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GREAT BOOKS OF THE WESTERN WORLD

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3.

THE GREAT IDEAS: II

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THE GREAT IDEAS

A Syntopicon of Great Books of the Western World

MORTIMER J. ADLER, *Editor in Chief*

WILLIAM GORMAN, *General Editor*

VOLUME II

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EXPLANATION OF REFERENCE STYLE

THE references have a uniform typographical style, but the manner of referring to particular works varies in certain respects. The Explanation of Reference Style describes the typographical construction of the references, with some comment on the variations. It is divided into four parts:

I. General Typographical Style
II. Style of Bible References
III. Punctuation, Symbols, Abbreviations
IV. Table of Authors, Titles, and Author's Divisions Cited

I. GENERAL TYPOGRAPHICAL STYLE

The two examples below illustrate the general typographical pattern of the references to *Great Books of the Western World*; and the headings above the examples call attention to the five elements commonly present in the construction of the references.

Volume Number	Author's Name	Title of Work	Author's Divisions	Page Sections
35	LOCKE:	*Human Understanding,*	BK II, CH XXI	178a-200d
41	GIBBON:	*Decline and Fall,*		365b-378d

(1) Volume Number:

The volume number indicates in which volume of *Great Books of the Western World* the work or passage referred to can be found. Most volumes contain the work of one author. When a single volume contains the works of two or more authors, the volume number is given for each author. When the work of a single author is contained in two volumes, the volume number is assigned according to the contents of the volume.

(2) Author's Name:

The author's name immediately follows the volume number, except in the case of the American State Papers and the Federalist, which are included in Volume 43. Authors' names are usually given in shortened form.

sometimes places continuous reading matter in the a and c sections of the upper half of the page, or in the b and d sections of the lower half of the page. This occurs when a work or an author's division begins in the lower, or ends in the upper, half of the two-column page. Where continuous reading matter thus appears in discontinuous page sections, it is indicated by **a,c** or **b,d**. For example:

14 PLUTARCH: *Solon* 64b,d-77a,c

means that the work cited begins in the lower half of page 64 and ends in the upper half of page 77.

Footnotes or notes are sometimes specifically cited by themselves in the references, in which case the page sections given correspond to their location on the pages referred to. When a footnote or a note is not specifically cited, the page sections given mark the beginning and the end of the text referred to. The reader is expected to consult the footnotes or notes indicated in the body of that text.

Chaucer's works (in Volume 22) are printed in two columns; the inside column of each page contains the Middle English text, the outside column a Modern English version. Since both columns contain equivalent passages, the references to this volume employ page sections (a and b) which divide each page only into an upper and a lower half.

II. STYLE OF BIBLE REFERENCES

All Bible references are to book, chapter, and verse in both the King James and Douay versions of the Bible. When the King James and Douay versions differ in the title of books or in the numbering of chapters or verses, the King James version is cited first and the Douay, indicated by a (*D*), follows. For example:

OLD TESTAMENT: *Nehemiah*, 7:45—(*D*) *II Esdras*, 7:46

In references to the Bible, a colon is used to separate chapter and verse numbers; and a comma separates the numbers of verses in the same chapter. For example:

OLD TESTAMENT: *Exodus*, 6:1–4,16–18

III. PUNCTUATION, SYMBOLS, ABBREVIATIONS

(1) Punctuation

Diagonal line: When a series of references to one author includes two or more of his works published in the same volume, a diagonal line is used to separate references to one work from references to another. The diagonal line is used in the same way to separate references to different books of the Bible. For example:

OLD TESTAMENT: *Exodus*, 33:12–23 / *Job*, 11:7–9

43 MILL: *Liberty*, 302d-303a / *Representative Government*, 327b,d-332d

Semi-Colon: When a series of references includes the citation of two or more passages in the same work, a semi-colon is used to separate the references to these passages. For example:

OLD TESTAMENT: *Genesis*, 1:12–14; 9:1–11

38 ROUSSEAU: *Social Contract*, BK II, 403a-404a; 405d-406a

46 HEGEL: *Philosophy of History*, PART II, 265c-266a; PART IV, 346c-348a

Comma: When a comma separates the title of a work, or an author's division of a work, from the page sections which follow, passages cited are only a part of the whole work or of the author's division indicated. For example, in the references:

14 PLUTARCH: *Lycurgus*, 36a-b; 44d-45c

36 SWIFT: *Gulliver*, PART II, 73a-74b

the passages from Plutarch are only a part of *Lycurgus*, and the passage from Swift is only a few pages from Part II of *Gulliver's Travels*.

When the title of a work, or an author's division of a work, is *not* separated by a comma from the page sections which follow, the reference is to the whole work or to the whole of the indicated author's division. For example, in the references:

14 PLUTARCH: *Lycurgus* 32a-48d

36 SWIFT: *Gulliver*, PART II 45a-87b

the whole of *Lycurgus* and the whole of Part II of *Gulliver's Travels* are cited.

Volume Number, Author, and Title		*Author's Divisions Cited*
5 SOPHOCLES (*c.* 495–406 B.C.)		
Oedipus the King	*Electra*	
Oedipus at Colonus	*Trachiniae*	
Antigone	*Philoctetes*	Line
Ajax		
5 EURIPIDES (*c.* 480–406 B.C.)		
Rhesus	*Electra*	
Medea	*The Bacchantes*	
Hippolytus	*Hecuba*	
Alcestis	*Heracles Mad*	
Heracleidae	*The Phoenician Maidens*	
The Suppliants	*Orestes*	
The Trojan Women	*Iphigenia Among the Tauri*	
Ion	*Iphigenia at Aulis*	
Helen	*The Cyclops*	Line
Andromache		
5 ARISTOPHANES (*c.* 445–*c.* 380 B.C.)		
The Acharnians	*The Frogs*	
The Knights	*The Lysistrata*	
The Clouds	*The Thesmophoriazusae*	
The Wasps	*The Ecclesiazusae*	
The Peace	*The Plutus*	Line
The Birds		
6 HERODOTUS (*c.* 484–*c.* 425 B.C.)		
The History		BOOK
6 THUCYDIDES (*c.* 460–*c.* 400 B.C.)		
Peloponnesian War——*The History of the Peloponnesian War*		BOOK
7 PLATO (*c.* 428–*c.* 348 B.C.)		
Charmides	*Phaedo*	
Lysis	*Gorgias*	
Laches	*The Republic*	
Protagoras	*Timaeus*	
Euthydemus	*Critias*	
Cratylus	*Parmenides*	
Phaedrus	*Theaetetus*	
Ion	*Sophist*	
Symposium	*Statesman*	
Meno	*Philebus*	
Euthyphro	*Laws*	
Apology	*The Seventh Letter*	—— except *Republic*
Crito		and *Laws*, BOOK

Volume Number, Author, and Title	*Author's Divisions Cited*
8 ARISTOTLE (384–322 B.C.)	
Categories	CHAPTER, Line
Interpretation——*On Interpretation*	
Prior Analytics	BOOK, CHAPTER, Line
Posterior Analytics	
Topics	
Sophistical Refutations——*On Sophistical Refutations*	CHAPTER, Line
Physics	BOOK, CHAPTER, Line
Heavens——*On the Heavens*	
Generation and Corruption——*On Generation and Corruption*	
Meteorology	
Metaphysics	
Soul——*On the Soul*	
Sense and the Sensible——*On Sense and the Sensible*	CHAPTER, Line
Memory and Reminiscence——*On Memory and Reminiscence*	
Sleep——*On Sleep and Sleeplessness*	
Dreams——*On Dreams*	
Prophesying——*On Prophesying by Dreams*	
Longevity——*On Longevity and Shortness of Life*	
Youth, Life, and Breathing——*On Youth and Old Age, On Life and Death, On Breathing*	
9 ARISTOTLE	
History of Animals	BOOK, CHAPTER, Line
Parts of Animals——*On the Parts of Animals*	
Motion of Animals——*On the Motion of Animals*	CHAPTER, Line
Gait of Animals——*On the Gait of Animals*	
Generation of Animals——*On the Generation of Animals*	BOOK, CHAPTER, Line
Ethics——*Nicomachean Ethics*	
Politics	
The Athenian Constitution	CHAPTER, paragraph
Rhetoric	BOOK, CHAPTER, Line
Poetics——*On Poetics*	CHAPTER, Line
10 HIPPOCRATES (*fl.* 400 B.C.)	
The Oath	——
Ancient Medicine——*On Ancient Medicine*	paragraph
Airs, Waters, Places——*On Airs, Waters, and Places*	
Prognostics——*The Book of Prognostics*	
Regimen in Acute Diseases——*On Regimen in Acute Diseases*	paragraph, APPENDIX
Epidemics——*Of the Epidemics*	BOOK, SECTION, paragraph, CASE
Injuries of the Head——*On Injuries of the Head*	paragraph
Surgery——*On the Surgery*	
Fractures——*On Fractures*	
Articulations——*On the Articulations*	
Instruments of Reduction	

Volume Number, Author, and Title	*Author's Divisions Cited*
15 TACITUS, P. CORNELIUS (*c.* 55–*c.* 117 A.D.)	
The Annals *The Histories*	BOOK
16 PTOLEMY (*c.* 100–*c.* 178 A.D.)	
The Almagest	BOOK
16 COPERNICUS, NICOLAUS (1473–1543)	
Revolutions of the Heavenly Spheres——*On the Revolutions of the Heavenly Spheres*	BOOK
16 KEPLER, JOHANNES (1571–1630)	
Epitome——*Epitome of Copernican Astronomy:* IV and V	BOOK
The Harmonies of the World: V	——
17 PLOTINUS (205–270)	
First-Sixth Ennead——*The Six Enneads*	TRACTATE, CHAPTER
18 AUGUSTINE, SAINT (354–430)	
The Confessions	BOOK, paragraph
The City of God	BOOK, PREFACE, CHAPTER
Christian Doctrine——*On Christian Doctrine*	PREFACE, BOOK, CHAPTER
19 AQUINAS, SAINT THOMAS (*c.* 1225–1274)	
The Summa Theologica, First Part; Part I of the Second Part, Questions 1–48	PROLOGUE, PART, QUESTION, ARTICLE, ANSWER, CONTRARY, REPLY
20 AQUINAS, SAINT THOMAS	
The Summa Theologica, Part I of the Second Part (continued), Questions 49–114; Part II of the Second Part, Questions 1–46, 179–189; Third Part, Questions 1–26, 60–65; Supplement to the Third Part, Questions 69–99	PROLOGUE, PART, QUESTION, ARTICLE, ANSWER, CONTRARY, REPLY
21 DANTE ALIGHIERI (1265–1321)	
The Divine Comedy, HELL, PURGATORY, PARADISE	Number of Canto, Line
22 CHAUCER, GEOFFREY (*c.* 1340–1400)	
Troilus and Cressida	BOOK, STANZA
[*The Canterbury Tales*]	Line, except prose parts (see below)
The Prologue	*The Tale of the Man of Law*
The Knight's Tale	*The Wife of Bath's Prologue*
The Miller's Prologue	*The Tale of the Wife of Bath*
The Miller's Tale	*The Friar's Prologue*
The Reeve's Prologue	*The Friar's Tale*
The Reeve's Tale	*The Summoner's Prologue*
The Cook's Prologue	*The Summoner's Tale*
The Cook's Tale	*The Clerk's Prologue*
Introduction to the Man of Law's Prologue	*The Clerk's Tale*
The Prologue of the Man of Law's Tale	*The Merchant's Prologue*
	The Merchant's Tale
	Epilogue to the Merchant's Tale

Volume Number, Author, and Title		*Author's Divisions Cited*
22 CHAUCER, GEOFFREY (continued)		
[*The Canterbury Tales*]		
The Squire's Tale	*The Tale of Melibeus*	paragraph
The Words of the Franklin	*The Monk's Prologue*	
The Franklin's Prologue	*The Monk's Tale*	
The Franklin's Tale	*The Prologue of the Nun's Priest's Tale*	
The Physician's Tale	*The Nun's Priest's Tale*	
The Words of the Host	*Epilogue to the Nun's Priest's Tale*	
The Prologue of the Pardoner's Tale	*The Second Nun's Prologue*	
The Pardoner's Tale	*The Second Nun's Tale*	
The Shipman's Prologue	*The Canon's Yeoman's Prologue*	
The Shipman's Tale	*The Canon's Yeoman's Tale*	
The Prioress's Prologue	*The Manciple's Prologue*	
The Prioress's Tale	*The Manciple's Tale*	
Prologue to Sir Thopas	*The Parson's Prologue*	
Sir Thopas	*The Parson's Tale*	paragraph
Prologue to Melibeus	*L'Envoi*	—
23 MACHIAVELLI, NICOLÒ (1469–1527)		
The Prince		CHAPTER
23 HOBBES, THOMAS (1588–1679)		
Leviathan——*Leviathan, or, Matter, Form, and Power of a Commonwealth, Ecclesiastical and Civil*		INTRODUCTION, PART, CONCLUSION
24 RABELAIS, FRANÇOIS (*c.* 1495–1553)		
Gargantua and Pantagruel		BOOK
25 MONTAIGNE, MICHEL EYQUEM DE (1533–1592)		
The Essays		—
26 SHAKESPEARE, WILLIAM (1564–1616)		
1st Henry VI——*The First Part of King Henry the Sixth*	*Richard II*——*The Tragedy of King Richard the Second*	
2nd Henry VI——*The Second Part of King Henry the Sixth*	*A Midsummer-Night's Dream*	
3rd Henry VI——*The Third Part of King Henry the Sixth*	*King John*——*The Life and Death of King John*	
Richard III——*The Tragedy of King Richard the Third*	*The Merchant of Venice*	
The Comedy of Errors	*1st Henry IV*——*The First Part of King Henry the Fourth*	
Titus Andronicus	*2nd Henry IV*——*The Second Part of King Henry the Fourth*	
The Taming of the Shrew	*Much Ado About Nothing*	
The Two Gentlemen of Verona	*Henry V*——*The Life of King Henry the Fifth*	
Love's Labour's Lost	*Julius Caesar*	
Romeo and Juliet	*As You Like It*	PROLOGUE, ACT, SCENE, EPILOGUE, Line

Volume Number, Author, and Title — *Author's Divisions Cited*

27 SHAKESPEARE, WILLIAM

Twelfth Night——*Twelfth Night; or, What You Will*
Hamlet——*Hamlet, Prince of Denmark*
The Merry Wives of Windsor
Troilus and Cressida
All's Well That Ends Well
Measure for Measure
Othello——*Othello, the Moor of Venice*
King Lear
Macbeth
Antony and Cleopatra
Coriolanus
Timon of Athens
Pericles——*Pericles, Prince of Tyre*
Cymbeline
The Winter's Tale
The Tempest
Henry VIII——*The Famous History of the Life of King Henry the Eighth* — PROLOGUE, ACT, SCENE, EPILOGUE, Line

Sonnets — Number of Sonnet

28 GILBERT, WILLIAM (1540–1603)

Loadstone——*On the Loadstone and Magnetic Bodies* — PREFACE, BOOK

28 GALILEO GALILEI (1564–1642)

Two New Sciences——*Concerning the Two New Sciences* — DAY

28 HARVEY, WILLIAM (1578–1657)

Motion of the Heart——*On the Motion of the Heart and Blood in Animals*
Circulation of the Blood——*On the Circulation of the Blood*
On Animal Generation——*On the Generation of Animals* — ——

29 CERVANTES, MIGUEL DE (1547–1616)

Don Quixote——*The History of Don Quixote de la Mancha* — PART

30 BACON, SIR FRANCIS (1561–1626)

Advancement of Learning — ——
Novum Organum — PREFACE, BOOK, APHORISM
New Atlantis — ——

31 DESCARTES, RENÉ (1596–1650)

Rules——*Rules for the Direction of the Mind* — Number of Rule
Discourse——*Discourse on the Method* — PART
Meditations——*Meditations on First Philosophy* — Number of Meditation
Objections and Replies——*Objections Against the Meditations and Replies* — DEFINITION, POSTULATE, AXIOM, PROPOSITION
The Geometry — BOOK

31 SPINOZA, BENEDICT DE (1632–1677)

Ethics — PART, PREFACE, DEFINITION, AXIOM, PROPOSITION, DEMONSTRATION, SCHOLIUM, COROLLARY, LEMMA, POSTULATE, EXPLANATION, APPENDIX

Volume Number, Author, and Title	*Author's Divisions Cited*
32 MILTON, JOHN (1608–1674)	
[*English Minor Poems*]	Line, except *Sonnets* and *Psalms*
Christs Nativity——*On the Morning of Christs Nativity* and *The Hymn*	*Death of a Fair Infant*——*On the Death of a Fair Infant*
A Paraphrase on Psalm 114	*Vacation Exercise*——*At a Vacation Exercise*
Psalm 136	*The Fifth Ode of Horace*——*The Fifth Ode of Horace, Lib. I*
The Passion	*Sonnets*, I, VII–XIX
On Time	*New Forcers of Conscience*——*On the New Forcers of Conscience under the Long Parliament*
Upon the Circumcision	*Lord Gen. Fairfax*——*On the Lord Gen. Fairfax at the siege of Colchester*
At a Solemn Musick	*Lord Gen. Cromwell*——*To the Lord Generall Cromwell May 1652*
An Epitaph on the Marchioness of Winchester	*Sr Henry Vane*——*To Sr Henry Vane the Younger*
Song on May Morning	*Mr. Cyriack Skinner*——*To Mr. Cyriack Skinner upon his Blindness*
On Shakespear. 1630	*Psalms*, I–VIII, LXXX–LXXXVIII
On the University Carrier	
Another on the Same	
L'Allegro	
Il Penseroso	
Arcades	
Lycidas	
Comus	
Paradise Lost	BOOK, Line
Samson Agonistes	Line
Areopagitica	——
33 PASCAL, BLAISE (1623–1662)	
The Provincial Letters	——
Pensées	Number of Pensée
Vacuum——*Preface to the Treatise on the Vacuum* and *New Experiments Concerning the Vacuum*	——
Great Experiment——*Account of the Great Experiment Concerning the Equilibrium of Fluids*	
Equilibrium of Liquids and *Weight of Air*——*Treatises on the Equilibrium of Liquids and on the Weight of the Mass of the Air*	
Geometrical Demonstration——*On Geometrical Demonstration*	
Arithmetical Triangle——*Treatise on the Arithmetical Triangle*	
Correspondence with Fermat——*Correspondence with Fermat on the Theory of Probabilities*	
34 NEWTON, SIR ISAAC (1642–1727)	
Principles——*Mathematical Principles of Natural Philosophy*	DEFINITION, SCHOLIUM, LAW, COROLLARY, BOOK, RULE, LEMMA, PROPOSITION, PHENOMENON, HYPOTHESIS
Optics	BOOK

Volume Number, Author, and Title	*Author's Divisions Cited*
34 HUYGENS, CHRISTIAAN (1629–1695)	
Light——*Treatise on Light*	PREFACE, CHAPTER
35 LOCKE, JOHN (1632–1704)	
Toleration——*A Letter Concerning Toleration*	——
Civil Government——*Concerning Civil Government, Second Essay*	CHAPTER, SECTION
Human Understanding——*An Essay Concerning Human Understanding*	INTRODUCTION, BOOK, CHAPTER, SECTION
35 BERKELEY, GEORGE (1685–1753)	
Human Knowledge——*The Principles of Human Knowledge*	PREFACE, INTRODUCTION, SECTION
35 HUME, DAVID (1711–1776)	
Human Understanding——*An Enquiry Concerning Human Understanding*	INTRODUCTION, SECTION, DIVISION
36 SWIFT, JONATHAN (1667–1745)	
Gulliver——*Gulliver's Travels*	PART
36 STERNE, LAURENCE (1713–1768)	
Tristram Shandy	——
37 FIELDING, HENRY (1707–1754)	
Tom Jones——*The History of Tom Jones, A Foundling*	——
38 MONTESQUIEU, CHARLES DE SECONDAT, BARON DE (1689–1755)	
The Spirit of Laws	BOOK
38 ROUSSEAU, JEAN JACQUES (1712–1778)	
Inequality——*On the Origin of Inequality*	——
Political Economy——*On Political Economy*	——
The Social Contract	BOOK
39 SMITH, ADAM (1723–1790)	
Wealth of Nations——*An Inquiry Into the Nature and Causes of the Wealth of Nations*	INTRODUCTION, BOOK
40 GIBBON, EDWARD (1737–1794)	
Decline and Fall——*The Decline and Fall of the Roman Empire*, Chapters 1–40	——
41 GIBBON, EDWARD	
Decline and Fall——*The Decline and Fall of the Roman Empire* (continued), Chapters 41–71	——

Volume Number, Author, and Title	*Author's Divisions Cited*
42 KANT, IMMANUEL (1724–1804)	
Pure Reason——*The Critique of Pure Reason*	
Fund. Prin. Metaphysic of Morals——*Fundamental Principles of the Metaphysic of Morals*	
Practical Reason——*The Critique of Practical Reason*	
Pref. Metaphysical Elements of Ethics——*Preface and Introduction to the Metaphysical Elements of Ethics With a Note on Conscience*	
Intro. Metaphysic of Morals——*General Introduction to the Metaphysic of Morals*	
The Science of Right	
Judgement——*The Critique of Judgement*	——
43 DECLARATION OF INDEPENDENCE	Line
43 ARTICLES OF CONFEDERATION	Number of Article, Line
43 CONSTITUTION OF THE U.S.	ARTICLE, SECTION, AMENDMENT, Line
43 [HAMILTON, ALEXANDER (1757–1804), MADISON, JAMES (1751–1836), JAY, JOHN (1745–1829)]	
THE FEDERALIST	Papers, by NUMBER
43 MILL, JOHN STUART (1806–1873)	
Liberty——*On Liberty*	
Representative Government	
Utilitarianism	——
44 BOSWELL, JAMES (1740–1795)	
Johnson——*Life of Samuel Johnson, L.L.D.*	——
45 LAVOISIER, ANTOINE LAURENT (1743–1794)	
Elements of Chemistry	PREFACE, PART
45 FOURIER, JEAN BAPTISTE JOSEPH (1768–1830)	
Theory of Heat——*Analytical Theory of Heat*	——
45 FARADAY, MICHAEL (1791–1867)	
Researches in Electricity——*Experimental Researches in Electricity*	——
46 HEGEL, GEORG WILHELM FRIEDRICH (1770–1831)	
The Philosophy of Right	PREFACE, INTRODUCTION, PART, paragraph, ADDITION
The Philosophy of History	INTRODUCTION, PART
47 GOETHE, JOHANN WOLFGANG VON (1749–1832)	
Faust, Parts I and II	DEDICATION, PRELUDE, PROLOGUE, PART, Line
48 MELVILLE, HERMAN (1819–1882)	
Moby Dick——*Moby Dick; or, The Whale*	——

Volume Number, Author, and Title	*Author's Divisions Cited*
49 DARWIN, CHARLES (1809–1882)	
Origin of Species——*The Origin of Species by Means of Natural Selection*	
Descent of Man——*The Descent of Man and Selection in Relation to Sex*	——
50 MARX, KARL (1818–1883)	
Capital	——
50 MARX, KARL and ENGELS, FRIEDRICH (1820–1895)	
Communist Manifesto——*Manifesto of the Communist Party*	——
51 TOLSTOY, LEO (1828–1910)	
War and Peace	BOOK, EPILOGUE
52 DOSTOEVSKY, FYODOR MIKHAILOVICH (1821–1881)	
The Brothers Karamazov	BOOK, EPILOGUE
53 JAMES, WILLIAM (1842–1910)	
Psychology——*The Principles of Psychology*	——
54 FREUD, SIGMUND (1856–1939)	
The Origin and Development of Psycho-Analysis	
Hysteria——*Selected Papers on Hysteria*, Chapters 1–10	
The Sexual Enlightenment of Children	
Psycho-Analytic Therapy——*The Future Prospects of Psycho-Analytic Therapy*	
"Wild" Psycho-Analysis——*Observations on "Wild" Psycho-Analysis*	
The Interpretation of Dreams	
Narcissism——*On Narcissism*	
Instincts——*Instincts and Their Vicissitudes*	
Repression	
The Unconscious	
General Introduction——*A General Introduction to Psycho-Analysis*	
Beyond the Pleasure Principle	
Group Psychology——*Group Psychology and the Analysis of the Ego*	
The Ego and the Id	
Inhibitions, Symptoms, and Anxiety	
War and Death——*Thoughts for the Times on War and Death*	
Civilization and Its Discontents	
New Introductory Lectures——*New Introductory Lectures on Psycho-Analysis*	——

THE GREAT IDEAS: II

Chapters 51–102: MAN *to* WORLD

Chapter 51: MAN

INTRODUCTION

WHETHER or not the proper study of mankind is man, it is the only study in which the knower and the known are one, in which the object of the science is the nature of the scientist. If we consider every effort men have made in response to the ancient injunction "know thyself," then psychology has perhaps a longer tradition than any other science. But by a stricter conception of science, more is required than individual insight or self-consciousness. Definitions, principles, analyses applicable to all men must be established, and it has been questioned whether the method of introspection suffices for this purpose. What methods should be used by the psychologist depends in part upon the precise object and scope of his inquiry. According as different subject matters and different methods define psychology, there seem to be several disciplines bearing that name, each with its own tradition in western thought.

In one conception, psychology begins with the dialogues of Plato and with Aristotle's treatise *On the Soul.* As Aristotle's title indicates, and as the Greek roots of the word "psychology" connote, the soul rather than man is the object of the science. Anthropology, Kant later suggests, would be a more appropriate name for the science of man. The Greek inquiry into the soul extends, beyond man, to all living things. It is because "the soul is in some sense the principle of animal life," Aristotle writes, that "the knowledge of the soul admittedly contributes greatly to the advance of truth in general, and, above all, to our understanding of Nature."

Nevertheless, psychology for the Greeks is principally concerned with the study of man. The analysis of the parts or faculties of the human soul is an analysis of the properties of human nature—the powers which man has and the characteristically human acts or functions he can perform. The methods by which this analysis is developed are, for the most part, the same methods which the Greek philosophers use in physics. "The study of the soul," Aristotle writes, "falls within the science of Nature." The definitions of the psychologist, like those of the physicist, give "a certain mode of movement of such and such a body (or part or faculty of a body) by this or that cause and for this or that end." In the case of the human soul, however, the psychologist can employ a method not applicable to other things. The human intellect is able to examine itself. Mind can thus know things about mind which are not otherwise observable.

The subject matter of psychology narrows somewhat when, at a later moment in the tradition, the study of mind tends to replace the study of man. This narrowing takes place gradually. Though Descartes identifies soul with mind or intellect, he treats of the passions and the will as well as thought and knowledge. Differing from Descartes with regard to body and soul, Hobbes and Spinoza also give as much attention to the emotions as to ideas and reasoning. But with Locke, Berkeley, and Hume there is an increasing tendency to analyze the contents of consciousness and the acts of the understanding, treated exclusively as a faculty of thinking or knowing. Where in the earlier tradition the observation of human behavior and the behavior of other animals appears to be useful in psychology, here the main source of psychological knowledge seems to be introspection.

The *Principles of Psychology* by James and the writings of Freud represent a return to the broader conception of the science. According to James, "it is better . . . to let the science be as vague as its subject . . . if by so doing we can throw any light on the main business in hand."

If psychology "takes into account the fact that minds inhabit environments which act on them and on which they in turn react" and "takes mind in the midst of all its concrete relations, it is immensely more fertile than the old-fashioned 'rational psychology,' which treated the soul as a detached existent, sufficient unto itself, and assumed to consider only its nature and properties. I shall therefore feel free," James goes on to say, "to make any sallies into zoology or into pure nerve-physiology which may seem instructive for our purposes."

Though in the hands of James and Freud the scope of psychology extends no further than the range of topics Aquinas covers in his treatise on man and his treatise on human acts and passions, their return to the study of man as a whole is accompanied by an interest in or invention of new methods, experimental and clinical. "As a science," Freud writes, "psychoanalysis is characterized by the methods with which it works, not by the subject matter with which it deals." Those who distinguish between science and philosophy in terms of empirical research date the beginning of psychology from the inception of these new methods. They regard most psychological writings earlier than James and Freud as works of speculation or philosophy.

Controversy over the validity of conclusions in psychology sometimes turns on the conflicting claims of rival methods to be the *only* way of arriving at the truth; and sometimes, as with Kant, the issue of method seems to be subordinate to the issue of subject matter. Kant admits the possibility of an empirical psychology which would confine its inquiries to the phenomenal processes of thought and feeling, because with respect to such an object "we could call in aid observations on the play of our thoughts," and thence derive "natural laws of the thinking self." But, he goes on to say, "it could never be available for discovering those properties which do not belong to possible experience."

What Kant calls "rational psychology" aims at what is for him impossible, namely, knowledge of the reality or substance of the soul itself. It is impossible, he says, to make "any dogmatical affirmation concerning an object of experience beyond the boundaries of experience." Kant's critique of rational psychology thus appears to be based on the same principles which underlie his critique of metaphysical assertions concerning God's existence and the freedom of the will.

Those principles are in turn based on an elaborate theory of the human faculties, such as sense, understanding, and reason, and the role they play in the constitution of experience and knowledge. But Kant does not regard his own theory of the faculties as psychology. Writers like Locke and Hume, on the other hand, seem to make their psychology—certainly in its principal concern with how the content of the mind is acquired and formed—the basis for appraising the validity of all other knowledge. They do not question the validity of psychology itself. They seem to assume that self-knowledge has unique advantages over all other inquiries.

THESE ISSUES of the scope and validity of psychology are in one sense more relevant to the chapters on KNOWLEDGE, MIND, and SOUL than to this one. Their relevance here is limited by their connection with the main issues about the nature of man. Not merely the tradition of psychology, but the whole tradition of western thought seems to divide on the question of man's essence.

The question can be put in a number of ways. Is man a rational animal, and does that definition imply that only man has reason? Does it imply that man has free will, and that only man has free will? Like the question about the distinction between living and non-living things or the similar question about the difference between plants and animals, this question can also be asked in terms of the contrast between difference in kind and difference in degree. Does man differ essentially or in kind from other animals, or do all animals possess the same fundamental properties? Does man differ from the others only in the degree to which he possesses some of these shared qualities?

Some, like Darwin, think that "the difference in mind between man and the higher animals, great as it is, certainly is one of degree and not of kind. We have seen," he writes, "that the senses and intuitions, the various emotions and faculties, such as love, memory, attention, curiosity, imitation, reason, etc., of which man

boasts, may be found in an incipient, or even sometimes in a well-developed condition, in the lower animals. They are also capable of some inherited improvement, as we see in the domestic dog compared with the wolf or jackal. If it could be proved that certain high mental powers, such as the formation of general concepts, self-consciousness, etc., were absolutely peculiar to man, which seems extremely doubtful, it is not improbable that these qualities are merely the incidental results of other highly-advanced intellectual faculties; and these again mainly the result of the continued use of a perfect language." Such a view clearly takes the position that man varies from other animals in the same way that one species of animal varies from another.

Those who take the opposite position do not always agree on the precise nature of the difference in kind. For the most part, they attribute rationality to man alone and use the word "brute" to signify that all other animals totally lack reason, no matter how acute their intelligence or the apparent sagacity of their instinctive reactions. Milton, for example, in common with many others, describes man as

> . . . a creature who not prone
> And brute as other creatures, but endued
> With sanctity of reason, might erect
> His stature, and upright with front serene
> Govern the rest, self-knowing, and from thence
> Magnanimous to correspond with heaven.

Those who find a difference in kind between man and other animals also tend to think that human society and human language are essentially different from the beehive or the ant mound, from bird calls, jungle cries, or parroting, because they are the work or expression of reason. Unlike Darwin, some of them find in human speech not the cause of man's *apparent* difference in kind from other animals, but the consequence of his *real* difference in kind—his distinctive rationality. The fact that man does certain things that no other animal does at all means to them that man possesses certain powers which no other animal shares to any degree, even the slightest. They would therefore interpret Darwin's admission that an anthropoid ape could not fashion "a stone into a tool" or "follow a train of metaphysical reasoning, or solve a mathematical problem, or reflect on God, or admire a grand natural scene," as an indication that the ape totally lacked human reason or intellect, however acute his animal intelligence. But the writers who agree that man is radically different from the brutes do not all agree in the account they give of human reason; nor do they all affirm free will as the natural accompaniment of rationality.

Locke, for example, begins his essay on *Human Understanding* with the remark that "the understanding . . . sets man above the rest of sensible beings." Men and other animals alike have the powers of sense, memory, and imagination, but, he says, "brutes abstract not. . . . The power of abstracting is not at all in them." This power of having "general ideas is that which puts a perfect distinction betwixt man and brutes, and is an excellency which the faculties of brutes do by no means attain to." But Locke denies that man has free will in the sense of a free choice among alternatives. Rousseau, on the other hand, declares that "every animal has ideas . . . and it is only in degree that man differs, in this respect, from the brute. . . . It is not, therefore, so much the understanding that constitutes the specific difference between the man and the brute, as the human quality of free agency . . . and it is particularly in his consciousness of this liberty that the spirituality of his soul is displayed."

James agrees with Locke that "it is probable that brutes neither attend to abstract characters nor have associations by similarity," but it is the latter fact which James himself makes the principal distinction between man and brute. "We may," he asserts, "consider it proven that the most elementary single difference between the human mind and that of brutes lies in this deficiency on the brute's part to associate ideas by similarity." James enumerates "other classical *differentiae* of man besides that of being the only reasoning animal." Man has been called, he says, "the laughing animal" and "the talking animal," but these distinctive traits, like human reasoning, James regards as "consequences of his unrivalled powers . . . to associate ideas by similarity."

Reason and speech are for James the effects, where for Adam Smith they are the cause, of man's peculiarly human attributes. "The propensity to truck, barter, and exchange one

thing for another," Smith writes, is "common to all men, and to be found in no other race of animals." This seems to him to be a "necessary consequence of the faculties of reason and speech" which are peculiar to man. Hobbes, as we shall see presently, takes still another position, since he explains man's reasoning power in terms of his faculty of speech, a faculty which is possessed by no other animal.

Despite all these variations in theory or explanation, writers like Locke, Rousseau, James, Smith, and perhaps Hobbes seem to agree that man and brute differ in kind. On that point they agree even with writers like Plato, Aristotle, Augustine, Aquinas, Descartes, Spinoza, Kant, and Hegel who hold, as they most definitely do not, that man has a special faculty of mind, reason, or intellect. The contradictory position is, therefore, not to be found in the denial of some particular theory of reason, but rather in the denial that any faculty or attribute which man possesses warrants our calling him "rational" and other animals "brute."

THE ISSUE IS sharply drawn between these contradictory positions. Yet it is avoided by those who go no further than to see in human civilization certain distinctive features, such as the arts and sciences, or law, government, and religion. Mill, for example, discussing the sentiment of justice, finds its root in the natural impulse "to resent, and to repel or retaliate, any harm done or attempted against ourselves, or against those with whom we sympathise . . . common to all animal nature." Man differs from other animals, he writes, "first, in being capable of sympathising, not solely with their offspring, or, like some of the more noble animals, with some superior animal who is kind to them, but with all human and even with all sentient beings. Secondly, in having a more developed intelligence, which gives a wider range to the whole of their sentiments, whether self-regarding or sympathetic. By virtue of his superior intelligence, even apart from his superior range of sympathy, a human being is capable of apprehending a community of interest between himself and the human society of which he forms a part."

A view of this sort would seem to leave open the question whether such typically human developments signify the possession by man of special powers which set him apart as *different in kind.* While admitting extraordinary differences between the behavior or accomplishments of men and other animals, this view does not reject the possibility that such accomplishments may represent merely wide differences in degree of power, which give the *appearance* of differences in kind.

As we have already observed, the issue about man and brute cannot be separated from the controversy about the so-called "higher faculties" of man. Except for the view that man is a purely spiritual being, who merely inhabits or uses a physical body, no theory of human nature doubts that man, as a living organism, possesses in common with plants and animals certain bodily powers or functions. The vegetative functions which Galen calls "the natural faculties" are indispensable to human as to all other forms of corporeal life. Similarly, the powers of sensitivity and appetite or desire are obviously present in man as in other animals. To the observer, who sees only the externals of human and animal behavior, men and the higher animals appear to react to the physical stimulation of their sense organs with a similar repertoire of bodily movements, which vary only as their skeletal structure and their organs of locomotion differ. They also manifest outward signs of inner emotional disturbance sufficiently similar to warrant treating emotions like fear and rage as common to men and other animals.

On all this there seems to be little dispute in the tradition of the great books. But difficult questions arise when the inner significance of these external movements is considered. Both men and animals have the familiar sense organs and such powers as touch, taste, smell, hearing, and vision. But do sensations give rise to knowledge in the same way for both men and animals? Do the powers of memory and imagination extend an animal's range of apprehension as they do man's? Do these powers affect the perception of present objects in the same way for men and animals?

Such questions are not readily answered by observation of external behavior alone. What seems to be called for—a comparison of human and animal experience—cannot be obtained. The difficulty of the problem becomes most in-

tense when a special faculty of knowledge or thought is attributed to man, for animal and human sense perception, imagination, or even emotion may be incommensurable if a special factor of understanding or reason enters into all human experience and is totally absent from that of animals.

In the ancient and mediaeval periods, the sensitive faculty, including the interior sensitive powers of memory and imagination, is generally distinguished from another faculty, variously called "intellect," "reason," or "mind." Writers like Plato, Aristotle, Plotinus, Lucretius, Augustine, and Aquinas have different conceptions of intellect or mind, in itself and in its relation to sense and imagination, but they do not question its existence as a separate faculty. The range of the sensitive powers does not extend to ideas or intelligible objects, nor is sensitive memory or imagination for them the same as rational thought.

Not only does it seem unquestionable in the ancient and mediaeval tradition that man has these two distinct faculties of knowledge, but it is generally assumed that other animals have to a greater or less degree, the power of the senses alone. Only men can understand as well as perceive; only men can know the universal as well as the particular; only men can think about objects which are neither sensible nor, strictly, imaginable—objects such as atoms and God, the infinite and the eternal, or the intellect itself. The affirmation of an essential difference between reason and sense seems to be inseparable from the affirmation of an essential difference between men and brutes.

DOUBTS OR DENIALS with regard to both affirmations achieve considerable prevalence in modern times. But though the two affirmations appear inseparable, they are not always denied together. Montaigne, for example, does not so much doubt that men have reason as he does that other animals lack it. He considers the matter in the light of external evidences, in terms of the comparable performances of men and animals. The light of reason seems to shine in both.

He repeats many stories from Plutarch and Pliny which supposedly reveal the comparable mentality of animals and men. One is the story of the hound who, following the scent, comes to a triple parting of the ways. After sniffing along the first and second paths and discovering no trace of the scent, the hound, without a moment's hesitation or sniffing, takes up the pursuit along the third trail. This, Montaigne suggests, is a kind of syllogizing; as if the dog reasoned thus with himself: "I have followed my master by foot to this place; he must, of necessity, be gone by one of these three ways; he is not gone this way nor that; he must then infallibly be gone this other."

It is noteworthy that Aquinas tells exactly the same story in order to make the point that such *appearances* of reasoning in animals can be explained as instinctively determined conduct. "In the works of irrational animals," he writes, "we notice certain marks of sagacity, in so far as they have a natural inclination to set about their actions in a most orderly manner through being ordained by the supreme art. For which reason, too, certain animals are called prudent or sagacious; and not because they reason or exercise any choice about things." That such behavior is not the work of reason, he claims, "is clear from the fact that all that share in one nature invariably act in the same way."

Unlike Montaigne, Machiavelli seems to imply that men and brutes are alike not in having reason, but in lacking it. The passions control behavior. Intelligence exhibits itself largely as craft or cunning in gaining ends set by the passions. Man is no less the brute in essence because in the jungle of society he often succeeds by cunning rather than by force. He may have more cunning than the fox, but without armor he also has less strength than the lion. The prince, Machiavelli remarks, "being compelled knowingly to adopt the beast, ought to choose the lion and the fox, because the lion cannot defend himself against snares and the fox cannot defend himself against wolves."

For the most part, however, the modern dissent from the ancient and mediaeval view takes the form of denying that reason and sense are distinct powers. In its most characteristic expression, this denial is accompanied by a denial of abstract ideas as in the writings of Hobbes, Berkeley, and Hume. Their position, discussed more fully in the chapter on UNIVERSAL AND PARTICULAR, is that men only give the appear-

ance of having abstract or general ideas because they employ common names which have general significance.

Language, according to Hobbes, is the root of all other differences between man and brute. Sense and imagination are "common to man and beast." Reasoning, or the "train of thoughts," can take place in any animal which has memory and imagination. But that type of understanding which Hobbes describes as "conception caused by speech" is peculiar to man. His statement that "by the help of speech and method, the same faculties" which belong to both men and beasts "may be improved to such a height as to distinguish men from all other living creatures," would seem to imply that Hobbes regards man as superior to other animals only in degree. Yet, on the other hand, he enumerates a variety of institutions peculiar to human life, such as religion, law, and science, which imply a difference in kind.

Like Hobbes, Berkeley thinks that men use general names but do not have general or abstract ideas. But he seems much less willing than Hobbes to assert man's clear superiority, even on the basis of man's attainments through the power of speech. If the fact that "brutes abstract not," he says in reply to Locke, "be made the distinguishing property of that sort of animals, I fear a great many of those that pass for men must be reckoned into their number." Hume goes further than either Berkeley or Hobbes. Agreeing with them that man has no faculty above sense and imagination, and hence no faculty which animals do not also possess, he alone explicitly draws the conclusion which that implies.

"Animals as well as men," he writes, "learn many things from experience and infer that the same events will always follow from the same causes." Such inferences, in animals or men, are not "founded on any process of argument or reasoning." They are the result of the operation of custom and instinct. "Were this doubtful with regard to men, it seems to admit of no question with regard to the brute creation; and the conclusion being once firmly established in the one, we have a strong presumption, from all the rules of analogy, that it ought to be universally admitted, without any exception or reserve."

But if custom and instinct underlie the appearance of reasoning in both men and animals, it may be asked, says Hume, "how it happens that men so much surpass animals in reasoning, and one man so much surpasses another?" His answer seems to be entirely in terms of degree of the same factors. The same sort of difference which obtains between a superior and an inferior intelligence among men obtains between men and other animals.

All the evidence which Darwin later assembles on the characteristics of human mentality is offered by him in proof of the same point. But to those who think that man alone has an intellect or a rational faculty, over and above all his sensitive powers, such evidence remains inconclusive. As in the case of the dog, whose behavior Aquinas and Montaigne interpret differently, the same observed facts seem to be capable of quite opposite explanation by those who hold opposite theories of human and animal intelligence.

Is THERE INTERNAL evidence, obtained from man's introspective experience of his own thought, which can resolve the controversy? As Descartes sees it, the interpretation of such evidence also seems to depend on the prior assumption one makes about the sameness or difference of men and brutes.

"We cannot help at every moment experiencing within us that we think," he writes; "nor can anyone infer from the fact that it has been shown that the animate brutes can discharge all these operations entirely without thought, that he therefore does not think; unless it be that having previously persuaded himself that his actions are entirely like those of the brutes, just because he has ascribed thought to them, he were to adhere so pertinaciously to these very words, '*men and brutes operate in the same way*,' that when it was shown to him that the brutes did not think, he preferred to divest himself of that thought of his of which he could not fail to have an inner consciousness, rather than to alter his opinion that he acted in the same way as the brutes."

On the other hand, Descartes continues, those who hold "*that thought is not to be distinguished from bodily motion*, will with much better reason conclude that it is the same thing in us and

in them, since they notice in them all corporeal movements as in us; they will add *that a difference merely of greater and less makes no difference to the essence*, and will infer that, though perchance they think that there is less reason in the beasts than in us, our minds are of exactly the same species."

THE ISSUE concerning the senses and the reason is more fully discussed in the chapters on MIND and SENSE, and also in the chapters on IDEA and UNIVERSAL AND PARTICULAR, where the problem of abstract ideas or universal notions is considered. The issue concerning soul in general and the human soul in particular belongs primarily to the chapter on SOUL, and also to the chapter on MIND. But like the issue about sense and intellect, its bearing on the problem of man's nature deserves brief comment here.

The question is not whether man has a soul, but whether only man has a soul; a rational soul; a soul which is, in whole or in part, immaterial; a soul capable of separate existence from the body; an immortal soul. If soul is conceived as the principle of life in all living organisms—as Aristotle conceives it—then having a soul does not distinguish man from plants or animals. If, furthermore, the rational soul is distinguished from the sensitive and vegetative soul in the same way that men are distinguished from brute animals and plants, namely, by reference to certain powers, such as intellect and will, then the statement that men alone have rational souls would seem to add nothing to the statement that men alone are rational.

But if the human soul, through being rational, confers a mode of immaterial, or spiritual, being upon man, then man's possession of such a soul sets him apart from all other physical things, even further than the special power of reason separates him from the brutes. The position of Lucretius illustrates this distinction in reverse. He does not deny that man has a soul. Unlike other living things which also have souls, man's soul includes a special part which Lucretius calls "mind." He describes it as the part "which we often call the understanding, in which dwells the directing and governing principle of life, [and] is no less part of the man than hand and foot and eyes are parts of the whole living creature."

So far as his having this special faculty is concerned, man is set apart. But for Lucretius nothing exists except atoms and void. Consequently, "the nature of the mind and soul is bodily," consisting of "seeds exceedingly round and exceedingly minute, in order to be stirred and set in motion by a small moving power." In his physical constitution man does not differ in any fundamental respect from any other composite thing. The materiality of his soul, furthermore, means that it is as perishable as any composite body.

At the other extreme from Lucretius, Descartes conceives man as a union of two substances. "I possess a body," he writes, "with which I am very intimately conjoined, yet because, on the one side, I have a clear and distinct idea of myself inasmuch as I am only a thinking and unextended thing, and as, on the other, I possess a distinct idea of body as it is only an extended and unthinking thing, it is certain that this I (that is to say, my soul by which I am what I am), is entirely and absolutely distinct from my body and can exist without it." Nevertheless, "sensations of pain, hunger, thirst, etc." lead Descartes to add: "I am not only lodged in my body as a pilot in a vessel, but . . . I am very closely united to it, and so to speak so intermingled with it that I seem to compose with it one whole."

Only man has a dual nature, thus compounded. Other living things, Descartes seems to hold, are merely bodies, having the structure and operation of complex machines. If, like the "*automata* or moving machines . . . made by the industry of man," there were "such machines, possessing the organs and outward form of a monkey, or some other animal without reason, we should not have . . . any means of ascertaining that they were not of the same nature as those animals."

It is indifferent to Descartes whether other animals are conceived as automata or whether, because they have life, sensation, and imagination, they are granted souls. "I have neither denied to the brutes," he writes, "what is vulgarly called life, nor a corporeal soul, or organic sense." What he has denied is thought, and it is this one factor which makes it impossible for a

machine to imitate human speech and action. It is this one factor which also requires man's soul, unlike that of the brute, to be an incorporeal substance.

Unlike sensations and passions, acts of thought and will, according to Descartes, cannot be functions of bodily organs. "Even though I were to grant," he says, "that thought existed" in dogs and apes, "it would in nowise follow that the human mind was not to be distinguished from the body, but on the contrary rather that in other animals also there was a mind distinct from their body." When Descartes affirms man's uniqueness, he is therefore affirming more than that man alone has reason and free will. He is affirming that of all things man alone is "formed of body and soul"—not a corporeal soul, but a spiritual substance. The angels, in contrast, are simply spirits.

The remark of Plotinus, that "humanity is poised midway between the gods and the beasts," applies with somewhat altered significance to the Cartesian view. But there are other conceptions of the human constitution which, though they preserve the sense of man's dual nature, do not make him a union of two separate substances.

Spinoza, for example, gives man special status in the order of nature by conferring on him alone participation in the divine mind. "The human mind," he writes, "is a part of the infinite intellect of God." The human body, on the other hand, is "a mode which expresses in a certain and determinate manner the essence of God in so far as He is considered as the thing extended." Man is thus "composed of mind and body," but for Spinoza this duality in human nature is a duality of aspects, not a duality of substances.

There is still another way in which a certain immateriality is attributed to man. In Aristotle's theory, the soul is not a substance in its own right, but the substantial form of an organic body. This is true of all kinds of souls—whether of plants, animals, or men. But when Aristotle enumerates the various powers which living things possess—such as "the nutritive, the appetitive, the sensory, the locomotive, and the power of thinking"—he assigns to man alone, or "possibly another order like man or superior to him, the power of thinking, *i.e.*, mind." Furthermore, of all the parts or powers of the soul, thinking seems to Aristotle to afford "the most probable exception" to the rule that "all the affections of soul involve body."

Apart from thinking, "there seems to be no case," he says, "in which the soul can act or be acted upon without involving body." Whereas the sensitive powers are seated in bodily organs and cannot act except as bodily functions, the intellect is immaterial. It has no bodily organ which is comparable to the eye as the organ of vision and the brain as the organ of memory and imagination. The act of understanding is not a function of physical matter.

According to this theory, man as a whole is a single substance, composite of correlative principles of being—matter and form, or body and soul. But man differs from all other physical substances which are similarly composite in that he has a faculty and mode of activity separate from matter. In the later development of this theory by Aquinas, the immateriality of the intellect becomes the basis for arguing that the rational soul of man can exist apart from matter when the composite human substance is disintegrated by death.

As indicated in the chapters on IMMORTALITY and SOUL, this is not the only argument for the immortality of the soul. We are not here concerned, however, with the various arguments and their merits, but only with the fact that certain conceptions of man's constitution attribute to man something more than the power of rationality, namely, the distinction of having a spiritual and immortal life.

HIS FUTURE AND his past color the present life of man and alter the aspect under which he conceives his place in the general scheme of things. Immortality promises release from mutability as well as salvation from death. With an immortal soul, man belongs to eternity as well as to time. He is not merely a transient character in the universe. His stature and his dignity are not the same when man regards himself as completely dissolvable into dust.

The question of man's past or origin is, perhaps, even more critical in its bearing on man's present status. Ancient poetry and history contain many myths of man's kinship with the gods. The heroes trace their lineage back to the

gods. Through them or through the progenitors of the race, man conceives himself as of divine descent or, at least, as having more affinity with the immortal gods than with all other earth-bound things.

In the *Descent of Man*, Darwin paints a different picture of human origin. Two propositions determine its general outlines. The first, already stated, is that man belongs to the animal kingdom without any differentiation except in degree. Not only in anatomy, physiology, and embryology are there marks of man's affinity with the mammals; man's behavior and mentality also show, according to Darwin, that man possesses no attribute so peculiarly human that some trace of it cannot be found in the higher forms of animal life.

The second proposition is that man's origin on earth has come about by a process of natural variation from an ancestral type, exactly as other new species of plants or animals have originated by descent with variation from a common ancestor. This theory of the origin of species is discussed in the chapter on EVOLUTION. Its special application to the human species involves the notion of a common ancestor for both man and the anthropoid apes, and the disappearance not only of the ancestral form, but of the intermediate varieties—the so-called "missing links" in the chain of variation.

These two propositions are logically interdependent. If the proposition is false that man differs from other animals only in degree, the proposition cannot be true that man originated along with the anthropoid apes by descent from a common ancestor. Conversely, if the Darwinian theory of man's origin is true, it cannot be true that men and brutes differ in kind. But though the truth of each of these two propositions implies the truth of the other, the problem of the difference between man and other animals has a certain logical priority over the problem of man's origin, simply because more evidence is available to solve it. That question calls for an examination of man as he is today in comparison with other extant species; whereas the other question necessarily requires the collection and interpretation of historical evidence, which may have some bearing on hypothetical missing links.

It should be added that if, in regard to the first question, the evidence favored the affirmation of a difference in kind, that would not entail the denial of biological evolution, though it would necessarily challenge the Darwinian theory of how such evolution took place. One alternative to the Darwinian hypothesis is the theory of emergent evolution, according to which lower forms of life may give rise to new organic forms which are not only higher but are distinct in kind.

Whether or not Christian theology and some theory of biological evolution can be reconciled, there seems to be an inescapable contradiction between Darwin's view of man's origin and the Judaeo-Christian conception of man as a special creation, special above all in the sense that "God created man in his own image."

As God is in essence a perfect intelligence and a spiritual being, man, according to Aquinas, "is said to be to the image of God by reason of his intellectual nature." In all creatures "there is some kind of likeness to God," but it is only in man that that likeness is an image. Man's finitude, imperfection, and corporeal existence make the image a remote resemblance; yet, according to the theologians, it is precisely that likeness which separates man from all other earthly creatures and places him in the company of the angels.

But man is no more an angel than he is a brute. He is separated from the one by his body as from the other by his reason. Nor does he in the present life have the spiritual existence of a disembodied and immortal soul. To these three negatives in the definition of man—*not* an angel, *not* a brute, *not* a soul—the Christian theologian adds a fourth, drawn from man's past. Man is of the race begotten by Adam, but he does not have the attributes which Adam possessed before the fall.

The dogma of man's fall from grace is discussed in the chapter on SIN. Here we are concerned only with its implications for the understanding of man's present nature, as not only being deprived of the extraordinary gifts of life and knowledge which Adam lost through disobedience, but as also being wounded in perpetuity by Adam's sin. Weakness, ignorance, malice, and concupiscence, Aquinas declares, "are the four wounds inflicted on the whole of human nature as a result of our first parent's

sin." Man in the world is not only disinherited from Adam's gifts, but with the loss of grace, he also suffers, according to Aquinas, a diminution in "his natural inclination to virtue."

THERE ARE OTHER divisions in the realm of man, but none so radical as that between Eden and the world thereafter. As retold by Plato, the ancient myths of a golden age when men lived under the immediate benevolence of the gods also imply a condition of mankind quite different from the observable reality, but they do not imply a decline in human nature itself with the transition from the golden age to the present. The modern distinction between man living in a state of nature and man living in civil society considers only the external circumstances of human life and does not divide man according to two conditions of his soul. Other dichotomies—such as that between prehistoric and historic man, or between primitive and civilized man—are even less radical, for they deal even more in gradations or degrees of the same external conditions.

These considerations lead us to another phase of man's thinking about man. Where the previous problem was how man differs from everything else in the universe, here the question is how man is divided from man. If men are not equal as individuals, to what extent are their individual differences the result of the unequal endowment of the natures with which they are born, and to what extent are they the result of individual acquirement in the course of life?

The range of human differences, whether innate or acquired, may itself become the basis for a division of men into the normal and the abnormal, a division which separates the feeble-minded and the insane from the competent and sane. From a moral and political point of view, this is perhaps the most fundamental of all classifications. It must be admitted, however, that traditionally the problem of the difference between men and women and the problem of the difference between the ages of man from the extreme of infancy to the extreme of senility seem to have exercised more influence on the determination of political status and moral responsibility.

One other differentiation of man from man seems to have significance for the theory of human society and the history of civilization. That is the division of men into groups, sometimes by reference to physical and mental traits which separate one race from another—whether these traits are supposed to be determined biologically as inheritable racial characteristics or are attributed to environmental influences; sometimes by reference to the customs and ideals of a culture. Both sets of criteria appear to be used in the traditional discussion of the opposition between Greek and barbarian, Jew and gentile, European and Asiatic.

THE ULTIMATE questions which man asks about himself are partly answered by the very fact of their being asked. The answer may be that man is the measure of all things; that he is sufficient unto himself or at least sufficient for the station he occupies and the part he plays in the structure of the universe. The answer may be that man is not a god overlooking the rest of nature, or even at home in the environment of time and space, but rather that he is a finite and dependent creature aware of his insufficiency, a lonely wanderer seeking something greater than himself and this whole world. Whatever answer is given, man's asking what sort of thing he is, whence he comes, and whither he is destined symbolizes the two strains in human nature—man's knowledge and his ignorance, man's greatness and his misery.

Man, writes Pascal, is "a nothing in comparison with the Infinite, an All in comparison with the Nothing, a mean between nothing and everything. Since he is infinitely removed from comprehending the extremes, the end of things and their beginning are hopelessly hidden from him in an impenetrable secret; he is equally incapable of seeing the Nothing from which he was made, and the Infinite in which he is swallowed up.

"Man," Pascal goes on, "must not think that he is on a level either with the brutes or with the angels, nor must he be ignorant of both sides of his nature; but he must know both." In recognizing both lies his wretchedness and grandeur. "Man knows that he is wretched. He is therefore wretched, because he is so; but he is really greater because he knows it."

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PAGE SECTIONS: When the text is printed in one column, the letters **a** and **b** refer to the upper and lower halves of the page. For example, in **53** JAMES: *Psychology*, **116a-119b**, the passage begins in the upper half of page 116 and ends in the lower half of page 119. When the text is printed in two columns, the letters **a** and **b** refer to the upper and lower halves of the left-hand side of the page, the letters **c** and **d** to the upper and lower halves of the right-hand side of the page. For example, in **7** PLATO: *Symposium*, **163b-164c**, the passage begins in the lower half of the left-hand side of page 163 and ends in the upper half of the right-hand side of page 164.

AUTHOR'S DIVISIONS: One or more of the main divisions of a work (such as PART, BK, CH, SECT) are sometimes included in the reference; line numbers, in brackets, are given in certain cases; *e.g.*, *Iliad*, BK II [265–283] **12d**.

BIBLE REFERENCES: The references are to book, chapter, and verse. When the King James and Douay versions differ in title of books or in the numbering of chapters or verses, the King James version is cited first and the Douay, indicated by a (*D*), follows; *e.g.*, OLD TESTAMENT: *Nehemiah*, 7:45—(*D*) *II Esdras*, 7:46.

SYMBOLS: The abbreviation "esp" calls the reader's attention to one or more especially relevant parts of a whole reference; "passim" signifies that the topic is discussed intermittently rather than continuously in the work or passage cited.

For additional information concerning the style of the references, see the Explanation of Reference Style; for general guidance in the use of *The Great Ideas*, consult the Preface.

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27 SHAKESPEARE: *Hamlet*, ACT IV, SC IV [32-39] 59a

31 DESCARTES: *Discourse*, PART I, 41b,d; PART IV 51b-54b passim; PART V, 56a-b; 59a-60c / *Meditations*, II 77d-81d esp 78b-c; IV 89a-93a / *Objections and Replies*, 156a-d; 209b; 226a-d; 276c

31 SPINOZA: *Ethics*, PART II, AXIOM 2 373d; PART III, PROP 57 414d-415b; PART IV, PROP 35, SCHOL 433d-434a; PROP 37, SCHOL 1-2 434d-436a passim

32 MILTON: *Paradise Lost*, BK VII [449-549] 227a-229a; BK VIII [369-451] 240a-242a; BK IX [549-566] 259b; BK XII [63-110] 320b-321b

33 PASCAL: *Pensées*, 140 199a-b; 339-348 233a-234a; 418 243a

35 LOCKE: *Civil Government*, CH VI, SECT 56-63 36d-38c; CH XIV, SECT 163-164 63a-c / *Human Understanding*, BK II, CH XI, SECT 10-11 145d-146a; CH XXVII, SECT 8 221a-222a; SECT 12 223a-b; BK III, CH VI, SECT 26-27 274d-276a; CH X, SECT 17 295d-296b; CH XI, SECT 20 304c-d

38 MONTESQUIEU: *Spirit of Laws*, BK I, 1d-2b

38 ROUSSEAU: *Inequality*, 337d-338c; 357c-358b / *Social Contract*, BK I, 393b-c

39 SMITH: *Wealth of Nations*, BK I, 6d-7b; 8a-b

42 KANT: *Pure Reason*, 164a-165c / *Fund. Prin. Metaphysic of Morals*, 264d-265a; 279b,d; 281c-282c / *Practical Reason*, 291a-293b; 316c-317a / *Pref. Metaphysical Elements of Ethics*, 378b-c / *Science of Right*, 400b,d-402a esp 401b-402a; 420d-421a / *Judgement*, 584d-585c

43 MILL: *Liberty*, 294a-297b

46 HEGEL: *Philosophy of Right*, INTRO, par 21 17a-c; PART I, par 47 24a-b; PART II, par 132 46b-47a; par 139 48d-49b; ADDITIONS, 4 116a-d; 10 117d-118a; 22 120c-d; 28 121b; 62 126a / *Philosophy of History*, INTRO, 156c; 168b-d; 178a-b; 186a; PART I, 257d-258a; PART III, 304d-305a

49 DARWIN: *Descent of Man*, 287b-c; 319b-d; 331b-332a

(1. ***Definitions of man: conceptions of the properties and qualities of human nature.*** 1*a.* ***The conception of man as essentially distinct, or differing in kind, from brute animals: man's specific rationality and freedom.***)

51 TOLSTOY: *War and Peace*, EPILOGUE II, 689c-690a

52 DOSTOEVSKY: *Brothers Karamazov*, BK V, 127b-137c passim

1*b*. The conception of man as distinguished from brutes by such powers or properties as abstraction or relational thought, language and law, art and science

OLD TESTAMENT: *Genesis*, 2:19-20

5 AESCHYLUS: *Prometheus Bound* [442-506] 44c-45a

5 EURIPIDES: *Suppliants* [195-213] 260a-b / *Trojan Women* [665-672] 275d

7 PLATO: *Laches*, 35b-d / *Protagoras*, 44a-45a / *Theaetetus*, 534d-536a esp 535d-536a / *Laws*, BK II, 653a-c

8 ARISTOTLE: *Topics*, BK V, CH 1 [128^{b}15-16] 178b; CH 3 [132^{a}1-9] 182d; [132^{a}17-22] 183a; CH 4 [133^{a}15-23] 184b; CH 5 [134^{a}8-17] 185b-c / *Heavens*, BK II, CH 12 [292^{b}1-11] 384a / *Metaphysics*, BK I, CH 1 [980^{b}25-981^{a}27] 499b-d / *Soul*, BK III, CH 3 [427^{b}7-14] 659d-660a; [428^{a}20-24] 660c / *Memory and Reminiscence*, CH 2 [453^{a}5-14] 695b

9 ARISTOTLE: *History of Animals*, BK I, CH 1 [488^{b}20-27] 9d; BK IV, CH 9 [536^{b}1-8] 63a-b; BK VIII, CH 1 [588^{a}18-^{b}4] 114b,d; BK IX, CH 1 [608^{a}10-^{b}19] 133b,d-134a / *Parts of Animals*, BK II, CH 10 [656^{a}8-9] 182a; CH 16 [659^{b}28] CH 17 [660^{b}3] 186d-187c; BK III, CH 6 [669^{a}18-20] 197c; CH 10 [673^{a}4-10] 201d-202a; BK IV, CH 10 [686^{a}25-687^{b}5] 217d-219a esp [686^{b}24] 218b, [687^{a}4-23] 218c-d / *Generation of Animals*, BK II, CH 6 [744^{a}27-31] 285c; BK V, CH 2 [781^{b}17-23] 323d-324a; CH 7 [786^{b}15-22] 328c-d / *Ethics*, BK I, CH 7 [1097^{b}7-11] 342d-343a; BK III, CH 2 [1111^{b}6-12] 357b-c; BK VII, CH 1 [1145^{a}15-33] 395a-b; CH 3 [1147^{a}25-^{b}5] 397c-d; BK VIII, CH 12 [1162^{a}16-25] 414c; BK IX, CH 9 [1169^{b}17-19] 423b / *Politics*, BK I, CH 2 [1253^{a}1-39] 446b-d; BK VII, CH 13 [1332^{a}39-^{b}7] 537a-b / *Rhetoric*, BK I, CH 1 [1355^{b}1-3] 594d / *Poetics*, CH 4 [1448^{b}4-24] 682c-d

12 EPICTETUS: *Discourses*, BK I, CH 3 108b-c; CH 28, 134a-d; BK IV, CH 11 240d-242d

12 AURELIUS: *Meditations*, BK III, SECT 16 262d-263a,c; BK IX, SECT 9 292b-d

23 MACHIAVELLI: *Prince*, CH XVIII, 25a

23 HOBBES: *Leviathan*, PART I, 52b; 53a-b; 54a; 54c; 57d; 59b-c; 63a; 79b-d; PART II, 100a-c

25 MONTAIGNE: *Essays*, 215b-216b; 218a-c

28 HARVEY: *On Animal Generation*, 427d-428a

30 BACON: *Advancement of Learning*, 20c-d / *Novum Organum*, BK II, APH 35, 163d-164a

31 DESCARTES: *Discourse*, PART V, 59c-60b / *Objections and Replies*, 226a-d

32 MILTON: *Paradise Lost*, BK VIII [369-451] 240a-242a; BK IX [549-566] 259b

35 LOCKE: *Human Understanding*, INTRO, SECT 1 93a-b; BK II, CH XI, SECT 4-11 144d-146a esp SECT 10 145d; BK III, CH 1, SECT 1-3 251b,d-252a; CH VI, SECT 33 278b-c; BK IV, CH XII, SECT 11, 361c-d; CH XVIII, SECT 11, 384b

35 BERKELEY: *Human Knowledge*, INTRO, SECT 11 407b-408a

35 HUME: *Human Understanding*, SECT I, DIV 4, 452b-c

38 ROUSSEAU: *Inequality*, 341d; 349d-350a

39 SMITH: *Wealth of Nations*, BK I, 6d-8b

42 KANT: *Pure Reason*, 164a-165c; 199c-200c / *Practical Reason*, 316c-317a / *Pref. Metaphysical Elements of Ethics*, 372a-b / *Intro. Metaphysic of Morals*, 386b-d / *Judgement*, 479a-c; 602b,d [fn 1]

43 MILL: *Utilitarianism*, 448a-449c

46 HEGEL: *Philosophy of Right*, PART III, par 211 70a-c; ADDITIONS, 26 121a-b; 121 136c-d; 157 142b-c / *Philosophy of History*, INTRO, 168b-d

49 DARWIN: *Descent of Man*, 278a-279a; 294c-304a esp 294c-d, 297a-298a, 304a; 311d; 320a-b; 349d; 591d-593c

50 MARX: *Capital*, 85b-c; 86b-c

52 DOSTOEVSKY: *Brothers Karamazov*, BK V, 122d-123a; BK VI, 167c-d

53 JAMES: *Psychology*, 85a-b; 677a; 678b-686b esp 678b, 683b-684a, 686a-b; 691a-b; 704a-706b esp 706b; 873a

54 FREUD: *Interpretation of Dreams*, 385b-c / *Unconscious*, 429c-d / *General Introduction*, 616b-c / *Civilization and Its Discontents*, 778a

1*c*. The conception of man as an animal, differing only in degree of intelligence and of other qualities possessed by other animals

20 AQUINAS: *Summa Theologica*, PART III SUPPL, Q 79, A 1, ANS 951b-953b

23 HOBBES: *Leviathan*, PART I, 52b; 53a-b; 53d-54a; 59b; 64a-c; 79c; PART II, 112d-113a; PART IV, 267b

25 MONTAIGNE: *Essays*, 207a-c; 215a-232c esp 216c-219a, 231d-232c

30 BACON: *Novum Organum*, BK II, APH 35, 163d-164a

32 MILTON: *Paradise Lost*, BK IX [549-566] 259b

35 LOCKE: *Human Understanding*, BK III, CH VI, SECT 12 271d-272b; CH X, SECT 17 295d-296b; CH XI, SECT 20 304c-d; BK IV, CH XVI, SECT 12, 370c-371a

35 HUME: *Human Understanding*, SECT IX 487b-488c

38 ROUSSEAU: *Inequality*, 334b,d-338d; 348d-349c

42 KANT: *Pure Reason*, 199c-200c

43 MILL: *Utilitarianism*, 448a-449c; 469b-d

49 DARWIN: *Descent of Man*, 286a-319d esp 287a-b, 294c, 304a-305c, 319b-d; 331b-332a; 591d-592a
51 TOLSTOY: *War and Peace*, EPILOGUE II, 689c-690a
53 JAMES: *Psychology*, 677a; 690b
54 FREUD: *Sexual Enlightenment of Children*, 121d; 122c

2. Man's knowledge of man

2*a*. Immediate self-consciousness: man's intimate or introspective knowledge of himself

7 PLATO: *Charmides*, 7b-c; 8b-d / *Phaedrus*, 116c-d / *Philebus*, 629b-c
8 ARISTOTLE: *Soul*, BK III, CH 4 [429^{b}5-9] 661d; [429^{b}25-29] 662b; [430^{a}2-9] 662b-c
9 ARISTOTLE: *Ethics*, BK IX, CH 9 [1170^{a}28-^{b}1] 424a
12 EPICTETUS: *Discourses*, BK I, CH I, 105a-b; CH 27, 133a-b
12 AURELIUS: *Meditations*, BK XI, SECT I 302a-b
18 AUGUSTINE: *Confessions*, BK X, par 3 72a; par 7 73a / *City of God*, BK XI, CH 26 336d-337b; CH 27, 337d-338a
19 AQUINAS: *Summa Theologica*, PART I, Q 87, A 1, ANS 465a-466c; A 2, ANS 466c-467b; A 4, ANS 468b-d
20 AQUINAS: *Summa Theologica*, PART I-II, Q 112, A 5, ANS and REP 1,5 359c-360c
21 DANTE: *Divine Comedy*, PURGATORY, XVIII [49-60] 80b-c
23 HOBBES: *Leviathan*, INTRO, 47b-d
25 MONTAIGNE: *Essays*, 6d-7a; 69d-70c; 177d-181d esp 180b-d; 253d-254a; 319d-320b; 322b-323b; 388c-389c; 485c-486a; 520b-522a
29 CERVANTES: *Don Quixote*, PART II, 332b
30 BACON: *Advancement of Learning*, 54b-c; 88c-89b
31 DESCARTES: *Discourse*, PART IV, 51c-52a / *Meditations*, II 77d-81d / *Objections and Replies*, 207b; 224b,d; 276b-c
31 SPINOZA: *Ethics*, PART II, PROP 19-23 382b-383c
33 PASCAL: *Pensées*, 396-399 240b
35 LOCKE: *Human Understanding*, BK II, CH I, SECT 1-8 121a-123a esp SECT 7-8 122c-123a; CH IX, SECT 1-2 138b-c; CH XIX 175b-176b; CH XXI, SECT 30 185a-c; CH XXIII, SECT 15 208c-d; SECT 32-33 212c-213a; CH XXVII, SECT 9 222a-b; BK IV, CH IX, SECT 2-3 349a-c
35 HUME: *Human Understanding* SECT I, DIV 8, 454a-b; SECT VII, DIV 51-53 472b-474b
38 ROUSSEAU: *Inequality*, 349b-c
42 KANT: *Pure Reason*, 32a-c; 55a-56c; 99a-101b; 121a-123b / *Practical Reason*, 292d [fn 1]; 307d-310c / *Judgement*, 599d-600d
43 MILL: *Liberty*, 303b-c
46 HEGEL: *Philosophy of Right*, INTRO, par 5 13a-c; par 7 14a-c; PART I, par 35 21a-b; ADDITIONS, 5 116d-117a; 22 120c-d; 25 121a / *Philosophy of History*, PART I, 257d-258a; PART II, 278a-c; PART III, 304a-b; 310d
47 GOETHE: *Faust*, PART I [3217-3239] 79a-b; PART II [11,433-452] 278a-b
51 TOLSTOY: *War and Peace*, EPILOGUE II, 688b-689b; 693d-694c
52 DOSTOEVSKY: *Brothers Karamazov*, BK XI, 341c
53 JAMES: *Psychology*, 121a-b; 122b-126a; 191a-197a esp 193a, 196a-197a; 221b; 223b-224a; 233a-b
54 FREUD: *Interpretation of Dreams*, 383b-c / *Unconscious*, 429c-430c / *General Introduction*, 451a-b; 620a / *Ego and Id*, 702d-703a

2*b*. The sciences of human nature: anthropology and psychology; rational and empirical psychology; experimental and clinical psychology

8 ARISTOTLE: *Metaphysics*, BK VI, CH I [1026^{a}5-6] 548a / *Soul*, BK I, CH I 631a-632d; BK II, CH 4 [415^{a}14-22] 645b-c
9 ARISTOTLE: *Ethics*, BK I, CH 13 [1102^{a}5-25] 347b-c
25 MONTAIGNE: *Essays*, 261c-269b passim
30 BACON: *Advancement of Learning*, 54b-c
35 HUME: *Human Understanding*, SECT I 451a-455b passim; SECT VIII, DIV 65 479b-480a
38 ROUSSEAU: *Inequality*, 329a-330b
42 KANT: *Pure Reason*, 1a-4a,c esp 1b-d / *Fund. Prin. Metaphysic of Morals*, 253b-254b; 271a-c / *Practical Reason*, 294a-b; 307d-310c / *Intro. Metaphysic of Morals*, 388a-c / *Judgement*, 599d-600d
46 HEGEL: *Philosophy of Right*, INTRO, par 11 15a-b
53 JAMES: *Psychology*, xiiib-xiva; 1a-4a; 120a-129b
54 FREUD: *Unconscious*, 431b-d / *General Introduction*, 451a-453a esp 451b-452a / *Group Psychology*, 664a 665a / *New Introductory Lectures*, 864a-868d esp 868b-c; 873c-d

2*b*(1) The subject matter and scope of the science of man

8 ARISTOTLE: *Soul*, BK I, CH I 631a-632d
19 AQUINAS: *Summa Theologica*, PART I, Q 87 464d-468d
30 BACON: *Advancement of Learning*, 49d-50b; 54b-c
35 LOCKE: *Human Understanding*, INTRO, SECT 1-4 93a-94b
35 HUME: *Human Understanding*, SECT I 451a-455b
38 ROUSSEAU: *Inequality*, 329a-331d
42 KANT: *Practical Reason*, 294a-b / *Intro. Metaphysic of Morals*, 388b-c / *Judgement*, 599d-600d esp 600d
53 JAMES: *Psychology*, xiiib-xiva; 3b-4a; 120a-121a; 129b; 236a; 825a [fn 1]
54 FREUD: *Unconscious*, 428a-429c esp 429b / *General Introduction*, 452a-454b; 467b-d; 550a-b; 606a / *Group Psychology*, 664a-665b / *New Introductory Lectures*, 866a-b

(*2b. The sciences of human nature: anthropology and psychology; rational and empirical psychology; experimental and clinical psychology.*)

2b(2) The methods and validity of psychology

8 ARISTOTLE: *Soul*, BK I, CH I 631a-632d; BK II, CH 4 [415a14-22] 645b-c
9 ARISTOTLE: *Ethics*, BK I, CH 13 [1102a5-25] 347b-c
19 AQUINAS: *Summa Theologica*, PART I, Q 87 464d-468d
21 DANTE: *Divine Comedy*, PURGATORY, XVIII [49-60] 80b-c
23 HOBBES: *Leviathan*, INTRO, 47b-d; PART II, 163a
30 BACON: *Advancement of Learning*, 49d-50b; 54b-c
35 BERKELEY: *Human Knowledge*, SECT 145 441d-442a; SECT 148 442b-d
35 HUME: *Human Understanding*, SECT I, DIV 8 454a-c; SECT IX, DIV 82 487b-c
42 KANT: *Pure Reason*, 55a-56c; 121a-123b; 126c d / *Practical Reason*, 292d [fn 1]; 294a-b; 307d-310c / *Judgement*, 599d-600d
43 FEDERALIST: NUMBER 79, 234b-c
52 DOSTOEVSKY: *Brothers Karamazov*, BK XII, 386c-387d
53 JAMES: *Psychology*, 17b-18b; 56a-66a passim; 121a-129b esp 126a-129b; 146a; 165a; 235b-236a esp 236b [fn 1]; 259a-b; 822b; 825a [fn 1]
54 FREUD: *Origin and Development of Psycho-Analysis*, 13c-14a / *Unconscious*, 429b-c; 434c / *General Introduction*, 451d-452a; 548a-550c esp 550a-b; 606a-b / *Beyond the Pleasure Principle*, 639a-b; 661c-662b / *Ego and Id*, 706d-707a

2b(3) The relation of psychology to physiology: the study of organic factors in human behavior

7 PLATO: *Phaedo*, 240d-242b / *Timaeus*, 474b-475d
8 ARISTOTLE: *Physics*, BK VII, CH 3 [246b20-248a8] 330a-d / *Soul*, BK I, CH I [403a2-b19] 632a-d; BK II, CH I 642a-643a; CH 9 [421b22-26] 653b; BK III, CH 4 [429a28-b4] 661c-d; CH 9 [432b26-433a1] 665c / *Sleep* 696a-701d esp CH I 696a-697c / *Dreams* 702a-706d passim, esp CH 2 703a-704d
9 ARISTOTLE: *Parts of Animals*, BK II, CH 4 175b-176a; CH 7 [653b1-7] 178d-179a; BK III, CH 6 [669a18-20] 197c; BK IV, CH 10 [686b22-29] 218b-c / *Motion of Animals*, CH 7 [701b13]-CH 8 [702a22] 237a-c; CH 11 239a-d
10 HIPPOCRATES: *Sacred Disease*, 155d-160d esp 159a-c
12 LUCRETIUS: *Nature of Things*, BK III [94-829] 31b-40c
19 AQUINAS: *Summa Theologica*, PART I, Q 75, A 3, REP 3 380c-381b; A 4 381b-382a; Q 76, A 5 394c-396a; Q 84, AA 7-8 449b-451b; Q 85, A 7 459c-460b; PART I-II, Q 41, A 1, ANS 798b-d
28 HARVEY: *Motion of the Heart*, 271a-b; 296d / *Circulation of the Blood*, 321d-322a; 322c-d / *On Animal Generation*, 431d-432a
30 BACON: *Advancement of Learning*, 48d-50b
31 DESCARTES: *Discourse*, PART V, 60b-c; PART VI, 61c / *Meditations*, VI, 99d / *Objections and Replies*, 207d-208a; 209c
31 SPINOZA: *Ethics*, PART II, PROP 14 380c; PROP 16-17 380d-381d; PROP 26, DEMONST 384a-b; PART V, PREF 451a-452c; PROP 39 462a-c
38 ROUSSEAU: *Inequality*, 338a
42 KANT: *Judgement*, 538d-539a
51 TOLSTOY: *War and Peace*, EPILOGUE II, 689c-690a
53 JAMES: *Psychology*, 2b-4a; 7a; 9a-56a esp 9a-b, 52a-53b; 66b-71a passim; 690b
54 FREUD: *Interpretation of Dreams*, 154c-155a / *Unconscious*, 429a-b; 431c-d / *General Introduction*, 451d-452a; 605b-606b / *Inhibitions, Symptoms, and Anxiety*, 721a / *New Introductory Lectures*, 872c-d

2b(4) The place of psychology in the order of sciences: the study of man as prerequisite for other studies

7 PLATO: *Charmides*, 7b-c; 8b-d / *Phaedrus*, 116c-d / *Phaedo*, 240d-242b / *Republic*, BK II, 316a-b; BK IV, 350a-b / *Philebus*, 629b-c
8 ARISTOTLE: *Metaphysics*, BK VI, CH I [1026a 5-6] 548a
9 ARISTOTLE: *Ethics*, BK I, CH 13 [1102a5-25] 347b-c / *Rhetoric*, BK I, CH 2 [1356a21-29] 595d
23 HOBBES: *Leviathan*, INTRO, 47b-d
25 MONTAIGNE: *Essays*, 69d-70c; 259a-260b; 308c-d
28 HARVEY: *On Animal Generation*, 443b
31 DESCARTES: *Discourse*, PART IV, 51c-52a / *Meditations*, II 77d-81d / *Objections and Replies*, 207b
33 PASCAL: *Pensées*, 66 180b; 144-146 200b
35 LOCKE: *Human Understanding*, 87d; INTRO 93a-95d
35 HUME: *Human Understanding*, SECT I, DIV 7-8 453c-454c
38 ROUSSEAU: *Inequality*, 329a-330b
42 KANT: *Pure Reason*, 1a-4a,c esp 1b-d / *Practical Reason*, 307d-310c; 331a-332d / *Judgement*, 511a-512a; 599d-600d
46 HEGEL: *Philosophy of Right*, INTRO, par 4 12d-13a; par 19 16d-17a
54 FREUD: *New Introductory Lectures*, 868b-d; 874a-c; 883c-d

3. The constitution of man

3a. Man as a unity or conjunction of matter and spirit, body and soul, extension and thought

OLD TESTAMENT: *Genesis*, 2:7
APOCRYPHA: *Wisdom of Solomon*, 9:14-15; 15:11
—(*D*) OT, *Book of Wisdom*, 9:14-15; 15:11
NEW TESTAMENT: *Romans*, 7:14-23; 8:4-13 / *I Corinthians*, 15:36-49

7 PLATO: *Cratylus*, 93b-d / *Phaedrus*, 124b-d / *Phaedo*, 231b-234c / *Republic*, BK III, 338a-339a / *Timaeus*, 453b-c / *Laws*, BK V, 686d-687c
8 ARISTOTLE: *Metaphysics*, BK VII, CH 10 [1035^{b} 13-32] 559a-b; BK VIII, CH 3 [1043^{a}29-^{b}4] 567d; CH 6 569d-570d; BK XII, CH 10 [1075^{b} 34-37] 606d / *Soul*, BK I, CH 1 [403^{a}2-^{b}19] 632a-d; CH 5 [410^{b}10-16] 640c; [411^{b}5-18] 641c-d; BK II, CH 1-2 642a-644c
9 ARISTOTLE: *Politics*, BK I, CH 5 [1254^{a}33-^{b}7] 448a
12 LUCRETIUS: *Nature of Things*, BK III [94-176] 31b-32b; [370-395] 34d-35a
12 EPICTETUS: *Discourses*, BK I, CH 3 108b-c; BK IV, CH 11, 240d-241b
12 AURELIUS: *Meditations*, BK IV, SECT 21 265b-c; BK VII, SECT 55 283b-c; BK IX, SECT 8 292b; BK XII, SECT 30 310a-b
14 PLUTARCH: *Romulus*, 29a-b
17 PLOTINUS: *First Ennead*, TR I 1a-6b / *Second Ennead*, TR I, CH 5, 37c / *Fourth Ennead*, TR III, CH 19-23 151d-154b esp CH 20 152b-153a; TR VII, CH 1 191c-d; CH 8, 197c-198b / *Sixth Ennead*, TR VII, CH 4-6 323c-325a
18 AUGUSTINE: *City of God*, BK V, CH 11, 216c; BK IX, CH 8-17 289d-295c passim; BK X, CH 29 316d-318b; BK XIII, CH 16 367a-d; CH 19 369c-370c; BK XIV, CH 2-3 377a-378d; CH 5 379c-380b
19 AQUINAS: *Summa Theologica*, PART I, Q 8, A 1, REP 2 34d-35c; A 2, REP 2 35c-36b; QQ 75-76 378a-399b; Q 118, A 2, ANS and REP 2 601c-603b; A 3, ANS 603b-604b; Q 119, A 1, ANS 604c-607b; PART I-II, Q 4, A 5, REP 2 632c-634b; Q 17, A 4, ANS and REP 3 688d-689c
20 AQUINAS: *Summa Theologica*, PART III, Q 2, A 1, ANS and REP 2 710a-711c; A 5 715a-716b; Q 17, A 2, REP 4 808d-809d; PART III SUPPL, Q 79, A 1-Q 80, A 2 951b-958b
21 DANTE: *Divine Comedy*, PURGATORY, XXV [34-78] 91d-92a
25 MONTAIGNE: *Essays*, 311a-b; 432b-d; 538a-543a,c
30 BACON: *Advancement of Learning*, 48d-49c
31 DESCARTES: *Discourse*, PART IV, 51d-52a; PART V, 60b-c / *Meditations*, II 77d-81d; VI, 98c-99a; 99d-100a / *Objections and Replies*, 119d-120a; DEF VI-VII 130c-d; DEF X 130d; PROP IV 133c; 135d-136b; 152b,d-156a; 170b-c; 207d-208a; 209c; 224d-225d; 231a-232d; 248b; 276b-c
31 SPINOZA: *Ethics*, PART II, PROP 10-13 376c-378c; PART III, PROP 2 396c-398b; PART V, PREF 451a-452c
33 PASCAL: *Pensées*, 512 262a
35 LOCKE: *Human Understanding*, BK I, CH III, SECT 4, 113b; BK II, CH XXVII, SECT 6-8 220c-222a esp SECT 8, 221d-222a; SECT 15 224b-c; SECT 21 225d-226a; SECT 27-29 227d-228c; BK IV, CH III, SECT 6 313c-315b passim
35 HUME: *Human Understanding*, SECT VII, DIV 52 472c-473c
36 STERNE: *Tristram Shandy*, 229b-230a; 270b; 277a-b
37 FIELDING: *Tom Jones*, 198a-c
42 KANT: *Judgement*, 557c-558b
46 HEGEL: *Philosophy of Right*, PART I, par 47-48 24a-c; ADDITIONS, 2 115d
53 JAMES: *Psychology*, 1a-4a esp 2b-3a, 4a; 84a-93b esp 88a-90b; 116a-119b; 130a; 139a-140a; 208a-b; 221a-226a esp 221a-222b, 225b-226a
54 FREUD: *Interpretation of Dreams*, 154c-155a

3a(1) Man as a pure spirit: a soul or mind using a body

7 PLATO: *Cratylus*, 93b-d / *Phaedrus*, 124b-126c / *Meno*, 179d-180b / *Phaedo*, 231b-234c; 250a-d / *Timaeus*, 452d-454a
12 EPICTETUS: *Discourses*, BK IV, CH 11, 240d-241a
13 VIRGIL: *Aeneid*, BK VI [724-751] 230b-231a
17 PLOTINUS: *First Ennead*, TR I 1a-6b esp CH 5-7 2d-4a / *Second Ennead*, TR I, CH 5, 37c / *Third Ennead*, TR IV, CH 2 97d-98a / *Fourth Ennead*, TR VII, CH 1 191c-d / *Sixth Ennead*, TR VII, CH 4-6 323c-325a
18 AUGUSTINE: *City of God*, BK XIII, CH 16 367a-d; CH 19 369c-370c
19 AQUINAS: *Summa Theologica*, PART I, Q 29, A 1, REP 5 162a-163b; Q 75, A 4 381b-382a; Q 76, A 1, ANS 385d-388c; A 4, ANS 393a-394c; A 7, ANS 396d-397d; Q 118, A 3, ANS 603b-604b
20 AQUINAS: *Summa Theologica*, PART III SUPPL, Q 79, A 1, ANS and REP 4 951b-953b
31 DESCARTES: *Discourse*, PART IV, 51c-52a; PART V, 60b-c / *Meditations*, II 77d-81d; VI, 98c-d / *Objections and Replies*, 119d-120a; DEF VI-VII 130c-d; DEF X 130d; PROP IV 133c; 135d-136b; 152d; 155c-156a; 207d-208a
31 SPINOZA: *Ethics*, PART III, PROP 2 396c-398b; PART V, PREF 451a-452c
35 LOCKE: *Human Understanding*, BK II, CH XXVII, SECT 6-8 220c-222a esp SECT 8, 221d-222a; SECT 21 225d-226a; SECT 28-29 228a-c
35 BERKELEY: *Human Knowledge*, SECT 2 413b; SECT 89 430b-c; SECT 135-142 440a-441c; SECT 148 442b-d
40 GIBBON: *Decline and Fall*, 186a-b
46 HEGEL: *Philosophy of Right*, PART I, par 35 21a-b; par 47 24a-b; ADDITIONS, 5 116d-117a; 22 120c-d; 25 121a; 28 121b / *Philosophy of History*, PART III, 310d
48 MELVILLE: *Moby Dick*, 28a; 380b-381a
51 TOLSTOY: *War and Peace*, BK VII, 295b-c
53 JAMES: *Psychology*, 220b-226a

3a(2) Man's spirituality as limited to his immaterial powers or functions, such as reason and will

8 ARISTOTLE: *Soul*, BK I, CH 4 [408^{b}18-29] 638c; CH 5 [411^{b}13-18] 641c-d; BK II, CH 2 [413^{b}24-29] 643d-644a; BK III, CH 4-5 661b-662d
19 AQUINAS: *Summa Theologica*, PART I, Q 7, A 2, REP 2 31d-32c; Q 29, A 1, REP 5 162a-163b; Q 75, A 2 379c-380c; AA 5-6 382a-384c; Q 76

(*3a. Man as a unity or conjunction of matter and spirit, body and soul, extension and thought. 3a(2) Man's spirituality as limited to his immaterial powers or functions, such as reason and will.*)

385c-399b passim; Q 77, A 5 403d-404c; Q 78, A 1, ANS 407b-409a; Q 79 413d-427a; Q 80, A 2 428a-d; QQ 82-83 431d-440b; Q 84, A 1, ANS and REP 1 440d-442a; A 2, ANS 442b-443c; A 6, ANS 447c-449a; Q 85, A 1, ANS 451c-453c; Q 86, A 1, REP 3 461c-462a; Q 87, A 1, REP 3 465a-466c; Q 91, A 1, ANS and REP 1 484a-485b; Q 96, A 2 511b-d; Q 98, A 1, ANS 516d-517c; Q 118, A 2, ANS 601c-603b

3*b*. Comparisons of man with God or the gods, or with angels or spiritual substances

OLD TESTAMENT: *Genesis*, 1.26-27; 5:1-2; 9:6 / *Job*, 4:16-21 / *Psalms*, 8.5—(*D*) *Psalms*, 8:6

APOCRYPHA: *Wisdom of Solomon*, 2:23—(*D*) OT, *Book of Wisdom*, 2:23

NEW TESTAMENT: *Matthew*, 22:23-30 / *I Corinthians*, 11 7 / *Hebrews*, 2.7 / *James*, 3:9 / *II Peter*, 1.3-4 / *Revelation*, 22:8-9—(*D*) *Apocalypse*, 22:8-9

7 PLATO. *Protagoras*, 44a-45a / *Republic*, BK VI, 382c / *Timaeus*, 476a-b

9 ARISTOTLE. *Parts of Animals*, BK IV, CH 10 [686a27-33] 217d-218a

10 HIPPOCRATES *Sacred Disease*, 155c-d

12 EPICTETUS: *Discourses*, BK I, CH 3 108b-c; CH 12, 119b-120a, CH 14 120d-121c; BK II, CH 16, 158b-d

18 AUGUSTINE: *Confessions*, BK VI, par 4 36a-b; BK XII, par 20 103c-d; BK XIII, par 32 119a-b / *City of God*, BK VIII, CH 25 283b-c, BK IX, CH 8 17 289d 295c; BK XII, CH 21 357a-b; CH 23 357d-358a, BK XIII, CH 1 360a-b, BK XVI, CH 6 426c-427a / *Christian Doctrine*, BK I, CH 22, 629b-c; CH 23 630a-c; CH 30 632c-633b; CH 33 633d-634b

19 AQUINAS: *Summa Theologica*, PART I, Q 7, A 2, REP 2 31d-32c; Q 30, A 2, REP 3 168a-169b; Q 47, A 2, ANS 257b-258c; QQ 50-64 269a-338d passim; Q 75, A 7 384d-385c; Q 93 492a 501c; Q 96, A 2 511b-d; QQ 106-107 545c-552b passim; Q 108, A 1, ANS 552c-553c; A 8 561a-562a; Q 112, A 1, REP 4 571d-573a, Q 117, A 2, REP 3 597c-598c; A 3, ANS 598c-599b; Q 118, A 3, ANS 603b-604b; PART I-II, Q 4, A 5, REP 6 632c-634b

20 AQUINAS: *Summa Theologica*, PART I-II, Q 50, A 6 11a-12a, PART III, Q 6, A 3, REP 2 742a-743a

21 DANTE: *Divine Comedy*, PARADISE, VII [121-148] 116b c; XXIX [13-84] 150b-151a

23 HOBBES: *Leviathan*, PART II, 162c; PART III, 183d 184a

27 SHAKESPEARE. *Hamlet*, ACT II, SC II [314-324] 43d

32 MILTON: *Paradise Lost*, BK II [345-353] 118b-119a; BK IV [358-393] 160a-161a; BK V [388-450] 183b-185a; [469-505] 185b-186a; BK VI [320-353] 203a-204a; BK X [888-908] 293b-294a

33 PASCAL: *Pensées*, 140 199a b; 418 243a

35 LOCKE: *Human Understanding*, BK II, CH X, SEC 9 143a-c; CH XXIII, SECT 13 207d-208b, BK IV, CH III, SECT 17 317c; SECT 23 320a-c

35 BERKELEY: *Human Knowledge*, SEC 81 428c-d

36 STERNE: *Tristram Shandy*, 394a

42 KANT: *Pure Reason*, 33a-d / *Practical Reason*, 350c-351b

47 GOETHE: *Faust*, PART I [482-517] 14a-b; [602-736] 16b-19b passim; PART II [8094-8097] 197a

51 TOLSTOY: *War and Peace*, BK VII, 295b-c

53 JAMES: *Psychology*, 745a

3*c*. Man as an organization of matter or as a collocation of atoms

7 PLATO: *Sophist*, 567a-568a / *Laws*, BK X, 761b

8 ARISTOTLE: *Generation and Corruption*, BK II, CH 6 [334a10-15] 435a / *Soul*, BK I, CH 2-5 633a-641d

10 GALEN: *Natural Faculties*, BK I, CH 12 172d-173c

12 LUCRETIUS: *Nature of Things*, BK II [251-293] 18b-d; BK III [91-869] 31b-41a; BK IV [722-817] 53d-54d; [877-961] 55d-56d

17 PLOTINUS: *Third Ennead*, TR I, CH 3 79b-c / *Fourth Ennead*, TR VII 191c-200c esp CH 1-4 191c-193c, CH 8, 195b-196a, 196c-197c

19 AQUINAS: *Summa Theologica*, PART I, Q 75, A 1 378b-379c, Q 84, A 2, ANS 442b-443c, A 6, ANS 447c-449a

23 HOBBES. *Leviathan*, INTRO, 47a; PART I, 49a-d; 80a-b, PART IV, 251a-b

31 DESCARTES *Objections and Replies*, 226a-d

35 LOCKE. *Human Understanding*, BK II, CH XXVII, SEC 21 225d-226a, SEC 28 29 228a-c; BK IV, CH III, SEC 6 313c 315b; CH X, SEC 5 350a-b; SEC 10 351b-352a, SEC 17 353b-c

35 BERKELEY: *Human Knowledge*, SECT 93 431b, SECT 137 440b-c; SECT 141 441a-b

42 KANT: *Pure Reason*, 126c-d / *Judgement*, 557c-559d; 575b-578a, 578d-582c; 599d-600d

46 HEGEL *Philosophy of History*, PART I, 255d

51 TOLSTOY: *War and Peace*, EPILOGUE II, 689c-690a

53 JAMES: *Psychology*, 95a-119b

54 FREUD: *New Introductory Lectures*, 829a-b

4. The analysis of human nature into its faculties, powers, or functions: the id, ego, and super-ego in the structure of the psyche

7 PLATO: *Republic*, BK IV, 350a-353d

8 ARISTOTLE: *Soul*, BK II-III 642a-668d

19 AQUINAS: *Summa Theologica*, PART I, QQ 77-83 399b-440b

31 DESCARTES: *Meditations*, VI 96b-103d passim

42 KANT: *Judgement*, 465c-467a; 475b-d
49 DARWIN: *Descent of Man*, 287a-302b passim
54 FREUD: *General Introduction*, 501d-504b; 531d-532b / *Group Psychology*, 681a-b / *Ego and Id*, 701d-708c esp 702c, 706d-707d; 715a-716c / *Inhibitions, Symptoms, and Anxiety*, 721d-722c / *New Introductory Lectures*, 830a-840a esp 836c-838d

4a. Man's vegetative powers: comparison with similar functions in plants and animals

7 PLATO: *Republic*, BK V, 361c-362a / *Timaeus*, 469d-471d
8 ARISTOTLE: *Generation and Corruption*, BK I, CH 5 417b-420b / *Soul*, BK II, CH 2 [413a20-b13] 643b-d; CH 4 645b-647b; BK III, CH 9 [432b8-10] 665a; CH 12 [434a22-26] 667a-b
9 ARISTOTLE: *History of Animals*, BK VIII, CH 1 [588b23-589a8] 115b / *Generation of Animals*, BK I, CH 23 271b-d; BK II, CH 1 [735a13-24] 275d-276a; CH 4 [740b9-741a5] 281c-282a / *Ethics*, BK I, CH 7 [1097b33-1098a1] 343b; CH 13 [1102a33-b13] 347d-348a
10 GALEN: *Natural Faculties* 167a-215d esp BK I, CH 1 167a-b, CH 5-8 169b-171a
17 PLOTINUS: *Third Ennead*, TR IV, CH 2 97d-98a / *Fourth Ennead*, TR III, CH 19, 152a; TR IX, CH 3, 206b
18 AUGUSTINE: *City of God*, BK VII, CH 23, 256b-c; BK XIV, CH 26 395d-396c
19 AQUINAS: *Summa Theologica*, PART I, Q 18, A 3, REP 3 106b-107c; Q 76, A 4, ANS 393a-394c; Q 78, AA 1-2 407b-410a; Q 96, A 2 511b-d; Q 98 516d-519a; Q 118, A 1 600a-601c; A 2, REP 2 601c-603b; Q 119 604c-608d; PART I-II, Q 17, A 8 692a-c
20 AQUINAS: *Summa Theologica*, PART I-II, Q 50, A 3, REP 1 8b-9a; PART III SUPPL, Q 80, A 1, ANS and REP 4-5 959c-963a
21 DANTE: *Divine Comedy*, PURGATORY, XXV [34-84] 91d-92b
24 RABELAIS: *Gargantua and Pantagruel*, BK III, 143a-144c
28 HARVEY: *On Animal Generation*, 427d-428b
30 BACON: *Novum Organum*, BK II, APH 27, 158a-b
31 DESCARTES: *Objections and Replies*, 207a; 244b-c
49 DARWIN: *Descent of Man*, 256a-257c
54 FREUD: *Sexual Enlightenment of Children*, 121d

4b. Man's sensitive and appetitive powers: comparison with similar functions in other animals

7 PLATO: *Republic*, BK II, 319c-320c; BK IV, 351b-353d / *Timaeus*, 466a-467d / *Theaetetus*, 534d-535b / *Philebus*, 620b-622b / *Laws*, BK VII, 715b-c; BK XII, 796a-b
8 ARISTOTLE: *Soul*, BK I, CH 5 [411b27-31] 641d; BK II, CH 2 [413a20-b13] 643b-d; BK II, CH 5-BK III, CH 3 647b-661b / *Sense and the Sensible* 673a-689a,c
9 ARISTOTLE: *History of Animals*, BK IV, CH 8-10 59d-64b; BK VIII, CH 1 [588a18-589a10] 114b,d-115b; BK IX, CH 1 [608a10-b19] 133b,d-134a / *Parts of Animals*, BK II, CH 16 [660a13]-CH 17 [660a23] 187a / *Motion of Animals*, CH 6-11 235d-239d esp CH 10 238c-239a / *Generation of Animals*, BK III, CH 2 [753a7-16] 294a-b / *Ethics*, BK I, CH 7 [1097b23-1098a20] 343a-c; CH 13 [1102b13-1103a3] 348a-c; BK III, CH 1 [1111a21-b3] 357a-b; CH 2 [1111b7-9] 357b; CH 10 [1118a17 b7] 364d-365a; BK VI, CH 2 [1139a17-21] 387d; BK VII, CH 3 [1147b3-5] 397d / *Politics*, BK I, CH 2 [1253a9-15] 446b-c
10 GALEN: *Natural Faculties*, BK I, CH 1 167a-b
12 LUCRETIUS: *Nature of Things*, BK IV [522-721] 51a-53d; [1192-1208] 59d-60a
12 EPICTETUS: *Discourses*, BK I, CH 3 108b-c
12 AURELIUS: *Meditations*, BK III, SECT 16 262d-263a,c; BK IX, SECT 9 292b-d
17 PLOTINUS: *First Ennead*, TR I 1a-6b passim / *Third Ennead*, TR IV, CH 2 97d-98a / *Fourth Ennead*, TR III, CH 19 151d-152b; TR IV, CH 20-21 167d-168c; CH 23-25 169c 171b; CH 28 172a-173b; TR IX, CH 3 206a b
18 AUGUSTINE *Confessions*, BK X, par 11 74a-b / *City of God*, BK V, CH 9, 215a; BK VII, CH 23, 256b c
19 AQUINAS: *Summa Theologica*, PART I, Q 75, A 3, ANS 380c-381b; Q 76, A 3, ANS 391a-393a; A 5, ANS 394c-396a; Q 78, A 1 407b-409a, AA 3-4 410a-413d; QQ 80-81 427a-431d; Q 91, A 3, REP 1,3 486b-487d; Q 96, A 2 511b-d; PART I-II, Q 22, A 3 722d-723b
20 AQUINAS: *Summa Theologica*, PART I-II, Q 50, A 3 8b-9a; PART III, Q 2, A 2, REP 2 711d-712d; Q 18, A 2, ANS 811d 812b; PART III SUPPL, Q 79, A 2, REP 3 953b-955c
21 DANTE. *Divine Comedy*, PURGATORY, XXV [34-84] 91d-92b
22 CHAUCER: *Knight's Tale* [1303-1333] 181b-182a / *Manciple's Tale* [17,104-144] 490a-b
23 HOBBES. *Leviathan*, PART I, 49a 54c; 61a-c; 64a-c, PART II, 139a; 141a-b; PART IV, 267b
24 RABELAIS. *Gargantua and Pantagruel*, BK III, 192b-d
25 MONTAIGNE: *Essays*, 285c-292d; 424d-425c
27 SHAKESPEARE. *King Lear*, ACT IV, SC VI [109-191] 274c-275b
28 HARVEY. *On Animal Generation*, 347c-d
30 BACON: *Novum Organum*, BK II, APH 27, 157b-c; APH 40, 173c-d
31 DESCARTES: *Rules*, XII, 19a-20d / *Discourse*, PART V, 59a-b / *Objections and Replies*, 156a-d
31 SPINOZA· *Ethics*, PART III, PROP 57, SCHOL 415b
32 MILTON: *Paradise Lost*, BK VIII [369-451] 240a-242a
35 LOCKE: *Civil Government*, CH VII, SECT 77-81 42b-43a / *Human Understanding*, BK II, CH IX, SECT 11-15 140b-141a; CH X 141b-143d passim, esp SECT 10 143c-d; CH XI, SECT 4-7 144d-145b

(4. The analysis of human nature into its faculties, powers, or functions: the id, ego, and super-ego in the structure of the psyche. 4b. Man's sensitive and appetitive powers: comparison with similar functions in other animals.)

35 HUME: *Human Understanding*, SECT IX 487b-488c
36 SWIFT: *Gulliver*, PART IV, 147b-148b
38 ROUSSEAU: *Inequality*, 331a-b; 337d-338d; 348d-349c
42 KANT: *Pure Reason*, 164b-c / *Intro. Metaphysic of Morals*, 386b-d / *Judgement*, 479a-d
46 HEGEL: *Philosophy of Right*, ADDITIONS, 121 136c-d
48 MELVILLE: *Moby Dick*, 134b-135a; 244a-245b; 286b-288a; 289b-291a
49 DARWIN: *Descent of Man*, 261c-262a; 287d-291c; 294c; 301c-302b; 304a-313a; 568d-571b
51 TOLSTOY: *War and Peace*, EPILOGUE II, 689c-690a
52 DOSTOEVSKY: *Brothers Karamazov*, BK III, 54a-b
53 JAMES: *Psychology*, 49a-50a; 198b-199b; 702a-b; 704a-706b; 712b-737a
54 FREUD: *Origin and Development of Psycho-Analysis*, 20a-d / *Narcissism*, 400c-401d / *Instincts* 412a-421a,c esp 413a-415b / *General Introduction*, 569c-585a esp 574a-d, 579b-581c, 584b-c / *Beyond the Pleasure Principle* 639a-663d esp 640b-c, 647a-648a, 651d-654c, 659d-661c / *Ego and Id*, 708c-712a esp 708d-709b / *Inhibitions, Symptoms, and Anxiety*, 720b-721a; 737b-738a; 752a / *Civilization and Its Discontents*, 782a-d [fn 1]; 784d-785a / *New Introductory Lectures*, 840a-853b esp 843d 844c, 846a-850a, 850d-851d

4c. Man's rational powers: the problem of similar powers in other animals

7 PLATO: *Laches*, 35b-c / *Republic*, BK III, 338a-339a; BK IV, 352b-353d / *Timaeus*, 452c-454a / *Theaetetus*, 535b-536a / *Laws*, BK II, 653a-c; BK VII, 723c-d
8 ARISTOTLE: *Topics*, BK V, CH 3 [132^a17-22] 183a / *Metaphysics*, BK I, CH 1 [980^b25-27] 499b; BK IX, CH 2 571c-572a; CH 5 573a-c; CH 7 [1049^a5-12] 574c-d / *Soul*, BK II, CH 3 [414^b17-20] 644d; [415^a7-12] 645b; BK III, CH 3-8 659c-664d; CH 10 [433^a8-13] 665d / *Memory and Reminiscence*, CH 2 [453^a5-14] 695b
9 ARISTOTLE: *History of Animals*, BK I, CH 1 [488^b20-27] 9d; BK IV, CH 9 [536^b1-8] 63a-b; BK VIII, CH 1 [588^a18-$^b4$] 114b,d / *Parts of Animals*, BK I, CH 1 [641^b5-10] 164b-c; BK II, CH 16 [659^b28]-CH 17 [660^b3] 186d-187c; BK III, CH 6 [669^a18-20] 197c; CH 10 [673^a4-10] 201d-202a; BK IV, CH 10 [686^a25-687^b5] 217d-219a / *Generation of Animals*, BK V, CH 7 [786^b15-22] 328c-d / *Ethics*, BK I, CH 7 [1097^b23-1098^a20] 343a-c; CH 13 [1102^b13-1103^a3] 348a-c; BK III, CH 2 [1111^b6-9] 357b; BK VI, CH 1 [1138^b35]-CH 2 [1139^b14] 387b-388b; BK VII, CH 3 [1147^b2-5] 397d; BK IX, CH 9 [1170^a16-18] 423d-424a; BK X, CH 7-8 431d-434a passim, esp CH 7 [1177^b26-1178^a8] 432c, CH 8 [1178^b23-31] 433c / *Politics*, BK I, CH 2 [1253^a 7-18] 446b-c; BK VII, CH 13 [1332^a39-$^b10$] 537a-b; CH 15 [1334^b8-28] 539b-d / *Rhetoric*, BK I, CH 1 [1355^b1-3] 594d
10 GALEN: *Natural Faculties*, BK I, CH 12, 173a-c
12 EPICTETUS: *Discourses*, BK I, CH 6 110c-112b; CH 28, 134a-c; BK II, CH 8, 146a-b; CH 11 150a-151b; BK III, CH 7, 183c-184a; BK IV, CH 6-7, 231d-233b; CH 7, 234d-235a
12 AURELIUS: *Meditations*, BK III, SECT 16 262d-263a,c; BK V, SECT 16 271c-d; BK VI, SECT 23 276b; BK VIII, SECT 7 286a; SECT 41 288d; BK IX, SECT 8-9 292b-d; BK XI, SECT 1 302a-b
17 PLOTINUS: *Third Ennead*, TR IV, CH 2 97d-98a / *Fifth Ennead*, TR I, CH 10, 213d-214a
18 AUGUSTINE: *City of God*, BK V, CH 11 216c-d; BK VII, CH 23, 256b-c; BK XII, CH 23, 357d / *Christian Doctrine*, BK I, CH 8 626c-627a
19 AQUINAS: *Summa Theologica*, PART I, Q 3, A 1, REP 2 14b-15b; Q 7, A 2, REP 2 31d-32c; Q 59, A 3, ANS 308b-309a; Q 76, A 5, REP 4 394c-396a; Q 78, A 1, ANS 407b-409a; A 4, ANS and REP 4-6 411d-413d; Q 79 413d-427a; Q 80, A 2 428a-d; Q 81, A 3 430c-431d; QQ 82-89 431d-480c; Q 96, A 2 511b-d; Q 118, A 2, ANS 601c-603b; PART I-II, Q 12, A 5 672a-c; Q 13, A 2 673c-674c; Q 15, A 2 682a-c; Q 17, A 2 687d-688b
20 AQUINAS: *Summa Theologica*, PART I-II, Q 50, A 3, REP 2 8b-9a; AA 4-5 9a-10d
21 DANTE: *Divine Comedy*, PURGATORY, XVIII [19-75] 80a-c; XXV [34-84] 91d-92b
23 HOBBES: *Leviathan*, PART I, 52b; 53a-b; 54a; 57d; 59b; 63a; PART II, 100a-c
25 MONTAIGNE: *Essays*, 119b-d; 184a-c
27 SHAKESPEARE: *Hamlet*, ACT IV, SC IV [32-39] 59a
28 HARVEY: *On Animal Generation*, 427d-428a
30 BACON: *Novum Organum*, BK II, APH 35, 163d-164a
31 DESCARTES: *Rules*, XII, 19a-20d / *Discourse*, PART I, 41b,d; PART IV, 51d-52a; PART V, 56a-b; 59c-60b / *Meditations*, 71b-d; II 77d-81d / *Objections and Replies*, 156a-d; 209b-c; 226a-d
31 SPINOZA: *Ethics*, PART II, AXIOM 2 373d; PART III, PROP 57, SCHOL 415b
32 MILTON: *Paradise Lost*, BK VII [499-528] 228a-b; BK VIII [369-451] 240a-242a; BK IX [549-566] 259b
33 PASCAL: *Pensées*, 339-349 233a-234a; 365 236a / *Vacuum*, 357a-358a
35 LOCKE: *Human Understanding*, INTRO, SECT 1 93a-b; BK I, CH 1, SECT 1 95b,d-96a; CH III, SECT 12 115b-116a; SECT 17 117a-c; SECT 23 119b-120a; SECT 25 120c-d; BK II, CH VI 131b-c; CH XI 143d-147b esp SECT 8-11 145b-

146a; CH XXI, SECT 5–6 179c-180a; SECT 15–16 181c-182a; CH XXVII, SECT 12 223a-b; BK IV, CH XIV, SECT 3–4 364d-365a; CH XVII, SECT 1–3 371c-372b

35 HUME: *Human Understanding*, SECT VIII, DIV 62 478b-c

38 MONTESQUIEU: *Spirit of Laws*, BK I, 1d-2b

38 ROUSSEAU: *Inequality*, 337d-338c; 349b-c / *Social Contract*, BK I, 393b-c

39 SMITH: *Wealth of Nations*, BK I, 6d-8b

41 GIBBON: *Decline and Fall*, 150c

42 KANT: *Pure Reason*, 164a-165c; 199c-200c / *Fund. Prin. Metaphysic of Morals*, 264d-265a; 271c-d; 279b; 281c-282c; 284d-285a / *Practical Reason*, 303b-d; 316c-317a / *Pref. Metaphysical Elements of Ethics*, 372a-b / *Judgement*, 465c-467a esp 466a-c; 474b-475d; 479a-d; 522b; 568c-575b esp 568c-d, 570c-571c, 572b-575b; 584d-585c; 587d-588a; 602b,d [fn 1]

43 MILL: *Liberty*, 294a-297b

46 HEGEL: *Philosophy of Right*, ADDITIONS, 4–5 116a-117a; 121 136c-d / *Philosophy of History*, INTRO, 156c; 168b-d; 186a; PART I, 257d-258a; PART III, 304d-305b

49 DARWIN: *Descent of Man*, 278a-b; 287a-b; 292a-294c; 296c-300a esp 297d-298a, 299b; 312a-313a; 319c; 331b-332a; 591d-592a

50 MARX: *Capital*, 85a-d

51 TOLSTOY: *War and Peace*, EPILOGUE II, 689c-690a

53 JAMES: *Psychology*, 85a-b; 184a-187b esp 186a-187a; 664a-693b esp 664a-b, 677a-686b, 691a; 873a

54 FREUD: *Interpretation of Dreams*, 363b-364b; 367b-c; 377c-379c esp 379a-b; 384c-385c / *Unconscious*, 429c-d / *General Introduction*, 532a

4d. The general theory of faculties: the critique of faculty psychology

8 ARISTOTLE: *Soul*, BK II, CH 2–3 643a-645b; CH 5 [417^{a}21–418^{a}6] 647d-648d; BK III, CH 9 664d-665c

10 GALEN: *Natural Faculties*, BK I, CH 1–2, 167a-b; CH 4 169a

19 AQUINAS: *Summa Theologica*, PART I, Q 77 399b-407a; Q 78, A 1 407b-409a; A 4, ANS 411d-413d; Q 83, A 2, REP 2 438a-d

20 AQUINAS: *Summa Theologica*, PART I-II, Q 49, A 3, ANS and REP 2 4b-5a; A 4 5a-6a; Q 50, A 2 7c-8a; Q 54, A 1 22d-23d; Q 56, A 1, ANS 30a-c; Q 110, A 4 350d-351d

21 DANTE: *Divine Comedy*, PURGATORY, IV [1–18] 57c

30 BACON: *Advancement of Learning*, 49d-50b esp 50b; 54b

31 DESCARTES: *Rules*, XII, 18b-20d / *Meditations*, IV 89a-93a; VI, 98d-99a; 101d-102a / *Objections and Replies*, 135b-c

31 SPINOZA: *Ethics*, PART II, PROP 48–49 391a-394d

35 LOCKE: *Human Understanding*, BK I, CH I, SECT 1 95b,d-96a; CH III, SECT 12 115b-116a; SECT 17 117a-c; SECT 23 119b-120a; SECT 25 120c-d; BK II, CH XXI, SECT 6 179d-180a; SECT 15–20 181c-183a

35 HUME: *Human Understanding*, SECT I, DIV 8, 454b-c

42 KANT: *Judgement*, 461a-475d esp 466a-c, 474b-475d

53 JAMES: *Psychology*, 1a-2a; 17b-18b

5. The order and harmony of man's powers and functions: contradictions in human nature; the higher and lower nature of man

APOCRYPHA: *Wisdom of Solomon*, 9:15—(*D*) OT, *Book of Wisdom*, 9:15

NEW TESTAMENT: *Romans*, 5–8 esp 7:15–25 / *Galatians*, 4–5 / *James*, 4:1–3

7 PLATO: *Phaedo*, 231b-234c / *Republic*, BK IV, 350a-355a; BK IX, 421a-427b; BK X, 431b-434a / *Timaeus*, 466a-c / *Laws*, BK V, 686d-687c

9 ARISTOTLE: *Ethics*, BK I, CH 7 [1097^{b}22–1098^{a}17] 343a-c; BK VII, CH 6 [1150^{a}1–5] 400c

12 EPICTETUS: *Discourses*, BK III, CH 24 203c-210a; BK IV, CH 11 240d-242d

12 AURELIUS: *Meditations*, BK I, SECT 1 253a; BK III, SECT 6 261a-c; BK IV, SECT 27 266a; SECT 39 267a; BK V, SECT 26 272c; BK VII, SECT 13 280c; BK IX, SECT 1 291a-c; SECT 7–8 292b

17 PLOTINUS: *Third Ennead*, TR IV, CH 2 97d-98a / *Fourth Ennead*, TR IV, CH 18 166d-167b / *Sixth Ennead*, TR IV, CH 15, 304c-d

18 AUGUSTINE: *Confessions*, BK VIII, par 10–11, 55d; par 19–24 58b-60a; BK XIII, par 12 113b-d / *City of God*, BK XI, CH 26–28 336d-338d; BK XIII, CH 3 361a-c; CH 15 366c-d

19 AQUINAS: *Summa Theologica*, PART I, Q 77, AA 4–7 403a-406b; Q 95, A 2 507c-508a; PART I-II, Q 13, A 1, ANS 672d-673c; Q 16, A 1 684b-d; Q 17, A 4 688d-689c

20 AQUINAS: *Summa Theologica*, PART I-II, Q 82, A 1 168a-d; A 4, REP 1 170b-171a; Q 85, A 1, ANS 178b-179b; Q 91, A 6, ANS 212c-213c

22 CHAUCER: *Manciple's Tale* [17,104–144] 490a-b

23 MACHIAVELLI: *Prince*, CH XVIII, 25a

23 HOBBES: *Leviathan*, PART I, 63a; 85b-86b esp 86b; PART II, 141a-b

25 MONTAIGNE: *Essays*, 105c-107a; 161a; 162b; 326b-327b; 381b-c

27 SHAKESPEARE: *Hamlet*, ACT I, SC IV [23–38] 36a-b / *Troilus and Cressida*, ACT III, SC II [82–106] 121a-b / *King Lear*, ACT IV, SC II [38–50] 270d-271a / *Macbeth*, ACT IV, SC III [1–132] 303b-304d / *Coriolanus*, ACT IV, SC VII [28–57] 384c-d

30 BACON: *Advancement of Learning*, 20c-d

31 DESCARTES: *Objections and Replies*, 207d-208a

33 PASCAL: *Pensées*, 106–117 193b-194b; 125–183 195b-204b; 396–424 240b-243b; 532 265a

36 SWIFT: *Gulliver*, PART IV, 151b-152a

(5. *The order and harmony of man's powers and functions: contradictions in human nature; the higher and lower nature of man.*)

37 FIELDING: *Tom Jones*, 198a-c; 205a-c
38 MONTESQUIEU: *Spirit of Laws*, BK I, 1d-2b
38 ROUSSEAU: *Inequality*, 337d-338d
42 KANT: *Pure Reason*, 164a-165c / *Fund. Prin. Metaphysic of Morals*, 282b-283d / *Practical Reason*, 292a-293b; 316c-317a / *Intro. Metaphysic of Morals*, 385c-386b / *Judgement*, 584d-585c; 587a-588a
43 FEDERALIST: NUMBER 55, 174c-d
43 MILL: *Utilitarianism*, 448a-450a
46 HEGEL: *Philosophy of Right*, PART II, par 139 48d-49b / *Philosophy of History*, PART III, 304b-306b
47 GOETHE: *Faust*, PART I [1110-1117] 27b-28a; [3217-3250] 79a-b
48 MELVILLE: *Moby Dick*, 204b-205a
49 DARWIN: *Descent of Man*, 304a-305a; 316a-317a
51 TOLSTOY: *War and Peace*, BK VIII, 304b-305a
53 JAMES: *Psychology*, 1a-b; 188b-191a; 717a
54 FREUD: *Interpretation of Dreams*, 377c-382a, esp 379c-d / *General Introduction*, 590c-d; 592b-593b; 615c-616c esp 616b-c / *Beyond the Pleasure Principle*, 640b-d / *Group Psychology*, 689d-690c / *Ego and Id*, 699a-c; 711b / *Inhibitions, Symptoms, and Anxiety*, 746c-747b esp 747a / *New Introductory Lectures*, 830a-832c; 834b-c

5*a*. Cooperation or conflict among man's powers

NEW TESTAMENT: *Matthew*, 5:29-30; 26:41 / *Mark*, 9:43-47; 14:38—(*D*) *Mark*, 9:42-46; 14:38 / *Romans*, 7:18-23 / *Galatians*, 5:16-26 / *Ephesians*, 4:17-18 / *I Peter*, 2:11
7 PLATO: *Phaedrus*, 128a-d / *Republic*, BK I, 308b-309b; BK III, 338a-339a; BK IV, 346a-355a; BK IX, 425c-427b / *Timaeus*, 453b-454a; 474b-d; 476a-b / *Laws*, BK I, 641a-b; 649d-650b
8 ARISTOTLE: *Soul*, BK III, CH 6-13 662d-668d
9 ARISTOTLE: *Motion of Animals*, CH 11 239a-d / *Ethics*, BK I, CH 7 [1098^a3-7] 343b; CH 13 347b-348d; BK V, CH 11 [1138^b5-13] 387a,c; BK IX, CH 4 [1166^b12-24] 419d-420a / *Politics*, BK I, CH 5 [1254^a33-$^b8$] 448a
12 EPICTETUS: *Discourses*, BK I, CH 2-5 106d-110c; BK III, CH 2, 177c-178a; CH 15 190a-191a; CH 24 203c-210a; BK IV, CH 1 213a-223d
12 AURELIUS: *Meditations*, BK I, SECT 1 253a; BK IV, SECT 33 266c-d; BK VII, SECT 13 280c; SECT 55 283b-c; BK VIII, SECT 1 285a-b; SECT 39 288c; BK IX, SECT 1 291a-c; SECT 8 292b
17 PLOTINUS: *Fourth Ennead*, TR IV, CH 18 166d-167b / *Sixth Ennead*, TR IV, CH 15, 304c-d
18 AUGUSTINE: *Confessions*, BK VIII, par 10-11 55c-56b; par 19-27 58b-60c; BK X, par 39 81b-c; BK XIII, par 47, 123d-124a / *City of God*, BK XIII, CH 3, 361c; CH 15 366c-d; BK XIV, CH 5-10 379c-385d; BK XIX, CH 12-14 517b-520d; CH 21, 524c-525a / *Christian Doctrine*, BK I, CH 24 630c-631a
19 AQUINAS: *Summa Theologica*, PART I, Q 81, A 3 430c-431d; Q 84, A 3, ANS 443d-444d; Q 91, A 3, ANS and REP 1 486b-487d; Q 95, A 1, ANS 506b-507c; A 2 507c-508a; Q 96, A 2 511b-d; PART I-II, Q 37, A 1, ANS 783d-784c
20 AQUINAS: *Summa Theologica*, PART I-II, Q 77, AA 1-2 145a-147c; QQ 82-83 168a-174b; PART II-II, Q 29, A 1, ANS 530b-531a; A 2 531a-d; PART III, Q 15, A 9, REP 3 794c-795b; PART III SUPPL, Q 96, A 11 1063d-1064d
21 DANTE: *Divine Comedy*, PURGATORY, IV [1-18] 57c
22 CHAUCER: *Parson's Tale*, par 12, 503b
23 HOBBES: *Leviathan*, CONCLUSION, 279a-c
25 MONTAIGNE: *Essays*, 5a-6c; 36c-41a esp 39b-40a; 159a-162c; 274d-276a; 344a-347c; 405c-406a
26 SHAKESPEARE: *Richard II* 320a-351d esp ACT V, SC V [1-41] 349d-350a / *Merchant of Venice*, ACT I, SC II [11-24] 408b-c
27 SHAKESPEARE: *Othello*, ACT I, SC III [329-337] 212c
28 HARVEY: *On Animal Generation*, 347c-d
30 BACON: *Advancement of Learning*, 72b; 78a-d
31 DESCARTES: *Meditations*, I 75a-77c; IV 89a-93a esp 90b-91b; VI, 102d-103a / *Objections and Replies*, 155d-156a; 207d-208a; 209c
31 SPINOZA: *Ethics*, PART III, PROP 1-2 396a-398b; PART IV, PROP 7, COROL 426b; PROP 60 442d-443a
32 MILTON: *Paradise Lost*, BK VIII [561-594] 244b-245a; BK XI [466-543] 309b-311a
33 PASCAL: *Pensées*, 125-131 195b; 411-413 242a
36 STERNE: *Tristram Shandy*, 239b
38 ROUSSEAU: *Social Contract*, BK I, 393b-c
40 GIBBON: *Decline and Fall*, 192b
42 KANT: *Fund. Prin. Metaphysic of Morals*, 282b-283d / *Pref. Metaphysical Elements of Ethics*, 368d-369a / *Intro. Metaphysic of Morals*, 390b,d-394a,c / *Judgement*, 509c-d
43 MILL: *Liberty*, 293b-302c passim / *Utilitarianism*, 448a-450a
44 BOSWELL: *Johnson*, 135c-d; 455a
47 GOETHE: *Faust*, PART I [354-521] 11a-15a; [1110-1117] 27b-28a; [3217-3250] 79a-b
49 DARWIN: *Descent of Man*, 311a-314b esp 312a-313a, 313d-314b; 318d-319a
51 TOLSTOY: *War and Peace*, BK I, 15a-b; BK VI, 235a-238c; BK XII, 554b-555c; BK XIII, 577a-578b; BK XIV, 605b-d; BK XV, 630c-631a
52 DOSTOEVSKY: *Brothers Karamazov*, BK II, 39a-40a, BK III, 53b-54b; BK IV, 95b-100c; BK V, 127b-137c passim; BK VI, 164b-d
53 JAMES: *Psychology*, 199b-204b esp 199b-200b; 717a-718a; 734b-735a; 799a-800a
54 FREUD: *Interpretation of Dreams*, 370b; 379a-380d / *Narcissism*, 407a-408a; 409d-410b /

Unconscious, 433c / *General Introduction*, 589c-591a; 635b-c / *Ego and Id*, 702c-d; 704a-d; 708d-712a passim, esp 711c-d; 715b-716c / *Inhibitions, Symptoms, and Anxiety*, 720a-722c esp 721d-722c / *Civilization and Its Discontents*, 785b [fn 1]; 787a-788b; 790a-791d; 797c-799a; 800d-801a / *New Introductory Lectures*, 837d-839b

5b. Abnormalities due to defect or conflict of powers: feeble-mindedness, neuroses, insanity, madness

5 AESCHYLUS: *Choephoroe* [1021-1076] 80a-d
5 SOPHOCLES: *Ajax* 143a-155a,c esp [1-330] 143a-146a
5 EURIPIDES: *Orestes* 394a-410d esp [1-423] 394a-398b
6 HERODOTUS: *History*, BK III, 96b-98a
7 PLATO: *Republic*, BK IX, 416a-417b / *Timaeus*, 474b-d / *Laws*, BK VI, 712b
8 ARISTOTLE: *Categories*, CH 8 [9^b34-10^a6] 15a
9 ARISTOTLE: *Parts of Animals*, BK IV, CH 10 [686^b22-29] 218b-c / *Ethics*, BK III, CH 10 [1118^a17-$^b7$] 364d-365a; BK VII, CH 1 [1145^a27-33] 395a b; CH 3 [1147^a10-19] 397b; CH 5 399a-d; CH 6 [1149^b24-1150^a8] 400b-c
12 EPICTETUS: *Discourses*, BK I, CH 5 110b-c; BK II, CH 15 155c-156b
12 AURELIUS: *Meditations*, BK III, SECT 1 259b,d
13 VIRGIL: *Aeneid*, BK VII [323-405] 245a-247b
19 AQUINAS: *Summa Theologica*, PART I, Q 84, A 7, ANS 449b-450b; Q 115, A 5, REP 1 590d-591c; PART I-II, Q 6, A 7, REP 3 650a-d; Q 10, A 3, ANS and REP 2 664d-665c; Q 24, A 2 727d-728c; Q 28, A 3, ANS and REP 1 742a-d; Q 31, A 7 757c-758b; Q 37, A 4, REP 3 785d-786d
23 HOBBES: *Leviathan*, PART I, 66d-67b; 68b-d; 69b-c
25 MONTAIGNE: *Essays*, 5a-6c; 10b-11b; 25c-26d; 36c-41a; 166a-167a; 235b-c; 274d-276a; 316b-c
26 SHAKESPEARE: *Richard III* 105a-148a,c
27 SHAKESPEARE: *Hamlet*, ACT IV, SC V 59c-62a; ACT V, SC II [236-255] 70b c / *Othello*, ACT IV, SC I [1-59] 229d-230b / *King Lear*, ACT IV, SC IV [1-19] 272b-c; SC VII [16-82] 276d-277c / *Macbeth*, ACT V, SC I 306b-307a; SC III [37-56] 308a-b
28 HARVEY: *On Animal Generation*, 347c-d
29 CERVANTES: *Don Quixote* esp PART I, 1a-3b, PART II, 205a-209d
31 DESCARTES: *Objections and Replies*, 155d-156a
35 LOCKE: *Civil Government*, CH VI, SECT 60 37d-38a / *Human Understanding*, BK II, CH XI, SECT 12-13 146a-c; BK IV, CH IV, SECT 13-16 326d-328d esp SECT 13 326d-327a
37 FIELDING: *Tom Jones*, 109c
44 BOSWELL: *Johnson*, 13a-14a; 214b-c; 354c-355a
47 GOETHE: *Faust*, PART I [4405-4612] 110a-114b
48 MELVILLE: *Moby Dick*, 122b-124a; 136a-b; 232a-236a; 380b-381a; 388b-389a
49 DARWIN: *Descent of Man*, 299c
51 TOLSTOY: *War and Peace*, BK XI, 510b-d; 515a-517a; 524c-527a; BK XV, 616a-617a
52 DOSTOEVSKY: *Brothers Karamazov*, BK II, 21d-22b; BK XI, 337a-348d; BK XII, 364b-369a
53 JAMES: *Psychology*, 23b-26b esp 25b-26b; 32a-34a; 35b-37a; 132a-137b esp 137a; 147b-149a; 241b-258b esp 242a, 244b, 251b-252a, 258a-b; 749a-750b; 753b-754b; 799b-807a; 818a-819a; 828b-829a
54 FREUD: *Origin and Development of Psycho-Analysis*, 7a-8b / *Hysteria*, 35b-c; 52d-53c; 81d-86c; 97b-106c; 111a-115a / *Interpretation of Dreams*, 176a-d; 328c; 364c-d; 370b-c; 380d-382a / *Narcissism*, 409c-d / *Unconscious* 433c / *General Introduction*, 558a-c; 585b 623b esp 586a-592b, 593c-595b, 600b-c, 604c-606a, 616b-c, 623a-b; 624b-d; 627a-b; 635b-c / *Group Psychology*, 690a-691c / *Ego and Id*, 713a-715a / *Inhibitions, Symptoms, and Anxiety*, 721c; 722b-723d; 728b-731d passim; 746c-748a / *New Introductory Lectures*, 812a; 830d-832a; 872a-d

6. Individual differences among men

6a. The cause and range of human inequalities: differences in ability, inclination, temperament, habit

APOCRYPHA: *Ecclesiasticus*, 33:10-15; 38:24-34—(*D*) OT, *Ecclesiasticus*, 33:10-15; 38:25-39
NEW TESTAMENT: *Romans*, 12:3-8 / *I Corinthians*, 12 / *II Timothy*, 2:20-21
4 HOMER: *Iliad*, BK XIII [723-734] 95d-96a / *Odyssey*, BK VIII [165-185] 223d-224a; BK XIV [199-232] 262b-c
5 SOPHOCLES. *Ajax* [1226-1263] 153c-154a
5 EURIPIDES: *Rhesus* [105-108] 204a / *Electra* [358-400] 330b-d / *Heracles Mad* [632-636] 370c / *Iphigenia at Aulis* [558-572] 429d-430a
5 ARISTOPHANES: *Frogs* [1482-1499] 581d-582a
6 THUCYDIDES: *Peloponnesian War*, BK I, 370a-c; 383d-384a; BK III, 425b-c
7 PLATO: *Euthydemus*, 70c / *Gorgias*, 274a-275c / *Republic*, BK II, 316c-320c; BK III, 329c-330a; 339b-341a; BK V, 357b-360d; BK VI, 373c-375b; 383c-d; BK VIII, 404a-405c; BK IX, 421a-c / *Theaetetus*, 540c-541a / *Statesman*, 605d-608a / *Laws*, BK VI, 699d-700b; 704a-c / *Seventh Letter*, 809c-810d esp 810c
8 ARISTOTLE: *Categories*, CH 8 [8^b25-9^a13] 13d-14a; [9^b9-10^a10] 14c-15a / *Posterior Analytics*, BK I, CH 34 122c / *Memory and Reminiscence*, CH 1 [449^b3-9] 690a; [450^a25-$^b12$] 691a-c
9 ARISTOTLE: *History of Animals*, BK VII, CH 1 [582^a5-16] 107c-d; CH 2 [583^a4-14] 108c / *Parts of Animals*, BK IV, CH 10 [686^b22-29] 218b-c / *Generation of Animals*, BK I, CH 18 [725^b25-726^a6] 266a; BK IV, CH 3 [767^a35-

(6. Individual differences among men. 6a. The cause and range of human inequalities: differences in ability, inclination, temperament, habit.)

769[b]10] 308d-311b / *Ethics*, BK III, CH 5 359c-361a passim, esp [1114[a]32-[b]25] 360c-d; BK VI, CH 13 [1144[b]1-14] 394b; BK VII, CH 7 400d-401c / *Politics*, BK I, CH 5-6 447d-449b; BK III, CH 13 481b-483a; CH 17 486c-487a; BK V, CH 12 [1316[a]1-10] 518d-519a / *Rhetoric*, BK I, CH 6 [1363[b]1-3] 604c; CH 9 [1367[a]32-[b]8] 610a-b; CH 10 [1369[a]5-28] 612b-c; CH 12 [1372[b]8-1373[a]17] 616b-617a; CH 15 [1377[a]6-8] 621d; BK II, CH 2 [1378[b]28-1379[a]3] 623d-624a; CH 5 [1382[b]19-22] 628d; CH 16-17 638b-639a; BK III, CH 7 [1408[a]27-33] 659b-c

10 HIPPOCRATES: *Airs, Waters, Places*, par 3-7 9c-12a; par 10 13b-14a; par 12-24 14b-19a,c / *Epidemics*, BK III, SECT III, par 14 59b / *Sacred Disease*, 155d-156a

12 LUCRETIUS: *Nature of Things*, BK III [231-322] 33a-34b

12 EPICTETUS: *Discourses*, BK I, CH 2-3 106d-108c; CH 5, 110b; BK II, CH 15, 156a-b; BK III, CH 6, 182a-b; CH 24, 203c-206a

13 VIRGIL: *Aeneid*, BK XI [243-295] 334b-336a

14 PLUTARCH: *Pompey*, 512c-d

17 PLOTINUS: *First Ennead*, TR III, CH 1-3 10a-11a / *Fourth Ennead*, TR IV, CH 17, 166d / *Fifth Ennead*, TR IX, CH 1 246c-d

19 AQUINAS: *Summa Theologica*, PART I, Q 85, A 7 459c-460b; Q 96, AA 3-4 512a-513c; Q 113, A 2, REP 3 576d-577d; PART I-II, Q 46, A 5, ANS 815d-816d

21 DANTE: *Divine Comedy*, PURGATORY, VII [121-123] 64a; PARADISE, VIII [91-148] 117d-118c

22 CHAUCER: *Troilus and Cressida*, BK II, STANZA 5-7 22a-b / *Tale of Wife of Bath* [6691-6788] 274b-276a / *Clerk's Tale* [8269-8317] 302b-303a / *Parson's Tale*, par 27-28, 514b-515a

23 HOBBES: *Leviathan*, PART I, 60a-61a; 61c-d; 66d-67a; 67d-68c; 71a; 84c-d; 94b-c; PART II, 112d; 154a

25 MONTAIGNE: *Essays*, 17c-18c; 60a-c; 63d-64b; 71d-72b; 126b-127c; 150b-151a; 240a-c; 264b-265a; 279b-c; 310d-312a; 317b-c; 367b-368a; 451a-c; 491d-493a; 513a-514a

26 SHAKESPEARE: *Merchant of Venice*, ACT I, SC I [1-104] 406a-407b; SC II [39-133] 408c-409b; ACT IV, SC I [40-62] 426a / *1st Henry IV*, ACT I, SC III [1-21] 437d-438a; ACT III, SC I [165-191] 451d-452a; SC II [93-161] 453d-454c / *2nd Henry IV*, ACT IV, SC III [92-135] 492b-c / *Much Ado About Nothing*, ACT I, SC III [1-41] 506d-507a; ACT III, SC I [47-116] 514d-515c / *Julius Caesar*, ACT I, SC II [33-47] 569d; [97-161] 570b-571a; [192-214] 571b-c; SC III [89-111] 573c-d; ACT IV, SC I [1-40] 587a-c; SC III [1-123] 588b-589c; ACT V, SC V [68-75] 596a,c / *As You Like It*, ACT IV, SC I [1-20] 617a-b

27 SHAKESPEARE: *Hamlet*, ACT I, SC II [66-86] 32b; ACT II, SC II [307-324] 43d; ACT IV, SC IV [31-66] 59a-c / *Troilus and Cressida*, ACT I, SC II [19-31] 105b; [201-270] 106d-107c / *Macbeth*, ACT III, SC I [92-108] 295d-296a / *Antony and Cleopatra*, ACT II, SC III [10-39] 321c-d; ACT V, SC II [76-100] 347a-b / *Cymbeline*, ACT IV, SC II [2-5] 472c

30 BACON: *Advancement of Learning*, 76a-78a / *Novum Organum*, BK I, APH 42 109d; APH 53-58 111c-112b

31 DESCARTES: *Discourse*, PART I, 41b,d / *Meditations*, 70b-d

33 PASCAL: *Pensées*, 7 173a; 97 190b

35 LOCKE: *Civil Government*, CH VI, SECT 54 36c / *Human Understanding*, BK II, CH X, SECT 8 142d-143a; CH XI, SECT 2 144a-c; BK III, CH VI, SECT 26-27 274d-276a

35 HUME: *Human Understanding*, SECT VIII, DIV 66 480b-c; SECT IX, DIV 84, 488b,d [fn 1]

36 STERNE: *Tristram Shandy*, 191b-192b; 269b-273a

37 FIELDING: *Tom Jones*, 274a-b

38 MONTESQUIEU: *Spirit of Laws*, BK I, 2b-d passim; BK VIII, 52a; BK XIV, 102b,d-104a; BK XV, 111a-b

38 ROUSSEAU: *Inequality* 323a-366d esp 329a-334a,c, 347a-b, 348b,d-363a,c / *Social Contract*, BK I, 387b,d-390d esp 388b-c; 394d; BK III, 411c-412c

39 SMITH: *Wealth of Nations*, BK I, 7d-8a; 54d-55b; 71b-d; BK V, 340c-343d

40 GIBBON: *Decline and Fall*, 343c-d

41 GIBBON: *Decline and Fall*, 31b,d-32a

42 KANT: *Judgement*, 525c-532a esp 526a-d, 528c-530c; 586a-587a

43 FEDERALIST: NUMBER 10, 50b-c

43 MILL: *Liberty*, 293b-302c passim / *Representative Government*, 336b-c; 346c-348c; 384a-387d / *Utilitarianism*, 448a-449c; 472d-473a

44 BOSWELL: *Johnson*, 8a-c; 110d; 124d-125d; 145d-146a; 283c; 413c-d

46 HEGEL: *Philosophy of Right*, PART III, par 200 67c-68a; ADDITIONS, 126 137a-b / *Philosophy of History*, INTRO, 166b-168a; 184b-d; 196d-199d; PART I, 222d; 250a-c; PART III, 289b-d

47 GOETHE: *Faust*, PART I [1064-1141] 26b-28a

48 MELVILLE: *Moby Dick*, 54b-55a; 59a-60b; 83a-88b; 107a-b; 117a-131a; 137b-138a; 317a-321a; 417b-418a

49 DARWIN: *Descent of Man*, 266a-271a

50 MARX: *Capital*, 25c-d

51 TOLSTOY: *War and Peace*, BK I, 15a-b; 53c-d; BK V, 215b-c; BK VII, 278c; 281a-d; 283d-284a; BK IX, 349d; BK XI, 480a-482b; BK XIII, 576a-b; 578b; BK XV, 632d-633a

52 DOSTOEVSKY: *Brothers Karamazov* esp BK I 1a-15a,c, BK II, 18b-21b, 32d-37b, 38d-40b, 41c-45d, BK III, 53c-62a, 63d-64c, BK IV, 91c-92b, 95b-100c, 105c-107a, BK V, 109a-114b, BK VII, 180a-189a, BK X, 272a-274d, BK XI, 368a-c, BK XII, 370b-372d, 373c-374b, 376b-

d, 380d-382b, 393a-c, 395d-396a, EPILOGUE, 402a-404c
53 JAMES: *Psychology*, 14b-15a; 197b-198a; 201b-202a; 274a-275a; 315a-b; 345b; 381a; 431b-432a; 448a-b; 484a-496b; 686b-690a; 691a-b; 692b-693a; 759b-760b; 795b; 797a; 798b-801a; 826a-827a; 856b-858a
54 FREUD: *Origin and Development of Psycho-Analysis*, 18c-d / *General Introduction*, 594d-595b; 600b-c / *Group Psychology*, 681b / *Inhibitions, Symptoms, and Anxiety*, 744b-745b / *War and Death*, 758d-759c / *Civilization and Its Discontents*, 775c-776a; 787d-788b [fn 3]

6b. The differences between men and women: their equality or inequality

OLD TESTAMENT: *Genesis*, 1:26-30; 2:18-25; 3:16; 5:1-2
NEW TESTAMENT: *I Corinthians*, 11:1-16; 14:34-35 / *Galatians*, 3:28 / *Ephesians*, 5:22-33 / *Colossians*, 3:18-19 / *I Timothy*, 2:9-15 / *I Peter*, 3:1-7
5 AESCHYLUS: *Seven Against Thebes* [181-202] 29a-b
5 EURIPIDES: *Medea* [263-266] 214b; [401-430] 215c-a; [1086-1092] 221b / *Andromache* [269-273] 317c-d; [929-953] 323a-b / *Hecuba* [1177-1186] 362d-363a / *Phoenician Maidens* [193-201] 379d / *Iphigenia Among the Tauri* [1052-1066] 420c / *Iphigenia at Aulis* [558-572] 429d-430a
5 ARISTOPHANES: *Lysistrata* 583a-599a,c / *Thesmophoriazusae* [785-847] 609b-610b / *Ecclesiazusae* 615a-628d
6 HERODOTUS: *History*, BK II, 56c; BK IV, 153a-b; BK VIII, 275b; BK IX, 311a-b
7 PLATO: *Cratylus*, 89d-90a / *Symposium*, 157b-158b / *Meno*, 174d-175c / *Apology*, 208d-209a / *Republic*, BK V, 357b-360d; BK VII, 401b-c / *Timaeus*, 442d; 452d-453a; 476b-d / *Critias*, 480a / *Laws*, BK VI, 711b-d; BK VII, 720d-721a; 721d-722d; BK VIII, 734a-735a
8 ARISTOTLE: *Metaphysics*, BK X, CH 9 586a-c
9 ARISTOTLE: *History of Animals*, BK I, CH 7 [491^{b}3-5] 13a; BK II, CH 3 [501^{b}20-22] 24a; BK III, CH 20 [522^{a}12-22] 47a-b; BK IV, CH 11 [538^{a}22-^{b}15] 64d-65a,c; BK V, CH 8 [542^{a}32-33] 69a; CH 14 [545^{b}26-30] 72c; BK VII, CH 3 [583^{b}14-29] 109b-c; BK IX, CH 1 [608^{a}21-^{b}20] 133b,d-134a / *Generation of Animals*, BK I, CH 19-20 266c-269c; BK IV, CH 6 [775^{a}5-27] 317a-b; BK V, CH 3 [783^{b}8-784^{a}10] 325c-326a / *Ethics*, BK VII, CH 7 [1150^{b}1-4] 401a-b; [1150^{b}12-16] 401b; BK VIII, CH 7 [1158^{b}12-29] 410c-d; CH 10 [1160^{b}32-1161^{a}2] 413a-b; CH 11 [1161^{a}23-24] 413c; CH 12 [1162^{a}15-29] 414c-d / *Politics*, BK I, CH 2 [1252^{a}26-^{b}9] 445c-d; CH 5 [1254^{b}13-15] 448b; CH 12 453d-454a; CH 13 [1259^{b}29-1260^{a}31] 454b-d; BK II, CH 5 [1264^{b}1-7] 459d / *Rhetoric*, BK I, CH 5 [1360^{b}38-1361^{a}12] 601b-c; CH 9 [1367^{a}17-18] 609d; BK III, CH 7 [1408^{a}27-29] 659b-c / *Poetics*, CH 15 [1454^{a}15-24] 689a-b
10 HIPPOCRATES: *Aphorisms*, SECT VII, par 43 142d
12 LUCRETIUS: *Nature of Things*, BK V [1350-1360] 78c-d
12 EPICTETUS: *Discourses*, BK I, CH 16, 122b-c
13 VIRGIL: *Aeneid*, BK IV [554-570] 182b-183a
14 PLUTARCH: *Lycurgus-Numa*, 62d-63c
15 TACITUS: *Annals*, BK III, 53a-b / *Histories*, BK IV, 285d-286a
18 AUGUSTINE: *Confessions*, BK XIII, par 47, 123d-124a / *City of God*, BK XII, CH 21 357a-b; BK XIX, CH 14, 520c-d; BK XXII, CH 17 603a-c
19 AQUINAS: *Summa Theologica*, PART I, Q 92 488d-491d; Q 93, A 4, REP 1 494c-495b; A 6, REP 2 496b-498a; Q 96, A 3, ANS 512a-c; Q 99, A 2 520a-d; Q 115, A 3, REP 4 588c-589c
20 AQUINAS: *Summa Theologica*, PART III SUPPL, Q 81, A 3 966a-c
22 CHAUCER: *Wife of Bath's Prologue* 256a-270a / *Tale of Wife of Bath* 270a-277a esp [6612-6627] 273a-b / *Clerk's Tale* [8808-8814] 312b / *Merchant's Tale* [10,110-164] 335b-336a / *Tale of Melibeus*, par 14-16 405a-407b / *Nun's Priest's Tale* [15,258-272] 457a
23 HOBBES: *Leviathan*, PART II, 109c-110a
24 RABELAIS: *Gargantua and Pantagruel*, BK III, 159b-d; 164d-165c; 191c-193c; 195a-196b
25 MONTAIGNE: *Essays*, 84a-b; 188c-191c; 399c-d; 406a-434d passim
26 SHAKESPEARE: *3rd Henry VI*, ACT I, SC IV [128-142] 75d-76a / *Comedy of Errors*, ACT II, SC I 152a-153b / *1st Henry IV*, ACT II, SC III [105-115] 444b / *Julius Caesar*, ACT II, SC I [261-309] 577b-c; SC IV 579d-580b
27 SHAKESPEARE: *Hamlet*, ACT III, SC I [122-157] 48b-c / *Troilus and Cressida*, ACT V, SC II [107-112] 136a / *All's Well That Ends Well*, ACT I, SC III [62-94] 146b-c / *Othello*, ACT II, SC I [101-167] 214c-215a; ACT III, SC IV [103-106] 228c; ACT IV, SC III [60-108] 236c-237a / *King Lear*, ACT IV, SC II [59-68] 271a-b; SC VI [109-135] 274c-d / *Cymbeline*, ACT II, SC V 463a-c; ACT III, SC IV [19-35] 466d-467a; [156-168] 468b-c / *Sonnets*, XX 589b
29 CERVANTES: *Don Quixote*, PART I, 123c-124a
30 BACON: *Advancement of Learning*, 84b-c
32 MILTON: *Paradise Lost*, BK IV [288-301] 158b-159a; [440-502] 162a-163a; [634-658] 166a-b; BK VIII [452-594] 242a-245a; BK X [144-156] 277b; [867-936] 293b-294b / *Samson Agonistes* [210-214] 344a; [871-902] 358b-359a; [997-1060] 361b-362b
35 LOCKE: *Civil Government*, CH VII, SECT 82 43b
35 HUME: *Human Understanding*, SECT VIII, DIV 66, 480b
36 SWIFT: *Gulliver*, PART I, 29b-31a; PART III, 98b-99a; PART IV, 163a; 166b
37 FIELDING: *Tom Jones*, 30a-32a esp 30d-31a; 100b-102a; 120c-121a,c; 126d-127b; 203b; 219a-b; 219d-220a; 235b-238d; 283b-c

(6. Individual differences among men. 6b. The differences between men and women: their equality or inequality.)

38 MONTESQUIEU: *Spirit of Laws*, BK VII, 47c; 50d; BK XVI, 116a-c; BK XXIII, 189d-190a; BK XXVI, 217d-218a
38 ROUSSEAU: *Inequality*, 346a / *Political Economy*, 367d-368a
40 GIBBON: *Decline and Fall*, 92d-93b
42 KANT: *Science of Right*, 404d; 419c-420a; 436d-437c
43 CONSTITUTION OF THE U.S.: AMENDMENTS, XIX 19d
43 MILL: *Liberty*, 311a-312a; 317c-d / *Representative Government*, 387d-389b
44 BOSWELL: *Johnson*, 132a; 165b-c; 312a; 312c; 391c-392a; 537a-c
46 HEGEL: *Philosophy of Right*, PART III, par 165-166 59d-60a; ADDITIONS, 104 133d; 106-107 134a-b / *Philosophy of History*, PART I, 222d
47 GOETHE: *Faust*, PART I [3522-3535] 86a; [3978-3985] 97a; PART II [9127-9134] 222a
49 DARWIN: *Descent of Man*, 257c; 264d-265a; 372d-373c; 383b-384d; 562a-567c esp 566a-567b; 584c-585d; 588d-589a
51 TOLSTOY: *War and Peace*, BK I, 51d; BK IV, 184b; BK VI, 263b-264b; BK VII, 287a-b; BK XI, 488b-c; BK XII, 543b-544a; BK XV, 639a-b; EPILOGUE I, 659b; 660d-661b
53 JAMES: *Psychology*, 691b-692a; 720a; 887b [fn 3]
54 FREUD: *Narcissism*, 405b-406a / *Ego and Id*, 705a-706a; 707d / *Civilization and Its Discontents*, 785a [fn 1] / *New Introductory Lectures*, 853b-864a esp 854a-855a, 862a-863c

6c. The ages of man: infancy, youth, maturity, senescence

OLD TESTAMENT: *Genesis*, 17:15-19; 18:9-15; 21:1-8; 27:1 / *Deuteronomy*, 34:7 / *I Kings*, 1:1-4—(*D*) *III Kings*, 1:1-4 / *Job*, 32:6 9 / *Proverbs*, 20:29 / *Isaiah*, 65:20—(*D*) *Isaias*, 65:20
APOCRYPHA: *Ecclesiasticus*, 14:17-18—(*D*) OT, *Ecclesiasticus*, 14:18-19
NEW TESTAMENT: *John*, 21:18 / *I Corinthians*, 13:11
4 HOMER: *Iliad*, BK XXIII [448-499] 165d-166b; [566-649] 167a-168a; [785-792] 169c; BK XXIV 171a-179d esp [349-551] 175a-177a
5 AESCHYLUS: *Agamemnon* [71-82] 52d
5 SOPHOCLES: *Oedipus at Colonus* [1211-1248] 125b-c / *Antigone* [631-767] 136c-137d / *Philoctetes* [96-99] 183a
5 EURIPIDES: *Alcestis* [629-705] 242c-243a
5 ARISTOPHANES: *Acharnians* [676-718] 463a-c
7 PLATO: *Laches*, 31c / *Symposium*, 166a / *Meno*, 174b-175c / *Republic*, BK I, 295d-297b; BK II, 320c-321d; BK IV, 353b-d; BK VI, 380d-381a; BK VII, 398c-401d / *Timaeus*, 471d-472a / *Theaetetus*, 514b-c / *Laws*, BK II, 653b-c; 655b-656c; 659c-d; BK VII, 713d-714a; 723c-d; BK XII, 796a-d / *Seventh Letter*, 802b
8 ARISTOTLE: *Topics*, BK III, CH 2 [117^{a}26-34] 164a / *Physics*, BK VII, CH 3 [247^{b}13-248^{a}6] 330c-d / *Soul*, BK I, CH 4 [408^{b}18-29] 638c / *Memory and Reminiscence*, CH 1 [450^{a}26-^{b}9] 691a-b
9 ARISTOTLE: *History of Animals*, BK II, CH 1 [500^{b}25-501^{a}4] 23a-b; CH 4 24a-b; BK III, CH 11 [518^{a}6-^{b}29] 42c-43c; BK IV, CH 9 [536^{b}5-8] 63a-b; CH 10 [537^{b}14-20] 64b; BK V, CH 14 [544^{b}13-27] 71b-c; [545^{b}26-30] 72c; BK VII, CH 1 106b,d-108a; CH 5 [585^{a}33]-CH 6 [585^{b}29] 111b-d; CH 10 [587^{b}5-18] 113d-114a; BK VIII, CH 1 [588^{a}24-^{b}5] 114b,d / *Parts of Animals*, BK IV, CH 10 [686^{b}5-30] 218a-c / *Gait of Animals*, CH 11 [710^{b}12-18] 248d / *Generation of Animals*, BK I, CH 18 [725^{b}18-25] 265d-266a; CH 19 [727^{a}2-10] 267a-b; BK IV, CH 2 [766^{b}27-34] 308b; CH 6 [775^{a}9-28] 317a-b; CH 8 [776^{b}15-28] 318d-319a; BK V, CH 1 [778^{b}20-779^{b}13] 321a-d; [780^{a}14-^{b}10] 322b-d; CH 3 [781^{b}30-782^{a}20] 324a-b; CH 3 [783^{b}2]-CH 4 [785^{a}7] 325c-327a / *Ethics*, BK I, CH 3 [1094^{b}29-1095^{a}12] 340a-b; CH 9 [1099^{b}33-1100^{a}9] 345b-c; BK III, CH 12 [1119^{a}34-^{b}19] 366a,c; BK VI, CH 8 [1142^{a}12-19] 391b; BK X, CH 3 [1174^{a}1-4] 428b / *Politics*, BK I, CH 13 [1259^{b}29-1260^{a}33] 454b-455a; BK VII, CH 14 [1332^{b}36-41] 537c-d; BK VIII, CH 7 [1342^{b}18-33] 548c / *Rhetoric*, BK I, CH 5 [1361^{b}6-15] 602a-b; BK II, CH 12-14 636a-638a
10 HIPPOCRATES: *Injuries of the Head*, par 18 69a b / *Aphorisms*, SECT I, par 13-14 131d; SECT II, par 39 133c; par 53 133d; SECT III, par 3 134a; par 18 134d; par 24-31 135a-b; SECT VI, par 6 140c; par 29-30 141a; par 57 141d; SECT VII, par 82 144a / *Sacred Disease*, 157b-158b
12 LUCRETIUS: *Nature of Things*, BK III [445-458] 35d-36a; BK IV [1037-1057] 57d; BK V [222-234] 64a
13 VIRGIL: *Aeneid*, BK VIII [152-174] 263a-b; [510-520] 272b-273a
18 AUGUSTINE: *Confessions*, BK I, par 7-13 2c-4c; par 30-31 8b-9a / *City of God*, BK XXI, CH 16 573b-574a
19 AQUINAS: *Summa Theologica*, PART I, Q 77, A 8, REP 3 406b-407a; Q 96, A 3, ANS 512a-c; PART I-II, Q 34, A 1, REP 2 768c-769d; Q 40, A 5, REP 2 795d-796c; A 6 796c-797a
20 AQUINAS: *Summa Theologica*, PART I-II, Q 94, A 1, REP TO CONTRARY 221a-d; PART III SUPPL, Q 70, A 1, REP 7 893d-895d
21 DANTE: *Divine Comedy*, PURGATORY, XVI [85-105] 77d
22 CHAUCER: *Reeve's Prologue* [3862-3896] 224a-b
23 MACHIAVELLI: *Prince*, CH XXV, 36b
23 HOBBES: *Leviathan*, PART I, 53d; 60b; 78b-c
24 RABELAIS: *Gargantua and Pantagruel*, BK I, 14c-19a

25 MONTAIGNE: *Essays*, 43a-c; 63d-64b; 72b-c; 74b; 156d-158a,c; 185d-188d; 339a-d; 394a-395b; 406a-408b; 432d-434a; 535c-536a
26 SHAKESPEARE: *1st Henry VI*, ACT II, SC V [1-16] 12d-13a / *2nd Henry VI*, ACT V, SC I [161-174] 66d / *2nd Henry IV*, ACT III, SC II [321-357] 486d-487a / *Henry V*, ACT I, SC I [22-69] 533b-c / *As You Like It*, ACT II, SC VII [137-166] 608d-609a
27 SHAKESPEARE: *Hamlet*, ACT II, SC II [197-209] 42c-d / *Troilus and Cressida*, ACT II, SC II [163-173] 115b / *King Lear* 244a-283a,c esp ACT I, SC I [291-312] 247c-d, SC II [48-53] 248b-c, [75-79] 248c-d, SC III [12-21] 249d-250b, SC IV [258-344] 252c-253c, ACT II, SC IV [148-158] 260a, ACT IV, SC VII 276c-277d / *Macbeth*, ACT V, SC III [20-28] 307d
28 HARVEY: *On Animal Generation*, 450a-b
30 BACON: *Advancement of Learning*, 70b-c
32 MILTON: *Paradise Lost*, BK XI [527-543] 310b-311a
35 LOCKE: *Civil Government*, CH VI 36a-42a passim
35 HUME: *Human Understanding*, SECT VIII, DIV 66, 480b
36 SWIFT: *Gulliver*, PART III, 127a-128a
36 STERNE: *Tristram Shandy*, 352b-353b
38 MONTESQUIEU: *Spirit of Laws*, BK XXIII, 188a
38 ROUSSEAU: *Inequality*, 336a-b / *Social Contract*, BK I, 387d-388a; BK II, 402d
39 SMITH: *Wealth of Nations*, BK V, 309d-310a
43 FEDERALIST: NUMBER 79, 234c-d
43 MILL: *Liberty*, 271d-272a
44 BOSWELL: *Johnson*, 8b; 55c-56a; 126d; 128b; 146b-d; 360b; 381a; 407d-408a; 422c
46 HEGEL: *Philosophy of History*, INTRO, 169d; 187d-188b; 203d-206a,c; PART I, 222d; 257c-d; PART II, 259a-b
47 GOETHE: *Faust*, PRELUDE I [184-213] 5a-b; [2337-2365] 56b-57a; [4076-4087] 99b; PART II [6685-6818] 164a-166b; [10,331-344] 251b-252a
49 DARWIN: *Descent of Man*, 297b; 562c-563a
51 TOLSTOY: *War and Peace*, BK III, 132b-c; 153d-154b; BK IV, 168d-169b; 171c-d; BK V, 206d-207b; BK VIII, 305b-310d passim; BK X, 391d-394d; 400c-401d; BK XII, 559d; BK XIII, 584c; EPILOGUE I, 659d-660b
52 DOSTOEVSKY: *Brothers Karamazov*, BK I, 7a-8d; BK V, 117c-127b; BK VI, 167c-168a; BK X 272a-297d; EPILOGUE, 411b-412d
53 JAMES: *Psychology*, 206b-207a; 242a; 270a; 409a-b; 413b [fn 2]; 431b-433a; 649b-650a; 711b-717a
54 FREUD: *Origin and Development of Psycho-Analysis*, 15a-16c; 17b-18a / *Sexual Enlightenment of Children* 119a-122a,c passim / *Interpretation of Dreams*, 191b-193a; 238b-246b passim, esp 238c-239a, 241b-c, 243a-c / *Narcissism*, 400a-b; 406b-407c; 410b / *General Introduction*, 495a-496b; 526d-527b; 528d-531d; 572d-576d; 579b-584d; 592c; 594d-599d; 612d-614b / *Beyond the Pleasure Principle*, 641d-643c esp 643b-c; 644d-645a; 651b-c / *Group Psychology*, 685b-686a; 693a-c / *Ego and Id*, 704d-706c / *Inhibitions, Symptoms, and Anxiety*, 725d-726a; 738b-740c; 743a-744a; 746c-747a; 751d-753c / *Civilization and Its Discontents*, 768b-d / *New Introductory Lectures*, 855b-863c esp 855d-858d, 860b-861c; 869a-870c

7. Group variations in human type: racial differences

7a. Biological aspects of racial type

6 HERODOTUS: *History*, BK II, 69b-d; BK III, 91b-c; 113d; 114a-b; BK IV, 128a-c; 131b-c; 143b-c
9 ARISTOTLE: *History of Animals*, BK III, CH 9 [517^{a}12-20] 41c; CH 22 [523^{a}17 19] 48c; BK VII, CH 4 [584^{b}8-15] 110b / *Generation of Animals*, BK II, CH 2 [736^{a}9-13] 276d; BK V, CH 3 [782^{b}30-783^{a}2] 324d-325a
10 HIPPOCRATES: *Airs, Waters, Places*, par 3-7 9c-12a; par 12-15 14b-15c; par 19-24 16c-19a,c
26 SHAKESPEARE: *Titus Andronicus*, ACT IV, SC II [51-127] 188b-189a; ACT V, SC I [20-53] 192c-d
27 SHAKESPEARE: *Othello*, ACT I, SC II [62-81] 208b-c; SC III [94-106] 210a
38 MONTESQUIEU: *Spirit of Laws*, BK XIV, 102b,d-104c
40 GIBBON: *Decline and Fall*, 546d
41 GIBBON: *Decline and Fall*, 49d
44 BOSWELL: *Johnson*, 113a
46 HEGEL: *Philosophy of History*, PART IV, 352a-353a
48 MELVILLE: *Moby Dick*, 304a-305a
49 DARWIN: *Descent of Man*, 342a-359d esp 348c-350b, 356a-359d; 562d-565a passim; 573d-576d; 578a-589d esp 583b-584d, 586a, 589c-d; 591a-c

7b. The influence of environmental factors on human characteristics: climate and geography as determinants of racial or national differences

6 HERODOTUS: *History*, BK I, 31d-32a; BK III, 91b-c; BK IX, 314a,c
7 PLATO: *Laws*, BK V, 696d
9 ARISTOTLE: *Politics*, BK VII, CH 7 [1327^{b}19-38] 531d-532a
10 HIPPOCRATES: *Airs, Waters, Places*, par 3-7 9c-12a; par 12-13 14b-15a; par 15-16 15b-16a; par 19-21 16c-17b; par 23-24 18a-19a,c
12 LUCRETIUS: *Nature of Things*, BK VI [1106-1113] 94d-95a
14 PLUTARCH: *Solon*, 72d / *Pompey*, 512c-d
25 MONTAIGNE: *Essays*, 279b-c
26 SHAKESPEARE: *Henry V*, ACT III, SC V 547a-c
36 SWIFT: *Gulliver*, PART II, 79a-80a; PART IV, 168a-b

(*7. Group variations in human type: racial differences. 7b. The influence of environmental factors on human characteristics: climate and geography as determinants of racial or national differences.*)

36 STERNE: *Tristram Shandy*, 203a-204a; 224a-b; 295b-296b
38 MONTESQUIEU: *Spirit of Laws*, BK XIV 102b,d-108d; BK XV, 111a-b; BK XVI, 116a-120a; BK XVII, 122a-124d passim; BK XVIII, 125a-129c; BK XXI, 153a-154a; BK XXIII, 190c-d
38 ROUSSEAU: *Inequality*, 349a / *Social Contract*, BK III, 415b-417c
39 SMITH: *Wealth of Nations*, BK IV, 291a-c
40 GIBBON: *Decline and Fall*, 45d; 87d-88a; 397c-398a; 409d-412c esp 410a-411a
41 GIBBON: *Decline and Fall*, 220b-223c passim, esp 221b-c; 338b-c; 341b 342c; 778a [n 1]
43 FEDERALIST: NUMBER 11, 55d-56b
46 HEGEL: *Philosophy of Right*, PART III, par 346 111b / *Philosophy of History*, INTRO, 190b-201a,c; PART I, 235c-d; 236d-237a; 251d-252d; PART II, 259d-260a
49 DARWIN: *Descent of Man*, 267a-c; 268b-269a; 343c-344a; 356b-358d; 584a-b

7c. Cultural differences among men: Greek and barbarian, Jew and gentile, European and Asiatic

OLD TESTAMENT: *Genesis*, 12:1-4; 15; 17:1-18:19; 26:1-6; 27:46; 35:9-13 / *Exodus*, 34:1-17 / *Leviticus*, 26 / *Deuteronomy*, 7:1-8; 10:15; 14:1-2; 26:17-19; 28:1-10,58-65 / *Judges*, 14-16 / *Ruth* / *I Kings*, 8:38-43,51-53; 11:1-10—(*D*) *III Kings*, 8:38-43,51-53; 11:1-10 / *I Chronicles*, 17:21-24—(*D*) *I Paralipomenon*, 17:21-24 / *Esther*—(*D*) *Esther*, 1:1-10:3 / *Ezekiel*, 37:21-22—(*D*) *Ezechiel*, 37:21-22 / *Daniel*, 1:1-8
APOCRYPHA: *Rest of Esther*—(*D*) OT, *Esther*, 10:4-16:24 / *II Maccabees*, 6:1-11; 11:22-26—(*D*) OT, *II Machabees*, 6:1-11; 11:22-26
NEW TESTAMENT: *Matthew*, 10:5-6 / *Acts*, 15:1-29 esp 15:9, 15:17; 16:16-24 / *Romans*, 2:9-29; 3:29-30; 4:11-12; 10:12 / *I Corinthians*, 1:22-24; 12:13 / *Galatians*, 3:26-29; 4:21-31 / *Ephesians*, 2:11-22 / *Colossians*, 3:9-11
4 HOMER: *Iliad*, BK IV [422-445] 28a-b
5 EURIPIDES: *Medea* 212a-224a,c / *Andromache* 315a-326a,c esp [147-244] 316c-317b, [445-453] 319a-b, [590-601] 320b / *Hecuba* [1196-1201] 363a / *Iphigenia Among the Tauri* 411a-424d / *Iphigenia at Aulis* [1395-1401] 437d
6 HERODOTUS: *History* 1a-314a,c passim, esp BK I, 12d-13b, 35b-c, BK II, 57d-58a, 61d, 69b-d, BK III, 97d-98a, BK IV, 137a-138c, 140d-141a, BK V, 163d-164a, BK VII, 216b-d, 232d-233d, 253b-254a, BK VIII, 264c, 287c-d, BK IX, 291c-292a, 298a-302c, 305d-306a, 308d-310c
6 THUCYDIDES: *Peloponnesian War*, BK I, 350b-d; 366a-c; 370a-c; BK II, 395d-397d; BK VIII, 589d-590a
7 PLATO: *Cratylus*, 106b-c / *Republic*, BK IV, 350c-d; BK V, 357d-358a; 367b-368c / *Statesman*, 582d-583b / *Laws*, BK I, 645b 647c
9 ARISTOTLE: *Politics*, BK I, CH 2 [1252^{b}5-9] 445d; CH 6 [1255^{a}28-37] 448d-449a; BK III, CH 14 [1285^{a}17 29] 483b-c; BK VII, CH 7 [1327^{b}19-38] 531d-532a
10 HIPPOCRATES: *Airs, Waters, Places*, par 16 15d-16a; par 23 18a-c
14 PLUTARCH: *Themistocles*, 99b-c / *Marcellus*, 254c-256b / *Flamininus*, 303a-310d
15 TACITUS: *Annals*, BK II, 23d 24a / *Histories*, BK V, 295d-296a
18 AUGUSTINE: *City of God*, BK I, CH 1-17 129d-140b; BK IV, CH 34 206d-207a,c; BK XVI, CH 16 433c-434a; CH 18 434c; CH 21-28 435a-440b; CH 32, 442b-c; BK XIX, CH 22 525b-c
20 AQUINAS: *Summa Theologica*, PART I-II, Q 98, AA 4-5 242b-244b; QQ 102-105 270b 321a passim
22 CHAUCER: *Troilus and Cressida*, BK II, STANZA 3-7 22a-b / *Tale of Man of Law* [4631-4644] 238a / *Prioress's Tale* [13,418-620] 392a-395b
23 HOBBES: *Leviathan*, PART IV, 267c-d
25 MONTAIGNE: *Essays*, 44b-48a; 91d-98b esp 93b-94a
26 SHAKESPEARE: *Merchant of Venice*, ACT I, SC III 409c 411b; ACT II, SC III 414a-b; ACT III, SC I 418d-420a; SC III 423b-d; ACT IV, SC I [386-400] 429c-d
31 DESCARTES: *Discourse*, PART II, 46b-c
37 FIELDING: *Tom Jones*, 266c-269b
38 MONTESQUIEU: *Spirit of Laws*, BK XIV 102b,d-108d; BK XV, 110a-d; BK XVI, 116a-120a; BK XIX 135a-146a,c passim; BK XXI, 153a-c
38 ROUSSEAU: *Inequality*, 352b / *Social Contract*, BK II, 402d-403a
40 GIBBON: *Decline and Fall*, 99c; 179d-183a; 207b-208d; 260d-261a; 402a; 409d-410a
41 GIBBON: *Decline and Fall*, 32d-34c; 35b-36c; 222d-226a passim, esp 224b; 300a-c; 336c-339b passim; 341b-343a; 508d-509d
42 KANT: *Judgement*, 504a-b
43 MILL: *Liberty*, 300d-302c; 307d-308c
46 HEGEL: *Philosophy of Right*, PART III, par 351 112a-b / *Philosophy of History* 153a-369a,c passim, esp INTRO, 161a-c, 174b-d, 176b, 177b-178a, 182d-183a, 183d-188b, 192a-194a, 196d-199d, PART I, 211a-221a, 222a-233a, 235c-d, 245d-247b, 250a-c, PART II, 276d-277a, 277d-278a, 279c-d, PART III, 289b-d, 312c-313a, PART IV, 352a-353a
48 MELVILLE: *Moby Dick*, 17a-19a; 36b-46a; 60b-65a; 350b-354b
49 DARWIN: *Descent of Man*, 323a-b; 571b-577d esp 573b-c, 575d, 577b-c; 584a-b

51 TOLSTOY: *War and Peace*, BK III, 140d-141b; BK IV, 171b; BK VIII, 309b-c; BK IX, 358b-365c passim, esp 362d-363a; BK XI, 497c-499c; 515c-521c; BK XIII, 575d-577a; BK XV, 624d-626d
52 DOSTOEVSKY: *Brothers Karamazov*, BK V, 123b-125c
54 FREUD: *New Introductory Lectures*, 882c-d

8. The origin or genealogy of man

8*a*. The race of men as descendants or products of the gods

6 HERODOTUS: *History*, BK II, 79c-80a
7 PLATO: *Protagoras*, 43d-45a / *Symposium*, 157b-158b / *Timaeus*, 452c-454a; 466a-467d / *Laws*, BK IX, 743a-b
12 EPICTETUS: *Discourses*, BK I, CH 3 108b-c; CH 6, 111a-c; CH 13 120b-c; CH 17, 123d; BK III, CH 11 187a-b; CH 24, 204b-c
14 PLUTARCH: *Alexander*, 553d-554b
17 PLOTINUS: *Second Ennead*, 1R I, CH 5 37b-c
18 AUGUSTINE: *City of God*, BK III, CH 4 170c
48 MELVILLE: *Moby Dick*, 345b-346b
49 DARWIN: *Descent of Man*, 265d

8*b*. God's special creation of man

OLD TESTAMENT: *Genesis*, 1:26-27; 2:7,18,21-23; 5:1-2 / *Job*, 10:8-12 / *Psalms*, 8:4-6; 100:3; 119:73; 139:14-16—(*D*) *Psalms*, 8:5-7; 99:3; 118:73; 138:14-16 / *Isaiah*, 29:15-16; 43:7; 45:12—(*D*) *Isaias*, 29:15 16; 43:7; 45:12 / *Jeremiah*, 27:5—(*D*) *Jeremias*, 27:5 / *Malachi*, 2:10—(*D*) *Malachias*, 2:10
APOCRYPHA: *Wisdom of Solomon*, 2:23; 6:7; 10:1 15:10-11—(*D*) OT, *Book of Wisdom*, 2:23; 6:8; 10:1; 15:10-11 / *Ecclesiasticus*, 17:1-3; 33:10-13—(*D*) OT, *Ecclesiasticus*, 17:1-3; 33:10-14 / *II Maccabees*, 7:23,28—(*D*) OT, *II Machabees*, 7:23,28
NEW TESTAMENT: *Matthew*, 19:4 / *Mark*, 10:6 / *Acts*, 17:24-29 / *I Corinthians*, 15:45 / *Colossians*, 3:10
18 AUGUSTINE: *City of God*, BK VII, CH 29-30, 261a-c; BK X, CH 31 319b-d; BK XII, CH 10-13 348b-350d; CH 20-21, 356d-357b; CH 23 357d-358a; CH 26-27 359a-360a,c; BK XIII, CH 24 373d-376a,c; BK XXII, CH 1 586b,d-587b / *Christian Doctrine*, BK I, CH 22, 629b-c
19 AQUINAS: *Summa Theologica*, PART I, Q 72, A 1, REP 1 368b-369d; Q 73, A 1, REP 3 370a-371a; Q 75, A 6, REP 1 383c-384c; QQ 90-92 480c-491d; Q 118 600a-604b
21 DANTE: *Divine Comedy*, PURGATORY, XVI [85-90] 77d; XXV [34-78] 91d-92a; PARADISE, VII [64-84] 115d-116a; [121-148] 116b-c; XIII [52-87] 126a-b
22 CHAUCER: *Monk's Tale* [14,013-020] 434b
23 HOBBES: *Leviathan*, PART III, 176d; PART IV, 251a-b
30 BACON: *Advancement of Learning*, 41b-c; 54b-c
31 DESCARTES: *Discourse*, PART V, 56a-b / *Meditations*, III, 87d-88d
32 MILTON: *Paradise Lost*, BK I [650-659] 107b; BK II [345-353] 118b-119a; BK VII [139-161] 220a-b; [499-550] 228a-229a; BK VIII [452-499] 242a-243a; BK XI [497-511] 310a-b
35 LOCKE: *Civil Government*, CH II, SECT 6 26b-c; CH VI, SECT 56-57 36d-37a
37 FIELDING: *Tom Jones*, 187d-188a
41 GIBBON: *Decline and Fall*, 228a
49 DARWIN: *Descent of Man*, 265d; 590b
51 TOLSTOY: *War and Peace*, EPILOGUE II, 689b
52 DOSTOEVSKY: *Brothers Karamazov*, BK V, 120d-121c
53 JAMES: *Psychology*, 420a
54 FREUD: *General Introduction*, 562d

8*c*. Man as a natural variation from other forms of animal life

38 ROUSSEAU: *Inequality*, 334b,d
42 KANT: *Judgement*, 578d-580a esp 579b-c
47 GOETHE: *Faust*, PART II [8245-8264] 201a; [8321-8326] 202b-203a
49 DARWIN: *Descent of Man*, 253a-287b esp 253a-254a, 255a-c, 265a-d, 284c-285c; 331a-341d esp 341a-d; 590a-591d; 596d-597a,c
51 TOLSTOY: *War and Peace*, EPILOGUE II, 689c-690a
53 JAMES: *Psychology*, 51b-52b; 95a-98a
54 FREUD: *General Introduction*, 509d-510a; 562d; 591d-592a / *New Introductory Lectures*, 881a

9. The two conditions of man

9*a*. The myth of a golden age: the age of Kronos and the age of Zeus

5 AESCHYLUS: *Prometheus Bound* 40a-51d
6 HERODOTUS: *History*, BK II, 80a
7 PLATO: *Cratylus*, 92b-d / *Timaeus*, 444c-446b / *Critias* 478a-485d / *Statesman*, 586c-589c / *Laws*, BK IV, 681b-d
13 VIRGIL: *Eclogues*, IV 14a-15b / *Georgics*, I [118-146] 40a-41a / *Aeneid*, BK I [254-296] 110a-111a; BK VIII [306-336] 267a-268a
14 PLUTARCH: *Numa Pompilius*, 59d-60b
15 TACITUS: *Annals*, BK III, 51b
21 DANTE: *Divine Comedy*, HELL, XIV [94-120] 20c-d; PURGATORY, XXII [130-154] 87d-88a; XXVIII [136-148] 97c
24 RABELAIS: *Gargantua and Pantagruel*, BK III, 143b-d
25 MONTAIGNE: *Essays*, 215b
27 SHAKESPEARE: *Tempest*, ACT II, SC I [143-168] 532d-533a
29 CERVANTES: *Don Quixote*, PART I, 27b-28a; PART II, 208a-c
30 BACON: *Advancement of Learning*, 71d-72a
35 HUME: *Human Understanding*, SECT XI, DIV 106-107 499b-500b
37 FIELDING: *Tom Jones*, 268c-d
46 HEGEL: *Philosophy of History*, INTRO, 188c

9b. The Christian doctrine of Eden and of the history of man in the world

9b(1) The condition of man in Eden: the preternatural powers of Adam

OLD TESTAMENT: *Genesis*, 1:26–30; 2:7–25
APOCRYPHA: *Wisdom of Solomon*, 1:13–16; 2:23–24—(*D*) OT, *Book of Wisdom*, 1:13–16; 2:23–25 / *Ecclesiasticus*, 17:1–15—(*D*) OT, *Ecclesiasticus*, 17:1–13
18 AUGUSTINE: *City of God*, BK XI, CH 12 329b-c; BK XII, CH 21 357a-b; BK XIII, CH 1 360a-b; CH 13–14 366a-c; CH 23 372a-373c; BK XIV, CH 10–13 385b-388c; CH 15–17 388d-391a; CH 21–24 392b-395b; CH 26–27 395d-397a; BK XXII, CH 30, 617c-618a
19 AQUINAS: *Summa Theologica*, PART I, Q 76, A 5, REP 1 394c-396a; QQ 94–102 501c-527a,c
20 AQUINAS: *Summa Theologica*, PART I–II, Q 89, A 3 200d-201d; Q 109, A 2, ANS 339c-340b; A 3, ANS 340c-341b; A 4, ANS 341c-342a; A 8, ANS 344d-346a; PART II–II, Q 2, A 7, ANS 396a-397c; Q 5, A 1, ANS 410a-411b; PART III, Q 1, A 3, REP 1 704d-706a
21 DANTE: *Divine Comedy*, PURGATORY, XXVIII [91]-XXIX [36] 97a-98a; PARADISE, VII [64–93] 115d-116a; XIII [31–87] 125d-126b
22 CHAUCER: *Monk's Tale* [14,013–020] 434b / *Parson's Tale*, par 18, 507a-b
23 HOBBES: *Leviathan*, PART III, 191b-192c; PART IV, 250c-d
30 BACON: *Advancement of Learning*, 17d-18a
31 SPINOZA: *Ethics*, PART IV, PROP 68, SCHOL 445a-b
32 MILTON: *Paradise Lost*, BK I [650–654] 107b; BK III [56–371] 136b-143b; BK IV [32–538] 153a-164a esp [131–171] 155a-156a, [205–392] 157a-161a; [610–775] 165b-169a; BK V [1–560] 175a-187b; BK VII–VIII 217a-246b esp BK VIII [1–560] 232a-244a; BK IX [1–1004] 247a-269a; BK XI [45–71] 300a-b; BK XII [63–110] 320b-321b
33 PASCAL: *Pensées*, 560 272b
46 HEGEL: *Philosophy of History*, INTRO, 179d-180c; PART III, 304d-306a
51 TOLSTOY: *War and Peace*, BK VII, 275a
52 DOSTOEVSKY: *Brothers Karamazov*, BK V, 125a-126a

9b(2) The condition of man in the world: fallen man; corrupted or wounded human nature

OLD TESTAMENT: *Genesis*, 3 esp 3:15–19; 6:5–13; 8:21 / *Job*, 5:7; 8:9; 14–15 passim; 25:4–6 / *Psalms*, 8; 14:2–3; 39:5–6,11; 51:2–5; 53:1–3; 103:13–15; 144:3–4—(*D*) *Psalms*, 8; 13:2–3; 38:6–7,11–12; 50:4–7; 52:1–4; 102:13–15; 143:3–4 / *Proverbs*, 20:9 / *Ecclesiastes* esp 2:18–26, 3:19, 5:16–19, 6:1–12, 7:20, 7:27–29, 9:3—(*D*) *Ecclesiastes* esp 2:18–26, 3:19, 5:15–18, 6:1–11, 7:21, 7:28–30, 9:3 / *Jeremiah*, 17:9—(*D*) *Jeremias*, 17:9
APOCRYPHA: *Wisdom of Solomon*, 1:13–16; 2:1–12,23–24—(*D*) OT, *Book of Wisdom*, 1:13–16; 2:1–12,23–25
NEW TESTAMENT: *Matthew*, 15:10–20 / *Mark*, 7:14–23 / *John*, 8:3–8 / *Romans*, 3:9–23; 5:12–21; 7:14–24; 8:20–23; 9:29 / *I Corinthians*, 3:1–4; 15:21–22 / *Galatians*, 3:22; 4:1–3; 5:19–21 / *Ephesians*, 2:1–5 / *I John*, 2:15–17
18 AUGUSTINE: *City of God*, BK XII, CH 22 357c; BK XIII, CH 3 361a-c; CH 10 364a-c; CH 13–14 366a-c; CH 23 372a-373c; BK XIV, CH 1 376b,d-377a; CH 3 378a-d; CH 12 387a-b; CH 15–26 388d-396c; BK XXI, CH 12 571a-c; CH 15 572c-573b; BK XXII, CH 22–23 606d-609a
19 AQUINAS: *Summa Theologica*, PART I–II, Q 17, A 9, REP 3 692d-693d
20 AQUINAS: *Summa Theologica*, PART I–II, QQ 81–83 162d-174b; Q 85, A 1, ANS 178b-179b; A 3 180b-181b; A 5 181d-182d; Q 91, A 6, ANS 212c-213c; Q 109 338a-347d passim; PART III, Q 8, A 5, REP 1 760a-d; QQ 14–15 784a-796a
21 DANTE: *Divine Comedy*, HELL, XIV [94–120] 20c-d; PURGATORY, III [16–45] 56a-b; X [121–129] 68c-d; XVI [52–114] 77b-78a; XXVIII [91–96] 97a; PARADISE, VII [19–148] 115b-116c; XIII [31–87] 125d-126b
22 CHAUCER: *Monk's Tale* [14,013–020] 434b / *Second Nun's Prologue* [15,497–552] 461b-462b / *Second Nun's Tale* [15,788–822] 467a-b / *Parson's Tale* 495a-550a esp par 18 506b-507b, par 53 526b-527a
23 HOBBES: *Leviathan*, PART III, 191b-193c passim; 195d; PART IV, 250c-251b; 253b-255b passim
24 RABELAIS: *Gargantua and Pantagruel*, BK II, 81a-b
25 MONTAIGNE: *Essays*, 238c
30 BACON: *Novum Organum*, BK II, APH 52, 195a-d
32 MILTON: *Paradise Lost*, BK I [1–26] 93b-94a; BK II [496–505] 122a; [1021–1033] 133b; BK III [167–216] 139a-140a; [274–343] 141b-143a; BK IV [304–320] 159a-b; BK VII [542–547] 229a; BK IX [780–1189] 264b-273a; BK X [103–117] 276b-277a; [229–414] 279b-283b; [585–640] 287a-288b; [720–844] 290a-292b; [1046–1104] 297a-298b; BK XI [45–71] 300a-b; [84–98] 301a; [162–180] 302b-303a; [251–262] 304b-305a; BK XI [334]–BK XII [649] 306b-333a
33 PASCAL: *Pensées*, 430 245a-247b; 434–435 248a-251a; 439–450 251a-253a; 560 272b
37 FIELDING: *Tom Jones*, 38d
44 BOSWELL: *Johnson*, 482a
46 HEGEL: *Philosophy of Right*, ADDITIONS, 14 118c-d / *Philosophy of History*, PART III, 304d-306a
50 MARX: *Capital*, 354b
51 TOLSTOY: *War and Peace*, BK VII, 275a
52 DOSTOEVSKY: *Brothers Karamazov*, BK III, 54a-b; BK V, 125a-126a; 127b-137c passim; BK VI, 165b-169c

9b(3) The Christian view of the stages of human life in the world: law and grace

NEW TESTAMENT: *Matthew*, 5:17–44 / *Luke*, 16:16–17 / *John*, 1:17; 3:3–8 / *Acts*, 10; 13:38–39 / *Romans*, 2–8 / *II Corinthians*, 3; 5:17 / *Galatians* / *Ephesians*, 2:14–15; 4:17–24 / *Philippians*, 3:8–10 / *Colossians*, 2–3 / *II Timothy*, 1:8–10 / *Hebrews* / *I Peter*, 1:1–2:10

18 AUGUSTINE: *Confessions*, BK XIII, par 49–51 124a-d / *City of God*, BK X, CH 14 307c-308a; CH 25 313c-314c; BK XII, CH 22 357c; BK XV–XVIII 397b,d-507a,c esp BK XV, CH 1–3 397b,d-399c, CH 21 415b-416a, BK XVI, CH 26 438c-439a, CH 37 444b-445a, BK XVII, CH 1–4 449a-455c, BK XVIII, CH 11 477c-d; BK XX, CH 4 532b-c; BK XXI, CH 16 573b-574a; BK XXII, CH 30, 618c-d / *Christian Doctrine*, BK III, CH 33 670b-c

19 AQUINAS: *Summa Theologica*, PART I, Q 51, A 2, REP 1 276b-277a; Q 73, A 1, REP 1 370a-371a

20 AQUINAS: *Summa Theologica*, PART I–II, Q 98 239b-245b; QQ 106–107 321a-330d; PART II–II, Q 1, A 7, REP 4 385c-387a

21 DANTE: *Divine Comedy*, PARADISE, VII [19–148] 115b-116c

22 CHAUCER: *Parson's Tale*, par 53 526b-527a

32 MILTON: *Paradise Lost*, BK III [56–415] 136b-144b esp [130–134] 138a, [227–238] 140b; BK XI [1–21] 299a-b; [251–262] 304b-305a; BK XII [334]-BK XII [649] 306b-333a

33 PASCAL: *Pensées*, 560 272b; 655 292b; 699 302b

JZ DOSTOEVSKY: *Brothers Karamazov*, BK V, 127b-137c passim

9c. Secular conceptions of the stages of human life: man in a state of nature and in society; prehistoric and historic man; primitive and civilized man

4 HOMER: *Odyssey*, BK IX [105–141] 230b-c

5 AESCHYLUS: *Prometheus Bound* 40a-51d esp [196–256] 42b-d [442–506] 44c-45a

6 THUCYDIDES: *Peloponnesian War*, BK I, 349a-354b

7 PLATO: *Protagoras*, 44a-45a / *Symposium*, 157b-159b / *Republic*, BK II, 311b-c / *Laws*, BK III, 663d-667b

9 ARISTOTLE: *Politics*, BK II, CH 8 [1269a4–8] 465a

12 LUCRETIUS: *Nature of Things*, BK V [925–1457] 73b-80a,c

13 VIRGIL: *Aeneid*, BK VIII [306–336] 267a-268a

15 TACITUS: *Annals*, BK III, 51b

23 HOBBES: *Leviathan*, PART I, 84c-86b; 94b-c; PART IV, 267c-268a

25 MONTAIGNE: *Essays*, 91d-98b esp 93b-94a; 237d-238c; 440b-443d

26 SHAKESPEARE: *As You Like It* 597a-626a,c esp ACT II, SC I [1–20] 603c-d, ACT III, SC II [11–90] 609d-610c

27 SHAKESPEARE: *Cymbeline*, ACT III, SC III 465c-466c

30 BACON: *Advancement of Learning*, 20c-d

31 SPINOZA: *Ethics*, PART IV, PROP 37, SCHOL 2 435b-436a

35 LOCKE: *Toleration*, 16a-c / *Civil Government*, CH II 25d-28c esp SECT 14–15 28b-c; CH III, SECT 19 29b-c; CH VII, SECT 94 46a-c; CH IX 53c-54d

38 MONTESQUIEU: *Spirit of Laws*, BK I, 2b-3a; BK VIII, 52a

38 ROUSSEAU: *Inequality*, 329a-366d esp 329a-334a,c, 362a-366d / *Social Contract*, BK I 387b,d-394d esp 393b-c; BK II, 398a-b; 400d-401a

39 SMITH: *Wealth of Nations*, INTRO, 1b-c; BK I, 6a-d; BK III, 163d-164a; BK V, 309a-311c

40 GIBBON: *Decline and Fall*, 53b-c; 86b,d-96d passim, esp 88d, 89d, 92c-d; 398d-399a; 409d-414a passim, esp 409d-410a; 566a-b; 632b-634a,c

41 GIBBON: *Decline and Fall*, 86d-87b

42 KANT: *Pure Reason*, 222b-c / *Science of Right*, 402c; 405d-406c; 408c-409c; 412c-414c; 433c-434d; 435c-436b; 450d-451a

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44 BOSWELL: *Johnson*, 110d; 124d-126a; 164d; 204c-205a; 209a; 214b; 221c-d; 311b; 408d-409a; 510b-c

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48 MELVILLE: *Moby Dick*, 9b-23b; 136b-137a; 171b; 221b-223b; 354a

49 DARWIN: *Origin of Species*, 13c / *Descent of Man*, 314c-316a; 317c-d; 320a-330a,c passim, esp 323a-b, 328d-330a,c; 349b-d; 351a-355d

50 MARX-ENGELS: *Communist Manifesto*, 421c

54 FREUD: *War and Death* 755a-766d passim, esp 759c-d, 763a-766c / *Civilization and Its Discontents*, 776c-782d esp 776c-777b, 780d-781a; 788d-789b

10. Man's conception of himself and his place in the world

10a. Man's understanding of his relation to the gods or God

OLD TESTAMENT

NEW TESTAMENT

4 HOMER: *Iliad* 3a-179d esp BK I 3a-9a,c, BK II [340–447] 13b-14c, BK IV [1–183] 24a-25d, BK V 30a-39a,c, BK VIII 51a-56d, BK XIV–XV 98a-111d, BK XVI [431–461] 117a-b, [843–867] 121c-d, BK XVIII [1–137] 130a-131c, BK XX–XXI 142a-154d, BK XXIV [513–551] 176d-177a / *Odyssey* 183a-322d

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5 AESCHYLUS: *Suppliant Maidens* [86–103] 2a-b / *Persians* [798–831] 23d-24a / *Seven Against Thebes* 27a-39a,c / *Prometheus Bound* 40a-51d / *Agamemnon* 52a-69d / *Choephoroe* 70a-80d / *Eumenides* 81a-91d

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5 EURIPIDES: *Hippolytus* 225a-236d esp [936–1466] 232d-236d / *Alcestis* [962–996] 245c / *Suppliants* 258a-269a,c esp [195–245] 260a-c, [734–749] 264d / *Trojan Women* 270a-281a,c esp [895–990] 277c-278b, [1277–1283] 280d / *Ion* 282a-297d esp [237–451] 284a-286c / *Helen* 298a-314a,c esp [711–721] 304d-305a / *Andromache* [1070–1288] 324b-326a,c / *Electra* 327a-339a,c esp [1233–1359] 338b-339a,c / *Bacchantes* 340a-352a,c / *Heracles Mad* [1301–1356] 376b-d / *Orestes* 394a-410d esp [316–347] 397a-b, [1625–1693] 410b-d / *Iphigenia Among the Tauri* 411a-424d esp [378–391] 414b, [570–575] 416a, [903–911] 419a, [1435–1499] 424a-d / *Iphigenia at Aulis* [1034–1035] 434c; [1279–1335] 436d-437a

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7 PLATO: *Cratylus*, 94a; 106b / *Phaedrus*, 125b-126c / *Ion*, 144b-145c / *Euthyphro* 191a-199a,c / *Apology*, 206b-d / *Phaedo*, 222b-d / *Republic*, BK II, 314c-d; 320c-324c / *Timaeus*, 447a-477a,c passim / *Critias* 478a-485d / *Theaetetus*, 530b-531a / *Laws*, BK I, 650a-b; BK II, 653b-c; BK IV, 682d-683d; BK V, 686d-689c passim; BK VII, 721a-c; BK X 757d-771b

8 ARISTOTLE: *Topics*, BK I, CH II [105^a2–6] 148c / *Metaphysics*, BK I, CH 2 [982^b28–983^a5] 501a-b

9 ARISTOTLE: *Ethics*, BK VII, CH I [1145^a15–33] 395a-b; BK VIII, CH 7 [1158^b29–1159^a13] 410d-411a / *Rhetoric*, BK II, CH 5 [1383^a33–$^b8$] 629c-d; CH 17 [1391^a30–$^b3$] 638d

12 LUCRETIUS: *Nature of Things*, BK II [581–660] 22b-23b; [1090–1104] 29a; BK III [978–1023] 42d-43b; BK V [146–234] 63a-64a; [1161–1240] 76b-77b; BK VI [43–79] 80d-81b

12 EPICTETUS: *Discourses*, BK I, CH 3 108b-c; CH 6 110c-112b; CH 12 118d-120b; CH 14 120d-121c; CH 17, 123c-124a; BK II, CH 8 146a-147c; BK IV, CH I, 218b-219d; CH 3 224b-d; CH 4, 226d-228a; CH 7 232c-235a

12 AURELIUS: *Meditations*, BK II, SECT 1 256b,d; SECT 3–4 257a-b; SECT 11–13 258a-c; BK III, SECT 6 261a-c; SECT 13 262c; BK V, SECT 8 269d-270b; SECT 27 272d; BK VI, SECT 40 277d; SECT 42 278a-b; SECT 44 278b-c; BK IX, SECT 1 291a-c; BK XII, SECT 2 307b; SECT 5 307d-308a; SECT 23 309a-b; SECT 30 310a-b

13 VIRGIL: *Aeneid* 103a-379a esp BK IX [77–122] 281a-282a, BK X [96–117] 304b-305a, [621–632] 319a-b

14 PLUTARCH: *Numa Pompilius*, 50d-51c / *Coriolanus*, 189a-c

15 TACITUS: *Annals*, BK III, 59d-60c; BK VI, 91b-d; BK XVI, 179d; 183d / *Histories*, BK I, 189d-190a; BK II, 235a-c

17 PLOTINUS: *Second Ennead*, TR IX, CH 9, 71a / *Third Ennead*, TR II, CH 8–9 86c-88a

18 AUGUSTINE: *Confessions* 1a-125a,c passim / *City of God* 129a-618d / *Christian Doctrine*, BK I 624a-636a,c; BK II, CH 7 638d-639c

19 AQUINAS: *Summa Theologica*, PART I, Q 8, A 3, ANS and REP 4 36b-37c; Q 17, A 1, ANS 100d-101d; Q 22, A 2, REP 4–5 128d-130d; QQ 23–24 132b-143c; Q 83, A 1, REP 2–4 436d-438a; Q 103, A 5, REP 3 531b-532b; A 8, REP 1–2 533d-534b; Q 116 592d-595c; PART I-II, QQ 1–48 609a-826a,c

20 AQUINAS: *Summa Theologica*, PART I-II, QQ 49–114 1a-378a,c

21 DANTE: *Divine Comedy* esp PARADISE, I [94–142] 107b-d, VII [19–120] 115b-116b, XIX [40–66] 135c-d

22 CHAUCER: *Troilus and Cressida*, BK I, STANZA 30–35 5a-b; BK III, STANZA 89 66a; BK IV, STANZA 136–155 106a-108b; BK V, STANZA 259–267 154a-155a / *Knight's Tale* [1251–1274] 180b-181a; [1303–1333] 181b-182a / *Tale of Man of Law* 236b-255b esp [4869–4931] 242b-243b, [5240–5253] 249b / *Friar's Tale* [7056–7085] 281a-b / *Franklin's Tale* [11,177–206] 353b-354a / *Prioress's Tale* 391a-395b / *Tale of Melibeus*, par 17 407b-408a / *Monk's Prologue* 432a-434a / *Monk's Tale* 434a-448b / *Nun's Priest's Tale* [15,236–256] 456b-457a / *Second Nun's Tale* 463b-471b / *Parson's Tale* 495a-550a esp par 1 495a-b, par 12, 503b-504a, par 52–56, 526a-528a, par 103 549b-550a

23 MACHIAVELLI: *Prince*, CH XXV, 35a-b

23 HOBBES: *Leviathan*, PART I, 54b-c; 78d-83a; PART II, 113b-c; 159d-164a,c; PART IV, 254b; 260b-c; 272b-c

24 RABELAIS: *Gargantua and Pantagruel*, BK IV, 265a-d

25 MONTAIGNE: *Essays*, 98b-99a; 208a-294b esp 209a-212d, 233a-234a, 246a-258b

26 SHAKESPEARE: *Richard II*, ACT V, SC II [23–40] 346c-d
27 SHAKESPEARE: *Hamlet*, ACT I, SC II [129–134] 32d; ACT III, SC III [36–96] 53d-54b / *King Lear*, ACT IV, SC I [30–37] 269d; SC II [46–81] 271a-b; SC VI [34–80] 273d-274b / *Antony and Cleopatra*, ACT II, SC I [1–8] 317d / *Pericles*, ACT III, SC I [1–26] 433c-434a / *Cymbeline*, ACT V, SC IV [1–151] 481a-482c; SC V [425–485] 488b-d
29 CERVANTES: *Don Quixote*, PART II, 267b-c; 408c
30 BACON: *Advancement of Learning*, 80b-81a
31 DESCARTES: *Discourse*, PART IV 51b-54b passim / *Meditations*, III 81d-89a passim; IV 89a-93a / *Objections and Replies*, 122a-b; 123c-d; 142b-c; 213b-214d; 226d-227a; 229c-d
31 SPINOZA: *Ethics*, PART I, PROP 25, COROL 365b; PROP 29, SCHOL 366b-c; APPENDIX 369b-372d; PART II, PROP 5 374c-d; PROP 10 376c-377a; PART IV, PREF, 423a-b
32 MILTON: *Paradise Lost*, BK III [80–134] 137a-138a; BK IV [411–439] 161b-162a; BK V [224–245] 180a-b; [506–543] 186a-187a; BK X [610–640] 287b-288b / *Samson Agonistes* [373–419] 347b-348b; [667–709] 354a-355a / *Areopagitica*, 394b-395b
33 PASCAL: *Provincial Letters*, 78b-80b / *Pensées*, 389 239b; 425–555 243b-270a
35 LOCKE: *Civil Government*, CH II, SECT 6 26b-c / *Human Understanding*, BK II, CH VII, SECT 5–6 132c-d
35 BERKELEY: *Human Knowledge*, SECT 155–156 444b-d
35 HUME: *Human Understanding*, SECT VIII, DIV 78–81 485c-487a; SECT XI, DIV 106–109 499b-501a
38 MONTESQUIEU: *Spirit of Laws*, BK I, 1a-2b; BK XII, 85d-86a
38 ROUSSEAU: *Inequality*, 366b-d / *Social Contract*, BK IV, 435a-439c
40 GIBBON: *Decline and Fall*, 292d-296c; 409b
41 GIBBON: *Decline and Fall*, 258a; 259b-260a
42 KANT: *Fund. Prin. Metaphysic of Morals*, 278b-279d / *Practical Reason*, 291a-292a; 325a-328b; 334a-335c; 345c-d / *Intro. Metaphysic of Morals*, 383b,d-384a,c / *Judgement*, 502d-503a; 594d [fn 1]
43 MILL: *Liberty*, 296b-d
44 BOSWELL: *Johnson*, 392d-393a; 394a-c; 481d-482d
46 HEGEL: *Philosophy of History*, INTRO, 158c-160b; 169d; PART I, 224a-225a; 236a-c; 245d-246c; PART II, 263d-265c; 266d; 268b-271c; 280b-281b; PART III, 291b-292b; 303c-307b; 308a-b; PART IV, 322a-c; 339b-d; 349c-350c
47 GOETHE: *Faust*, PART I [354–517] 11a-14b; [1810–1815] 43a; PART II [8582–8590] 209a
48 MELVILLE: *Moby Dick*, 28a-36b; 84b-85a; 123a-b; 306b-307a; 318b; 380a-381a; 396b-397a
49 DARWIN: *Descent of Man*, 302b-303d
51 TOLSTOY: *War and Peace*, BK I, 50b-c; BK V, 196a-198b; 216d-218b; BK IX, 357d-358b; BK XIV, 608a-b; BK XV, 631a-c; EPILOGUE II, 675a-676b; 680b-c; 684b-d
52 DOSTOEVSKY: *Brothers Karamazov*, BK III, 54a-b; 64c-67a; BK V, 121d-137c passim; BK VI 146b,d-170d; BK VII, 177b-180a; 185a-c; BK XI, 313c-314d; 337a-346a passim
53 JAMES: *Psychology*, 203a-204b
54 FREUD: *Interpretation of Dreams*, 246c-247d / *General Introduction*, 582a-b / *Civilization and Its Discontents*, 771a-b; 793c

10b. Man as the measure of all things

7 PLATO: *Cratylus*, 85a-86d / *Theaetetus*, 517b-532a esp 517b-c, 522b, 525a-526c, 531b-c; 534b / *Laws*, BK IV, 683a
8 ARISTOTLE: *Metaphysics*, BK IV, CH 5–6 528c-531c; BK X, CH 1 [$1053^{a}31$–$^{b}3$] 580a; CH 6 [$1057^{a}7$–11] 584b; BK XI, CH 6 [$1062^{b}12$–$1063^{b}14$] 590d-592a
23 HOBBES: *Leviathan*, PART I, 50a
46 HEGEL: *Philosophy of History*, PART II, 279d-280b

10c. Man as an integral part of the universe: his station in the cosmos

7 PLATO: *Laws*, BK X, 767c-768c
12 EPICTETUS: *Discourses*, BK I, CH 2 106d-108b; CH 12 118d-120b; CH 14 120d-121c; BK II, CH 8 146a-147c; BK III, CH 13 188b-189c; CH 24 203c-210a; BK IV, CH 1 213a-223d
12 AURELIUS: *Meditations*, BK II, SECT 1 256b,d; SECT 4 257b; SECT 9 257d; SECT 16 259a; BK IV, SECT 14 264d; SECT 23 265c; SECT 48 267d-268a; BK V, SECT 3–4 269a; SECT 8 269d-270b; BK VI, SECT 40–46 277d-278d; BK VII, SECT 9–10 280b-c; SECT 13 280c; BK VIII, SECT 27 287c; SECT 34 288a-b; BK IX, SECT 1 291a-c; SECT 9 292b-d; BK X, SECT 6–7 297a-c; BK XII, SECT 30 310a-b
17 PLOTINUS: *Third Ennead*, TR II, CH 14 89b-d
31 SPINOZA: *Ethics*, PART I, PROP 25, COROL 365b; PROP 29, SCHOL 366b-c; PROP 31 366d-367a; PART II, PROP 1–10 373d-377a; PROP 11, COROL 377b-c; PART III, 395a-d; PART IV, PROP 2–6 425a-426a; APPENDIX, VI–VIII 447c-d; XXVI 449c; XXXII 450c-d; PART V, PROP 40, SCHOL 462d

10d. The finiteness and insufficiency of man: his sense of being dependent and ordered to something beyond himself

OLD TESTAMENT: *Genesis*, 1:26–30; 3:16–24 / *Numbers*, 23:19 / *Deuteronomy*, 8:3 / *Job*, 4:17–21; 9; 12–14; 25 / *Psalms*, 8; 39:4; 103:14–16; 119–120; 139:1–16; 144:3-4—(*D*) *Psalms*, 8; 38:5; 102:14–16; 118–119; 138:1–16; 143:3-4 / *Proverbs*, 16:33; 20:24 / *Jeremiah*, 17:5–8—(*D*) *Jeremias*, 17:5–8

(10. *Man's conception of himself and his place in the world.* 10*d*. *The finiteness and insufficiency of man: his sense of being dependent and ordered to something beyond himself.*)

APOCRYPHA: *Wisdom of Solomon*, 9:14–17; 16:26—(*D*) OT, *Book of Wisdom*, 9:14–17; 16:26 / *Ecclesiasticus*, 18:7–11; 33:10–15—(*D*) OT, *Ecclesiasticus*, 18:6–10; 33:10–15

NEW TESTAMENT: *Luke*, 4:4 / *Romans*, 14:7–9 / *I Corinthians*, 2–3 / *James*, 4:13–16 / *I Peter*, 1:24

5 AESCHYLUS: *Suppliant Maidens* [86–103] 2a-b

5 EURIPIDES: *Alcestis* [962 996] 245c / *Suppliants* [195–245] 260a-c; [734–749] 264d / *Heracles Mad* [1301–1356] 376b-d

6 HERODOTUS: *History*, BK I, 7b-8a; 20b-21a; 46c-d; BK II, 65b; BK III, 98b-c; 99a; 103d-104b; BK IV, 153b-d; BK VII, 252b-c; BK IX, 291b-c

7 PLATO: *Phaedo*, 246c / *Laws*, BK I, 650a-b; BK VII, 721a-c; BK X, 767c-768c

8 ARISTOTLE: *Metaphysics*, BK XII, CH 10 [1075^{a} 12–24] 605d-606a

12 EPICTETUS: *Discourses*, BK IV, CH 7 232c-235a

12 AURELIUS: *Meditations*, BK II, SECT 3 257a-b; SECT 17 259b-d; BK III, SECT 10 261d-262a; BK IV, SECT 33–36 266c-d; BK V, SECT 10 270c-d; SECT 33 273b-c; BK VII, SECT 44–50 282b-283a; BK XII, SECT 32 310c

14 PLUTARCH: *Aemilius Paulus*, 225b-c; 229a-c / *Sulla*, 370c-371b / *Demetrius*, 739c-740d; 744b-c

15 TACITUS: *Annals*, BK III, 49c; BK IV, 68d-69b; BK VI, 91b-d / *Histories*, BK I, 194a-c; BK II, 232d-233a; BK IV, 281a-b

17 PLOTINUS: *Third Ennead*, TR II, CH 9, 87d

18 AUGUSTINE: *Confessions*, BK I, par 1–2 1a-c; BK IV, par 15–19 23a-24b; BK V, par 1–2 27a-c; BK VII, par 16–17 48c-49a; BK IX, par 23–26 68a-d; BK X, par 7–8 73a-c; par 33–40 79d-81c; BK XII, par 10 101c; BK XIII, par 9 112c-d / *City of God*, BK XII, CH 1 342b,d-343c; BK XIX, CH 4–10 511a-516d / *Christian Doctrine*, BK I, CH 38 635c-d

19 AQUINAS: *Summa Theologica*, PART I, Q 12, A 1, ANS 50c-51c; A 8, REP 4 57b-58b; Q 60, A 5, ANS 313b-314c; PART I-II, Q 2, A 3 617b-618a; A 8 621c-622b; Q 3, AA 6–8 627b-629c; Q 5, A 3 638b-639a; A 5 640b-641a

21 DANTE: *Divine Comedy*, HELL, VII [61–96] 10b-c; PURGATORY, III [16–45] 56a-b; X [121–129] 68c-d; XI [1–30] 68d-69a; XVI [52–105] 77b-d; PARADISE, VII 115a-116c

23 HOBBES: *Leviathan*, PART II, 163d-164a

25 MONTAIGNE: *Essays*, 6d-10a passim; 149b-d; 208a-294b esp 213a-215b, 231d-234a, 251c-252b, 269d-270a, 294a-b; 503b-d; 514d-515a; 520b-d; 528c-529b

31 DESCARTES: *Meditations*, III 81d-89a passim / *Objections and Replies*, 122a-b; 214a-d

31 SPINOZA: *Ethics*, PART I, APPENDIX 369b-372d; PART IV, PREF 422b,d-424a; PROP 2–6 425a-426a

32 MILTON: *Sonnets*, XVI 66b-67a / *Lord Gen. Cromwell* 69a-b / *Mr. Cyriack Skinner* 70a / *Paradise Lost*, BK VI [168–188] 200a / *Samson Agonistes* 339a-378a esp [164–175] 343a-b, [373–419] 347b-348b, [667–704] 354a-355a

33 PASCAL: *Pensées*, 72 181a-184b; 205 211a; 208 211b; 227 213a; 233 213b-216a / *Geometrical Demonstration*, 439b

35 LOCKE: *Human Understanding*, BK II, CH II, SECT 3 128b-c; CH VII, SECT 5–6 132c-d; CH XV, SECT 12 165b-c; CH XXIII, SECT 12–13 207a-208b; BK IV, CH XIV, SECT 1–2 364b-c

38 MONTESQUIEU: *Spirit of Laws*, BK I, 1a-2b

38 ROUSSEAU: *Inequality*, 366b-d

46 HEGEL: *Philosophy of Right*, PART III, par 270, 85c; par 340 110b-c / *Philosophy of History*, INTRO, 162a-170b; 196d-198b; PART II, 266d; 280b-281b; PART III, 304c-306c

47 GOETHE: *Faust*, PROLOGUE 7a-9b; PART I [652–655] 17b; [997–1010] 25b

51 TOLSTOY: *War and Peace*, BK I, 50b-c; BK V, 196a-198b; BK VI, 243d-250a; 262c; BK VIII, 303a-305b; BK XIV, 605b-d; BK XV, 631a-c; EPILOGUE I, 646d-647b; 650b-d; 659c-d; 671c-672a; EPILOGUE II, 692c-694d

10*e*. Man's comparison of himself with other creatures and with the universe as a whole

7 PLATO: *Timaeus*, 447b-455c esp 452c-453c; 466a-b / *Philebus*, 618c-619c

9 ARISTOTLE: *Ethics*, BK VI, CH 7 [1141^{a}20–^{b}2] 390a-b / *Politics*, BK I, CH 8 [1256^{a}15–22] 450c

12 LUCRETIUS: *Nature of Things*, BK VI [647–652] 89a

12 EPICTETUS: *Discourses*, BK II, CH 5, 143d-144a; BK III, CH 13, 189a

12 AURELIUS: *Meditations*, BK IV, SECT 4 264a

16 KEPLER: *Epitome*, BK IV, 915b-916a

17 PLOTINUS: *Second Ennead*, TR IX, CH 7 69c-70a

19 AQUINAS: *Summa Theologica*, PART I-II, Q 17, A 8, REP 2 692a-c

22 CHAUCER: *Troilus and Cressida*, BK I, STANZA 31–35 5a-b; BK V, STANZA 263 154b / *Tale of Man of Law* 236b-255b esp [4610–4623] 237b, [4701–4729] 239a-b

24 RABELAIS: *Gargantua and Pantagruel*, BK III, 135b-139b

25 MONTAIGNE: *Essays*, 213d-215a; 259a-d

27 SHAKESPEARE: *Hamlet*, ACT II, SC II [303–331] 43d; ACT III, SC I [122–132] 48b; SC IV [53–63] 55a-b; ACT IV, SC III [17–33] 58a-b / *King Lear*, ACT III, SC II 262d-263d; SC IV 264a-266b esp [105–114] 265b / *Macbeth*, ACT V, SC V [16–28] 308d-309a / *Antony and Cleopatra*, ACT V, SC II [76–100] 347a-b / *Pericles*, ACT I, SC I [41–55] 422b; ACT II, SC I [1–11] 427b / *Tempest*, ACT IV, SC I [148–158] 543b

29 CERVANTES: *Don Quixote*, PART II, 237c; 427a

30 BACON: *Advancement of Learning*, 50c-51d
31 SPINOZA: *Ethics*, PART II, PROP 13, SCHOL 378a-c
32 MILTON: *Sonnets*, VII 63b / *Paradise Lost*, BK IV [411-735] 161b-168b esp [411-491] 161b-163a, [721-735] 168a-b; BK VIII [249-559] 237b-244a / *Samson Agonistes* [164-175] 343a-b; [667-704] 354a-355a
33 PASCAL: *Pensées*, 72 181a-184b; 347-348 233b-234a
35 LOCKE: *Human Understanding*, BK II, CH XXIII, SECT 12-13 207a-208b; BK III, CH VI, SECT 12 271d-272b esp 272b; BK IV, CH XVI, SECT 12, 370c-371a
36 SWIFT: *Gulliver*, PART I 3a-42a; PART II 45a-87b; PART IV, 172b-173a
36 STERNE: *Tristram Shandy*, 383a-384a; 394a
38 ROUSSEAU: *Inequality*, 349b-c
42 KANT: *Pure Reason*, 175b [fn 1] / *Fund. Prin. Metaphysic of Morals*, 271d-273b esp 271d-272c; 274a-277b / *Practical Reason*, 327d-328b; 348a-b; 360d-361d / *Pref. Metaphysical Elements of Ethics*, 373d / *Judgement*, 583b-c; 584d-587a; 591b-592d
46 HEGEL: *Philosophy of History*, INTRO, 168b-d
47 GOETHE: *Faust*, PROLOGUE [280-292] 8a; PART I [652-655] 17b; PART II [11,404-419] 277b
48 MELVILLE: *Moby Dick* esp 84b-85a, 123a-b, 168a-b, 171b, 204a, 209b, 236a-239a, 313b-314a, 318a, 319a-b, 341b-343a, 347b, 353b-354b, 360b-361a, 363a-364a, 370b-371b, 381a, 409b-410b
51 TOLSTOY: *War and Peace*, BK III, 156d; 162b-164a,c; BK V, 217b-218b
52 DOSTOEVSKY: *Brothers Karamazov*, BK V, 117c-127b passim
53 JAMES: *Psychology*, 655a-659a esp 655b-657b
54 FREUD: *General Introduction*, 562c-563a / *New Introductory Lectures*, 874a

11. The theological conception of man

11*a*. Man as made in the image of God

OLD TESTAMENT: *Genesis*, 1:26-27; 5:1; 9:6
APOCRYPHA: *Wisdom of Solomon*, 2:23—(*D*) OT, *Book of Wisdom*, 2:23 / *Ecclesiasticus*, 17:1-3—(*D*) OT, *Ecclesiasticus*, 17:1-3
NEW TESTAMENT: *I Corinthians*, 11:7; 15:49 / *II Corinthians*, 3:18 / *Colossians*, 3:8-10 / *James*, 3:9
18 AUGUSTINE: *Confessions*, BK VI, par 4 36a-b; BK XIII, par 12 113b-d; par 32 119a-b / *City of God*, BK XI, CH 26-28 336d-338d; BK XII, CH 23 357d-358a; CH 27, 359c-d / *Christian Doctrine*, BK I, CH 22 629b-630a
19 AQUINAS: *Summa Theologica*, PART I, Q 3, A 1, REP 2 14b-15b; Q 14, A 2, REP 3 76d-77d; Q 32, A 1, REP 2 175d-178a; Q 35, A 2, REP 3 189d-190d; Q 59, A 1, CONTRARY 306c-307b; Q 72, A 1, REP 3 368b-369d; Q 77, A 2, REP 1 401b-d; Q 88, A 3, REP 3 472c-473a; Q 91, A 4, REP 1-2 487d-488c; Q 93 492a-501c; Q 106, A 1, REP 3 545d-546d; PART I-II, PROLOGUE 609a,c
20 AQUINAS: *Summa Theologica*, PART I-II, Q 55, A 2, REP 3 27a-d; Q 110, A 4, ANS 350d-351d
21 DANTE: *Divine Comedy*, PARADISE, V [19-24] 112b; VII [64-84] 115d-116a
22 CHAUCER: *Troilus and Cressida*, BK V, STANZA 263 154b
30 BACON: *Advancement of Learning*, 41b-d
31 DESCARTES: *Meditations*, III, 88c-d / *Objections and Replies*, 214a-d
32 MILTON: *Paradise Lost*, BK IV [285-294] 158b; [356-365] 160a-b; BK VII [519-528] 228b; BK XI [466-522] 309b-310b / *Areopagitica*, 384a
33 PASCAL: *Pensées*, 430-431, 246b-247b; 434-435, 249b-251a
46 HEGEL: *Philosophy of History*, INTRO, 168b-d; PART III, 304d-305b; 310d
47 GOETHE: *Faust*, PART I [486-517] 14a-b; [614-685] 17a-18a
54 FREUD: *Civilization and Its Discontents*, 790d

11*b*. The fatherhood of God and the brotherhood of man

OLD TESTAMENT: *Genesis*, 4:1-15 / *Leviticus*, 19:11,13-18,33-34 / *Deuteronomy*, 10:17-19 / *Psalms*, 82:6; 103:13—(*D*) *Psalms*, 81:6; 102:13 / *Isaiah*, 2:1-4; 45:11-13; 63:15-16—(*D*) *Isaias*, 2:1-4; 45:11-13; 63:15-16 / *Micah*, 4:1-5—(*D*) *Micheas*, 4:1-5 / *Malachi*, 2:10—(*D*) *Malachias*, 2:10
APOCRYPHA: *Ecclesiasticus*, 13:15-17; 25:1—(*D*) OT, *Ecclesiasticus*, 13:19-21; 25:1-2
NEW TESTAMENT: *Matthew*, 5:38-48; 12:46-50; 19:19; 22:39; 23:8-9; 25:34-40 / *Mark*, 12:31-33 / *Luke*, 10:27 / *John*, 1:12; 8:41-42; 13:34-35; 15:12-17 / *Acts*, 17:22-34 esp 17:24-26 / *Romans*, 3:29; 8:14-19; 12; 13:8-10; 14:10-13 / *II Corinthians*, 6:17-18 / *Galatians*, 3:26-28; 5:13-14 / *Ephesians*, 2:13-22; 3:6,14-15; 4:1-6,25; 5:1-2 / *Colossians*, 3:9-14 / *I Thessalonians*, 4:9-10 / *I Peter*, 1:22; 2:17 / *I John*, 2:9-11; 3:1-2,10-18; 4:7-11,20-21; 5:1-2
12 EPICTETUS: *Discourses*, BK I, CH 9 114c-116b; CH 13 120b-c; BK III, CH 11 187a-b; CH 22, 199b-d; CH 24, 203c-204c; 207a-b
12 AURELIUS: *Meditations*, BK III, SECT 4 260b-261a; SECT 11 262a-b; SECT 13 262c; BK VI, SECT 42 278a-b; BK IX, SECT 1 291a-c
18 AUGUSTINE: *City of God*, BK XII, CH 21-22 357a-c; CH 27, 359d / *Christian Doctrine*, BK I, CH 22 629b-630a; CH 30 632c-633b
20 AQUINAS: *Summa Theologica*, PART II-II, QQ 25-27 501a-527a; Q 29, A 3, ANS 531d-532c; A 4, ANS 532c-533a; Q 44, AA 2-3 593d-595b; A 7 597b-598a; Q 184, A 2, REP 3 629d-630d
22 CHAUCER: *Parson's Tale*, par 31 517b-518b
30 BACON: *Advancement of Learning*, 31d-32a
44 BOSWELL: *Johnson*, 392b-c
46 HEGEL: *Philosophy of History*, PART III, 308a-b; 310d-311a

(11. *The theological conception of man.* 11b. *The fatherhood of God and the brotherhood of man.*)

48 MELVILLE: *Moby Dick*, 84b-85a
51 TOLSTOY: *War and Peace*, BK V, 196a-198b; 213a-218b; BK XI, 525c-526b
52 DOSTOEVSKY: *Brothers Karamazov*, BK V, 117c-137c passim; BK VI 146b,d-170d passim
53 JAMES: *Psychology*, 887a-b
54 FREUD: *Group Psychology*, 674c-d

11c. God incarnate in human form: the human nature of Christ

NEW TESTAMENT: *Matthew*, 1:18-25; 2:11; 11:18-19; 13:54-56; 14:33; 16:13-17; 17:1-9; 22:41-46; 26:63-66; 27:26-54 / *Mark*, 3:9-12; 6:2-3; 14:61-62; 15:15-39 / *Luke*, 1-2 esp 1:26 38, 2:8-12; 5:18-26; 7:33-34; 11:27-28; 22:67-70; 23:24 47; 24:2-7,36-43 / *John*, 1:1-18 esp 1:14; 1:30-34; 5:16-47 esp 5:27; 6:42; 8:12-28; 10:22 38; 11:27; 14; 19:25-34; 20:24-21:14 / *Romans*, 1:3-4; 8:3 / *II Corinthians*, 5:16 / *Galatians*, 4:4 / *Ephesians*, 2:14-16 / *Philippians*, 2:5-8 / *Colossians*, 1:12-20 / *I Timothy*, 2:5; 3:16 / *Hebrews*, 1:1-6; 2:14-18; 4:14-15; 5:7-8; 7:20-25 / *I John*, 1:1-4; 2:18-29; 4:2-3 / *II John*, 7-11
18 AUGUSTINE: *Confessions*, BK V, par 20 32d-33a; BK VII, par 13-14 47c-48b; par 24-25 50d-51c; BK X, par 67-70 88b-89a; BK XI, par 4 90a-b / *City of God*, BK IX, CH 15 293a-294a; CH 17 295a-c; BK X, CH 20 311b-c; CH 22 312a-b; CH 24 312d-313c; CH 27-29 315b-318b; BK XI, CH 2 323a-c; BK XXI, CH 15-16 572c-574a / *Christian Doctrine*, BK I, CH 11-14 627b-628b; CH 34 634b-c
19 AQUINAS: *Summa Theologica*, PART I, Q 51, A 2, REP 1 276b-277a; A 3, REP 5 277a-278c; Q 95, A 1, REP 1 506b-507c; PART I-II, Q 5, A 7, REP 2 642a-d
20 AQUINAS: *Summa Theologica*, PART III, QQ 1-26 701b,d-846d esp QQ 4-15 730c-796a, Q 26 845a-846d; PART III SUPPL, Q 76, A 1, ANS 939d 941a; Q 95, A 3, ANS 1045b-1046d; A 4, ANS 1046d-1047d
21 DANTE: *Divine Comedy*, PURGATORY, XXIX [106-120] 98d-99a; XXXI [76-126] 101c-102a; XXXII [28-48] 102c-d; PARADISE, II [37-45] 108a; VII 115a-116c; XIII [31-87] 125d-126b; XXXIII [76-145] 157a-d
22 CHAUCER: *Troilus and Cressida*, BK V, STANZA 264 154b / *Prioress's Tale* [13,383-417] 391a-b / *Parson's Tale*, par 12-13 503b-505a
23 HOBBES: *Leviathan*, PART III, 182a-b
32 MILTON: *Christs Nativity* 1a-7b / *The Passion* 10b-12a esp [15-21] 10b-11a / *Upon the Circumcision* 12b-13a / *Paradise Lost*, BK III [56-415] 136b-144b esp [238-241] 140b, [281-343] 141b-143a; BK XI [22-36] 299b-300a; BK XII [355-465] 327a-329a
33 PASCAL: *Pensées*, 512 262a; 553 268a-270a; 763-765 322a; 785 325b; 862 342b-343a
40 GIBBON: *Decline and Fall*, 308a-b
41 GIBBON: *Decline and Fall*, 134a-161a,c esp 134a-138a; 230d-231a
46 HEGEL: *Philosophy of History*, PART III, 306b 307b; 308a-b
52 DOSTOEVSKY: *Brothers Karamazov*, BK V, 127a-137c

12. Man as an object of laughter and ridicule: comedy and satire

5 ARISTOPHANES: *Acharnians* 455a-469a,c / *Knights* 470a-487a,c / *Clouds* 488a-506d / *Wasps* 507a-525d / *Peace* 526a-541d / *Birds* 542a-563d / *Frogs* 564a-582a,c / *Lysistrata* 583a-599a,c / *Thesmophoriazusae* 600a-614d / *Ecclesiazusae* 615a-628d / *Plutus* 629a-642d
7 PLATO: *Phaedo*, 237b-c / *Philebus*, 629a-630c
12 LUCRETIUS: *Nature of Things*, BK III [978-1052] 42d-43c; BK IV [1073-1191] 58a-59d; BK V [1007-1010] 74b
14 PLUTARCH: *Antony*, 774a-b
22 CHAUCER: *Miller's Prologue* 211a-212b / *Miller's Tale* 212b-223b / *Reeve's Prologue* 224a-225a / *Reeve's Tale* 225a-232a
23 MACHIAVELLI: *Prince*, CH XVII, 24a-c; CH XVIII 25a-26a
23 HOBBES: *Leviathan*, PART I, 59b-c; 63c
24 RABELAIS: *Gargantua and Pantagruel*
25 MONTAIGNE: *Essays*, 6d-10a passim, esp 6d-7a; 10b-11b; 42a-b; 145d-147b; 159a-162c; 165c-167a; 168d-169a; 208a-295a esp 213a-219a, 231d-234a, 251c-252b; 300d-301c; 308c-d; 326b-327b; 388c-395b; 424d-426b; 478c-482b; 538a-543a,c
26 SHAKESPEARE: *Comedy of Errors* 149a-169d / *Taming of the Shrew* 199a-228a,c / *Love's Labour's Lost* 254a-284d / *Midsummer-Night's Dream* 352a-375d / *1st Henry IV*, ACT II, SC IV [510-550] 449a-c / *2nd Henry IV*, ACT IV, SC III [92-135] 492b-c / *Much Ado About Nothing* 503a-531a,c / *As You Like It* 597a-626a,c
27 SHAKESPEARE: *Twelfth Night* 1a-28d / *Merry Wives of Windsor* 73a-102d / *Troilus and Cressida*, ACT II, SC III [1-82] 115d-116c / *All's Well That Ends Well*, ACT IV, SC III [76-87] 164c / *Measure for Measure*, ACT II, SC II [110-123] 183b; ACT III, SC II [234-245] 191d-192a; [275-286] 192b / *King Lear*, ACT III, SC II [80-95] 263d
36 SWIFT: *Gulliver* 3a-184a esp PART II, 71a-76b, PART IV 135a-184a
36 STERNE: *Tristram Shandy* 191a-556a
37 FIELDING: *Tom Jones*, 59c-d; 173b-c; 186c-189a,c; 205a-c; 274a-b; 275d-276a
38 MONTESQUIEU: *Spirit of Laws*, BK XXV, 208d-209a
47 GOETHE: *Faust*, PRELUDE [109-132] 3b-4a; PROLOGUE [280-292] 8a; PART I [1202-1209] 30a; [1868-2054] 44b-48b; [3251-3344] 79b-81b; PART II [4917-4922] 122a; [5061-5064]

125a; [5457-5470] 134b-135a; [6956-6966] 170b

13. The grandeur and misery of man

OLD TESTAMENT: *Genesis*, 1:26-30; 3:17-19; 11:1-9 / *II Samuel*, 14:14—(*D*) *II Kings*, 14:14 / *I Chronicles*, 29:15—(*D*) *I Paralipomenon*, 29:15 / *Job* esp 3:1-26, 5:7, 7:1-21, 14:1-12, 15:14-16, 21:23-26, 25:4-6, 29:1-30:31 / *Psalms*, 8:4-8; 39:4-6,11; 49:12-14; 51:2-5; 89:47-48; 103:13-16; 144:3-4—(*D*) *Psalms*, 8:5-9; 38:5-7,11-12; 48:13-15; 50:4-7; 88:48-49; 102:13-16; 143:3-4 / *Ecclesiastes* passim / *Isaiah*, 40:6-8—(*D*) *Isaias*, 40:6-8

APOCRYPHA: *Wisdom of Solomon*, 9:1-3,13-16; 10:1-2—(*D*) OT, *Book of Wisdom*, 9:1-3,13-16; 10:1-2 / *Ecclesiasticus*, 8:7; 10:9-11; 14:17-19; 17:1-4,30-32; 40:1-11—(*D*) OT, *Ecclesiasticus*, 8:8; 10:9-13; 14:18-20; 17:1-4,29-31; 40:1-11

NEW TESTAMENT: *Romans*, 7:21-25 / *Hebrews*, 2:6-8 / *James*, 4:14 / *I Peter*, 1:24

4 HOMER: *Iliad*, BK VI [144-151] 41c; BK XVII [420-455] 126b-d

5 AESCHYLUS: *Prometheus Bound* [442-506] 44c-45a

5 SOPHOCLES: *Oedipus the King* [1186-1195] 110b-c; [1524-1530] 113c / *Oedipus at Colonus* [1211-1248] 125b-c / *Antigone* [332-375] 134a-b / *Trachiniae* [94-140] 171a-b

5 EURIPIDES: *Suppliants* [195-245] 260a-c; [734-749] 264d

5 ARISTOPHANES: *Birds* [685-692] 551b-c

6 HERODOTUS: *History*, BK I, 2b; 7b-8a; 20b-21a; BK V, 160c-d; BK VII, 224d-225a; 252b-c; BK IX, 291b-c

7 PLATO: *Republic*, BK II, 322a-b / *Timaeus*, 476a-b / *Laws*, BK VI, 704b

12 LUCRETIUS: *Nature of Things*, BK II [1-61] 15a-d; BK III [31-93] 30b-31b; [1053-1075] 43c-d

12 EPICTETUS: *Discourses*, BK I, CH 3-4 108b-110a; CH 24 129a-d; CH 28 133b-134d; BK II, CH 16 156b-158d; BK III, CH 22 195a-201a; CH 24 203c-210a

17 PLOTINUS: *Third Ennead*, TR III, CH 3 93d-94c / *Fourth Ennead*, TR III, CH 8 145d-146d

18 AUGUSTINE: *City of God*, BK IX, CH 14-15 293a-294a; BK XII, CH 1, 343a-c; BK XIII, CH 10 364a-c; BK XIX, CH 4-10 511a-516d; CH 20 523d-524a; CH 27 529a-d; BK XXI, CH 15 572c-573b; BK XXII, CH 22-24 606d-612a

21 DANTE: *Divine Comedy*, HELL, XXVI [49-142] 38c-39c

22 CHAUCER: *Knight's Tale* [1303-1333] 181b-182a / *Monk's Prologue* 432a-434a esp [13,971-996] 433b-434a / *Monk's Tale* 434a-448b esp [13,997-14,004] 434a, [14,679-684] 446b-447a

23 HOBBES: *Leviathan*, PART I, 76c-d; 79c-d

25 MONTAIGNE: *Essays*, 149b-d; 381b-c; 528c-529b

26 SHAKESPEARE: *Richard II* 320a-351d

27 SHAKESPEARE: *Hamlet* 29a-72a,c / *Troilus and Cressida* 103a-141a,c / *King Lear* 244a-283a,c / *Timon of Athens* 393a-420d / *Henry VIII*, ACT III, SC II [350-372] 572c-d

30 BACON: *Advancement of Learning*, 49b

32 MILTON: *Paradise Lost*, BK II [496-505] 122a; BK XI [466-529] 309b-310b / *Samson Agonistes* [164-175] 343a-b; [667-709] 354a-355a

33 PASCAL: *Pensées*, 72 181a-184b; 103 192b-193a; 125-183 195b-204b; 195 209b-210b; 199 210b; 351 234a; 366 236a; 386 239a; 397-424 240b-243b; 430-431 245a-247b; 434-435, 249a-251a; 443 251b; 510-511 261b; 513-517 262a-263b; 524-555 264a-270a; 693, 301b

36 STERNE: *Tristram Shandy*, 383a-384a; 394a

38 ROUSSEAU: *Inequality*, 337d-338c; 363a-366d / *Social Contract*, BK I, 393b-c

40 GIBBON: *Decline and Fall*, 633d-634a,c

42 KANT: *Practical Reason*, 300a-d; 321b-329a esp 327d-328d; 345a-347a; 360d-361d / *Judgement*, 584d-586a; 587a-588a; 591b-592d

44 BOSWELL: *Johnson*, 58b-c; 94d-95d; 102a-b; 102d-103a; 312b; 362c-363a; 401a-b; 540b-542a

46 HEGEL: *Philosophy of Right*, PART I, par 39 21d; PART III, par 358 113c; ADDITIONS, 22 120c-d / *Philosophy of History*, INTRO, 165a-170b; PART II, 280b-281b; PART III, 285a-b; 304c-306c; 310d

47 GOETHE: *Faust* esp DEDICATION [5]-PRELUDE [78] 1a-3a, PROLOGUE [280-292] 8a, [300-329] 8b-9a, PART I [354-517] 11a-14b, [606-807] 16b-21a, [1064-1117] 26b-28a, [1178-1237] 29b-30b, [1544-1571] 37b-38a, [1583-1706] 38b-41a, [1765-1815] 42a-43a, [1851-1867] 44a-b, [3217-3250] 79a-b, [3431-3458] 84a-b, [4405-4612] 110a-114b, PART II [8094-8131] 197a-198a, [9695-9944] 235a-241b, [11,219-272] 273a-274a, [11,384-419] 277a-b, [11,573-603] 281b-282a, [11,934-12,111] 290b-294b

48 MELVILLE: *Moby Dick*, 54b-55a; 59a-60b; 84b-85a; 88b-91a; 107a-b; 313a-314a; 318a; 343a; 403a-b; 418a-419a

49 DARWIN: *Descent of Man*, 597a,c

51 TOLSTOY: *War and Peace* esp BK VI, 235a-238c, 243d-250a, 262c-263a, BK VII, 294b, BK VIII, 303a-305b, 311a-313a, BK IX, 355c-358b, BK X, 430a-b, 439b-440a, BK XI, 514c-d, BK XIV, 605b-d

52 DOSTOEVSKY: *Brothers Karamazov*, BK III, 54a-b; BK V, 127b-137c

54 FREUD: *Interpretation of Dreams*, 246c-248c / *Beyond the Pleasure Principle*, 654a-c / *Civilization and Its Discontents* 767a-802a,c esp 771c-776b, 778d-779a, 799a-802a,c / *New Introductory Lectures*, 853a-b

CROSS-REFERENCES

For: Other discussions of the difference between men and other animals, *see* ANIMAL 1c–1c(2); KNOWLEDGE 7d; MEMORY AND IMAGINATION 1, 6b; MIND 3a–3b; SENSE 2c; WILL 6c.

Matters relevant to the science of psychology and its relation to other sciences, *see* KNOWLEDGE 5e; MIND 6; SOUL 5a–5b.

The issues concerning matter and spirit in the constitution of man, *see* ELEMENT 5f; MATTER 2d, 3a, 4c–4d; MIND 2a–2e; ONE AND MANY 3b(4); SOUL 3a–3d; and for comparisons of human with angelic nature, *see* ANGEL 4; SOUL 4d(2).

Discussions bearing on the analysis of human faculties or powers, *see* ANIMAL 1c(1)–1c(2), 8d; DESIRE 3b–3b(2); EMOTION 1, 1c; HABIT 3; MEMORY AND IMAGINATION 1–1a, 1c, 5; MIND 1a–1g(3); SENSE 1a–1d; SOUL 2c(1)–2c(3), 4a; WILL 3a, 9a.

The problem of harmony and conflict in human nature and the discussion of human abnormality, *see* EMOTION 3a, 3c; MEDICINE 6a–6c(2); MIND 8–8c; ONE AND MANY 3b(5); OPPOSITION 4–4e; WILL 9b.

Another consideration of the cycle of human life, *see* LIFE AND DEATH 6b–6c; and for the consideration of human immaturity, or childhood, *see* FAMILY 6c, 6e; MIND 4b.

The relation of men and women in the domestic community, and for the place of women in the state, *see* FAMILY 5a–5c.

Matters relevant to the problem of individual and racial differences, *see* ANIMAL 10; EVOLUTION 1b; MIND 4a.

The issue concerning the ultimate origin of man, *see* EVOLUTION 7a–7b.

Other statements of the myth of a golden age, *see* LABOR 1a; PROGRESS 1c; TIME 8b; and for the distinction between prehistoric and historic man, or for the progress of historic man, *see* ART 12; EVOLUTION 7c; TIME 8a.

The distinction between man in a state of nature and in a state of civil society, *see* LAW 4b; LIBERTY 1b; NATURE 2b; STATE 3c; and for the consideration of man as a social animal, *see* FAMILY 1; STATE 3b(1).

Other discussions of the condition of Adam before and after original sin, and of the condition of the human race as a result of Adam's sin, *see* GOD 9c; JUSTICE 1b; SIN 3–3c; VIRTUE AND VICE 8b; WILL 7e(1); and for theological doctrines concerning man's life on earth and his immortal destiny, *see* HISTORY 5a; IMMORTALITY 5d–5g; PUNISHMENT 5d; SIN 6c–6e.

The teaching of Christian theology concerning Christ, *see* GOD 9b–9b(3); ONE AND MANY 6c.

Matters relevant to man's understanding of himself, his place in the world, and his relation to God or the gods, *see* DESIRE 7b; GOD 3–3f; WORLD 2.

The tragedy or comedy of human life, *see* HAPPINESS 4b; POETRY 4b.

ADDITIONAL READINGS

Listed below are works not included in *Great Books of the Western World*, but relevant to the idea and topics with which this chapter deals. These works are divided into two groups:

I. Works by authors represented in this collection.
II. Works by authors not represented in this collection.

For the date, place, and other facts concerning the publication of the works cited, consult the Bibliography of Additional Readings which follows the last chapter of *The Great Ideas*.

I.

PLUTARCH. "That Brute Beasts Make Use of Reason," in *Moralia*
AUGUSTINE. *On Nature and Grace*
AQUINAS. *Quaestiones Disputatae, De Veritate*, Q 18
AQUINAS. *Summa Theologica*, PART II–II, QQ 161–165
DANTE. *Convivio (The Banquet)*, FOURTH TREATISE, CH 23–28
F. BACON. "Of Nature in Men," "Of Youth and Age," in *Essays*

HOBBES. *The Elements of Law, Natural and Politic*
——. *The Whole Art of Rhetoric.* BK II, CH 14–19
KANT. *Anthropologie*
J. S. MILL. *A System of Logic,* BK VI, CH 3–4
FREUD. *An Outline of Psychoanalysis*

II.

THEOPHRASTUS. *The Characters*
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Chapter 52: MATHEMATICS

INTRODUCTION

IT is necessary for us to observe the difference between problems *in* mathematics and the problem of the truth *about* mathematics. In the case of any science—in physics, logic, or metaphysics, as well as mathematics—it is one thing to examine the discourses or treatises of the scientists on the special subject matter of their field, and quite another to examine discussions of the science itself, its scope, branches, and unity, its objects, its methods and its relation to other disciplines. The chapter on QUANTITY deals with the subject matter of arithmetic, geometry, and other branches of mathematics; here we are primarily concerned with the nature of mathematical science itself.

Sometimes reflections on the nature of a science are expressed by experts in its subject matter who comment on the scientific enterprise in which they are engaged in prefaces or interspersed remarks. Sometimes such reflections are the commentary on a particular science by those who may claim to speak with competence on the processes of the human mind, the nature of knowledge or of science in general, but who claim no special competence in the particular science under consideration. This is usually the commentary of philosophers who may assert their right to make all knowledge, as well as all reality, their province. The same man may, of course, be both a mathematician and a philosopher; as, for example, Plato, Descartes, Pascal.

In the case of mathematics, the disparity between discourse *in* and *about* the science could hardly escape notice. Even if no preliminary rule of caution were laid down, we should be struck by the contrast between the agreement mathematicians have been able to reach in the solution of their problems and the disagreement of the commentators on basic questions about mathematics. To this there may be one significant exception. Mathematics is honored for the precision of its concepts, the rigor of its demonstrations, the certitude of its truth. Even its detractors—like Swift or Berkeley—concede the exactitude and brilliance of mathematics while questioning its utility; or they admit its intellectual austerity while challenging some application of its method. Its "clearness and certainty of demonstration," Berkeley writes, "is hardly anywhere else to be found."

This general agreement about the quality of mathematical thought may explain why in all epochs mathematics has been looked upon as the type of certain and exact knowledge. Sometimes it is taken as more than a model for other sciences; it is regarded as the method of pure science itself or as the universal science. Sometimes its excellences are thought to be qualified by the limited or special character of its objects; or it is contrasted with other disciplines which, employing different methods, deal with more fundamental matters no less scientifically. But always the conclusions of mathematics serve to exemplify rational truth; always the method of mathematics represents the spirit of dispassionate thought; always mathematical knowledge symbolizes the power of the human mind to rise above sensible particulars and contingent events to universal and necessary relationships.

Mathematics means this not only to mathematicians and philosophers, but also to moralists and statesmen. "The objects of geometrical inquiry," writes Alexander Hamilton, "are so entirely abstracted from those pursuits which stir and put in motion the unruly passions of the human heart, that mankind, without difficulty, adopt not only the more simple theorems of the science, but even those abstruse paradoxes which, however they may appear susceptible of demonstration, are at variance with the natural conceptions which the mind, without the aid

of philosophy, would be led to entertain upon the subject. . . . But in the sciences of morals and politics, men are found far less tractable." This, Hamilton points out, is not due merely to the passionate interest in their problems. "It cannot be pretended," he says, "that the principles of moral and political knowledge have, in general, the same degree of certainty with those of mathematics."

ADMIRATION FOR MATHEMATICS often extends beyond enthusiasm for its exemplary virtues or delight in its intellectual beauty to the recognition of its influence on the whole history of thought. Yet here differences of opinion begin to appear.

In the ancient world Plato and Aristotle represent opposite estimates of the importance of mathematics for the rest of philosophy. For the Platonists, Aristotle says, "mathematics has come to be identical with philosophy, though they say that it should be studied for the sake of other things." He complains of those students of science who "do not listen to a lecturer unless he speaks mathematically." They make the error of supposing that "the minute accuracy of mathematics is . . . to be demanded in all cases," whereas, according to Aristotle's own view, "its method is not that of natural science."

In the modern world, thinkers who are both mathematicians and philosophers, like Descartes and Whitehead, represent a return to the Platonic point of view; while Kant, even more than Aristotle, insists that the philosopher is grievously misled if he tries to follow the method of mathematics in his own inquiries. Whitehead charges Aristotle with having deposed mathematics from its high role "as a formative element in the development of philosophy"—a demotion which lasted until, with Descartes and others in the 17th century, mathematics recovered the importance it had for Plato.

Attempting to qualify his own enthusiasm, Whitehead admits that he would not "go so far as to say that to construct a history of thought without a profound study of the mathematical ideas of successive epochs is like omitting Hamlet from the play which is named after him. That would be claiming too much. But it is certainly analogous to cutting out the part of Ophelia. This simile is singularly exact. For Ophelia is quite essential to the play, she is very charming—and a little mad. Let us grant that the pursuit of mathematics is a divine madness of the human spirit, a refuge from the goading urgency of contingent happenings."

For Kant the madness lies not in the pursuit of mathematics itself, but in the delusion of the philosopher that he can proceed in the same way. "The science of mathematics," Kant writes, "presents the most brilliant example of how pure reason may successfully enlarge its domain without the aid of experience. Such examples are always contagious, particularly when the faculty is the same, which naturally flatters itself that it will meet with the same success in other cases which it has had in one." The expectation naturally arises that the method of mathematics "would have the same success outside the field of quantities." But philosophers who understand their own task, Kant thinks, should not be infected by the "confidence . . . of those who are masters in the art of mathematics . . . as to their ability of achieving such success" by applying its method in other fields.

"The exactness of mathematics," Kant holds, "depends on definitions, axioms, and demonstrations. . . . None of these can be achieved or imitated by the philosopher in the sense in which they are understood by the mathematician," because, according to Kant, the validity of the mathematician's definitions and demonstrations ultimately depends on the fact that he is able to *construct* the concepts he uses. The point is not that mathematics obtains its objects from reason rather than experience, but rather that it obtains them from reason by construction; as, for example, Euclid begins by constructing a triangle which corresponds with his definition of that figure.

Hence, Kant maintains, "we must not try in philosophy to imitate mathematics by beginning with definitions, except it be by the way of experiment. . . . In philosophy, in fact, the definition in its complete clearness ought to conclude rather than begin our work"; whereas in mathematics we cannot begin until we have constructed the objects corresponding to our definitions. "It follows from all this," Kant concludes, "that it is not in accordance with the

very nature of philosophy to boast of its dogmatical character, particularly in the field of pure reason, and to deck itself with the titles and ribands of mathematics."

DIFFERENCES OF opinion about mathematics represent, for the most part, philosophical controversy concerning the nature of science or the objects of its knowledge. Mathematicians who engage in such controversy assume the role of philosophers in doing so, for mathematics itself is not concerned with questions of this sort. But there are some questions about mathematics which seem to call for a close study of the science itself and even for proficiency in its subject matter and operations. They are questions about the scope of mathematics and about the divisions of the science, in relation to one another and to its unity. On these issues, mathematicians disagree not only with philosophers, but among themselves and in their capacity as mathematicians.

These issues usually involve different interpretations of the history of mathematics. The problem is not one of the origin of mathematics.

The ancient opinion, found in Herodotus, Plato, and Aristotle, that the mathematical arts, especially geometry, were first developed by the Egyptians, is of interest because of the questions it raises about the circumstances of the origin of mathematics. Herodotus seems to suggest that geometry arose as an aid in the practice of surveying land. "From this practice," he says, "geometry first came to be known in Egypt, whence it passed into Greece." Aristotle, on the other hand, separating from the useful arts those which "do not aim at utility," thinks the latter arose "first in the places where men first began to have leisure. That is why the mathematical arts were founded in Egypt, for there the priestly caste was allowed to be at leisure."

The Greek development of mathematics very early distinguishes between the pure sciences of arithmetic and geometry and their useful applications in the arts of measurement. The Greeks conceived mathematics as essentially speculative rather than practical or productive. They also divorced it from empirical investigation of the sensible world. As arithmetic is concerned with numbers, not with numbered things, and geometry with figures, not with physical shapes, areas, or volumes, so Plato points out that music and astronomy belong to the mathematical sciences when they deal not with audible harmonies but with their numerical ratios, not with visible celestial motions but with their geometrical configurations.

Provoked by Glaucon's interest in the usefulness of the mathematical arts, Socrates excludes their utility as being of no interest to the philosopher. He recommends arithmetic and its sister disciplines only so far as these sciences entirely ignore the world of sensible things. The reason why the philosopher "who has to rise out of the sea of change and lay hold of true being . . . must be an arithmetician," he explains, is that arithmetic can have "a very great and elevating effect," when it compels "the soul to reason about abstract number" and rebels "against the introduction of visible or tangible objects into the argument." In the same way, only when it concerns itself with "knowledge of the eternal," not with measuring earthly distances, will geometry "draw the soul towards truth, and create the spirit of philosophy." The astronomer, like the geometer, "should employ problems, and let the heavens alone, if he would approach the subject in the right way"; and, like the astronomer, the student of harmony will work in vain, if he compares "the sounds and consonances which are heard only" and so fails to "reach the natural harmonics of number."

About the non-empirical or non-experimental character of mathematics there has been little dispute. It is seldom suggested that the growth of mathematical knowledge depends upon improvement in methods of observation. But on the relation of mathematics to physics, which raises the whole problem of pure and applied mathematics, or of mathematical and experimental physics, there has been much controversy, especially in modern times.

Bacon, for example, adopts the ancient division of mathematics into pure and mixed, the former "wholly abstracted from matter and physical axioms." Though he regards mathematics as a useful instrument in physics—"the investigation of nature" being "best conducted when mathematics are applied to physics"—he also insists upon the primacy of physics and

upon its essentially experimental character. Physics has been corrupted, he says, by logic and by mathematics when these seek to dominate instead of to serve it. "It is a strange fatality that mathematics and logic, which ought to be but handmaids to physics, should boast their certainty before it, and even exercise dominion against it."

The certainty and clarity which Hume is willing to attribute to mathematics cannot, in his opinion, be extended to mathematical physics. "The most perfect philosophy of the natural kind," he thinks, "only staves off our ignorance a little longer. . . . Nor is geometry, when taken into the assistance of natural philosophy, ever able to remedy this defect, or lead us into the knowledge of ultimate causes, by all that accuracy of reasoning for which it is so justly celebrated. Every part of mixed mathematics," Hume continues, "proceeds upon the assumption that certain laws are established by nature in her operations; and abstract reasonings are employed, either to assist experience in the discovery of these laws, or to determine their influence in particular instances, where it depends upon any precise degree of distance or quantity." When mixed with physics, mathematics remains subordinate—at best an aid in the formulation and the discovery of the laws of nature.

A different view seems to be taken by the great mathematicians and physicists of the 17th century. Galileo, Descartes, and Newton tend to make mathematical analysis an integral part of physics. As the structure of the world is mathematical, so, too, must the science of nature be mathematical. Geometry, says Descartes, is "the science which furnishes a general knowledge of the measurement of all bodies." If we retain the ancient distinction between geometry and mechanics, it can only be in terms of the assumption, "confirmed by the usage" of these names, that "geometry is precise and exact, while mechanics is not."

In the preface to his *Mathematical Principles of Natural Philosophy*, Newton also says that "geometry is founded in mechanical practice, and is nothing but that part of universal mechanics which accurately proposes and demonstrates the art of measuring." What is called "rational mechanics" must not be confused with the manual arts of measurement which are imperfect and inexact; and it is therefore wrong to distinguish geometry from mechanics as that which is perfectly accurate from that which is less so. "But since the manual arts are chiefly employed in the moving of bodies, it happens that geometry is commonly referred to their magnitude, and mechanics to their motion."

Newton himself does not abide by this distinction. His aim is to subject all the phenomena of nature "to the laws of mathematics" and to cultivate mathematics as far as it relates to natural philosophy. "I offer this work as the mathematical principles of philosophy, for the whole burden of philosophy consists in this—from the phenomena of motions to investigate the forces of nature and from these forces to demonstrate the other phenomena." He regrets that he has not been able to deduce *all* the phenomena of nature "by the same kind of reasoning from mechanical principles."

Fourier goes even further. "Mathematical analysis," he says, is "as extensive as nature itself." Mathematical analysis has "necessary relations with sensible phenomena." In laying hold "of the laws of these phenomena," mathematics "interprets them by the same language as if to attest the unity and simplicity of the plan of the universe, and to make still more evident that unchangeable order which presides over all natural causes." This much had been said or implied by Descartes and Newton. But in addition to all this, Fourier, from his own experience in developing a mathematical theory of heat, comes to the conclusion that "profound study of nature is the most fertile source of mathematical discoveries." Mathematics itself benefits from its alliance with physics; it increases in analytical power and in the generality of its formulations as physical inquiries extend the range of phenomena to be analyzed and formulated.

THE RELATIONS OF mathematics to physics are considered in the chapters on ASTRONOMY, MECHANICS, and PHYSICS. Mathematical physics must be examined in the light of the opinion that mathematics and physics are separate sciences, distinct in object and method. Furthermore, whereas some of the major contributions to mathematics appear in the great books of

physics or natural philosophy (*e.g.*, Archimedes, Kepler, Newton, Fourier), even more fundamental formulations of the science occur in great books devoted exclusively to mathematics: Euclid's *Elements* (on geometry), Apollonius' treatise *On Conic Sections*, Nicomachus' *Introduction to Arithmetic*, Descartes' *Geometry*, and Pascal's mathematical papers. Others belonging to this latter group are listed in the Additional Readings. The great modern advances in mathematics are exemplified by the works of Gauss, Lobachevski, Hamilton, Riemann, Boole, Dedekind, Peano, Frege, Cantor, Hilbert.

It would be both natural and reasonable to inquire about the relation between the great works of mathematics included in this set and the equally great treatises or monographs, listed in the Additional Readings, which represent for the most part the contributions of the 19th century. But since the major question which immediately confronts us in such an inquiry concerns the relation of modern to ancient mathematics, we can examine the problem in terms of the works included in this set, for they represent both the continuity and the discontinuity in the tradition of mathematical science.

Galileo and Newton are disciples of Euclid and Archimedes; Fourier is a disciple of Newton and Descartes. But Descartes is the great innovator. He seems to be quite self-conscious of his radical departure from the ancients and from the state of mathematics as he found it in his own day. Yet the truth and power of his mathematical discoveries seem so evident to him that he cannot doubt the ancients must have had some inkling of it.

"I am quite ready to believe," he writes, "that the greater minds of former ages had some knowledge of it, nature even conducting them to it. We have sufficient evidence that the ancient Geometricians made use of a certain analysis which they extended to the resolution of all problems, though they grudged the secret to posterity. At the present day also there flourishes a certain kind of Arithmetic, called Algebra, which designs to effect, when dealing with numbers, what the ancients achieved in the matter of figures. These two methods," he claims, "are nothing else than the spontaneous fruit sprung from the inborn principles of the discipline here in question."

Descartes does not regard his success as consisting in the advance of mathematical truth through discoveries based upon principles or conclusions already established. Nor would he even be satisfied to say that his use of algebra in developing analytical geometry created a new branch of mathematics. Rather, in his own view, it tended to unify all existing branches and to form a single universal method of analysis. In effect, it revolutionized the whole character of mathematics and laid the foundation for the characteristically modern development of that science since his day. "To speak freely," he writes, "I am convinced that it is a more powerful instrument of knowledge than any other that has been bequeathed to us by human agency, as being the source of all others."

One need not quite agree with Bertrand Russell that pure mathematics was not discovered until the 19th century, in order to perceive that the discoveries made in that century carry out the spirit of the Cartesian revolution. If one understands the difference between the universal mathematics of Descartes and the separate sciences of arithmetic and geometry as developed by the ancients; if one understands the difference between the theory of equations in Descartes and the theory of proportions in Euclid; if one understands how algebraic symbolism, replacing numbers by letters, frees both arithmetic and geometry from definite quantities, then the profound discontinuity between modern and ancient mathematics begins to be discernible.

There are other differences contributing to that discontinuity, such as the modern treatment of the infinite, the invention of the calculus, and the theory of functions. But what is of prime importance for the purpose of understanding the nature of mathematics, its objects, and its methods, is the perception of the discontinuity in any one or another of its manifestations. Here is a fundamental disagreement about the nature of mathematics which is not an issue between philosophers disputing the definition of the science, but rather an issue made by the actual work of mathematicians in ancient and modern times.

In his *Battle of the Books*—ancient and modern—Swift sees only the great poets and philosophers of the two epochs set against one

another. The battle between the ancient and the modern books of mathematics might be as dramatically represented. In such affairs there is a natural tendency to prejudge the issue in favor of the modern contender. That prejudice has reason on its side in certain fields of knowledge where the perfection of new instruments and the discovery of new facts work to the advantage of the latecomer. But it is questionable whether in this dispute over the nature of mathematics the same advantage prevails.

When the issue is fairly explored by an examination of the differences between the great masterpieces of ancient and modern mathematics, it may be found impossible to say that truth lies more on one side than on the other, or that one conception of mathematics is more fruitful than another, because the two versions of the science may seem to be incommensurable in their aims, methods, and standards of accomplishment.

ONE EXAMPLE WILL illustrate this incommensurability. The ancient notion of number, as may be seen in Nicomachus' *Introduction to Arithmetic*, limits the variety of numbers. A number always numbers a number of things, even though we can deal with the number itself apart from any set of numbered things. It is always a positive and integral quantity which, excepting unity itself, "the natural starting point of all numbers," contains a multitude of discrete units.

Numbers are classified according to the way in which they are constituted of parts and according to the constitution of these parts. The primary division of numbers is into even and odd. "The even is that which can be divided into two equal parts without a unit intervening in the middle; and the odd is that which cannot be divided into two equal parts because of the aforesaid intervention of a unit."

The even numbers are capable of subdivision into the even-times-even, the odd-times-even, and the even-times-odd; and the odd into the prime and incomposite, the secondary and composite, and the number which, in itself, is secondary and composite, but relatively is prime and incomposite. The peculiarities of these types of number are explained in the chapter on QUANTITY. There are still further classifications of numbers into superabundant, deficient, and perfect; and of the parts of numbers in relation to the numbers of which they are parts.

Finally, numbers are considered in terms of their geometrical properties, to be observed when their units are disposed discretely in spatial patterns, and in one, two, or three dimensions. There are linear, plane, and solid numbers, and among plane numbers, for example, there are triangular, square, pentagonal, hexagonal numbers, and so on.

The arithmetic operations of addition, subtraction, multiplication, and division are performed in the production of numbers or in the resolution of numbers into their parts. But though any two numbers can be added together or multiplied, the inverse operations cannot always be performed. A greater number cannot be subtracted from a less, for subtraction consists in taking a part from the whole, and leaving a positive remainder. Since division is the decomposition of a number into its parts, a number cannot be divided by one greater than itself, for the greater cannot be a part of the less.

In short, in Nicomachus' theory of numbers what later came to be treated as negative numbers and fractions can have no place. Nicomachus will not carry out arithmetical operations in all possible directions without regard to the result obtained. He refuses to perform these operations when the results which would be obtained do not have for him the requisite mathematical reality. He does not find it repugnant to reason that subtraction and division, unlike addition and multiplication, are not possible for any two numbers; as, for example, subtracting a larger from a smaller number, or using a divisor which does not go into the dividend evenly, and so leaves a fractional remainder. On the contrary, Nicomachus finds it repugnant to reason to perform these operations in violation of their proper meaning, and to produce thereby results, such as negative quantities and fractions, which are for him not numbers, *i.e.*, which cannot number any real thing.

Understanding the nature of square numbers, Nicomachus would be able to understand a square root, but he would not see why the operation of extracting the square root should be

applied to numbers which are not square. Hence another kind of modern number, the irrational fraction which is generated by such operations as the extraction of the square of positive integers which are not perfect squares, would never appear in Nicomachus' set of numbers; nor would the imaginary number, which is the result of applying the same operation to negative quantities.

When the arithmetical operations are performed algebraically, with unknowns as well as definite quantities, the solution of equations requires the employment of terms which Nicomachus would not admit to be numbers—negatives, fractions (both rational and irrational), imaginaries, and complex numbers, which are partly real and partly imaginary. Descartes finds nothing repugnant in these novel quantities. On the contrary, he would find it repugnant not to be able to perform the basic arithmetical operations without restriction. Algebra would be impossible, and with it the general method of analysis that proceeds in terms of the purely formal structure of equations from which all definite quantities have been excluded. It would also be impossible to do what Descartes thinks essential to the unity of mathematics, namely, to represent geometrical operations algebraically and to perform most algebraic operations geometrically.

Geometrical loci cannot be expressed by algebraic formulae or equations, unless there are as many numbers as there are points on a line. The number series for Nicomachus, without fractions and irrationals, is neither dense nor continuous. There are fewer numbers than there are points on a line. And without the use of zero, negative numbers, and fractions—none of which would be regarded as numbers by Nicomachus—it would be impossible for Descartes to construct a set of coordinates for the geometrical representation of equations, whereby all the points in a plane have their unique numerical equivalents.

The Cartesian synthesis of algebra and geometry, which in his view vastly increases the power of each, violates the ancient distinction between continuous and discontinuous quantities—magnitudes (like lines and planes) and multitudes (or numbers). Euclid, for example, treats the irrational or the incommensurable always as a relation of magnitudes, never of multitudes, or numbers; for him certain geometrical relationships cannot be expressed numerically. Arithmetic and geometry are not even coordinate, much less co-extensive sciences. Arithmetic is the simpler, the more elementary science, and is presupposed by geometry.

Other examples arising from the innovations of Descartes might be employed to show the chasm between the arithmetic and geometry of the ancients, and modern mathematics—such as the treatment of infinite magnitudes and numbers, the theory of functions, and the method of the calculus. But the multiplication of examples does not seem necessary to suggest that there may be no answer to the question, Is Descartes right, and Nicomachus and Euclid wrong? or to the question, Are the modern innovations improvements or corruptions of the mathematical arts and sciences?

These questions are not like questions concerning the truth or falsity of a proposition in mathematics or the validity of a proof. A given theorem in Euclid must, in the light of his definitions, axioms, and postulates, be either true or false; and accordingly Euclid's demonstrations or constructions are either cogent or fallacious. The same rules apply to Descartes. But whether Euclid's or Descartes' conception of the whole mathematical enterprise is right seems to present a choice between disparate worlds, a choice to be made by reference to principles and purposes which are themselves not mathematical.

Modern mathematics may be much more useful in its physical applications, especially in the analysis and calculation of variable notions or quantities. It may have a special elegance and simplicity, as well as greater unity and even systematic rigor. But it may also purchase these qualities at the expense of the kind of intelligibility which seems to characterize ancient mathematics as a result of the insistence that its objects have an immediately recognizable reality. Ancient mathematics never occasioned such an extreme remark as that made by Bertrand Russell about modern mathematics—that it is "the science in which we never know what we are talking about, nor whether what we are saying is true."

THE QUESTION OF the reality of the objects of mathematics is in part a problem for the mathematician and in part a question for the philosopher. The problem for the mathematician seems to be one of establishing the existence of the objects he defines. This can be illustrated by reference to Euclid's *Elements*.

The basic principles, as Euclid expounds the science, seem to be threefold: definitions, postulates, and axioms or common notions. The axioms are called "common notions" because they are truths common to other branches of mathematics as well as to geometry. The common notions are called "axioms" because their truth is supposed to be self-evident. In contrast, the postulates are peculiar to geometry, for they are written as rules of construction. They demand that certain operations be *assumed* possible, such as the drawing of a straight line or a circle, or the transposition of a figure from one portion of space to another without alteration of its form or quantity.

Euclid's definitions include the definition of a straight line and a circle. His first two postulates, therefore, seem to ask us to assume that space is such that these defined geometrical objects exist in it as they are defined; or, in other words, that objects corresponding to the definitions have geometrical reality. But there are many definitions—of a triangle, of an equilateral triangle, of a parallelogram—for which Euclid states no postulate demanding that we assume the geometrical reality of the object defined. Hence before he undertakes to demonstrate the properties of these figures, he finds it necessary to prove that they can be constructed. Until they are constructed, and the construction demonstrated, the definitions state only possibilities to which no geometrical realities are *known* to correspond in the space determined by Euclid's postulates.

In his first constructions, Euclid can employ only the definition of the figure itself, his axioms, and those postulates which permit him to use certain mechanical devices—the straight edge and the compass, which are the mechanical equivalents of his postulates that a straight line can be drawn between any two points and a circle described with any radius from any point upon a plane. When, for example, in the first proposition of Book I, Euclid thus demonstrates the construction of an equilateral triangle, he has proved the geometrical existence of that figure, or, in other words, its reality in the space of his postulates.

A number of questions can be asked about this and many other similar demonstrations. The postulates being assumptions, their truth can be questioned and an effort made to prove or disprove them. This type of questioning led to the development of the non-Euclidean geometries. After centuries of trying unsuccessfully to prove Euclid's postulate about parallel lines, geometers like Lobachevski and Riemann postulated other conditions concerning parallels, with consequences for the properties of other geometrical figures.

The interior angles of a Euclidean triangle, for example, equal the sum of two right angles; in certain non-Euclidean triangles, they add up to more or less than two rights. One interpretation of this situation is that the truth of conclusions in geometry is entirely dependent on arbitrary assumptions. Another is that the several variants of the parallel postulate indicate the selection of different spaces in which to construct figures; and under each set of spatial conditions postulated, there is only one body of geometrical truths concerning the properties of the figures therein constructed.

Another type of question concerns the logical, as opposed to the geometrical, conditions of geometrical proof. In his essay *On Geometrical Demonstration*, Pascal declares the geometric method to be the most perfect available to men, for it "consists not in defining or in proving everything, nor in defining or proving nothing, but in maintaining itself in the middleground of not defining things which are clear to all men and in defining all others; and not proving everything known to men, but in proving all the other things." This method, it seems, is not restricted to the subject matter of geometry; to Descartes and Spinoza, at least, it seems to be the method for demonstrating any theoretical truth. Descartes presents "arguments demonstrating the existence of God and the distinction between soul and body, drawn up in geometrical fashion"; and as its title page indicates, the whole of Spinoza's *Ethics* is set forth "in geometrical order."

It may be questioned whether the postulates

which Descartes adds to his definitions and axioms, or those which Spinoza introduces beginning with Proposition 13 of Book II, function as postulates do in geometry, *i.e.*, as rules of construction; it may similarly be questioned whether Spinoza is following the geometrical method in Book I where he proceeds without any postulates at all. But the more general question concerns the criteria for testing the consistency and the adequacy of the primitive propositions—the definitions, axioms, postulates—laid down as the foundation for all that is to be demonstrated. The investigation of this problem calls for an examination of the whole process of proof, from which has developed the modern theory of mathematical logic that challenges the universality and adequacy of the traditional logic of Aristotle, and asserts that mathematics and logic are continuous with one another—essentially the same discipline.

THE ISSUES RAISED by mathematical logic or the logic of mathematics are considered in the chapters on HYPOTHESIS, LOGIC, and REASONING. Here we must turn finally to one other question which is of interest principally to the philosopher rather than the mathematician. It concerns the objects of mathematics. It is a question about their reality or mode of existence which cannot be answered by the mathematical proof of a construction.

When, for example, Euclid constructs an equilateral triangle, the figure established cannot be the one imperfectly drawn upon paper. The postulated permission to use a ruler and compass does not remove the imperfection of these mechanical instruments or the inaccuracy in their physical use. The triangle whose properties the geometer tries to demonstrate must be perfect, as no actually drawn figure can be. The philosophical question, therefore, concerns the reality or existence of this ideal, perfect figure. The same question can be asked about pure numbers—numbers apart from all numbered things.

Are the objects of mathematics purely intelligible beings existing apart from the sensible world of material things? Or are they ideal entities—not in the sense of existing outside the mind, but in the sense of being ideas in the mind itself rather than perceptible particulars? As indicated in the chapters on BEING, FORM, and IDEA, Plato and Aristotle seem to answer these questions differently. But there are further differences among those who regard mathematical objects as having being only in the mind.

Aristotle, Aquinas, Locke, and James, for example, think of the objects of mathematics as universals formed by abstraction from the particulars of sense and imagination. "The mathematicals," such as numbers and figures, Aquinas writes, "do not subsist as separate beings." Apart from numbered things and physical configurations, numbers and figures "have a separate existence only in the reason, in so far as they are abstracted from motion and matter." Hobbes, Berkeley, and Hume, on the other hand, deny abstract ideas or universal concepts. "Let any man try to conceive a triangle in general," Hume declares, "which is neither *isosceles* nor *scalenum*, nor has any particular length or proportion of sides; and he will soon perceive the absurdity of all the scholastic notions with regard to abstraction and general ideas."

Despite these differences, there seems to be general agreement in the tradition of the great books that the truths of mathematics are rational rather than empirical; or, in the language of Kant and James, *a priori* rather than *a posteriori*. But the meaning of this agreement is not the same for those who think that truth in mathematics does not differ from truth in other sciences and those who think that mathematical truths stand alone precisely because they are not about matters of fact or real existence.

Plato, for whom all science is knowledge of purely intelligible objects, regards the mathematical sciences as inferior to dialectic in the knowledge of such objects "because they start from hypotheses and do not ascend to principles." The students of such sciences, Plato writes, "assume the odd and the even and the figures and three kinds of angles and the like in their several branches of science; these are their hypotheses, which they and everybody are supposed to know, and therefore they do not deign to give any account of them either to themselves or others; but they begin with them, and go on until they arrive at last, and in a consistent manner, at their conclusion."

For Aristotle, what differentiates mathematics from physics and metaphysics is the special character of its objects. Physics and metaphysics both deal with substances as they exist outside the mind, whereas the objects of mathematics are abstractions. Though figures and numbers "are inseparable in fact" from material substances, they are "separable from any particular kind of body by an effort of abstraction." This does not deny, for example, that physical things have perceptible figures. It merely insists that the geometer does not treat figures *as* sensible, but *as* intelligible, that is, as abstracted from matter. Nevertheless, the truths of mathematics, no less than those of physics and metaphysics, apply to reality. All three sciences are further alike in demonstrating their conclusions rationally rather than by experiment. All three employ induction to obtain their principles, though metaphysics alone attains to the first principles of all science.

For Kant, "mathematical cognition is cognition by means of the *construction* of conceptions." To explain this he cites the example of the construction of a triangle. "I construct a triangle, by the presentation of the object which corresponds to this conception, either by mere imagination (in pure intuition) or upon paper (in empirical intuition); in both cases completely *a priori* without borrowing the type of that figure from any experience.... We keep our eye merely on the act of the construction of the conception, and pay no attention to the various modes of determining it, for example, its size, the length of its sides, the size of its angles." The *a priori* character of such intuitions, on which rests the *a priori* character of mathematical truths, does not mean that mathematics has no relevance to experience. Arithmetic and geometry are like physics, according to Kant; they are sciences of experience or nature but like pure (as opposed to empirical) physics, they are *a priori* sciences. Since Kant holds that experience itself is constituted by *a priori* forms of perception, he can ascribe the validity which mathematics has for all possible experience to the "*a priori* intuition of the pure forms of phenomena—space and time."

Bertrand Russell rejects this "Kantian view which [asserts] that mathematical reasoning is not strictly formal, but always uses intuitions, *i.e.*, the *a priori* knowledge of space and time. Thanks to the progress of Symbolic Logic . . . this part of the Kantian philosophy," Russell holds, "is now capable of a final and irrevocable refutation." Leibnitz, before Kant, had advocated "the general doctrine that all mathematics is a deduction from logical principles," but, according to Russell, he had failed to substantiate this insight, partly because of his "belief in the logical necessity of Euclidean geometry." The same belief is, in Russell's opinion, the cause of Kant's error. "The actual propositions of Euclid . . . do not follow from the principles of logic alone; and the perception of this fact," he thinks, "led Kant to his innovations in the theory of knowledge. But since the growth of non-Euclidean geometry, it has appeared that pure mathematics has no concern with the question whether the axioms and propositions of Euclid hold of actual space or not."

Russell asserts that "by the help of ten principles of deduction and ten other premises of a general logical nature (*e.g.*, 'implication is a relation'), all mathematics can be strictly and formally deduced." He regards "the fact that all Mathematics is Symbolic Logic" as "one of the greatest discoveries of our age; and when this fact has been established, the remainder of the principles of Mathematics consists in the analysis of Symbolic Logic itself." Though this view of mathematics may not be worked out in detail except in such treatises as Russell's *Principles of Mathematics* and in the *Principia Mathematica*, on which he collaborated with Whitehead, the conception of mathematics as a purely formal science, analogous to (if not identical with) logic, does have some anticipations in the great books. For James, as for Locke and Hume, mathematics is strictly a science of the relations between ideas, not of real existences. "As regards mathematical judgments," James writes, "they are all 'rational propositions'... for they express results of comparison and nothing more. The mathematical sciences deal with similarities and equalities exclusively, and not with coexistences and sequences." Both James and Locke, however, differ from Hume in thinking that there are sciences other than those of number and quantity which can demonstrate their conclusions with certitude.

The foregoing discussion indicates *some* of the differences among philosophers concerning the objects of mathematics, the conditions of its truth, and its relation to other sciences. These disagreements do not seem to take the form of an opposition between ancient and modern thought, like that between ancient and modern mathematicians concerning the nature of their science. The two oppositions do not run parallel to one another.

On the contrary, the objections which modern philosophers, especially Berkeley, Hume, and Kant, raise against the notion of infinite quantities seem to favor the ancient rather than the modern tenor of mathematical thought. Though the reasons they give do not derive from the same principles as those to which Plato and Aristotle appeal, they, like the ancients, appear to insist upon a certain type of intelligibility in the objects of mathematics, which seems to have been sacrificed in the mathematical development initiated by Descartes.

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To find the passages cited, use the numbers in heavy type, which are the volume and page numbers of the passages referred to. For example, in **4** HOMER: *Iliad*, BK II [265–283] **12d**, the number **4** is the number of the volume in the set; the number **12d** indicates that the passage is in section d of page 12.

PAGE SECTIONS: When the text is printed in one column, the letters **a** and **b** refer to the upper and lower halves of the page. For example, in **53** JAMES: *Psychology*, **116a-119b**, the passage begins in the upper half of page 116 and ends in the lower half of page 119. When the text is printed in two columns, the letters **a** and **b** refer to the upper and lower halves of the left-hand side of the page, the letters **c** and **d** to the upper and lower halves of the right-hand side of the page. For example, in **7** PLATO: *Symposium*, **163b-164c**, the passage begins in the lower half of the left-hand side of page 163 and ends in the upper half of the right-hand side of page 164.

AUTHOR'S DIVISIONS: One or more of the main divisions of a work (such as PART, BK, CH, SECT) are sometimes included in the reference; line numbers, in brackets, are given in certain cases; *e.g.*, *Iliad*, BK II [265–283] **12d**.

BIBLE REFERENCES: The references are to book, chapter, and verse. When the King James and Douay versions differ in title of books or in the numbering of chapters or verses, the King James version is cited first and the Douay, indicated by a *(D)*, follows; *e.g.*, OLD TESTAMENT: *Nehemiah*, 7:45—*(D) II Esdras*, 7:46.

SYMBOLS: The abbreviation "esp" calls the reader's attention to one or more especially relevant parts of a whole reference; "passim" signifies that the topic is discussed intermittently rather than continuously in the work or passage cited.

For additional information concerning the style of the references, see the Explanation of Reference Style; for general guidance in the use of *The Great Ideas*, consult the Preface.

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23 HOBBES: *Leviathan*, PART I, 72a-d
30 BACON: *Advancement of Learning*, 46a-c
31 DESCARTES: *Rules*, II, 3a-b; IV, 7a-b; VI 8a-10a; XIV, 30d-33b / *Discourse*, PART II, 47b-d; PART IV, 52d-53a / *Meditations*, I, 76b-c / *Objections and Replies*, 217b-d / *Geometry*, BK II, 304a-306a; 316a-b
34 NEWTON: *Principles*, 1a b
35 LOCKE: *Human Understanding*, BK II, CH XII, SECT 3–5 147d-148b
35 BERKELEY: *Human Knowledge*, SECT 118–132 436b-439c
35 HUME: *Human Understanding*, SECT XII, DIV 131 508d-509a
42 KANT: *Pure Reason*, 46a-c; 62a-d; 68a-69c; 211c-213a
53 JAMES: *Psychology*, 874a-878a esp 874a

2*a*. The apprehension of mathematical objects: by intuition, abstraction, imagination, construction; the forms of time and space

7 PLATO: *Meno*, 180b-183c / *Republic*, BK VI, 387b-d; BK VII, 393a-394a / *Theaetetus*, 535b-c
8 ARISTOTLE: *Posterior Analytics*, BK I, CH 18 111b-c / *Metaphysics*, BK IX, CH 9 [$1051^{a}23$-33] 577b-c; BK XIII, CH 3 609a-610a / *Memory and Reminiscence*, CH 2 [$452^{b}7$-23] 694b-d
9 ARISTOTLE: *Ethics*, BK III, CH 3 [$1112^{b}20$-24] 358d; BK VI, CH 8 [$1142^{a}13$-19] 391b
11 EUCLID: *Elements*, BK I, POSTULATES, 1–3 2a
19 AQUINAS: *Summa Theologica*, PART I, Q 1, A 1, REP 2 3b-4a; Q 85, A 1, REP 2 451c-453c
31 DESCARTES: *Rules*, XIV-XV 28a-33d / *Discourse*, PART II, 46d / *Meditations*, V, 93a-d; VI, 96b-d / *Objections and Replies*, 217b-d; 218c; 228c-d
33 PASCAL: *Pensées*, 1–2 171a-172b
35 LOCKE: *Human Understanding*, BK I, CH 1, SECT 16 99b-c; BK II, CH XIII, SECT 5–6 149b-d; CH XVI 165c-167c passim
35 BERKELEY: *Human Knowledge*, INTRO, SECT 15–16 409a-d; SECT 12–13 415b-c; SECT 118–122 436b-437c
35 HUME: *Human Understanding*, SECT XII, DIV 122 505c-d; DIV 124–125 506a-507a esp DIV 125, 507b [fn 1]
42 KANT: *Pure Reason*, 16a-c; 17d-18d; 24d-25b; 31b-d; 35b-36a; 46a-c; 55c-56a; 62a-d; 68a-69c; 86b-c; 87b-c; 110a; 211c-212a / *Practical*

(2. *The objects of mathematics: number, figure, extension, relation, order. 2a. The apprehension of mathematical objects: by intuition, abstraction, imagination, construction; the forms of time and space.*)

Reason, 295b-d / *Science of Right*, 399a / *Judgement*, 551a-553c

52 DOSTOEVSKY: *Brothers Karamazov*, BK V, 121a-b

53 JAMES: *Psychology*, 302a-304b; 549a-552a esp 552b [fn 1]; 869a-870a; 874b-878a passim

2b. The being of mathematical objects: their real, ideal, or mental existence

7 PLATO: *Phaedo*, 228b-230c; 242c-243c / *Republic*, BK VI, 387b-c; BK VII, 391b-398c / *Theaetetus*, 535b-c; 541b-d / *Sophist*, 562c / *Philebus*, 636b-c / *Seventh Letter*, 809c-810b

8 ARISTOTLE: *Prior Analytics*, BK I, CH 41 [49^{b}32-37] 68c / *Posterior Analytics*, BK I, CH 10 [76^{b}39-77^{a}3] 105d; CH 13 [79^{a}6-10] 108c; CH 18 [81^{a}40-^{b}5] 111b-c / *Topics*, BK VI, CH 6 [143^{b}11-33] 197b-c / *Physics*, BK II, CH 2 [193^{b}23-194^{a}11] 270a-c; BK III, CH 5 [204^{a}8-34] 282a-b; BK IV, CH 1 [208^{b}19-24] 287b-c; CH 11 [219^{b}5-8] 299b; CH 14 [223^{a}21-29] 303a / *Heavens*, BK III, CH 1 [299^{a}1-300^{a}19] 390b-391c; CH 7 [306^{a}1-^{b}2] 397b-d / *Metaphysics*, BK I, CH 5 [985^{b}22-986^{a}21] 503d-504b; CH 6 [987^{b}10-34] 505c-506a; CH 8 [989^{b}29-990^{a}32] 508a-c; CH 9 [991^{b}9-992^{b}18] 509d-511a; BK III, CH 1 [995^{b}13-18] 514a; [996^{a}13-15] 514c; CH 2 [996^{a}22-36] 514d-515a; [997^{b}12-998^{a}19] 516b-d; CH 5 [1001^{b}26]-CH 6 [1002^{b}25] 520c-521c; BK VII, CH 2 [1028^{b}18-28] 551a-b; CH 10 [1035^{b}32-1036^{a}12] 559b-c; CH 11 [1036^{b}32-1037^{a}4] 560b-c; BK XI, CH 1 [1059^{b}2-13] 587b-c; CH 2 [1060^{a}36-^{b}19] 588c-d; CH 3 [1061^{a}29-^{b}4] 589c; BK XII, CH 1 [1069^{a}30-37] 598b; BK XII, CH 10 [1075^{b}25]-BK XIII, CH 3 [1078^{b}5] 606c-610a; BK XIII, CH 6-9 611d-618c; BK XIV 619b,d-626d / *Soul*, BK III, CH 7 [431^{b}13-19] 664b

9 ARISTOTLE: *Ethics*, BK I, CH 6 [1096^{a}17-19] 341b; BK VI, CH 8 [1142^{a}13-19] 391b

11 EUCLID: *Elements*, BK I, POSTULATES, 1-3 2a

11 NICOMACHUS: *Arithmetic*, BK I, 811a-812a; 813d-814b

18 AUGUSTINE: *Confessions*, BK X, par 19 76a-b / *Christian Doctrine*, BK II, CH 38 654b-c

19 AQUINAS: *Summa Theologica*, PART I, Q 5, A 3, REP 4 25a-d; Q 10, A 6, ANS 45c-46d; Q 11, A 1, REP 1 46d-47d; A 3, REP 2 49a-c; Q 30, A 1, REP 4 167a-168a; Q 44, A 1, REP 3 238b-239a; Q 85, A 1, REP 2 451c-453c

20 AQUINAS: *Summa Theologica*, PART III, Q 7, A 12, REP 1 754c-755c; PART III SUPPL, Q 83, A 2, ANS 976c-978c; A 3, REP 2 978c-980d

31 DESCARTES: *Rules*, XIV, 30b-32a / *Discourse*, PART IV, 52d-53a / *Meditations*, I, 76b-c; V, 93a-d; 96a / *Objections and Replies*, 169c-170a; 217b-d; 218c; 228c-229a

31 SPINOZA: *Ethics*, PART I, APPENDIX, 370b-c

33 PASCAL: *Vacuum*, 373a-b

35 LOCKE: *Human Understanding*, BK I, CH III, SECT 6 113c-d; BK III, CH III, SECT 19 259c-260a; BK IV, CH IV, SECT 5-8 324d-325c

35 BERKELEY: *Human Knowledge*, INTRO, SECT 12-16 408a-409d; SECT 12-13 415b-c; SECT 118-128 436b-438d passim, esp SECT 121-122 436d-437c, SECT 125-126 438a-c

35 HUME: *Human Understanding*, SECT IV, DIV 20 458a-b; SECT XII, DIV 122 505c-d; DIV 124-125 506a-507a esp DIV 125, 507b [fn 1]

42 KANT: *Pure Reason*, 16a-c; 24a-33d esp 31d-32c; 35b-36a; 46a-c; 62a-d; 87b-c; 91c-d; 94b-95a; 211c-213a esp 211c-212a / *Practical Reason*, 295b-d; 312c-d / *Judgement*, 551a-553c

45 FOURIER: *Theory of Heat*, 183a-b

53 JAMES: *Psychology*, 874a-878a esp 875a-876b; 880b-881a

2c. Kinds of quantity: continuous and discrete quantities; the problem of the irrational

7 PLATO: *Meno*, 180d-181c / *Republic*, BK VIII, 403a-d / *Parmenides*, 499d-500c / *Theaetetus*, 515a-c

8 ARISTOTLE: *Categories*, CH 5 [3^{b}32-4^{a}9] 8a-b; CH 6 [4^{b}23-5^{a}14] 9a-c; CH 8 [10^{b}26-11^{a}14] 15d-16b / *Physics*, BK IV, CH 4 [211^{a}29-^{b}4] 290c; CH 5 [212^{b}3-6] 291d; BK V, CH 3 [227^{a}10-34] 307d-308b; BK VI, CH 1-2 312b,d-315d / *Heavens*, BK I, CH 1 [268^{a}6-11] 359a; BK III, CH 1 [299^{a}1-300^{a}19] 390b-391c; CH 7 [306^{a}26-^{b}2] 397c-d; CH 8 [306^{b}17-26] 398a / *Generation and Corruption*, BK I, CH 2 [315^{b}25-317^{a}17] 411b 413a; BK II, CH 10 [337^{a}22-34] 439b-c / *Metaphysics*, BK I, CH 2 [983^{a}11-20] 501b-c; BK II, CH 2 [994^{b}23-26] 513a; BK III, CH 4 [1001^{b}7-25] 520b-c; BK V, CH 6 [1015^{b}35-1016^{a}17] 536b-c; [1016^{b}6-32] 537a-b; CH 13 [1020^{a}9-14] 541b; BK VIII, CH 3 [1043^{b}33-1044^{a}14] 568b-d; BK X, CH 1 [1052^{a}15-37] 578b,d; CH 3 [1054^{a}20-29] 581a; BK XI, CH 12 [1068^{b}26-1069^{a}18] 597d-598a,c; BK XIV, CH 1 [1087^{b}34-1088^{a}14] 620a-b

11 EUCLID: *Elements*, BK V, DEFINITIONS, 4-5 81a; BK VII, DEFINITIONS, 2 127a; 20 127b; BK X 191a-300a esp PROP 1 191b-192a

11 ARCHIMEDES: *Sphere and Cylinder*, BK I, ASSUMPTIONS, 5 404b / *Spirals*, 484b / *Quadrature of the Parabola*, 527a-b

11 NICOMACHUS: *Arithmetic*, BK I, 811d-812a

17 PLOTINUS: *Second Ennead*, TR IV, CH 7, 52c / *Fourth Ennead*, TR II, CH 1, 139d / *Sixth Ennead*, TR I, CH 4 253b-254b; TR III, CH 13, 287d-288a; CH 15 289a-c

19 AQUINAS: *Summa Theologica*, PART I, Q 3, A 1, REP 1 14b-15b; Q 7, A 3, REP 3-4 32c-33c; A 4, ANS 33d-34c; Q 11, A 2, REP 2 47d-48d; Q 30, A 3, ANS 169b-170c; Q 42, A 1, REP 1 224b-225d; Q 48, A 4, REP 3 262a-263a; Q 52, A 1 278d-279b

20 AQUINAS: *Summa Theologica*, PART II-II,

Q 24, A 4, REP 1 491d-492b; PART III, Q 7, A 12, REP 1 754c-755c

28 GALILEO: *Two New Sciences*, FIRST DAY, 139c-153a passim; THIRD DAY, 201a-202a

31 DESCARTES: *Discourse*, PART IV, 52d-53a / *Meditations*, V, 93b

31 SPINOZA: *Ethics*, PART I, PROP 15, SCHOL 360b-361d

33 PASCAL: *Geometrical Demonstration*, 434a-439b

34 NEWTON: *Principles*, BK I, LEMMA I 25a; LEMMA II, SCHOL, 31a-32a

35 LOCKE: *Human Understanding*, BK II, CH XV, SECT 9 164b-d; CH XVI, SECT 3-4 165d-166b

35 BERKELEY: *Human Knowledge*, SECT 123-132 437c-439c

42 KANT: *Pure Reason*, 66d-72c; 124d-125b; 135a-137a,c; 152a-d; 161d-163a

51 TOLSTOY: *War and Peace*, BK XI, 469a-d

3. Method in mathematics: the model of mathematical thought

7 PLATO: *Meno*, 179d-183a / *Republic*, BK VI, 387b-d / *Theaetetus*, 515b-c

8 ARISTOTLE: *Prior Analytics*, BK I, CH 41 [49^{b} 32-50^{a}4] 68c / *Posterior Analytics*, BK I, CH 10 104d-105d / *Physics*, BK II, CH 9 [200^{a}15-29] 277c-d / *Metaphysics*, BK III, CH 2 [996^{a}22-36] 514d-515a; BK IX, CH 9 [1051^{a}22-34] 577b-c; BK XI, CH 3 [1061^{a}29-^{b}4] 589c; BK XIII, CH 3 609a-610a

9 ARISTOTLE: *Ethics*, BK III, CH 3 [1112^{b}20-24] 358d

11 ARCHIMEDES: *Method* 569a-592a esp 569b-570a

23 HOBBES: *Leviathan*, PART I, 56b; 58a-c; 59b c

28 GALILEO: *Two New Sciences*, FOURTH DAY, 252a-b

30 BACON: *Advancement of Learning*, 65b / *Novum Organum*, BK I, APH 59 112b-c

31 DESCARTES: *Rules* 1a-40a,c esp II 2a-3b, IV, 5c-7d, XIV-XXI 28a-40a,c / *Discourse*, PART II, 46c-48b / *Meditations*, 73a / *Objections and Replies*, 128a-129a / *Geometry* 295a-353b esp BK I, 295a-298b, BK II, 304a-306a, 316a-317a, BK III, 331b, 353a

31 SPINOZA: *Ethics*, PART I, APPENDIX, 370b-c

33 PASCAL: *Pensées*, 1-3 171a-172b / *Geometrical Demonstration*, 430a-434a; 442a-446b / *Arithmetical Triangle*, 451b-452a; 458b-459b; 464a-466a

34 NEWTON: *Principles*, BK II, LEMMA 2 and SCHOL 168a-170a

35 LOCKE: *Human Understanding*, BK IV, CH II, SECT 9-10 311b-c; CH III, SECT 18-20 317d-319c passim; SECT 29-30 322c-323c passim; CH IV, SECT 6-9 325a-326b; CH VII, SECT 11, 340c-341a; CH XII, SECT 1-8 358c-360c passim; SECT 14-15 362d-363b; CH XVII, SECT 11 378b

35 BERKELEY: *Human Knowledge*, INTRO, SECT 12 408a-b; SECT 19 410c; SECT 118-132 436b-439c passim

35 HUME: *Human Understanding*, SECT IV, DIV 20 458a-b; SECT VII, DIV 48 470d-471c; SECT XII, DIV 131 508d-509a

36 SWIFT: *Gulliver*, PART III, 118b-119a

42 KANT: *Pure Reason*, 5a-8d; 17d-18d; 46a-b; 211c-218d / *Practical Reason*, 302d-303b; 330d-331a / *Science of Right*, 399a-b

43 MILL: *Liberty*, 283d-284a

45 LAVOISIER: *Elements of Chemistry*, PREF, 2b

45 FOURIER: *Theory of Heat*, 172a-173b

51 TOLSTOY: *War and Peace*, BK XI, 469a-d; EPILOGUE II, 695b-c

53 JAMES: *Psychology*, 175a-176a; 874a-878a

3a. The conditions and character of demonstration in mathematics: the use of definitions, postulates, axioms, hypotheses

7 PLATO: *Meno*, 183b-c / *Republic*, BK VI, 386d-388a; BK VII, 397c-d

8 ARISTOTLE: *Prior Analytics*, BK I, CH 41 [49^{b} 32-37] 68c / *Posterior Analytics*, BK I, CH 1 [71^{a}1-16] 97a-b; CH 2 [72^{a}22-24] 98d; CH 5 101b-102b; CH 10 104d-105d; CH 12 106c-107c; CH 23 [84^{b}6-9] 115b-c; CH 24 [85^{a}20-31] 116b-c; [85^{b}4-14] 116d-117a; [86^{a}22-30] 117d-118a; CH 31 [87^{b}33-39] 120a; BK II, CH 3 [91^{a}1-5] 124b; CH 7 [92^{b}12-25] 126c-d; CH 9 [93^{b}21-25] 128a-b / *Topics*, BK I, CH 1 [101^{a}5-17] 143c-d; BK V, CH 4 [132^{a}32-34] 183b; BK VI, CH 4 [141^{b}3-22] 194d-195a; BK VII, CH 3 [153^{a}6-11] 208a-b; BK VIII, CH 1 [157^{a}1-3] 213a; CH 3 [158^{b}29-159^{a}1] 215c / *Sophistical Refutations*, CH 11 [171^{b}12-18] 236b; [171^{b}34-172^{a}7] 236d / *Physics*, BK II, CH 9 [200^{a}15-29] 277c-d / *Heavens*, BK III, CH 4 [302^{b}27-31] 394a / *Metaphysics*, BK III, CH 2 [996^{a}21-36] 514d-515a; [996^{b}18-21] 515b; CH 3 [998^{a}25-27] 517a; BK V, CH 3 [1014^{a}36-^{b}1] 534c; BK VII, CH 10 [1036^{a}2-13] 559b-c; BK XI, CH 3 [1061^{a} 29-^{b}4] 589c; CH 4 [1061^{b}17-25] 589d-590a; CH 7 [1063^{b}36-1064^{a}9] 592b; BK XIII, CH 2 [1077^{b} 1]-CH 3 [1078^{a}32] 608d-609d; BK XIV, CH 2 [1089^{a}22-26] 621c-d

9 ARISTOTLE: *Generation of Animals*, BK II, CH 6 [742^{b}23-33] 283d-284a / *Ethics*, BK VII, CH 8 [1151^{a}15-19] 402a

11 EUCLID: *Elements* 1a-396b esp BK I, DEFINITIONS-COMMON NOTIONS 1a-2a

11 ARCHIMEDES: *Sphere and Cylinder*, BK I, DEFINITIONS-ASSUMPTIONS 404a-b / *Spirals*, 484b / *Quadrature of the Parabola*, 527a-b / *Method*, 569b-570a; PROP 1 571a-572b esp 572b

19 AQUINAS: *Summa Theologica*, PART I, Q 85, A 8, REP 2 460b-461b

23 HOBBES: *Leviathan*, PART I, 56b; 58a-c; 59b-c

28 GILBERT: *Loadstone*, PREF, 1b-c

28 GALILEO: *Two New Sciences*, FOURTH DAY, 252a-b

31 DESCARTES: *Rules*, II, 3a; XIV-XXI 28a-40a,c / *Discourse*, PART I, 43b-c; PART II, 46d; 47b-c; PART IV, 52d-53a / *Meditations*, 70b-d; 73a;

(3. *Method in mathematics: the model of mathematical thought.* 3a. *The conditions and character of demonstration in mathematics: the use of definitions, postulates, axioms, hypotheses.*)

v, 93a-d / *Objections and Replies*, 128a-d / *Geometry*, BK II, 304a-b; 316a-b; BK III, 353a

33 PASCAL: *Pensées*, 1-5 171a-173a / *Vacuum*, 365b-366a; 373a-b / *Geometrical Demonstration*, 430a-434a; 442a-446b / *Arithmetical Triangle*, 451b-452a; 458b-459b; 464a-466a

34 NEWTON: *Principles*, 1a-b

34 HUYGENS: *Light*, PREF, 551b-552a

35 LOCKE: *Human Understanding*, BK II, CH XVI, SECT 4 166a-b; BK IV, CH I, SECT 9 308c-309b; CH II, SECT 9-10 311b-c; CH III, SECT 29, 322c; CH VII, SECT 11, 340c-341a; CH XII, SECT 1-8 358c-360c passim; SECT 14-15 362d-363b

35 BERKELEY: *Human Knowledge*, INTRO, SECT 12 408a-b; SECT 15-16 409a-d; SECT 118 436b-c

35 HUME: *Human Understanding*, SECT VII, DIV 48 470d-471c; SECT XII, DIV 131 508d-509a

42 KANT: *Pure Reason*, 17d-18d; 46a-b; 68a-69c; 91c-d; 110a; 110d-111a; 211c-218d / *Practical Reason*, 302d-303b; 330d-331a / *Pref. Metaphysical Elements of Ethics*, 376c-d

43 FEDERALIST: NUMBER 31, 103c

43 MILL: *Utilitarianism*, 445b-c

45 LAVOISIER: *Elements of Chemistry*, PREF, 2b

53 JAMES: *Psychology*, 869a-870a; 874a-878a

3b. The role of construction: its bearing on proof, mathematical existence, and the scope of mathematical inquiry

7 PLATO: *Meno*, 180b-182c / *Republic*, BK VI, 387b-c

8 ARISTOTLE: *Heavens*, BK I, CH 10 [279^{b}32-280^{a}12] 371b-c / *Metaphysics*, BK IX, CH 9 [1051^{a}22-34] 577b-c

11 EUCLID: *Elements*, BK I, POSTULATES, 1-3 2a; PROP I 2b-3a

23 HOBBES: *Leviathan*, PART IV, 267a-b

31 DESCARTES: *Rules*, XIV-XVIII 28a-39d / *Geometry*, BK II, 304a-306a; 316a-b; BK III, 331b-332b

33 PASCAL: *Vacuum*, 373a-b

34 NEWTON: *Principles*, 1a-b

42 KANT: *Pure Reason*, 31b-d; 68a-69c; 86b-c; 91c-d; 94b-95a; 211c-215a; 217c-d / *Science of Right*, 399a-b / *Judgement*, 551a-553c

53 JAMES: *Psychology*, 673b

3c. Analysis and synthesis: function and variable

9 ARISTOTLE: *Ethics*, BK III, CH 3 [1112^{b}20-24] 358d

11 ARCHIMEDES: *Sphere and Cylinder*, BK II, PROP I 434b-435b; PROP 3-7 437a-443b / *Method*, 569b-570a; PROP I, 572b

11 APOLLONIUS: *Conics*, BK II, PROP 44-47 710b-713a; PROP 49-51 714b-726a; BK III, PROP 54-56 793b-798b

31 DESCARTES: *Rules*, IV, 5c-7a; VI 8a-10a; XII, 20d-23b; 24a-b; XIII 25b-27d; XIV, 31a-33b; XVI-XXI 33d-40a,c / *Objections and Replies*, 128a-d / *Geometry* 295a-353b esp BK I, 296b-297b, 298b-304a, BK II, 308a-314b

33 PASCAL: *Geometrical Demonstration*, 430a

34 NEWTON: *Principles*, BK I, LEMMA 19 57b-58b / *Optics*, BK III, 543a-b

35 LOCKE: *Human Understanding*, BK IV, CH XII, SECT 15 363a-b; CH XVII, SECT 11 378b

45 LAVOISIER: *Elements of Chemistry*, PREF, 1a; 2b

45 FOURIER: *Theory of Heat*, 172a-173b; 196a-251b

3d. Symbols and formulae: the attainment of generality

8 ARISTOTLE: *Prior Analytics*, BK I, CH 41 [49^{b}32-37] 68c / *Posterior Analytics*, BK I, CH 10 [76^{b}39-77^{a}2] 105d

11 NICOMACHUS: *Arithmetic*, BK II, 832a

23 HOBBES: *Leviathan*, PART I, 56a

31 DESCARTES: *Rules*, XIV-XXI 28a-40a,c / *Discourse*, PART II, 46d; 47b-d / *Geometry* 295a-353b esp BK I, 295a-298b, BK II, 314a-b, BK III, 353a

35 LOCKE: *Human Understanding*, BK IV, CH III, SECT 19 318b-319a

35 BERKELEY: *Human Knowledge*, INTRO, SECT 16 409b-d; SECT 121-122 436d-437c

42 KANT: *Pure Reason*, 68a-69c; 211d-212a; 212d-213a

45 FOURIER: *Theory of Heat*, 172b-173b; 181a-b; 233b-240b

4. Mathematical techniques

4a. The arithmetic and algebraic processes

8 ARISTOTLE: *Topics*, BK VIII, CH 14 [163^{b}23-28] 222b

11 EUCLID: *Elements*, BK VII-IX 127a-190b

11 ARCHIMEDES: *Measurement of a Circle*, PROP 3 448b-451b / *Conoids and Spheroids*, LEMMA 455b-456a; LEMMA TO PROP 2 456b-457b / *Spirals*, PROP 10-11 488a-489b / *Sand-Reckoner* 520a-526b

11 NICOMACHUS: *Arithmetic*, BK I, 814b-821d

16 KEPLER: *Epitome*, BK V, 990a-b

23 HOBBES: *Leviathan*, PART I, 56a; 58a-b

28 GALILEO: *Two New Sciences*, SECOND DAY, 193b-c

31 DESCARTES: *Rules*, XVI 33d-35c; XVIII 36b-39d / *Discourse*, PART II, 46d; 47b-d / *Geometry*, BK I, 295a-296a

33 PASCAL: *Arithmetical Triangle* 447a-473b esp 451b-452a, 458b-459b, 464a-466a / *Correspondence with Fermat* 474a-487a passim

35 LOCKE: *Human Understanding*, BK IV, CH XVII, SECT 11 378b

35 BERKELEY: *Human Knowledge*, INTRO, SECT 19 410c; SECT 121-122 436d-437c

42 KANT: *Pure Reason*, 17d-18d; 68a-69c; 212d-213a; 217c-d
53 JAMES: *Psychology*, 874b-876b

4b. The operations of geometry

7 PLATO: *Meno*, 180b-183c / *Republic*, BK VI, 387b-c
8 ARISTOTLE: *Categories*, CH 7 [7^{b}29-33] 12c-d
11 EUCLID: *Elements*, BK I-IV 1a-80b esp BK I, POSTULATES 2a, PROP 1-4 2b-4b, PROP 9-12 7a-9a, PROP 22-23 13b-15a, PROP 31 19b, PROP 42 24b-25a, PROP 44-46 25b-28a, BK II, PROP 14 40a-b; BK VI 99a-126a esp PROP 9-13 106b-109a, PROP 18 112a-b, PROP 25 119a-b, PROP 28-29 121a-123a; BK XI-XIII 301a-396b
11 ARCHIMEDES: *Sphere and Cylinder*, BK I-II 403a-446a / *Measurement of a Circle* 447a-451b / *Conoids and Spheroids* 452a-481b / *Spirals* 482a-501a / *Quadrature of the Parabola* 527a-537b / *Book of Lemmas* 561a-568b
11 APOLLONIUS: *Conics* 603a-804b esp BK I, PROP 11-13 615a-620a
28 GALILEO: *Two New Sciences*, FIRST DAY, 149d-150d
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5. The applications of mathematics to physical phenomena: the utility of mathematics

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36 SWIFT: *Gulliver*, PART II, 78b; PART III, 94b-103a
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42 KANT: *Pure Reason*, 68a-69c / *Practical Reason*, 300d [fn 1]; 330d-331a / *Judgement*, 551a-552a
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CROSS-REFERENCES

For: The relation of mathematics to other arts and sciences, *see* ASTRONOMY 2c; MECHANICS 3; METAPHYSICS 3b; PHILOSOPHY 1b; PHYSICS 1b, 3; SCIENCE 5c.

The quality of necessity in mathematical truth, and for the theory of the *a priori* foundations of arithmetic and geometry in the transcendental forms of space and time, *see* NECESSITY AND CONTINGENCY 4d; SENSE 1c; SPACE 4a; TIME 6c.

The controversy over the character and existence of the objects of mathematics, *see* BEING 7d(3); QUANTITY 1; SPACE 5.

The discussion of the mental processes by which mathematical objects are apprehended, *see* IDEA 1a, 2f–2g; KNOWLEDGE 6a(3), 6c(4); MEMORY AND IMAGINATION 1a, 6c(2)–6d; SENSE 5a; UNIVERSAL AND PARTICULAR 2b.

The consideration of the specific objects of mathematical inquiry, such as numbers and figures, ratios and proportions, continuous and discontinuous quantities, finite and infinite quantities, *see* INFINITY 3a–3c; QUANTITY 1b–4c, 7; RELATION 1d, 5a(3); SPACE 3a–3c.

The general theory of mathematical method or logic, *see* DEFINITION 6a; HYPOTHESIS 3; JUDGMENT 8b–8c; LOGIC 4a; REASONING 6b; TRUTH 4c; and for the particular techniques of arithmetic, geometry, algebra, and calculus, *see* MECHANICS 3b–3d; QUANTITY 1b, 6b; RELATION 5a(3); SPACE 3d.

Other discussions of applied mathematics or mathematical physics, and of the role of measurement, *see* ASTRONOMY 2c; MECHANICS 3; PHYSICS 3, 4d; QUANTITY 3d(1), 6–6a, 6c; SCIENCE 5c.

ADDITIONAL READINGS

Listed below are works not included in *Great Books of the Western World*, but relevant to the idea and topics with which this chapter deals. These works are divided into two groups:

I. Works by authors represented in this collection.
II. Works by authors not represented in this collection.

For the date, place, and other facts concerning the publication of the works cited, consult the Bibliography of Additional Readings which follows the last chapter of *The Great Ideas*.

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Chapter 53: MATTER

INTRODUCTION

AFTER we came out of the church," says Boswell in his *Life of Johnson*, "we stood talking for some time together of Bishop Berkeley's ingenious sophistry to prove the non-existence of matter, and that everything in the universe is merely ideal. I observed that though we are satisfied his doctrine is not true, it is impossible to refute it. I shall never forget the alacrity with which Johnson answered, striking his foot with mighty force against a large stone, till he rebounded from it, 'I refute it thus.'"

But Berkeley's argument anticipated Dr. Johnson's style of refutation. "I do not argue," he says, "against the existence of any one thing that we can apprehend either by sense or reflexion. That the things I see with my eyes and touch with my hands do exist, really exist, I make not the least question. The only thing whose existence I deny is that which *philosophers* call Matter or corporeal substance. And in doing this there is no damage done to the rest of mankind, who, I dare say, will never miss it."

The rest of mankind does need to be instructed, however, that when they use the word "matter," they speak of *nothing*. They may from careless habit suppose they are referring to the most obvious something there is in the world—the solid, massy, concrete stuff of which tangible, visible, movable, and moving things are made. Of them, Berkeley would ask how they know such stuff exists. It is not itself perceptible.

We perceive a variety of qualities—colors, shapes, temperatures, textures, sizes, or extensions—but these, Berkeley argues, have their being *in being perceived*. Even if certain of these sensible qualities, sometimes called "primary," such as figure, size, or weight, are supposed to belong to bodies when they are not actually being sensed, they are not matter, but only its properties. Matter itself is not sensible. Those who assert its existence postulate it as a substratum or support for the sensible qualities they perceive.

The question, therefore, is whether such a substratum is a necessary or an unnecessary hypothesis. Berkeley does not deny the existence of beings which cannot be directly sensed. He affirms the existence of the human spirit or mind, of minds other than his own, and the spiritual being of God. These must be inferred to exist in order to explain the phenomena of our sensible experience and the experience of our own activities in thinking, imagining, willing. If, in addition, the existence of matter or a material substance were necessary to explain the phenomena, Berkeley would not object to affirming its existence by inference, even if it could in no way be directly perceived.

His argument therefore involves, first, a denial of Locke's distinction between primary and secondary qualities. Supposing it to be generally agreed that colors, sounds, odors have no actual existence except in the perceiving mind, he denies that perceptible figure, size, or motion can exist otherwise. "It having been shown that none even of these can possibly exist otherwise than in a Spirit or Mind which perceives them, it follows that we have no longer any reason to suppose the being of Matter."

Matter is not needed as a substratum or support for the qualities we perceive. This is the second main point in Berkeley's argument. "Though we give the materialists their external bodies, they by their own confession are never the nearer knowing how our ideas are produced; since they own themselves unable to comprehend in what manner body can act upon spirit, or how it is possible it should imprint any idea in the mind. Hence it is evident that the production of ideas or sensations in our minds can be no reason why we should suppose Matter or

corporeal substances, since that is acknowledged to remain equally inexplicable with or without this supposition."

BERKELEY'S ARGUMENTS against matter, which occupy the greater part of his *Principles of Human Knowledge*, may not have the same force when they are applied against different theories of matter. Berkeley seems to regard his attack on materialism as the refutation of an error at the root of skepticism, atheism, and irreligion. He also thinks materialism creates difficulties for the sciences. But are all affirmations of matter to be lumped together as materialism *in the same sense*? Are Aristotle, Plotinus, Descartes, Spinoza, and Locke materialists in the same sense as Lucretius, Hobbes, and perhaps Marx? Does it make no difference whether bodies are said to be the only real existences, or whether, in addition to bodies, immaterial substances or spiritual beings are also said to exist?

Does it make no difference how matter is conceived—whether as a self-subsistent substance in its own right, capable of existing apart from any qualities except extension and motion which belong to its very essence, or merely as one factor in the constitution of bodies, the factor of potentiality which, as will be presently explained, has no existence apart from the forms which actualize it? Are skepticism, atheism, and irreligion to be associated with all affirmations of matter, in view of the fact that theologians like Augustine and Aquinas seem to think that a sound view of matter supports the truths of religion against the errors of the materialists?

There seem to be, in short, three distinct positions to which Berkeley's blanket denial of matter stands opposed. The diametrically opposite view seems to be the blanket denial of anything except bodies, or of anything which cannot be reduced to a property or function of matter. The atomism of Lucretius, discussed in the chapter on ELEMENT, may be taken as representative of this view, though Engels would insist that materialism can be dialectical rather than atomistic or mechanical.

Between the two extremes, there appear to be two middle positions which are alike insofar as both affirm the immaterial as well as the material. Although they are alike in asserting the existence of spiritual substances, they may, of course, define the nature of these immaterial things differently, and differently interpret their relation to the realm of matter. But, as theories of matter, their principal difference consists in the way in which they conceive the being of bodies, material substances, or the bodily mode of substance.

In the conceptions of Descartes and Locke, for example, it is matter which gives actuality to sensible bodies. We have "no other idea or notion of matter," Locke writes, "but something wherein those many sensible qualities, which affect our sense, do subsist." The entire substance of sensible bodies consists of matter. All their properties derive from the essence or nature of matter. But in the conceptions of Aristotle and Plotinus, bodies would not exist at all if they were composed only of matter, for matter is no more than a capacity for being, not something which by itself actually is. Sensible bodies derive their being and all their attributes from the forms which matter assumes when its potentialities are actualized. Matter totally devoid of form is not the *nothing* Berkeley calls it, but it is so near to nothing that Plotinus says it is "more plausibly called a non-being . . . a bare aspiration towards substantial existence."

These theories of matter or corporeal being seem to be as contrary to one another as together they are contrary to Berkeley's doctrine. Yet each of the two middle positions leans toward one of the opposite extremes.

The conception of matter seems to be very much the same in the complete materialism of Lucretius and Hobbes and in the view of Descartes, Spinoza, and Locke. In the former, only bodies exist. In the latter, bodies do not comprise the whole of existence, but matter is the whole substance of bodies. The separation of body and mind, or matter and spirit, into distinct substances, or modes of substance, leaves matter the same kind of stuff that it is in a world which admits of no other reality. Atomism, furthermore, may be common to both theories, at least to the extent that it is held that the complex bodies we perceive are composed of minute and insensible particles. Unlike Lucretius, Locke may not insist upon the absolute indivisibility of the particles, or upon the eternity of the uncreated atoms of matter;

but he, like Hobbes and Newton, carries the division of the familiar bodies of sense-experience down to parts which cannot be perceived and yet have, in a way, a more ultimate reality as units of matter than the complex bodies they constitute.

"Had we senses acute enough to discern the minute particles of bodies, and the real constitution on which their sensible qualities depend," Locke writes, "I doubt not but that would produce quite different ideas in us; and that which is now the yellow color of gold, would then disappear, and instead of it we should see an admirable texture of parts, of a certain size and figure."

At the other extreme, Berkeley's complete denial of matter has less in common with the view of Aristotle, Plotinus, Augustine, and Aquinas than the theory of Descartes, Spinoza, and Locke has with the materialism of Lucretius and Hobbes. They would appear to be close enough, for one seems to hold that matter is almost non-being and the other that matter is simply nothing at all. But where Berkeley denies any role to matter, Aristotle and those who take his view affirm matter to be an indispensable factor in the constitution of physical things. They do not question the reality of bodies or their existence apart from mind. On both of these points they are as opposed to Berkeley as they would be if they were complete materialists. Nevertheless they lean toward Berkeley rather than toward the other extreme in one respect. Where Berkeley denies the existence of matter, they deny its substantiality. Where Berkeley says matter has no being, they say it has the lowest grade of being—on the very verge of not being!

IN SPITE OF ALL the differences noted, the idea of matter has a certain constant meaning throughout the tradition of the great books.

It is generally associated with the idea of quantity, and especially the basic magnitudes, such as time, space, and mass. Sometimes it is said that the essence of matter itself is extension; sometimes that bodies—not matter itself—have the property of tridimensionality. But in either case that which *is* or *has* matter in it necessarily occupies space.

The manner of that occupation is also generally agreed upon. Two bodies or two distinct quantities of matter cannot occupy the same place at the same time. A body may not be impenetrable in the sense of being indivisible, but so long as it remains the whole that it is, it offers resistance to other bodies tending to move into the place it occupies.

There is another connection between matter and quantity. To those who ask what makes two otherwise identical things two in number—or what is involved in the merely numerical difference of things alike in every other respect—the usual answer is in terms of matter. Matter is traditionally spoken of as "the principle of individuation." Aquinas, for example, holds that angels, unlike physical substances, cannot differ from one another as do numerically distinct individuals. Because they are immaterial, they can differ only as do species or kinds. "Such things as agree in species," he writes, "but differ in number, agree in form, but are distinguished materially. If, therefore, the angels be not composed of matter and form, it follows that it is impossible for two angels to be of one species; just as it would be impossible for there to be several whitenesses apart, or several humanities, since whitenesses are not several, except in so far as they are in several substances."

The way in which matter is related to individual differences can be exemplified in works of art. Two coins, stamped out of the same kind of matter by the impression of the same die, may differ in no other discernible respect than that they are *two* of the same kind. Their *twoness* seems to be somehow related to the fact that each consists of a distinct quantity of matter. But it may be asked how two units of matter have the distinction of being two while they differ in no other respect. One answer to this difficult question is that their distinction consists in their occupying different places. In the Platonic theory of the origin of many particulars all participating in the same form, diversity of place seems to play the role which matter plays for Aristotle and Aquinas.

Plato's doctrine of the receptacle, which is discussed in the chapter on FORM, is sometimes interpreted by conceiving the receptacle as space, and sometimes by conceiving it as matter. The receptacle, it is said in the *Timaeus*, is that which, "while receiving all things, never

departs at all from her own nature and never in any way, or at any time, assumes a form like that of any of the things which enter into her." This, according to Plotinus, means that "its one form is an invincible formlessness."

But Plotinus, who combines Plato's doctrine of the receptacle and the forms with Aristotle's theory of potentiality and actuality, holds that it is matter, not space, which is "the receptacle and nurse of all generation." He says that "recipient and nurse" is a better description of matter than the term "mother," for that term "is used by those who think of a mother as matter to the offspring, as a container only, giving nothing to them." In his own view, matter is more than space or mere receptivity. He is willing to admit the "parallel with motherhood" only to the extent that "matter is sterile, not female to full effect, female in receptivity only, not in pregnancy."

TRADITIONALLY, the distinction between universal and particular is understood as a distinction between the intelligible and the sensible. This indicates another traditional meaning of matter or the material. The realm of sensible things is the realm of bodies. But the atoms which are the elementary bodies are also usually called "insensible particles of matter." This, however, can be interpreted to mean, not that a definite material mass or bulk is in itself absolutely *intangible* or *imponderable*, but that, because of the limitation in our senses, it is imperceptible to us. On this interpretation it would then seem possible to say that *all* bodily existence is sensible existence.

But if we ask about the sensibility of matter itself, rather than of bodies large or small, questions arise which are more difficult to solve. On one theory of matter, matter devoid of form is as insensible as it is unintelligible, yet forms which are not material, that is, not in matter, are also insensible but not unintelligible. On the contrary, they are regarded as more perfectly intelligible than embodied forms. How, then, does matter which is itself insensible cause the forms which it assumes to become sensible when they are materialized?

The theory of matter which does not regard it as a co-principle with form seems to be confronted with a different problem of sensibility. It is supposed that some of the qualities which we sense in bodies are actually in them whether we sense them or not—such properties as size, figure, weight, motion. Other sensible qualities, such as colors, odors, temperatures, or sounds, are supposed to be effects produced by the motions of material particles acting on the sensitive apparatus of animals. This distinction between what Locke calls "primary and secondary qualities"—found also in Lucretius and Descartes—is more fully considered in the chapters on QUALITY and SENSE, but here it calls attention to the problem of how matter, devoid of certain sensible qualities, causes these qualities to arise.

For Lucretius the peculiar difficulty of the problem seems to lie in the fact that the sensitive animal is itself nothing but a material system. All its powers and acts are conceived as functions of matter in motion. How, then, does moving matter within the organism generate certain qualities which do not belong to moving matter outside the organism? For Locke the problem raises a difficulty of still another sort. Secondary qualities, such as colors, sounds, odors, exist only as sensations in the mind. In corporeal substances, or bodies, such qualities, he writes, "are nothing but the powers those substances have to produce several ideas in us by our senses; which ideas are not in the things themselves, otherwise than as anything is in its cause." Though they result from the impact of moving particles on the bodily sense-organs, they do not belong to the world of matter at all, but to the realm of spirit. How, then, do the motions of matter cause effects which exist only in the immaterial domain of mind?

These questions indicate some of the problems of matter as an object, condition, or cause of knowledge. They also show how the nature of the problem varies with different conceptions of matter, both in itself and in its relation to mind. There are still other problems which confront those theories of mind which separate reason or intellect from the sensitive faculty.

In such theories the consideration of matter's relation to mind goes beyond the question of the origin of sensations. It takes sensations and images as somehow the functions of living matter—the acts of the various sense-organs and the brain. But sensations and images, because they are acts of corporeal organs, have the

same limitation which belongs to everything material. As matter is said to cause the individuality or numerical diversity of bodies, so is it said to make sensations and images "particular intentions of the mind"—that is, capable of representing only particular objects, not general kinds or classes. Hence such theories face the problem of the relation of sensations and images to the "universal intentions of the mind," its general concepts or abstract ideas.

ONE MORE TRADITIONAL meaning of matter remains to be mentioned. The sciences of physics or mechanics are concerned with change or motion. They are not concerned with mutability in general, but with the kind of mutability that is manifested by material things. Material things are never conceived as unmovable or unchangeable.

The question whether matter itself is immutable has different meanings for different theories of matter. On the theory (discussed in the chapter on CHANGE) that matter and form are together principles of change in changing substances, it is neither matter nor form but the substance composite of matter and form which changes. Those who think that the motions of the physical world are without beginning and end, attribute a similar eternity to matter and conceive it as imperishable. The theologians who think that God can annihilate whatever He creates, do not hold that matter is indestructible, but they nevertheless attribute everlasting endurance to matter in God's plan. Aquinas, for example, in his treatise on the end of the world, describes the final conflagration which will purge the material universe but leave its matter in existence under the forms of the elements and the heavenly bodies. "The world will be renewed," he writes, "in such a way as to throw off all corruption and remain forever at rest." Hence nothing can be "the subject of that renewal, unless it be a subject of incorruption," such as "the heavenly bodies, the elements, and man."

On other theories of matter the fact that motion is regarded as an intrinsic property of bodies seems to be similarly consistent with the notion that matter itself is immutable or indestructible. This indestructibility may be conceived in terms of the absolute indivisibility of the atoms, as in Lucretius and Newton; or, as in Spinoza, it may be established by the uncreated and eternal nature of God. "By body," Spinoza writes, "I understand a mode which expresses in a certain and determinate manner the essence of God in so far as He is considered as the thing extended."

In the modern development of the science of mechanics the law of the conservation of matter seems to be another expression of the same insight. "We may lay it down as an incontestable axiom," Lavoisier writes, "that in all the operations of art and nature, nothing is created; an equal quantity of matter exists both before and after the experiment." What appears to be the destruction of a body is merely the transformation of its matter into another physical condition, without loss of mass unless there is an equivalent gain in energy. The total quantity of matter and energy remains constant throughout all physical changes.

But though change or motion seems to be inherent in the material world, the mutability of bodies, as well as the immutability of matter, seems to be differently conceived according to different conceptions of matter. The difference between the physics of Aristotle and the physics of Descartes can be expressed in terms of contrary definitions of motion, or divergent notions of causality, but neither of these differences is fully intelligible apart from the variance of these theories from one another on the nature of matter.

When matter is an actual substance, whose essence is extension and whose chief property is local motion, the principles of physics are mechanical. The laws of mechanics, with time, space, and mass as their fundamental variables, seem to have a universality adequate for describing all natural phenomena. All changes in material things are either the local motions of bodies or the result of the local motions of their parts. Motions are determined in their magnitude and direction by the impressed force which one body exerts upon another and the resistance of that other. Motion is itself completely actual, as matter is; and the only type of cause to which physics need appeal is the efficient cause, that is, the push or pull of one body upon another.

Physicists who share this conception of mat-

ter may not agree, as Descartes and Newton do not, in their mechanical formulations. They may or may not be atomists. They may, like Lucretius, think that local motion is an absolutely intrinsic property of the eternal particles; or, like Descartes and Newton, they may think that God first imparted motion to matter at the world's creation. They may hold that all subsequent motions issue therefrom in a continuous chain of cause and effect. But when matter is the only factor in the constitution of bodies, and one body differs from another only in its quantitative determinations, the consequence for physical theory seems to be one or another sort of mechanical formulation.

When matter is nothing more than a body's potentiality for change, and when neither what the body is nor how it changes can be explained by reference to its matter alone, physical theory seems to be constructed in other than mechanical terms. Its concepts and principles resemble those of biology. It finds natural tendencies or desires, and ends or final causes, in the motion of inert as well as animate bodies.

Central to Aristotle's physics are his theory of the four causes, discussed in the chapter on CAUSE, and his theory of the four types of change, discussed in the chapter on CHANGE. But even more fundamental is his definition of motion as the actualization of that which is potential in a respect in which it is potential. With motion so defined, the principles of physics must include the correlative factors of potentiality and actuality which Aristotle conceives in terms of matter and form.

REMOVE MATTER entirely from a thing and, according to Aristotle, you remove its capacity for physical change. Remove form, and you remove its existence, for nothing can exist without being actual or determinate in certain respects. When a thing changes physically, it loses certain determinate characteristics and acquires others. The determinations it acquires it had previously lacked, yet all the while it must have had a capacity for acquiring them. The thing is "capable both of being and of not being," Aristotle says, "and this capacity," he goes on to say, "is the matter in each." The matter of an existing substance is thus conceived as that which has certain forms (the respects in which the substance is actually determinate), and lacks certain forms which it can assume (the respects in which the substance is both indeterminate and potential).

As the chapter on ART indicates, Aristotle frequently uses artistic production to afford a simple illustration of his theory of matter and form as principles of change. When a man sets out to make a bed, he chooses material, such as wood, which can be shaped in a certain way. The same wood could have been made into a chair or a table. With respect to these various possible determinations in structure, the wood is itself indeterminate and determinable.

Before the artist has worked on it productively, the wood is in a state of both privation and potentiality with regard to the form of a bed, a chair, or a table. The transformation which the artist effects consists in his actualizing certain potentialities in the material for forms or determinations which the material at the moment lacks. When the bed is made, the wood or matter which is now actually in the form of a bed may still have the potentiality for being *remade* into a chair or table.

The wood, of course, remains actually wood throughout these artificial changes, as it does not when it suffers the natural change of combustion. This indicates that though the wood may be called matter or material by the artist, it is not matter, but a substance, a thing composite of matter and form; for when the wood is reduced to ashes by fire, the matter which had the form of wood assumes another form.

In the analysis of accidental change, which artistic production illustrates, it suffices to treat a composite substance, like wood or iron or bronze, as the material principle. But in the analysis of substantial change, when matter itself changes from being one kind of matter to being another in the coming to be or perishing of composite substances, the material principle must be pure matter—matter totally devoid of form. Where a whole substance can be regarded as the matter or substratum of accidental change (in quality, quantity, or place) the substratum of substantial change, which Aristotle calls "generation and corruption," must be matter in a condition of absolute indeterminacy and pure potentiality.

Referring to this ultimate substratum as "the

underlying nature," Aristotle says that it "is an object of scientific knowledge by analogy. For as the bronze is to the statue, the wood to the bed, so is the matter and the formless before receiving form to anything which has form, and so also is the underlying nature to substance, *i.e.*, the actually existing."

ARISTOTLE'S DEFINITION of matter as "the primary substratum of each thing, from which it comes to be without qualification, and which persists in the result" not only signifies an object which the physicist must apprehend analogically (*i.e.*, by comparison with substantially formed matter like wood and bronze), but also indicates that matter, by definition, must be in itself both unintelligible and non-existent. What Aristotle calls "the primary substratum" is later called by Plotinus "primal matter," by Augustine "formless matter," and by Aquinas "prime matter." Since they all agree that that which is without form lacks all determination and actuality, they deny that it can have existence by itself or be an object of knowledge, either by sense or reason.

Augustine and Aquinas go further. They deny even to God's omnipotence the power of creating matter without form. They speak of matter not as created, but as *concreated*, that is, united at the very instant of its creation with the forms it must assume in order to exist. God "made formless matter of absolutely nothing, and the form of the world from this formless matter," Augustine writes. Yet He "created both simultaneously, so that form came upon matter with no space of time intervening."

IN THE TRADITION of Aristotle's physics and metaphysics, especially as developed by Aquinas, matter and form become basic analytic terms, often having a significance remote from their original meaning in the analysis of change. The conception of prime (or formless) matter as the substratum of substantial change leads to the designation of the formed matter underlying accidental change as "second matter." This, in turn, is called "signate matter" when, considered as the matter of an individual substance, it is viewed as having the limiting determinations of individuality.

"Matter is twofold," Aquinas writes, "common, and signate or individual; common, such as flesh and bones; and individual, as this flesh and these bones." When the intellect forms concepts of different kinds of physical substances, it abstracts "from the individual sensible matter, but not from the common sensible matter." In defining the nature of man, for example, we abstract, Aquinas says, from "this flesh and these bones, which do not belong to the species as such, but to the individual"; but we do not abstract from the fact that man, consisting of body and soul, is a thing of flesh and bones.

To say that man consists of body and soul is to indicate that common matter enters into the definition of man as a physical substance. But in distinction from definitions of this type, which are proper to physics, mathematical and metaphysical definitions carry the abstraction from matter still further. In mathematics, Aquinas declares, the intellect abstracts "not only from individual sensible matter, but also from common sensible matter." In conceiving numbers and figures, the intellect does not, however, abstract from matter entirely, but only from individual intelligible matter. The common intelligible matter which is represented by "substance as subject to quantity" underlies all mathematical notions. "But some things," Aquinas maintains, "can be abstracted even from common intelligible matter, such as *being*, *unity*, *potency*, *act* and the like, all of which can exist without matter." Such abstraction characterizes the concepts of metaphysics. Aquinas thus differentiates the three speculative sciences of physics, mathematics, and metaphysics in terms of three grades of abstraction, each distinguished by the type of matter from which the concepts of the science are abstracted.

With one exception physical matter is not said to be of different kinds when it exists under different forms. The one exception for both Aristotle and Aquinas is the matter of terrestrial and celestial bodies.

Basing his inference on the observations available to him, Aristotle holds that the heavenly bodies are eternal—"not subject to increase or diminution, but unaging and unalterable and unmodified." Immutable in every other way, they are, however, subject to local motion. Since they are eternal, both their matter and

their motion must be different from that of perishable terrestrial bodies. "All things that change have matter," Aristotle writes, "but matter of different sorts; of eternal things those which are not generable but are movable in space have matter—not matter for generation, however, but for motion from one place to another." That motion from place to place is, unlike terrestrial motion, circular; it has the appropriate characteristic of endlessness.

Kepler challenges this theory of a radical difference between celestial and terrestrial matter or motion, and as the chapter on ASTRONOMY shows, by so doing he not only gives impetus to the Copernican system, but also paves the way for Newton to frame laws of motion applicable to matter everywhere in the universe. Because their matter is the same, it is possible, Kepler insists, to explain the motion of the heavenly bodies by the same principles which account for the motion of bodies on earth.

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REFERENCES

To find the passages cited, use the numbers in heavy type, which are the volume and page numbers of the passages referred to. For example, in **4** HOMER: *Iliad*, BK II [265-283] **12d**, the number **4** is the number of the volume in the set; the number **12d** indicates that the passage is in section d of page 12.

PAGE SECTIONS: When the text is printed in one column, the letters **a** and **b** refer to the upper and lower halves of the page. For example, in **53** JAMES: *Psychology*, **116a-119b**, the passage begins in the upper half of page 116 and ends in the lower half of page 119. When the text is printed in two columns, the letters **a** and **b** refer to the upper and lower halves of the left-hand side of the page, the letters **c** and **d** to the upper and lower halves of the right-hand side of the page. For example, in **7** PLATO: *Symposium*, **163b-164c**, the passage begins in the lower half of the left-hand side of page 163 and ends in the upper half of the right-hand side of page 164.

AUTHOR'S DIVISIONS: One or more of the main divisions of a work (such as PART, BK, CH, SECT) are sometimes included in the reference; line numbers, in brackets, are given in certain cases; *e.g.*, *Iliad*, BK II [265-283] **12d**.

BIBLE REFERENCES: The references are to book, chapter, and verse. When the King James and Douay versions differ in title of books or in the numbering of chapters or verses, the King James version is cited first and the Douay, indicated by a (*D*), follows; *e.g.*, OLD TESTAMENT: *Nehemiah*, 7:45—(*D*) *II Esdras*, 7:46.

SYMBOLS: The abbreviation "esp" calls the reader's attention to one or more especially relevant parts of a whole reference; "passim" signifies that the topic is discussed intermittently rather than continuously in the work or passage cited.

For additional information concerning the style of the references, see the Explanation of Reference Style; for general guidance in the use of *The Great Ideas*, consult the Preface.

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7 PLATO: *Timaeus*, 455c-458b

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35 BERKELEY: *Human Knowledge*, SECT II 415a-b

42 KANT: *Pure Reason*, 74b-76c; 100d-101b

1b. Matter in relation to the kinds of change: substantial and accidental change; terrestrial and celestial motion

8 ARISTOTLE: *Physics*, BK III, CH 1 [200^{b}26–201^{a}14] 278b-c; CH 3 [202^{b}22–29] 280c; BK IV, CH 9 296b-297c esp [217^{a}20–^{b}26] 297a-c; BK V, CH 1–2 304a-307b / *Heavens*, BK I, CH 2–5 359d-364a; CH 9–12 369a-375d; BK II, CH 4 [287^{b}15–21] 379b; BK IV, CH 3 [310^{b}22–311^{a}12] 402b-c; CH 4 [312^{a}3–22] 403c-d / *Generation and Corruption* 409a-441a,c esp BK I, CH 4 [320^{a}2–6] 417a / *Metaphysics*, BK VII, CH 7–9 555a-558a esp CH 7 [1032^{a}15–22] 555a-b; BK VIII, CH 1 [1042^{a}24–^{b}7] 566b-d; CH 4 [1044^{b}2]–CH 5 [1044^{b}29] 569a-c; BK IX, CH 7 [1049^{a}19–^{b}1] 574d-575a; CH 8 [1050^{b}20–28] 576c-d; BK XI, CH 11 [1067^{b}1]–CH 12 [1068^{b}25] 596a-597d; BK XII, CH 2–5 598c-601a esp CH 2 [1069^{b}24–27] 599a / *Soul*, BK I, CH 3 [406^{b}26 407^{b}13] 636b-637b

16 PTOLEMY: *Almagest*, BK I, 5a-6a; 8b; 10b-11b; BK XIII, 429a-b

16 COPERNICUS: *Revolutions of the Heavenly Spheres*, BK I, 517b-518a; 519b-520a

16 KEPLER: *Epitome*, BK IV, 888b-890b; 894a; 929b-930b

17 PLOTINUS: *Second Ennead*, TR I, CH 1–4 35a-37b; TR IV, CH 6 51d-52a; TR V, CH 6 103b-104a / *Third Ennead*, TR VI, CH 8–19 111c-119a

19 AQUINAS: *Summa Theologica*, PART I, Q 7, A 2, ANS and REP 3 31d-32c; Q 45, A 2, REP 2 242d-244a; Q 46, A 1, REP 1,3,5–6 250a-252d; Q 48, A 3, ANS 261b-262a; Q 55, A 2, ANS 289d-290d; Q 66, A 1, ANS 343d-345c; A 2 345d-347b; Q 84, A 3, REP 1 443d-444d

20 AQUINAS: *Summa Theologica*, PART I-II, Q 49, A 4, ANS 5a-6a

28 GILBERT: *Loadstone*, BK VI, 110b-c

1c. Matter and the distinction between individual and universal: signate and common matter; sensible and intelligible matter

8 ARISTOTLE: *Metaphysics*, BK I, CH 6 [987^{b}19–988^{a}16] 505d-506b; BK III, CH 3 [998^{a}20–^{b}13] 517a-b; CH 4 [999^{a}24–1000^{a}4] 518a-d; CH 6 [1003^{a}5–16] 521d-522a,c; BK VII, CH 10–11 558a-561a; CH 15 [1039^{b}27–31] 563d; BK VIII, CH 6 [1045^{a}33–36] 570a-b; BK X, CH 1 [1052^{a}28–37] 578d; BK XII, CH 4–5 599d-601a; BK XIII, CH 10 618c-619a,c / *Soul*, BK II, CH 1 [412^{a}6–8] 642a

12 AURELIUS: *Meditations*, BK XII, SECT 30 310a-b

17 PLOTINUS: *Second Ennead*, TR IV, CH 2–5 50b-51d / *Sixth Ennead*, TR III, CH 3 282a-c

19 AQUINAS: *Summa Theologica*, PART I, Q 3, A 2, REP 3 15c-16a; A 3, ANS 16a-d; Q 4, A 1, REP 3 20d-21b; Q 7, A 1, ANS 31a-d; Q 14, A 11, ANS 84c-85c; Q 15, A 3, REP 4 93b-94a; Q 29, A 1 162a-163b; A 2, REP 3 163b-164b; A 3, REP 4 164c-165c; Q 47, A 2, ANS 257b-

258c; Q 50, A 4, ANS 273b-274b; Q 56, A 1, REP 2 292a-d; Q 65, A 3, ANS 341c-342b; Q 75, A 4, ANS 381b-382a; A 5, ANS 382a-383b; A 7, ANS 384d-385c; Q 76, A 2 388c 391a; Q 85, A 1, REP 2 451c-453c; Q 115, A 1, ANS and RLP 1-3 585d-587c; Q 119, A 1, ANS 604c-607b

20 AQUINAS: *Summa Theologica*, PART III, Q 2, A 2, ANS 711d-712d; A 3, REP 3 713a-714c

2. The conception of matter as extension, as a bodily substance, or as a mode of substance: atoms and compound bodies

10 GALEN: *Natural Faculties*, BK I, CH 12 172d-173c

12 LUCRETIUS: *Nature of Things*, BK I [146-448] 2d-6c; [483 634] 7a-8d

17 PLOTINUS: *Second Ennead*, TR IV, CH 7, 52c; CH 12 54c-55b; TR VII, CH 3 64b c / *Third Ennead*, TR I, CH 2, 78d; TR VI, CH 7, 111a; CH 12, 114b-c; CH 16-19 116c-119a

23 HOBBES: *Leviathan*, PART IV, 271d-272a

28 GALILEO: *Two New Sciences*, FIRST DAY, 131d-132a

31 DESCARTES: *Rules*, XIV 28a-33b / *Meditations*, II 77d 81d esp 78c-d, 80b-d / *Objections and Replies*, 114d 115a,c; DEF VII 130c-d; 153c-154b; 231a-232a

31 SPINOZA: *Ethics*, PART I, PROP 14, COROL 2-PROP 15 360a-361d; PART II, DEF 1 373a; PROP 2 374a

34 NEWTON: *Optics*, BK III, 537a-b; 541b

35 LOCKE: *Human Understanding*, BK II, CH XIII, SECT 11-27 150d-154d passim; CH XXIII 204a-214b passim; BK III, CH X, SECT 15 295a-c; BK IV, CH X, SECT 9-19 351b-354c passim

35 BERKELEY: *Human Knowledge*, SECT 9-17 414d-416b passim; SECT 37 419d; SECT 50 422c; SECT 91-96 430d-431d

35 HUME: *Human Understanding*, SECT XII, DIV 123 506a

42 KANT: *Pure Reason*, 15b-c; 99a-100d esp 100c-d / *Judgement*, 580c-d

45 LAVOISIER: *Elements of Chemistry*, PREF, 3b-4a

45 FARADAY: *Researches in Electricity*, 850b,d-855a,c

53 JAMES: *Psychology*, 876a-b; 882a-884b

2a. The properties of matter: hypotheses concerning its constitution

8 ARISTOTLE: *Heavens*, BK III, CH 4 [303^{a}3-^{b}8] 394b-d / *Generation and Corruption*, BK I, CH 2 410d-413c; CH 8 423b-425d / *Metaphysics*, BK I, CH 4 [985^{b}3-19] 503c-d

10 GALEN: *Natural Faculties*, BK I, CH 12 172d-173c

12 LUCRETIUS: *Nature of Things*, BK I [146-920] 2d-12b; BK II [333-990] 19b-27c

16 KEPLER: *Epitome*, BK IV, 936a-937a

23 HOBBES: *Leviathan*, PART IV, 271d-272a

28 GILBERT: *Loadstone*, BK II, 29c-30a

28 GALILEO: *Two New Sciences*, SECOND DAY 178a-196d passim

30 BACON: *Novum Organum*, BK II, APH 8 140b; APH 25 155a-d; APH 40 170c-173d; APH 48 179d-188b

31 DESCARTES: *Meditations*, II, 78c-d; 80b-d / *Objections and Replies*, DEF VII 130c-d; 154a; 231a-232a

31 SPINOZA: *Ethics*, PART I, PROP 14, COROL 2-PROP 15 360a-361d; PROP 25, COROL 365b; PART II, DEF 1 373a; PROP 2 374a

34 NEWTON: *Principles*, DEF 1 5a; DEF III 5b; BK II, PROP 40, SCHOL, 246a b; BK III, RULE III 270b-271a; PROP 6, COROL III-IV 281b; PROP 7 281b-282b; GENERAL SCHOL, 371b / *Optics*, BK II, 479b-485b; BK III, 531a 543b esp 541b 543a

34 HUYGENS: *Light*, CH III, 566b-569b; CH V, 601b 603b

35 LOCKE: *Human Understanding*, BK II, CH IV 129b-131a; CH VIII, SECT 7-26 134b-138b passim; CH XIII, SECT 21-27 152d-154d; CH XXI, SECT 2-4 178c-179c; SECT 75 200b-d; CH XXIII, SECT 1-32 204a-212d passim; CH XXXI, SECT 2 239b-d esp 239d; BK III, CH VI, SECT 5, 269b-c; SECT 21 273c-d; CH X, SECT 15 295a-c; BK IV, CH III, SECT 6 313c-315b

35 BERKELEY: *Human Knowledge*, SECT 9-18 414d-416c passim; SECT 37 419d; SECT 47 421c-422a; SECT 85 429c; SECT 91 430d-431a

42 KANT: *Pure Reason*, 99a-100d esp 100c-d; 137a-140c; 152a-d

45 LAVOISIER: *Elements of Chemistry*, PART I, 9a-10c; 12d-13d; 16b-c

45 FOURIER: *Theory of Heat*, 169b-170a

45 FARADAY: *Researches in Electricity*, 273a-276a; 386c 390d; 604c-632d esp 604c 607a,c, 626c-632d; 819a-c; 850b,d-855a,c

46 HEGEL: *Philosophy of History*, INTRO, 160c-d

51 TOLSTOY: *War and Peace*, EPILOGUE II, 695c

53 JAMES: *Psychology*, 68a-b

2b. The motions of matter or bodies

8 ARISTOTLE: *Physics*, BK IV, CH 6-9 292c-297c / *Generation and Corruption*, BK I, CH 8 423b-425d

10 GALEN: *Natural Faculties*, BK I, CH 12 172d-173c

12 LUCRETIUS: *Nature of Things*, BK I [329-397] 5b-6a; [951-1113] 12d-14d; BK II [62-332] 15d-19b; BK III [177-205] 32b-c

19 AQUINAS: *Summa Theologica*, PART I, Q 47, A 1, ANS 256a-257b; Q 115, A 1, ANS and REP 3,5 585d-587c

23 HOBBES: *Leviathan*, PART I, 50a-b; PART IV, 268d; 271d-272a

28 GALILEO: *Two New Sciences*, FIRST DAY, 157b-171b; THIRD DAY-FOURTH DAY 197a-260a,c

(2. *The conception of matter as extension, as a bodily substance, or as a mode of substance: atoms and compound bodies.* 2b. *The motions of matter or bodies.*)

30 BACON: *Novum Organum*, BK I, APH 66 114d-115c; BK II, APH 35-36 162a-168d; APH 40 170c-173d; APH 48 179d-188b
31 DESCARTES: *Discourse*, PART V 54b-60c / *Objections and Replies*, 114d-115a; DEF VII 130c-d; 231a-b
31 SPINOZA: *Ethics*, PART II, LEMMA 1-7 378c-380b
34 NEWTON: *Principles* 1a-372a / *Optics*, BK III, 541b
35 LOCKE: *Human Understanding*, BK II, CH XXI, SECT 2-4 178c-179c; CH XXIII, SECT 17 209a; SECT 22 209d; SECT 28-29 211b-212a
38 MONTESQUIEU: *Spirit of Laws*, BK I, 1b
45 LAVOISIER: *Elements of Chemistry*, PART I, 41b-c
45 FOURIER: *Theory of Heat*, 169a-b
51 TOLSTOY: *War and Peace*, EPILOGUE II, 694d-695c
53 JAMES: *Psychology*, 882a; 883a-884b passim

2c. Matter as the support of sensible qualities

8 ARISTOTLE: *Sense and the Sensible*, CH 4 [442^{a}30-^{b}24] 680a-c; CH 6 [445^{b}4-446^{a}20] 683b-684c
12 LUCRETIUS: *Nature of Things*, BK II [398-477] 20a-21a; [730-885] 24b-26b; BK IV [522-721] 51a-53d
17 PLOTINUS: *Second Ennead*, TR IV, CH 8-13 52c-55d / *Third Ennead*, TR VI, CH 6-19 109d-119a / *Fourth Ennead*, TR VII, CH 8, 196a-b / *Sixth Ennead*, TR I, CH 29 267c-268b
23 HOBBES: *Leviathan*, PART I, 49b-d; 57a-b; PART III, 172b
30 BACON: *Novum Organum*, BK II, APH 40 170c-173d
31 DESCARTES: *Meditations*, II, 78c-d; 80b-d / *Objections and Replies*, DEF VII 130c-d; 228c-229b; 229d-230c; 231a-b
35 LOCKE: *Human Understanding*, BK II, CH VIII, SECT 7-26 134b-138b passim; CH XXIII 204a-214b passim, esp SECT 1-6 204a-205c, SECT 15 208c-d
35 BERKELEY: *Human Knowledge*, SECT 7-21 414b-417a; SECT 37 419d; SECT 49 422b; SECT 73 427b-c; SECT 76-78 427d-428b; SECT 91 430d-431a
35 HUME: *Human Understanding*, SECT XII, DIV 122-123 505c-506a esp DIV 123 506a
42 KANT: *Pure Reason*, 15b-c; 100c-d
53 JAMES: *Psychology*, 185a; 331a; 503a

2d. The diremption of body and mind, or matter and spirit

17 PLOTINUS: *First Ennead*, TR I 1a-6b esp CH 3-7 1d-4a / *Sixth Ennead*, TR IV, CH 1 297b-d; CH 4-6 299a-300b
19 AQUINAS: *Summa Theologica*, PART I, Q 76, A 4 393a-394c
30 BACON: *Advancement of Learning*, 48d-50b
31 DESCARTES: *Discourse*, PART IV, 51d-52a / *Meditations*, II 77d-81d passim; VI 96b-103d passim / *Objections and Replies*, DEF VI-VII 130c; DEF X 130d; PROP IV 133c; 153c-155c; 224d-225d; 231a-232d; 248b
31 SPINOZA: *Ethics*, PART I, PROP 14, COROL 2 360a; PROP 15, SCHOL 360b-361d; PART II, PROP 1-7 373d-375c; PROP 10-13 376c-378c; PART III, PROP 2 396c-398b; PART V, PREF 451a-452c
35 LOCKE: *Human Understanding*, BK II, CH XIII, SECT 16 151d-152a; CH XXIII, SECT 5 205a-b; SECT 15-32 208c-212d passim; CH XXVII, SECT 27 227d-228a; BK IV, CH III, SECT 28 322a-c; CH X, SECT 9-19 351b-354c passim
35 BERKELEY: *Human Knowledge*, SECT 18-20 416b-417a
53 JAMES: *Psychology*, 84a-93b esp 88a-90a; 95b-98a; 115a-119b esp 118b-119b; 139a-140a; 221a-226a esp 221a-222b, 225b-226a

3. The existence of matter

3a. Matter as the sole existent: materialism, atomism

7 PLATO: *Sophist*, 567a-568a
8 ARISTOTLE: *Physics*, BK II, CH 1 [193^{a}9-28] 269b-c / *Heavens*, BK III, CH 4 [303^{a}3-^{b}8] 394b-d / *Generation and Corruption*, BK I, CH 2 410d-413c; CH 8 423b-425d / *Metaphysics*, BK I, CH 3 [983^{b}7]-CH 4 [985^{b}21] 501d-503d; CH 8 [988^{b}23-989^{b}20] 506d-507d; BK VII, CH 13 [1039^{a}2-11] 562d; BK XII, CH 10 [1075^{a}25-1076^{a}5] 606a-d
10 GALEN: *Natural Faculties*, BK I, CH 12 172d-173c
12 LUCRETIUS: *Nature of Things*, BK I [146-634] 2d-8d
12 AURELIUS: *Meditations*, BK IX, SECT 39 295a; BK X, SECT 6 297a-b
17 PLOTINUS: *Second Ennead*, TR IV, CH 1 50a-b; CH 7, 52c / *Third Ennead*, TR I, CH 3 79b-c / *Fourth Ennead*, TR VII, CH 2-4 192a-193c / *Sixth Ennead*, TR I, CH 25-30 265b-268c
18 AUGUSTINE: *Confessions*, BK V, par 19-21, 32c-33b; par 25 34b-c; BK VII, par 1-2 43b-44a; par 7 45a-d
19 AQUINAS: *Summa Theologica*, PART I, Q 47, A 1, ANS 256a-257b; Q 50, A 1, ANS 269b-270a; Q 75, A 1, ANS 378b-379c
23 HOBBES: *Leviathan*, PART III, 172b; PART IV, 269b-272b
30 BACON: *Novum Organum*, BK II, APH 8 140b
35 LOCKE: *Human Understanding*, BK IV, CH X, SECT 8-17 351a-353c passim
53 JAMES: *Psychology*, 95b-98a; 106a; 671b [fn 1]; 882a-884b

3b. Matter as the most imperfect grade of being or reality

7 PLATO: *Republic*, BK IX, 423c-424a
12 AURELIUS: *Meditations*, BK IX, SECT 36 294d-295a
17 PLOTINUS: *First Ennead*, TR VIII, CH 4-5 28c-29c; CH 7-8 30c-31c / *Second Ennead*, TR IV, CH 5 51b-d; CH 15-16 56c-57c; TR V, CH 4-5 59c-60c / *Third Ennead*, TR VI, CH 11-14 113a-116a
18 AUGUSTINE: *Confessions*, BK XII, par 3-8 99d-101b; par 15 102b-c
19 AQUINAS: *Summa Theologica*, PART I, Q 3, A 8, ANS and REP 3 19d-20c; Q 4, A 1, ANS and REP 2 20d-21b; Q 5, A 3, REP 3 25a-d; Q 7, A 2, REP 3 31d-32c; Q 14, A 11, REP 3 84c-85c; Q 15, A 3, REP 3 93b-94a; Q 46, A 1, REP 1 250a-252d; Q 84, A 3, REP 2 443d-444d; Q 103, A 1, REP 2 528b-529a; Q 115, A 1, REP 4 585d-587c
21 DANTE: *Divine Comedy*, PARADISE, XXIX [13-36] 150b-c
35 LOCKE: *Human Understanding*, BK II, CH XXI, SECT 2 178c; CH XXIII, SECT 28 211b-d
35 HUME: *Human Understanding*, SECT XII, DIV 123 506a

3c. Matter as a fiction of the mind

35 BERKELEY: *Human Knowledge*, SECT 1-96 413a-431d passim; SECT 133 439c-440a
35 HUME: *Human Understanding*, SECT XII, DIV 123 506a
42 KANT: *Pure Reason*, 85d-91d esp 88b-c
44 BOSWELL: *Johnson*, 134c-d

3d. The relation of God to matter: the creation of matter and its motions

OLD TESTAMENT: *Genesis*, 1-2
APOCRYPHA: *Wisdom of Solomon*, 11:17-(*D*) OT, *Book of Wisdom*, 11:18
7 PLATO: *Timaeus*, 448b-449a; 450b-451b; 458a-b; 466a-b
8 ARISTOTLE: *Metaphysics*, BK XII, CH 6 [1071^{b}19-32] 601c; CH 10 [1075^{b}16-24] 606c
12 LUCRETIUS: *Nature of Things*, BK I [146-158] 2d-3a; BK V [146-194] 63a-c
18 AUGUSTINE: *Confessions*, BK VII, par 7 45a-d; BK XI, par 7 90d-91a; BK XII, par 3-9 99d-101c; par 15-16 102b-103a; par 24-26 104c-105b; par 28-31 105c-107a; par 38-40 108d-110a; BK XIII, par 45 123a; par 48 124a / *City of God*, BK XI, CH 23 334c-335c
19 AQUINAS: *Summa Theologica*, PART I, Q 8, A 4, ANS and REP 1 37c-38c; Q 15, A 3, REP 3-4 93b-94a; Q 16, A 7, REP 2 99a-d; Q 44, A 2 239b-240a; Q 45, A 2, REP 2 242d-244a; A 8 249b-250a; Q 46, A 1 esp REP 1,3,5-6 250a-252d; Q 47, A 1, ANS 256a-257b; Q 65, A 3 341c-342b; Q 66 343d-349d; Q 75, A 5, REP 1,4 382a-383b; Q 84, A 3, REP 2 443d-444d; Q 91 484a-488c; Q 92, A 2, REP 2 489d-490c; A 4 491b-d; Q 103, A 1, REP 2 528b-529a; Q 105, AA 1-2 538d-540c; Q 110, A 2, ANS 565d-566d; Q 117, A 3, ANS and REP 2 598c-599b
20 AQUINAS: *Summa Theologica*, PART I-II, Q 85, A 6 182d-184a
21 DANTE: *Divine Comedy*, PARADISE, VII [121-148] 116b-c; XIII [52-84] 126a-b; XXIX [13-45] 150b-c
22 CHAUCER: *Knight's Tale* [2987-3016] 209a-b
30 BACON: *Advancement of Learning*, 17b-d
31 DESCARTES: *Discourse*, PART V, 54d-56b
31 SPINOZA: *Ethics*, PART I, PROP 15 360a-361d; PART II, DEF 1 373a; PROP 2 374a; PROP 7, SCHOL 375b-c
32 MILTON: *Paradise Lost*, BK III [694-735] 150b-151b esp [708-735] 150b-151b; BK V [468-505] 185b-186a; [577-599] 187b-188a; BK VII [59-640] 218b-231a esp [70-108] 218b-219b, [192-386] 221b-225b
34 NEWTON: *Optics*, BK III, 541b-543a
35 LOCKE: *Human Understanding*, BK II, CH XXI, SECT 2 178c; CH XXIII, SECT 28 211b-d; BK IV, CH X, SECT 9-19 351b-354c
35 BERKELEY: *Human Knowledge*, SECT 67-79 426b-428b passim; SECT 91-94 430d-431c
35 HUME: *Human Understanding*, SECT XII, DIV 132, 509d [fn 1]
46 HEGEL: *Philosophy of History*, INTRO, 156d-157b

4. Matter as an object or condition of knowledge

4a. The knowability of matter: by sense, by reason

7 PLATO: *Phaedo*, 228d-229c / *Republic*, BK IX, 423c-424a / *Timaeus*, 456a-458a
8 ARISTOTLE: *Physics*, BK I, CH 7 [191^{a}8-11] 266d / *Metaphysics*, BK VII, CH 15 [1039^{b}20-1040^{a}8] 563c-564a; BK IX, CH 7 [1049^{a}19-^{b}1] 574d-575a / *Soul*, BK III, CH 4 [429^{b}10-430^{a}9] 661d-662c
12 LUCRETIUS: *Nature of Things*, BK I [265-328] 4b-5a; BK II [80-141] 16a-d
17 PLOTINUS: *First Ennead*, TR VIII, CH 9 31c-32a / *Second Ennead*, TR IV, CH 10 53b-d; CH 12 54c-55b
18 AUGUSTINE: *Confessions*, BK XII, par 3-6 99d-100c
19 AQUINAS: *Summa Theologica*, PART I, Q 3, A 3, ANS 16a-d; Q 14, A 11 84c-85c; Q 15, A 3, REP 3-4 93b-94a; Q 50, A 1, ANS 269b-270a; Q 57, A 1 295a-d; Q 66, A 1, REP 1 343d-345c; QQ 84-86 440b-464d; Q 87, A 1, ANS 465a-466c
20 AQUINAS: *Summa Theologica*, PART III SUPPL, Q 92, A 1, ANS and REP 12 1025c-1032b
30 BACON: *Novum Organum*, BK I, APH 66 114d-115c

(4. *Matter as an object or condition of knowledge.* **4a. The knowability of matter: by sense, by reason.**)

31 DESCARTES: *Meditations*, I-II 75a-81d passim; VI 96b-103d passim / *Objections and Replies*, 229d-230c
31 SPINOZA: *Ethics*, PART I, PROP 15, SCHOL 360b-361d
35 LOCKE: *Human Understanding*, BK II, CH VIII, SECT 7-26 134b-138b passim; CH XXIII, SECT 5 205a-b; SECT 15-17 208c-209a; SECT 22-32 209d-212d; BK IV, CH III, SECT 6 313c-315b; SECT 9-17 315c-317c passim; SECT 23-27 320a-322a passim; CH VI, SECT 14 335d-336b
35 BERKELEY: *Human Knowledge*, SECT 16-24 416a-417d; SECT 54 423b
35 HUME: *Human Understanding*, SECT XII, DIV 123 506a
42 KANT: *Pure Reason*, 186b-d
46 HEGEL: *Philosophy of Right*, PART I, par 52 25a-c
48 MELVILLE: *Moby Dick*, 231a
53 JAMES: *Psychology*, 140b-145a; 502a-503b passim

4b. The role of matter in the concepts and definitions of the several sciences: the grades of abstraction in physics, mathematics, and metaphysics

7 PLATO: *Timaeus*, 455c-458b
8 ARISTOTLE: *Physics*, BK II, CH 2 270a-271a; CH 7 9 275b 278a,c / *Meteorology*, BK IV, CH 12 493d-494d / *Metaphysics*, BK II, CH 3 [995^{a}15 20] 513d; BK III, CH 3 [998^{a}20-^{b}14] 517a-b; BK VI, CH 1 [1025^{b}28 1026^{a}6] 547d-548a; BK VII, CH 10-11 558a-561a; CH 15 [1039^{b}20-1040^{a}8] 563c-564a; CH 17 565a-566a,c; BK VIII, CH 2 3 566d-568d; CH 6 569d-570d; BK X, CH 8-9 585b-586c; BK XI, CH 7 [1064^{a}19-28] 592c; BK XII, CH 9 [1074^{b}37-1075^{a}2] 605c; BK XIII, CH 2 [1077^{b}11]-CH 3 [1078^{a}31] 609a-d / *Soul*, BK I, CH 1 [403^{a}15-^{b}19] 632b-d; BK III, CH 7 [431^{b}13-19] 664b
9 ARISTOTLE: *Parts of Animals*, BK I, CH 1 [641^{a}14-31] 163d-164a
16 PTOLEMY: *Almagest*, BK I, 5b
19 AQUINAS: *Summa Theologica*, PART I, Q 1, A 1, REP 2 3b-4a; Q 3, A 3, ANS 16a-d; Q 18, A 4, REP 3 107d-108c; Q 29, A 2, REP 3 163b-164b; Q 50, A 2, REP 1 270a-272a; Q 75, A 4 381b-382a; Q 85, A 1, REP 2 451c-453c
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4c. The material conditions of sensation, imagination, and memory

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54 FREUD: *Interpretation of Dreams*, 351c-352d esp 352a-b / *Beyond the Pleasure Principle*, 646b-648a esp 646c-d, 647d-648a

4d. The material conditions of thought: the relation of matter to the existence and acts of the mind

8 ARISTOTLE: *Soul*, BK I, CH 4 [408^{b}18-32] 638c-d; BK III, CH 4-5 661b-662d; CH 7 [431^{a}14-^{b}19] 663d-664b
12 LUCRETIUS: *Nature of Things*, BK III [94-176] 31b-32b; BK IV [722-817] 53d-54d
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19 AQUINAS: *Summa Theologica*, PART I, Q 3, A 1, REP 2 14b-15b; Q 7, A 2, REP 2 31d-32c; Q 14, A 2, REP 1-3 76d-77d; A 11, REP 1 84c-85c; Q 50, A 2, ANS 270a-272a; Q 55, A 2, ANS and

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CROSS-REFERENCES

For: Other considerations of matter as a principle of change, *see* ART 2b; BEING 7b(5); CHANGE 2a; FORM 1d(1)-1d(2); and for the theory of celestial and terrestrial matter as distinct in kind, *see* ASTRONOMY 8a; BEING 7b(3); CHANGE 7c(4); WORLD 6a.

The conception of matter as potentiality in relation to form as actuality, and for the theory of physical substances as composite of matter and form, *see* BEING 7b(2), 7c(3); FORM 2c(1)-2c(3); INFINITY 4c; MAN 3a; MIND 2b; ONE AND MANY 3b(4); SOUL 3c.

Considerations relevant to the doctrine that matter is the source of numerical diversity or the principle of individuality in material things, *see* SAME AND OTHER 1a; UNIVERSAL AND PARTICULAR 3.

For: The conception of matter or extension as a substance, or as a mode of substance, *see* BEING 7b(4); FORM 2d; MAN 3a; MIND 2d; SOUL 3c.

Atomism as a theory of matter and as a materialistic philosophy of nature, *see* ELEMENT 5a–5h; MIND 2e; and for discussions bearing on materialism as a philosophy of nature, society, and history, *see* ELEMENT 5; HISTORY 4a(2); MAN 3c; WILL 5c.

Matter in relation to mind, or body in relation to soul, *see* MAN 3a; MIND 2a–2e; SOUL 3c, 3e; and for the discussion of immaterial substances, spirits, or beings which exist apart from matter, *see* ANGEL 2, 3b; BEING 7b(2); ETERNITY 4a; FORM 2a, 2d; GOD 4c; MAN 3a(1); MIND 2a; SOUL 3a–3c.

The theological problems of matter, its creation and conservation, *see* GOD 7a; WORLD 4c–4e(1).

The physical properties of matter or bodies and the laws of their motion, *see* ASTRONOMY 8c(3); MECHANICS 4a, 5a–5f(2), 6a–6e; QUANTITY 5d–5c; SPACE 1a–1d; and for the problem of the infinity of matter or of an infinite body, *see* INFINITY 4a–4b.

Matter as an object of knowledge, *see* KNOWLEDGE 5a(2).

Matter in relation to sensation and to sensible qualities, *see* ELEMENT 5c; MECHANICS 4b; QUALITY 1; SENSE 3c(3).

Matter in relation to thought, abstract ideas, or definitions, *see* DEFINITION 6a; FORM 3c; IDEA 2g; MEMORY AND IMAGINATION 6c(1); MIND 1a(2); SENSE 5a; UNIVERSAL AND PARTICULAR 4c.

ADDITIONAL READINGS

Listed below are works not included in *Great Books of the Western World*, but relevant to the idea and topics with which this chapter deals. These works are divided into two groups:

I. Works by authors represented in this collection.
II. Works by authors not represented in this collection.

For the date, place, and other facts concerning the publication of the works cited, consult the Bibliography of Additional Readings which follows the last chapter of *The Great Ideas.*

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Chapter 54: MECHANICS

INTRODUCTION

MECHANICS, taken as the name for just one of the physical sciences, would merit no place on a small list of basic, focal terms. But the word "mechanics" means more than that. In the tradition of western thought it signifies a whole philosophy of nature, and it connotes a set of fundamental principles under which, it has been thought, all the physical sciences can be unified.

The principles of mechanics have been applied not only in statics and dynamics, which are concerned with the action and reaction of bodies at rest or in motion, but also in acoustics and optics and the sciences of heat, magnetism, and electricity. They have been extended to astronomical phenomena to constitute what is called "celestial mechanics." They have been thought to govern the action or motion of invisible particles or waves as well as the familiar bodies of ordinary experience. In the range and variety of the phenomena it covers, mechanics would seem to be co-extensive with physics. Such at least appears to be its scope at one stage in the development of natural science.

We shall presently consider the dissatisfaction with the mechanical point of view which causes scientists in our own day to hail the replacement of "classical mechanics" by the "new physics" as a great advance in science. The intellectual significance of this change can be compared with that earlier revolution in the 17th century when the new natural science founded on the achievements of Galileo, Huygens, and Newton replaced the physics of Aristotle which had long reigned as the traditional philosophy of nature. What Einstein calls "the rise and decline of the mechanical point of view" thus seems to provide an apt title for the story of three stages in the history of science, in only one of which does the whole of physics appear to be dominated by mechanics.

One way, then, of understanding the importance of mechanics is in terms of that story. Other chapters, such as ASTRONOMY, CHANGE, ELEMENT, MATTER, PHYSICS, SPACE, and TIME —and perhaps also CAUSE and HYPOTHESIS— tell part of that story, especially the part which turns on the differences between Aristotle's physics (which is neither experimental nor mathematical) and modern physics (which is both). This chapter focuses on issues which fall largely within modern physics—issues belonging to that part of the story which, in the great books, begins with Galileo, Huygens, and Newton and runs to Fourier and Faraday. The story itself does not end there, but the point to which Faraday carries it suggests the sequel in Clerk Maxwell and Einstein, just as Galileo's point of departure reflects antecedents in Aristotle. The great books state the issues sufficiently well, though they do not tell the whole story. That can be fully documented only by a host of supplementary scientific classics in various fields, such as the works listed in the Additional Readings.

IN MODERN TIMES it is accepted that physics should be both experimental and mathematical. No one questions the ideal of unifying the physical sciences and finding the unity in nature's laws. But the question is whether that unification can be achieved under the aegis of mechanics; and the issue is whether physics should gather its experimental findings together under purely mathematical formulations or should also try to give those mathematical formulae a mechanical interpretation.

The issue involves more than a question of scientific method. It concerns the ultimate aim of natural science and the kind of concepts it should employ to fulfill this aim. Should the scientist seek to do no more than describe the

phenomena of nature in terms of the simplest and most universal mathematical relations? Or should he go beyond description to an explanation of the phenomena in terms of their causes?

When the issue is thus stated as a choice between being content with description or striving for explanation, it appears to be broader than the question whether physics should or should not be mechanical. Even granted that explanation is desirable, does it necessarily follow that physical explanation must employ the principles and concepts of mechanics? Aristotle's physics, it can be argued, provides a negative answer. His various physical treatises represent a natural science which tries to explain the phenomena without doing so mechanically, just as it tries to describe the phenomena without doing so mathematically.

That the connection of these two features of Aristotle's physics is not accidental seems to be indicated by the conjunction of their opposites in modern physics. When in the 17th century the physicist describes natural phenomena in mathematical terms, he explains them—if he tries to explain them at all—in mechanical terms. "The laws of Mechanics," writes Descartes, "are the laws of Nature." Huygens opens his *Treatise on Light* by referring to optics as the kind of science "in which Geometry is applied to matter"; but he at once expresses the desire to advance this branch of mathematical physics by investigating "the origin and the causes" of the truths already known, in order to provide "better and more satisfactory explanations." Such explanations, he thinks, will be found only if we conceive "the causes of all natural effects in terms of mechanical motions." He declares it his opinion that "we must necessarily do this, or else renounce all hopes of ever comprehending anything in Physics."

Galileo and Newton, as will be noted, do not unqualifiedly share Huygens' view that it is proper for the mathematical physicist to inquire about causes. But they would agree that if any explanation is to be given for laws of nature expressed in mathematical form, one or another type of mechanical hypothesis would be required to state the causes. Postponing for the moment the consideration of whether the investigation of causes belongs to mathematical physics, let us examine what is involved in giving a mechanical explanation of anything and why this type of explanation tends to occur in the causal interpretation of mathematically formulated laws of nature.

Two points seem to constitute the essence of mechanical theory. Both are fundamental notions and both are philosophical in the sense that they do not seem to result from the findings of experimental research. The first point is an exclusive emphasis upon efficient causes, which means the exclusion of other types of causes, especially final and formal causes, from mechanical explanation. As the chapter on CAUSE indicates, efficient causality consists in *one thing acting on another*. But not every sort of action by which one thing affects another is mechanical. According to the doctrine, an efficient cause is mechanical only if it consists in a moving body acting on another by impact, or if it consists in a force exerted by one body to cause motion in another or to change its quantity or direction. The notion of a force which does not work through the impact of one moving thing upon another raises the problem of action-at-a-distance to which we shall return subsequently.

The second fundamental point is an exclusive emphasis upon quantities. Mechanical explanation makes no references to qualities or other attributes of things. Paradoxically this point is sometimes expressed in terms of a distinction between primary and secondary *qualities*; but, as the chapters on QUANTITY and QUALITY point out, the primary qualities are all quantities. According to Locke, they are "solidity, extension, figure, motion or rest, and number"; according to Newton, "the universal qualities of all bodies whatsoever" are "extension, hardness, impenetrability, mobility, and inertia." Others, like Galileo and Descartes, give still different enumerations, but the point remains that the only attributes of bodies which have mechanical significance are measurable quantities. Such secondary qualities, for example, as colors and tones belong to the physical world (as it is mechanically conceived) only by reduction to the local motion of particles or waves having certain velocities, lengths, or other quantitative attributes.

We need not be concerned here with what sort of reality is assigned to secondary qualities, or how their presence in experience is accounted for. These problems are discussed in other chapters, such as QUALITY and SENSE. However they are solved, the philosophy of mechanism excludes from the physical world whatever does not consist in, or cannot be reduced to, quantities of matter (or mass), motion, or force, and such related quantities as those of time and space (or distance).

The two points of mechanical theory are obviously connected, for the kind of cause which mechanical explanation employs to the exclusion of all others consists in a quantity of motion or of force. Just as obviously, mechanical explanation, dealing only in quantities and in causes which are quantitatively measurable, is precisely the type of explanation which would seem to be appropriate if one felt called upon to give an interpretation of the mathematical relationships which the mathematical physicist formulates as laws of nature. These mathematical laws are after all statements of the relations among physical quantities which have been subjected to experimental determination or measurement.

AS A PHILOSOPHICAL theory the mechanical view of nature antedates modern physical science. The atomistic conception of the world, which Lucretius expounds, contains both of the fundamental points of mechanism—the doctrine of primary and secondary qualities and the doctrine that all effects in nature are produced by efficient moving causes.

The controversy over mechanism is also ancient. Aristotle denies both points of doctrine in his criticism of the Greek atomists, Democritus and Leucippus; and in the exposition of his own physical theories he states an opposite view. To qualities and qualitative change he assigns physical reality. He explains change in terms of four types of causes, not one. He does not exclude the mechanical type of cause in his explanation of local motion. On the contrary, with respect to local motion his theory that a body in motion must be directly acted upon by a moving cause throughout the period of its motion, seems to be more mechanical than the modern theory that no cause need be assigned for the continuing uniform motion of a body along a straight line but only for a change in its direction or velocity.

What is new in modern times is not the philosophical doctrine of mechanism, but the introduction of mechanical explanation into experimental and mathematical physics, and the controversy about whether it belongs there or can be defended as useful. The so-called rise and decline of the mechanical view in modern physics is connected with experimental discoveries and mathematical formulations. It is not an alternation between success and failure on the level of philosophical argument concerning the ultimate truth of mechanical conceptions. When these conceptions are rejected, it is not for the sake of returning to opposite notions in physical theory, such as those of Aristotle, but rather because, as Einstein says, "science did not succeed in carrying out the mechanical program convincingly, and today no physicist believes in the possibility of its fulfillment."

There is a touch of prophecy in the conversation Swift imagines taking place between Aristotle and the physicists of the 17th century. According to Swift, when Aristotle was confronted with Descartes and Gassendi, he "freely acknowledged his own mistakes in natural philosophy, because he proceeded in many things upon conjecture, as all men must do; and he found that Gassendi, who had made the doctrine of Epicurus as palatable as he could, and the *vortices* of Descartes, were equally exploded. He predicted the same fate to *attraction*, whereof the present learned are such zealous asserters. He said that new systems of nature were but new fashions, which would vary in every age; and even those who pretend to demonstrate them from mathematical principles, would flourish but a short period of time, and be out of vogue when that was determined."

BOTH GALILEO and Descartes re-state the philosophical doctrine which first appears in ancient atomism, but both re-state it in a way that suggests its utility for an experimental investigation of nature. It is significant that Galileo's statement occurs in the context of his concern with the nature and causes of heat. He wishes to explain, he writes in *Il Saggiatore*, why he thinks that "motion is the cause of

heat." To do this he finds it necessary to question a prevalent notion "which is very remote from the truth"—the belief that "there is a true accident, affection, or quality, really inherent in the substance by which we feel ourselves heated." He denies the physical reality of heat as an inherent quality of bodies on the same ground that he denies the physical reality of other qualities. "I do not believe," he declares, "that there exists anything in external bodies for exciting tastes, smells, and sounds, but size, shape, quantity, and motion, swift or slow; and if ears, tongues, and noses were removed, I am of the opinion that shape, quantity, and motion would remain, but there would be an end of smells, tastes, and sounds, which, apart from the living creature, I regard as mere words."

Descartes' statement of the doctrine is bolder, perhaps, in its suggestion of a mechanical program for physical research. "Colors, odors, savors, and the rest of such things," he writes, are "merely sensations existing in my thought." They differ from the real properties of bodies just as much as "pain differs from the shape and motion of the instrument which inflicts it." The true physical properties, such as "gravity, hardness, the power of heating, of attracting and purging" consist, in Descartes' opinion, "solely in motion or its absence, and in the configuration and situation of [bodily] parts."

As a philosophical doctrine, the mechanical view is not necessarily tied to atomism. Descartes opposes atomism as plainly as does Aristotle. Furthermore, Newton, who is an atomist, disagrees with both Descartes and the Greek atomists on one fundamental point in mechanical theory. The ancient atomists make the actual motion of one particle in collision with another the indispensable cause of a change of motion in the latter. Descartes likewise requires one motion to be the cause of another and explains gravity in terms of actual bodily motions. Newton rejects Descartes' mechanical hypothesis of material vortices as the cause of gravitation. He seems to have this in mind, and to put Descartes in the same class with Aristotle, when he says that "hypotheses, whether metaphysical or physical, whether of occult qualities or mechanical, have no place in experimental philosophy."

The force of gravity, according to Newton, is a power of attraction which one body exercises on another without the first being in motion or coming into contact with the second. Newton acknowledges the problem of action-at-a-distance which his theory raises. For the most part he lets it stand as a problem which does not affect the mathematical results of his work. But in the Queries he attaches to his *Optics* he suggests, by way of solution, the hypothesis of an ether as the continuous medium through which gravitational force is exerted. In the opinion of later physicists, Newton's hypothesis is no less mechanical than Descartes'. Nor does there seem to be any philosophical grounds for preferring one hypothesis to the other.

But Newton's quarrel with Descartes is not on a philosophical issue. It turns on which mechanical conception, if any at all is to be offered, fits best with the mathematical laws of terrestrial and celestial motion which Newton had succeeded in formulating as universal laws of nature. Those mathematical laws, moreover, had the merit of fitting the observed phenomena and so, of realizing the scientific ideal of accurate description stated in the most generalized form. Newton's triumph over Descartes, then, is a triumph in mathematical and experimental physics, not a triumph in philosophy.

Pope's couplet

> Nature and Nature's Laws lay hid in Night,
> God said, Let Newton be, and all was light

records that triumph, and celebrates the illumination of nature by the mechanical as well as the mathematical principles of Newton's physics. Newton's picture of the world dominates the mind of a century and controls its science. Locke speaks of "the incomparable Mr. Newton" and of "his never enough to be admired book"; Hume refers to him as the philosopher who, "from the happiest reasoning . . . determined the laws and forces, by which the revolutions of the planets are governed and directed"; and even Berkeley, who challenges his theories of space, time, and attraction, regrets that he must take issue with "the authority of so great a man," a man "whom all the world admires" as the author of "a treatise on Mechanics, demonstrated and applied to nature."

NEWTON'S ACHIEVEMENT is to have accomplished an extraordinary synthesis of all that was good in previous scientific work, and a sweeping criticism of all that was considered stultifying. That so many and such varied phenomena should be organized mathematically by a theory as simple as Newton's, is altogether impressive. Equally astonishing is the predictive power of Newton's laws and the explanatory power of his mechanics, not to mention the technological fruits of the latter in mechanical engineering and the invention of machinery of all sorts. Whatever difficulties are implicit in the Newtonian mechanics—subsequently to become, with new discoveries, more and more perplexing—the scope and grandeur of Newton's book gives mechanics a commanding position with respect to the future of science for at least two centuries.

In the century between the publication of Newton's *Mathematical Principles* and the publication in 1787 of Lagrange's *Mécanique analytique*, "the notion of the mechanical explanation of all the processes of nature," writes Whitehead, "finally hardened into a dogma of science." In the next century, the mechanical dogma spreads from physics and chemistry throughout the whole domain of natural science—into biology and psychology—and even beyond that, into economics and sociology. Books bear such titles as *The Mechanistic Conception of Life, The Mechanism of Human Behavior, Social Statics, Social Dynamics.* At the end of the 19th century, James notes the conquests which are being made on all sides by the mechanical idea. "Once the possibility of *some* kind of mechanical interpretation is established," he writes, "Mechanical Science, in her present mood, will not hesitate to set her brand of ownership upon the matter."

James himself testifies to the persuasiveness and success of the mechanical dogma, though not without some resentment. "The modern mechanico-physical philosophy, of which we are so proud," he says, "because it includes the nebular cosmogony, the conservation of energy, the kinetic theory of heat and gases, etc., etc., begins by saying that the *only* facts are collocations and motions of primordial solids, and the only laws the changes in motion which changes in collocation bring. The ideal which this philosophy strives after," he continues, "is a mathematical world-formula, by which, if all the collocations and motions at a given moment were known, it would be possible to reckon those of any wished-for future moment, by simply considering the necessary geometrical, arithmetical, and logical implications."

Laplace had in fact pictured a lightning calculator who, given the total configuration of the world at one instant, would be able to bring the whole future "present to his eyes." And James quotes Helmholtz to the effect that the whole problem of physical science is "to refer natural phenomena back to unchangeable attractive and repulsive forces whose intensity depends wholly upon distance. The solubility of this problem is the condition of the complete comprehensibility of nature."

In commenting on this, James admits that "the world grows more orderly and rational to the mind, which passes from one feature of it to another by deductive necessity, as soon as it conceives it as made up of so few and so simple phenomena as bodies with no properties but number and movement to and fro." But he also insists that it is "a world with a very minimum of rational *stuff*. The sentimental facts and relations," he complains, "are butchered at a blow. But the rationality yielded is so superbly complete in *form* that to many minds this atones for the loss, and reconciles the thinker to the notion of a purposeless universe, in which all the things and qualities men love . . . are but illusions of our fancy attached to accidental clouds of dust which will be dissipated by the eternal cosmic weather as careless as they were formed."

WITH THE 20TH CENTURY a change occurs. The dogma of mechanism may continue to spread in other sciences and gain even wider acceptance as a popular philosophical creed, but within the domain of the physical sciences, certain mechanical conceptions become suspect and a wholesale rejection of classical mechanics (which becomes identified with Newtonian physics) is called for.

Einstein, for example, quotes the passage from Helmholtz that James had cited, in which Helmholtz goes on to say that the vocation of physics "will be ended as soon as the reduction

of natural phenomena to simple forces is complete." This "*mechanical view*, most clearly formulated by Helmholtz," Einstein concedes, "played an important role in its time"; but, he adds, it "appears dull and naive to a twentieth century physicist."

Einstein reviews the assumptions which physicists had to make in order to construct a mechanical theory of light, gravitation, and electricity. "The artificial character of all these assumptions," he says, "and the necessity for introducing so many of them all quite independent of each other, was enough to shatter the belief in the mechanical point of view.... In the attempt to understand the phenomena of nature from the mechanical point of view," he continues, "throughout the whole development of science up to the twentieth century, it was necessary to introduce artificial substances like electric and magnetic fluids, light corpuscles, or ether." According to Einstein, "attempts to construct an ether in some simple way" have been "fruitless"; but what is more important in his opinion, such failures "indicate that the fault lies in the fundamental assumption that it is possible to explain all events in nature from a mechanical point of view."

Does this mean that the contemporary physicist has found another and better way of explaining nature? Is there a non-mechanical way of explaining the phenomena, which fits the mathematical laws of experimental physics; or does discarding mechanics mean relinquishing all efforts to explain nature?

Eddington suggests an answer. "One of the greatest changes in physics between the nineteenth century and the present day," he writes, "has been the change in our ideal of scientific explanation. It was the boast of the Victorian scientist that he would not claim to understand a thing until he could make a model of it; and by a model he meant something constructed of levers, geared wheels, squirts, and other appliances familiar to the engineer. Nature in building the universe was supposed to be dependent on just the same kind of resources as any human mechanic.... The man who could make gravitation out of cogwheels would have been a hero in the Victorian age." Today, however, Eddington continues, "we do not encourage the engineer to build the world for us out of his material, but we turn to the mathematician to build it out of his material."

We may turn to the mathematician's construction of the world in his terms; but in the tradition of western thought, mathematically formulated laws of nature are not, with the single exception perhaps of the Pythagoreans, regarded as explanations of why things behave as they do or how they work. The change from the 19th to the 20th century with respect to "our ideal of scientific explanation" cannot, then, be the substitution of the mathematical for the mechanical account of why and how. The shift from mechanics to mathematics is rather a shift from explanation as the scientific ideal to the statement of laws which, while having maximum generality, remain purely descriptive. What Eddington means by building the world out of the material of mathematics seems to be the same as what Galileo means, four centuries earlier, when he says that the book of nature "is written in mathematical language." The materials are such symbols as "triangles, circles, and other geometrical figures." Without the help of these, Galileo writes to Kepler, nature "is impossible to comprehend."

But does the mathematical comprehension of nature mean a causal explanation of it? More explicitly than Eddington, Galileo insists that explanation—at least in the sense of stating the causes—is not the business of the mathematical physicist. In a passage which cannot be read too often or examined too closely, he names three opinions which the philosophers have expressed about "the cause of the acceleration of natural motion." Some, he says, "explain it by attraction to the center, others to repulsion between the very small parts of the body, while still others attribute it to a certain stress in the surrounding medium which closes in behind the falling body and drives it from one of its positions to another. Now all of these fantasies," he continues, "and others too, ought to be examined, but it is not really worthwhile."

They ought to be examined by philosophers, perhaps, but debating them is not worthwhile in "those sciences where mathematical demonstrations are applied to natural phenomena." Perfectly defining the program of mathematical physics, Galileo sets himself a limited task:

"merely to investigate and to demonstrate some of the properties of accelerated motion (whatever the cause of this acceleration may be)." It should be noted that of the three opinions about causes which Galileo mentions, the first, which anticipates Newtonian attraction, is no less summarily dismissed than the third, which summarizes the Aristotelian theory.

"What I call Attraction," Newton later writes, "may be performed by impulse or by some other means unknown to me. I use that word here to signify only in general any force by which bodies tend towards one another, whatsoever be the cause." It is well known, he asserts in the same passage of the *Optics*, "that bodies act one upon another by the attractions of gravity, magnetism, and electricity"; but, he goes on, "how these attractions may be performed I do not here consider."

Newton's attitude toward causes and explanation would seem to be identical with Galileo's. Galileo calls opinions about causes "fantasies" and dismisses them; Newton calls them "hypotheses" and seems to banish them as resolutely. "Hypotheses are not to be regarded in experimental philosophy," he declares in one place; and in another, having just referred to predecessors who feigned hypotheses "for explaining all things mechanically," he says that, on the contrary, "the main business of natural philosophy is to argue from phenomena without feigning hypotheses."

The task of the physicist who is both experimental and mathematical in his method, Newton plainly states, is "to derive two or three general principles of motion from phenomena, and afterwards to tell us how the properties and actions of all corporeal things follow from those manifest principles. [This] would be a very great step in philosophy, though the causes of those principles were not yet discovered. And therefore," he says of his own work, "I scruple not to propose the principles of motion above mentioned, they being of very general extent, and leave their causes to be found out."

The two or three principles of motion mentioned in this passage from the *Optics* are the foundation of Newton's other great work, the *Mathematical Principles of Natural Philosophy*. Its title indicates the clearly conceived intention of its author to limit himself to the program of mathematical physics on which both he and Galileo seem to agree. He will not try to define "the species or physical qualities of forces"; he will only investigate "the quantities and mathematical proportions of them." In the General Scholium with which the *Mathematical Principles* concludes, Newton disavows once more any knowledge of the cause of gravity. "To us it is enough," he says, "that gravity does really exist, and acts according to the laws which we have explained, and abundantly serves to account for all the motions of the celestial bodies, and of our sea." Admitting that he has "not been able to discover the causes . . . of gravity from phenomena," Newton flatly reiterates his policy: "I frame no hypotheses."

In view of this policy, how does the name of Newton come to be associated with the triumph of the mechanical point of view in physics? Why do contemporary scientists like Einstein identify Newtonian physics with classical mechanics? If a mathematical physicist, like Newton or Galileo, refrains from guessing at or asserting causes, how can he be charged with having indulged in the impurity of a mechanical explanation of the phenomena, and with having foisted a mechanical conception of the universe upon mankind?

The answer to these questions, so far as Newton is concerned, may be partly found in his own writings. He did not, it seems, entirely disavow an inquiry into the cause of attractive force, as in itself either misguided or irrelevant to science. "We must learn from the phenomena of nature," he tells us, "what bodies attract one another, and what are the laws and properties of the attraction, before we enquire the cause by which the attraction is performed." This statement postpones, but does not exclude, an inquiry into causes. In another statement, Newton even gives us a reason for the postponement. "In mathematics," he says, "we are to investigate the quantities of force with their proportions consequent upon any conditions supposed; then, when we enter upon physics, we compare those proportions with the phenomena of nature, that we may know the several kinds of attractive bodies. And this preparation being made, we argue more safely

concerning the physical species, causes, and proportions of the forces."

These remarks of Newton do not give the whole answer. For the other and perhaps more important part of it, we must go to the actual development of physical science in the 17th century. The steps in this development—largely discoveries and formulations made by Galileo, Huygens, and Newton—lead to crises from which the scientists could not extricate themselves without discussing causes—the causes of gravity and of the propagation of light. We may thus be able to understand why Newton could not abandon the search for causes; and why, in the Queries he appended to the *Optics*, he proposes a mechanical hypothesis in order to explain how the attractive force of gravity exerts itself across great distances, and also defends his mechanical theory of light against the equally mechanical but different hypothesis of Huygens.

It might well be argued that, though Galileo's pure position initiated modern mathematical physics, it was the persistence of impurity in the worrying about causes, or even the inescapability of such concern, which caused great scientific advances to be made. The concern about causes seems to provide, time and time again, the pivot for new discoveries. The causes are not found, but new hypotheses are made, and these, when employed, lead to wider, more general results in the form of more inclusive, unifying laws. We see this happen not only in the study of gravitation and light, but also in the investigation of heat and electricity. The concern of Faraday, for example, to explain electrical attraction and repulsion in terms of the action of contiguous particles, and to establish the existence of physical lines of force, leads to Maxwell's theory of the electro-magnetic field; and his field equations, combined with Faraday's speculations concerning the relation between electrical and gravitational attraction, lead to the attempt, on the part of contemporary physics, to construct a unified field theory covering all physical phenomena.

Physics may return in the 20th century to the purely mathematical character it had at the beginning of its modern development. But as may be seen in any introduction to recent physics written for the layman, it is necessary to mark the influence of mechanical conceptions upon scientific discovery and thought, in order to understand the difference between the unifying mathematical laws of the 17th and the 20th centuries. As we retrace the steps we see how fertile is the interplay between mathematical insights and mechanical hypotheses.

As FOURIER TELLS the story of "rational mechanics," the "discoveries of Archimedes" begin the science. "This great geometer," he says, "explained the mathematical principles of the equilibrium of solids and fluids. About eighteen centuries elapsed before Galileo, the originator of dynamical theories, discovered the laws of motion of heavy bodies." Statics and dynamics are related as the two parts of mechanics when that is conceived narrowly as the science which treats of the local motions of inert or inanimate bodies. The rest or equilibrium of bodies, which is the subject of statics, can be thought of as a limiting case of their motions, to which the principles of dynamics apply.

In the eighteen centuries between Archimedes and Galileo, little progress is made in mechanics. So far as statics is concerned, Archimedes, according to Galileo, by the "rigor of his demonstration" established the science in all its essentials; "since upon a single proposition in his book on Equilibrium depends not only the law of the lever but also those of most other mechanical devices." Pascal may later enlarge statics, by showing in his treatise *On the Equilibrium of Liquids* that "a vessel full of water is a new principle of Mechanics, a new machine which will multiply force to any degree we choose"; in other works Pascal extends these conceptions further, as in his treatment of the pressure of air. But at the time of Galileo, it could be said that although Archimedes had offered an exemplary model of mathematical physics, no progress was made until the work of Galileo's immediate predecessors.

Not without assistance from certain predecessors like Stevin, Galileo founds the science of dynamics. It may be wondered why, with the start made by Archimedes, no earlier application of his principles and method had been made. The answer may be found in the physics of Aristotle. His theory of the four elements

carried with it a doctrine of natural motions to different natural places, drawn from the observation of fire rising, stones dropping, air bubbling up through water. Such a doctrine would prevent the search for laws of motion applicable to all bodies; and the general character of Aristotle's physics, treating qualities as well as quantities, seems to have discouraged the application of mathematics even to the study of local motions.

The mathematical expression of the laws of motion is Galileo's objective. His interest in the new astronomy which affirmed the motion of the earth led him, he told Hobbes, to the careful study of movements on the earth. His aim is simply to describe with precision the motions to be found in a child's play—stones dropped and stones thrown, the one the natural motion of free fall, the other the violent motion of a projectile. It is clear to observation that the motion of a freely falling body is accelerated. But though, as a mathematical physicist, Galileo refrains from asking why this is so, he is not satisfied to know simply that it is so. He wants to know the properties of such acceleration. What is the relation of the rate of increase in velocity to the durations and distances of the fall? How much increase in velocity is acquired and how fast? What is the body's velocity at any given point in the fall? Similarly, when Galileo turns to projectiles, he wants to know, not merely that their trajectory is consistently curvilinear, but precisely what curve the path of the projectile describes.

Galileo succeeds in answering all these questions without being perturbed by any of the philosophical perplexities connected with space and time; nor does he allow questions about the forces involved in these motions to distract him from his purpose to "demonstrate everything by mathematical methods." With mathematical demonstration he combines observation and experiment and uses the latter to determine which mathematical conclusions can be applied to nature—which principles can be empirically verified as well as mathematically deduced.

One of Galileo's principles, however, seems to outrun ordinary experience and to defy experimental verification. In the interpretation of his experiments on inclined planes, Galileo expresses an insight which Newton later formulates as the first law of motion, sometimes called the "law of inertia." It declares that "every body continues in its state of rest, or of uniform motion in a right line, unless it is compelled to change that state by forces impressed upon it." Though Newton describes his method as one of "making experiments and observations, and in drawing general conclusions from them by induction," the law of inertia seems to be an exception; for it is difficult to say, as Hume does, that "we find by experience that a body at rest or in motion continues forever in its present state"—that is, *unless* it is acted on by some new force.

The condition introduced by "unless" raises Poincaré's question: "Have there ever been experiments on bodies acted on by no forces?" If not, and if they are impossible, then James may be right in saying that "the elementary laws of mechanics" are "never matters of experience at all, but have to be disengaged from under experience by a process of elimination, that is, by ignoring conditions which are always present." Because "the idealized experiment [which it calls for] can never be performed," the law of inertia, according to Einstein, can be derived "only by speculative thinking consistent with observation."

In any case, the first law of motion initiates a new departure in physics. So far as local motion is concerned, Aristotle and his followers look for the cause which keeps a moving body in motion or a stationary body at rest. According to Galileo and Newton, uniform motion continues naturally without cause. Only a change in the velocity or direction of that motion requires a cause, such as a force impressed upon it.

How radical this innovation is may be judged from its consequences in celestial mechanics, which in turn lead to a completely unified dynamics for both celestial and terrestrial motions. These advances are the work of Newton's mathematical genius, but the ground for them had been laid by the investigations of Galileo. Galileo had resolved the curvilinear motion of a projectile into the imparted rectilinear motion and the deflecting pull of gravity. This composition of forces—sometimes called the "parallelogram law"—explains why the path of

the projectile is a parabola. The path of the planets in their orbits, Kepler had previously shown, is another conical curve—an ellipse. But Kepler, lacking the first law of motion, could theorize physically about the cause of the planetary orbits only by looking for a force, projected outward from the sun, which would sweep around to keep the planets moving in their paths. On the other hand, a follower of Galileo, as Whitehead points out, would seek "for normal forces to deflect the direction of motion along the curved orbit." He would look for a force pulling the planet off its own rectilinear course inward toward the sun.

That is precisely what Newton did. When the problem, which others had been able to formulate, was put to Newton, he simply went to his study for the solution. He had solved that problem some years before. He had found the law of the force which, attracting the planets to the sun, would produce their elliptical paths and the other proportionalities stated in Kepler's purely descriptive laws.

With that single discovery, Galileo's terrestrial dynamics becomes a celestial one, too; and the traditional separation of the heavens from the earth is overcome. Newton goes even further. He guesses, and then shows by arithmetic, that the force deflecting the planets around the sun and the moon around the earth, is the same force which makes apples fall and stones heavy in the hand. He generalizes this insight in his famous inverse-square law: "Every particle of matter attracts every other particle of matter with a force proportional to the mass of each and to the inverse square of the distance between them."

Accordingly, the world can be pictured as one in which material particles each have position in absolute space and a determinate velocity. The velocity of each particle causes the change of its position, and changes in velocity are caused by forces, the amounts of which are determined by positions. From his laws of motion and this simple law of force Newton is able, by mathematical deduction, to account for the perturbations of the moon, the oblateness of the earth, the precession of the equinoxes, the solar and lunar tides, and the paths of the comets.

But is Newton's law of force as simple as it appears to be at first? Its mathematical meaning is plain enough, and its application to measured phenomena reveals its descriptive scope. When we ask, however, about its physical significance, we raise difficult questions concerning the nature of this attractive force and how it operates. To call it the "force of gravity" and to point out that this is a familiar force which everyone experiences in his own person hardly answers the question.

GALILEO WOULD NOT have tried to answer it. In his *Dialogues Concerning the Two Great Systems of the World*, one of the characters, Simplicio, refers to that manifest cause which "everyone knows is gravity." To this Salviati replies: "You should say that everyone knows it is *called* gravity. I do not question you about the name," he continues, "but about the essence of the thing"; and that, he concludes, is precisely what cannot be defined.

A physicist like Huygens, who expects the explanation of natural effects to be expressed in the familiar mechanical terms of bodily impact, has other objections. "I am not at all pleased," he writes to Leibnitz about Newton, "with any theories which he builds on his principle of attraction, which seems to me absurd." What shocks Huygens is a scandal that Newton himself cannot avoid facing. It is the scandal of action-at-a-distance—of the force of gravity being propagated instantaneously across great distances and producing effects at some remote place but no effects along the way. Newton recognizes the strangeness of such a force. In a letter to Bentley, he echoes Huygens' protest to Leibnitz. "That gravity should be innate, inherent and essential to matter," he says, "so that one body may act on another at a distance through a vacuum, without the mediation of anything else, by and through which their action and force may be conveyed from one to another, is to me so great an absurdity, that I believe no man who has in philosophical matters a competent faculty of thinking, can ever fall into it."

The absurdity of action-at-a-distance seems to be recognized by common sense and philosophy alike. "No action of an agent," Aquinas remarks, "however powerful it may be, acts at a distance except through a medium"; and

Kant, who regards Newtonian physics as the model of a rational science of nature, speaks of "*a force of attraction without contact*" as a "chimerical fancy" which "we have no right to assume." How can Newton avoid this absurdity without violating his rule of method in mathematical physics—not to frame hypotheses?

Newton's dilemma can perhaps be stated in the following alternatives: *either* the inverse-square law of gravitational attraction is to be treated as a purely mathematical, and hence a purely descriptive, proposition of great simplicity and generality; *or* it must be given physical meaning by a causal explanation of how gravitational force operates. On the first alternative, Newton can avoid framing hypotheses, but the physical meaning of the concepts he employs to state the mathematical law is then left dark. On the second alternative, he can solve the mechanical problem created by such words in his law as "attracts" and "force," but only by going beyond mathematical physics into the realm of mechanical hypotheses.

Newton seems to take the first alternative in his *Mathematical Principles of Natural Philosophy*, and the second in his *Optics*. There he proposes the hypothesis of an ethereal medium to explain the attractive force of gravity. "Is not this medium," he asks, "much rarer within the dense bodies of the sun, stars, planets, and comets, than in the empty celestial spaces between them? And in passing from them to great distances, doth it not grow denser and denser perpetually, and thereby cause the gravity of those great bodies towards one another, and of their parts towards the bodies; every body endeavoring to go from the denser parts of the medium towards the rare? . . . And though this increase of density may at great distances be exceeding slow, yet if the elastic force of this medium be exceeding great, it may suffice to impel bodies from the denser parts of the medium towards the rarer, with all that power which we call gravity."

The hypothesis fits the law of gravitation if, as Maxwell points out, "the diminution of pressure [in the ether] is inversely as the distance from the dense body." Newton recognized, according to Maxwell, that it then becomes necessary "to account for this inequality of pressure in this medium; and as he was not able to do this, he left the explanation of the cause of gravity as a problem for succeeding ages. . . . The progress made towards the solution of the problem since the time of Newton," Maxwell adds, "has been almost imperceptible."

THE PROBLEM OF the mechanical properties of an ethereal medium occurs in another form in the field of optics. Here it is complicated by the rivalry between two theories of light—Newton's corpuscular theory and Huygens' undulatory or wave theory. Each involves a mechanical hypothesis—one concerning the motion of particles emitted from the light source, and one concerning the wave-like propagation of the light impulse through a medium. Both theories involve the motion of particles. In their explanation of the oar which appears bent in the water, both appeal to the action of the particles in the refracting medium on the light corpuscles or the light waves.

Both theories, furthermore, are expressed by their authors in a mathematical form which permits the deduction of quantitative facts like the equality of the angles of incidence and of reflexion, the bending of the light ray in refraction according to the law of sines, and the recently discovered fact of the finite velocity of light. Huygens' book gives prominence to the explanation of the strange phenomena of double refraction found in "a certain kind of crystal brought from Iceland"—Iceland spar. But both theories seem to be equally competent in dealing with the established facts of reflexion and refraction, and the new facts about dispersion.

For a century at least, their rivalry resembles that between the Ptolemaic and Copernican theories at a time when they seemed equally tenable so far as accounting for the phenomena was concerned. Later, new discoveries, such as those by Young and Fresnel, tend to favor the wave theory of light; but the rivalry continues right down to the present day. It remains unresolved, at least to an extent which prompts Eddington, in reviewing contemporary controversy about the nature of light and electricity, to suggest the invention of the word "wavicle" to signify the complementary use of both particles and waves in the modern theory of radiation.

Unlike the rivalry between the Ptolemaic and Copernican systems, which seemed for a while to be entirely a matter of different mathematical descriptions of the same phenomena, the conflict between these two theories of light involves from the very beginning an issue between diverse mechanical hypotheses to explain the phenomena. That issue is argued not only with respect to the adequacy of either theory to explain such phenomena as the rectilinear propagation of light and its different behavior in different mediums; but it is also debated in terms of the underlying mechanical conceptions. As gravitational force acting at a distance raises a mechanical problem which Newton's ether is not finally able to solve, so Huygens' ether as the medium through which light is propagated in waves raises mechanical problems which, if insoluble (as they seem to be), contribute even more heavily to the general scientific scandal of mechanics.

The two authors take different attitudes toward hypotheses and mechanical explanation. Huygens, as we have seen, begins his book with the express intention to "investigate ... the causes" and to express them "in terms of mechanical motions." Newton, on the other hand, begins his with a reiteration of his disavowal of hypotheses. "My design in this book," he writes, "is not to explain the properties of light by hypotheses, but to propose and prove them by reason and experiments." Nevertheless, Newton's explanation of how the prism produces from white light the band of colors in the spectrum seems to require the assumption of a distinct kind of light corpuscle for each color; and, in addition, the assumption that, although all light particles have the same velocity when they travel together making white light, separate particles for different colors are differently refrangible, that is, differently susceptible to the action of the particles in the refracting medium of the glass.

Perhaps only in Newton's somewhat artificially restricted sense of the word "hypothesis" could these assumptions escape that denomination. In any case, the existence of Huygens' rival theory prevented his escaping a controversy about hypotheses. In the Queries attached to his *Optics*, he engages in that controversy with an acumen which shows another side of his genius.

HUYGENS' WAVE THEORY requires what anybody would have to call an hypothesis and requires it from the very start. "It is inconceivable," he writes, "to doubt that light consists in the motion of some sort of matter." He immediately rejects the notion that light rays consist in the "transport of matter coming to us from the [luminous] object, in the way in which a shot or an arrow traverse the air"—if for no other reason, because "the rays traverse one another without hindrance." The similarity between the phenomena of light and the phenomena of sound suggests to him the "way that light spreads," and causes him to extend the mechanics of sound—conceived as a wave motion—to light.

"We know that by means of air, which is an invisible and impalpable body," Huygens argues, "sound spreads around the spot where it has been produced, by a movement which is passed on successively from one part of air to another; and that the spreading of this movement, taking place equally on all sides, ought to form spherical surfaces ever enlarging and which strike our ears. Now there is no doubt at all that light also comes from the luminous body to our eyes by some movement impressed on the matter which is between the two.... If, in addition, light takes time for its passage ... it will follow that this movement, impressed on the intervening matter, is successive; and consequently it spreads, as sound does, by spherical surfaces and waves; for I call them waves from their resemblance to those which are seen to be formed in water when a stone is thrown into it."

Huygens is aware, however, that the analogy between light and sound is far from perfect. "If one examines," he says, "what this matter may be in which the movement coming from the luminous body is propagated, one will see that it is not the same that serves for the propagation of sound. ... This may be proved," he goes on, "by shutting up a sounding body in a glass vessel from which the air is withdrawn." An alarm clock beating its bell in a jar without air makes no sound, but a jar without air is no less transparent than one with air. Since when "the air is removed from the vessel the light does not cease to traverse it as before," and since waves have to be waves of something, and light waves cannot be waves of air, they

must be waves of a substance, says Huygens, "which I call ethereal matter."

This ether, a transparent medium permeating the whole universe, proves to be what Einstein calls the *enfant terrible* in the family of hypothetical physical substances. Postulated by Huygens in order to explain light mechanically, it in turn calls for a mechanical account of its own extraordinary properties. Huygens does not avoid this new problem, but neither does he undertake to solve it completely.

Suppose "one takes a number of spheres of equal size, made of some very hard substance, and arranges them in a straight line, so that they touch one another." Then, says Huygens, "one finds, on striking with a similar sphere against the first of these spheres, that the motion passes as in an instant to the last of them, which separates itself from the row, without one's being able to perceive that the others have been stirred." This type of motion in the ether would account for "the extreme velocity of light" and yet "this progression of motion is not instantaneous," as the motion of light also is not.

"Now in applying this kind of movement to that which produces light," Huygens continues, "there is nothing to hinder us from estimating the particles of the ether to be of a substance as nearly approaching to perfect hardness and possessing a springiness as prompt as we choose." Beyond this Huygens does not go. "It is not necessary to examine here," he says, "the causes of this hardness, or of that springiness. . . . Though we shall ignore the true cause of springiness we still see that there are many bodies which possess this property; and thus there is nothing strange in supposing that it exists also in little invisible bodies like the particles of the ether."

But difficulties which Huygens did not foresee make his ether more than a strange supposition—almost a mechanical impossibility. Huygens had thought that light waves are transmitted in the ether in the way that sound waves are in the air, that is, longitudinally, the direction in which the individual particles vibrate being the same as the direction of the wave motion itself. But when, in the 19th century, it was found that the phenomena of the polarization of light could not be explained by the corpuscular theory, but only by the wave theory (thus shifting the scales decisively in favor of the latter), it was also found that the wave theory could explain polarization *only* on the assumption that the motion of the ether particles which produce the light waves is not longitudinal, but transverse, that is, in a direction perpendicular to the waves produced by the vibration of the particles.

As Fresnel pointed out at the time, "the supposition that the vibrations were transverse was contrary to the received ideas on the nature of the vibration of elastic fluids." They had all involved, as in the case of air as the medium for sound, a longitudinal transmission. The character of the ether is changed by the requirement that its particles vibrate transversely. It ceases to be an air-like ether and must be imagined as a jelly-like ether.

The task which Huygens had postponed—that of giving a mechanical explanation of the ether he had posited in order to state the mechanics of light—becomes in consequence far more difficult, if not impossible. In their efforts to construct "the ether as a jelly-like mechanical substance, physicists," according to Einstein, had to make so many "highly artificial and unnatural assumptions," that they finally decided to abandon the whole program of mechanical explanation.

Of Newton's two objections to the wave theory of light, the second by itself seems to create an insuperable difficulty for Huygens' ether, even before the realization that it must be a jelly-like medium.

Newton's first objection is that any wave theory is inconsistent with the fact of the rectilinear propagation of light. "If light consisted in pression or motion, propagated either in an instant or in time, it would bend into the shadow; for," he points out, "pression or motion cannot be propagated in a fluid in right lines, beyond an obstacle which stops part of the motion, but will bend and spread every way into the quiescent medium which lies beyond the obstacle. . . . The waves, pulses or vibrations of the air, wherein sound consists, bend manifestly, even though not so much as the waves of water."

This objection loses its force when, in the

19th century, light's bending is experimentally discovered. But Newton's other objection gains force when, two centuries after he made it, a jelly-like density is imposed upon the ether by the experimental facts of polarization. This second objection does not point to the inadequacy of the wave theory with respect to the phenomena which must be described, but rather calls attention to its inconsistency with celestial mechanics.

Light travels through inter-stellar space. But so also do the planets. Newton's astronomy accounts for the motion of the planets with great precision, *only on the supposition of no resistance from a medium.* "To make way for the regular and lasting motions of the planets and comets," he writes, "it is necessary to empty the heavens of all matter, except perhaps . . . such an exceedingly rare ethereal medium as we described above." Here he refers to the ether he himself had posited as a possible cause of gravitational attraction. Its resistance, he thinks, is "so small as to be inconsiderable." The "planets and comets and all gross bodies [can] perform their motions more freely in this ethereal medium than in any fluid, which fills all space adequately without leaving any pores." Such "a dense fluid . . . serves only to disturb and retard the motions of those great bodies, and make the frame of nature languish." Since it "hinders the operations of nature," and since "there is no evidence for its existence," Newton concludes that "it ought to be rejected."

The next conclusion follows immediately. "If it be rejected, the hypotheses that light consists in pression or motion, propagated through such a medium, are rejected with it." Newton would seem entitled to draw these conclusions because, no matter how slight the density of ethereal matter, the use of the ether in the wave theory of light involves some interaction between the particles of ether and the particles of matter. Unless such interaction takes place, no explanation can be given of the change in the velocity of light when it enters a medium like glass or water. Since in Newton's universe there is no difference between terrestrial and celestial matter, Newton cannot accept an ether which interacts with the matter of glass or water, but does not interact with the matter of the planets.

This objection of Newton's, pointing to an inconsistency between the kind of ether required by the wave theory of light and the unretarded motion of the heavenly bodies, appears not to have been answered, but only waived, at the time of the wave theory's ascendancy. The famous Michelson-Morley experiment on ether drift later re-opens Newton's penetrating query about the ether. But this occurs at a time when physicists are prepared to give up not only the ether, but also with it the mechanical explanations of gravity and light which it had brought into conflict with one another.

BEFORE THE MECHANICAL dogma runs its course, it has a career in other fields of physical inquiry. The phenomena of heat, magnetism, and electricity are explored and explained under its inspiration. The history of these subjects is marked by a very rash of hypotheses. Each time mechanical explanation is attempted for a new domain of phenomena, new substances are added.

The postulated entities—calorific, magnetical, and electric fluids—are unobservable and without weight. In Newton's terms, they are "occult"; though, it must be added, they are no more occult than the ether Newton himself postulated to explain gravity or the ether Huygens postulated to explain light. In fact, each of these new substances seems to resemble the aeriform or fluid ether, just as each is conceived, as the gravitational or optical ether was earlier conceived, in the context of the issue of action-at-a-distance as opposed to action-by-contact. They would seem to be unavoidable in a mechanical account of the radiations of heat, magnetism, and electricity.

The phenomena of heat, Lavoisier writes, are "difficult to comprehend . . . without admitting them as the effects of a real and material substance, or very subtle fluid. . . . . Wherefore," he continues, "we have distinguished the cause of heat, or that exquisitely elastic fluid which produces it, by the term of caloric." Lavoisier declares himself "unable to determine whether light be a modification of caloric, or if caloric be, on the contrary, a modification of light." But in terms of observed effects he does attribute ether-like properties to caloric. "This

subtle matter," he says, "penetrates through the pores of all known substances"; for "there are no vessels through which it cannot escape."

The theory of caloric serves its purpose before it gives way to the theory of heat as molecular motion, a conception which can be integrated with the molecular, or kinetic, theory of gases. "The development of the kinetic theory of matter," writes Einstein, "is one of the greatest achievements directly influenced by the mechanical view." It is all the more striking, therefore, that in the opening pages of Fourier's *Analytical Theory of Heat*—wherein he reviews the triumphs of explanation achieved by Newton and his successors—Fourier should so flatly assert: "But whatever may be the range of mechanical theories, they do not apply to the effects of heat. These make up a special order of phenomena which cannot be explained by the principles of motion and equilibrium."

It is equally striking that Lavoisier seems to have anticipated not only the mechanical theory of heat, but the possibility of a purely mathematical treatment of the phenomena. "We are not obliged to suppose [caloric] to be a real substance," he writes; it is sufficient "that it be considered as the repulsive cause, whatever that may be, which separates the particles of matter from each other, so that we are still at liberty to investigate its effects in an abstract and mathematical manner."

The second of these two things is precisely what Fourier proposes to undertake, but he disavows any interest in the first, namely, the explanation of heat in terms of the mechanical separation of particles by repulsion. In language which resembles Newton's disavowal of concern with the cause of attraction, Fourier declares that "primary causes are unknown to us, but are subject to simple and constant laws, which may be discovered by observation."

In another place he writes: "Of the nature of heat only uncertain hypotheses could be formed, but the knowledge of the mathematical laws to which its effects are subject is independent of all hypothesis." Fourier's aim, therefore, with respect to "the very extensive class of phenomena, not produced by mechanical forces, but resulting simply from the presence and accumulation of heat," is "to reduce the physical questions to problems of pure analysis" and "to express the most general conditions of the propagation of heat in differential equations." He expresses his indebtedness to Descartes for "the analytical equations" which that mathematician "was the first to introduce into the study of curves and surfaces," but "which are not restricted to the properties of figures, and those properties which are the object of rational mechanics." These equations, he insists, "extend to all general phenomena," and "from this point of view, mathematical analysis is as extensive as nature itself."

This strongly worded statement affirms the mathematical character of nature as the support and justification for a purely mathematical physics. If Fourier's remarks about causes and hypotheses are reminiscent of Newton in his mathematical mood, how much more is Fourier's faith in pure mathematical analysis reminiscent of Galileo. Like Galileo, and unlike Newton, Fourier never deviates from his indifference to causes and never softens his judgment of the incompetence and irrelevance of mechanics to the subject he is investigating. His trust in mathematical analysis, which is able by itself to yield and organize physical discoveries, not only revives the spirit of Galileo, but also seems to have inspired Clerk Maxwell to turn from a mechanical to a mathematical theory of electricity.

Certain of Fourier's mathematical achievements, such as his theory of dimensions, prove useful to Maxwell. More important, perhaps, is the fact that Maxwell's predictions about the propagation of electro-magnetic waves, later experimentally verified by Hertz, are the result of mathematical analysis. With such a demonstration of the power of mathematics to work fruitfully with experiment, *and without any aid from mechanical hypotheses*, Maxwell gives up the attempt to formulate a mechanics for his equations describing the electro-magnetic field. He is quite content to let his field theory state the mathematical structure of the phenomena.

Between Fourier and Maxwell comes Faraday. One of the greatest experimenters in the whole tradition of science, Faraday discovers the phenomena whose mathematical structure Maxwell later develops. He prepares the way

for Maxwell's application to electricity and magnetism of the method Fourier had practiced. His speculations concerning the relation of electrical and gravitational force point ahead, beyond Maxwell, to the possibility of a field theory which might unify all physical phenomena under a single set of mathematical laws.

Faraday sees no incompatibility between experimentation and speculation. On the contrary he says that "as an experimentalist I feel bound to let experiment guide me into any train of thought which it may justify; being satisfied that experiment, like analysis, must lead to strict truth, if rightly interpreted; and believing also that it is in its nature far more suggestive of new trains of thought and new conditions of natural power." Faraday's faith seems to have been amply justified. His experiments not only discovered a stunning number of new facts, but the speculations to which they led transformed the whole mode of thinking about electricity and magnetism, and, to some extent, the whole of physics.

The Elizabethan Gilbert, with his bold and brilliantly handled thesis that the earth is a magnet, had made magnetism appear something more than a random phenomenon occasionally met with in nature. But not until Faraday's discovery of diamagnetism, announced in a memoir *On the Magnetic Condition of All Matter*, would anyone have dared to say that "all matter appears to be subject to the magnetic force as universally as it is to the gravitating, the electric and the chemical or cohesive forces." Of electricity, he can only predict, as the result of his protracted experimental investigations, that "it is probable that every effect depending upon the powers of inorganic matter ... will ultimately be found subordinate to it."

These remarks indicate the controlling theme of Faraday's researches, namely, the convertibility and unity of natural forces. It seems to have been suggested to him by the discovery that both electrical and magnetic forces obey the same simple inverse-square law as the force of gravitational attraction. The fact that certain forces obey the same law or that their action can be described by the same equations, would not of itself reveal whether one of these forces is primary or all are derivative from some other primary force. But it would suggest questions to be asked by experiment.

Gilbert compares magnetism and electricity but he is not able to convert one into the other. Oersted, before Faraday, is the first to establish one aspect of their convertibility. He shows that an electric current has a magnetic effect. Faraday succeeds in showing the reverse—that a magnetic current has electrical power. He expresses his fascination with such reversibilities in his remarks on the electrical torpedo fish. "Seebeck," he writes, "taught us how to commute heat into electricity; and Peltier has more lately given us the strict converse of this, and shown us how to convert electricity into heat. ... Oersted showed how we were to convert electric into magnetic forces, and I had the delight of adding the other member of the full relation, by reacting back again and converting magnetic into electric forces. So perhaps in these organs, where nature has provided the apparatus by means of which the fish can exert and convert nervous into electric force, we may be able, possessing in that point of view a power far beyond that of the fish itself, to reconvert the electric into the nervous force."

Faraday demonstrates still another such reversibility in nature. The nature of his discovery is indicated by the titles of the papers in which he announces it: *On the Magnetization of Light and the Illumination of Magnetic Lines of Force* and *The Action of Electric Currents on Light*. These papers, in his opinion, "established for the first time, a true, direct relation and dependence between light and the magnetic and electric forces"; and he concludes them with an explicit statement of the central theme of all his researches and speculations.

"Thus a great addition is made," he writes, "to the facts and considerations which tend to prove that all natural forces are tied together and have one common origin. It is no doubt difficult in the present state of our knowledge to express our expectation in exact terms; and, though I have said that another of the powers of nature is, in these experiments, directly related to the rest, I ought, perhaps, rather to say that another form of the great power is distinctly and directly related to the other forms."

ONE FORM OF the "great power" remained to be connected with such "other forms" as those of light, heat, electricity, and magnetism. That was the power of gravitational force. Faraday comes to this last stage of his speculations concerning the unity of nature's powers in terms of his conception of "lines of force" and of what later came to be called "the field of force."

The earliest theories of electricity and magnetism, in an orthodox atomistic vein, had conceived them as exerting an influence by means of the effluvia which they emitted. Newton, for example, speculates on "how the effluvia of a magnet can be so rare and subtle, as to pass through a plate of glass without any resistance or diminution of their force, and yet so potent as to turn a magnetic needle beyond the glass." When electrical conduction is later discovered, effluvia are replaced by fluids, on the analogy of caloric as the fluid conductor of heat. But when Faraday finds that he can induce from one current to another, he becomes interested in the dielectric, non-conducting medium around the circuits. He is strongly averse to any theory which involves action-at-a-distance, and so he argues that induction takes place by the action of contiguous particles. To support that argument he shows experimentally that electrical induction can "turn a corner."

From his study of all the phenomena of magnetism, Faraday forms the conception of "lines of force" and concludes that there is "a center of power surrounded by lines of force which are physical lines essential both to the existence of force within the magnet and to its conveyance to, and exertion upon, magnetic bodies at a distance." He says of this "idea of lines of force" that "all the points which are experimentally established with regard to [magnetic] action, *i.e.*, all that is not hypothetical, appear to be well and truly represented by it"; and he adds: "Whatever idea we employ to represent the power ought ultimately to include electric forces, for the two are so related that one expression ought to serve for both."

Subsequently Faraday satisfies himself as to the physical reality of electrical lines of force in addition to the magnetic lines. The compulsion of his interest in the unity of nature then drives him to speculate about gravitational force. He begins by admitting that, "in the case of gravitation, no effect sustaining the idea of an independent or physical line of force is presented to us; as far as we at present know, the line of gravitation is merely an ideal line representing the direction in which the power is exerted." But encouraged, perhaps, by Newton's repeated references to "the attractions of gravity, magnetism, and electricity," and by Newton's letter to Bentley which he interprets as showing Newton to be "an unhesitating believer in physical lines of gravitating force," Faraday goes to work experimentally.

The report of these researches *On the Possible Relation of Gravity to Electricity* opens with the re-statement of Faraday's central theme. "The long and constant persuasion that all the forces of nature are mutually dependent, having one origin, or rather being different manifestations of one fundamental power, has made me often think of establishing, by experiment, a connexion between gravity and electricity, and so introducing the former into the group, the chain of which, including also magnetism, chemical force and heat, binds so many and such varied exhibitions of force together by common relations." His experiments, he tells us, unfortunately "produced only negative results," but that does not shake his "strong feeling of the existence of a relation between gravity and electricity."

THOUGH FARADAY FAILS to prove "that such a relation exists," he does bequeath, as a legacy to 20th century physics, the problem of a field theory which would embrace both gravitational and electrical force. But whereas Faraday conceives the problem mechanically in terms of the physical reality, as well as unity, of all lines of force, in which contiguous particles act on one another, those who inherit the problem from him cease to concern themselves with the physical existence of "lines of force" and their mechanical basis in the action and reaction of bodies. Influenced by the amazing generality implicit in Maxwell's field equations, they proceed to search for a purely mathematical statement of nature's structure.

In the judgment of the 20th century physicist mathematics may at last succeed in doing precisely what mechanics, from Newton to Faraday, kept promising but forever failing to

do. If the unity of nature can be expressed in a single set of laws, they will be, according to Einstein, laws of a type radically different from the laws of mechanics. Taking the form of Maxwell's equations, a form which appears "in all other equations of modern physics," they will be, he writes, "laws representing the *structure* of the field."

In saying that "Maxwell's equations are structure laws" and that they provide "a new pattern for the laws of nature," Einstein means to emphasize their non-mechanical character. "In Maxwell's theory," he writes, "there are no material actors." Whereas "Newton's gravitational laws connect the motion of a body here and now with the action of a body at the same time in the far distance," Maxwell's equations "connect events which happen now and here with events which will happen a little later in the immediate vicinity." Like the equations which describe "the changes of the electromagnetic field, our new gravitational laws are," according to Einstein, "also structure laws describing the changes of the gravitational field."

The heart of the difference between a "structure law" and a mechanical law seems to be contained in Einstein's statement that "all space is the scene of these laws and not, as for mechanical laws, only points in which matter or changes are present." This contrast between matter and space brings to mind the difference between physics and geometry. Yet Einstein's repeated reference to "changes" in these space-structures also reminds us that the electrical and gravitational fields are not purely geometrical, but physical as well.

The structure laws of the new physics may be geometrical in form, but if they are to have any physical meaning, can they entirely avoid some coloring by the mechanical conceptions which have been traditionally associated with the consideration of matter and motion? At least one contemporary physicist appears to think that mechanics survives to bury its undertakers. After describing the development in which geometry progressively "swallowed up the whole of mechanics," Eddington observes that "mechanics in becoming geometry remains none the less mechanics. The partition between mechanics and geometry," he continues, "has broken down and the nature of each of them has diffused through the whole"; so that "besides the geometrisation of mechanics, there has been a mechanisation of geometry."

According to this view, it is not mechanics, but *classical* mechanics, which the new physics has abandoned. The character of the mechanics seems to have altered with the character of the mathematical formulations. Field theory, dealing with contiguous areas and successive events, avoids the problem of action-at-a-distance and also apparently that problem's classical solution in terms of the action of contiguous particles. But another sort of mechanics may be implicit in the field equations which connect events in one area with events in the immediate vicinity. If those equations had been available to him, Newton might have expressed his theory of a variably dense ether—analogous to the modern conception of a variably filled or variably curved space—in terms of structure laws describing the gravitational field.

WE ARE LEFT with a number of questions. Is the story of mechanics the story of its rise and decline or the story of its changing role—now dominant, now subordinate; now more manifest, now more concealed—at all stages in the development of a physics which is committed to being both mathematical and experimental? Do the status and character of mechanical conceptions change with changes in the form of the mathematical laws which describe the phenomena? Can physics be totally devoid of mechanical insight and yet perform experiments which somehow require the scientist to act on bodies and to make them act on one another? Could a pure mathematical physics have yielded productive applications in mechanical engineering without the intermediation of mechanical notions of cause and effect?

Whichever way these questions are answered, we face alternatives that seem to be equally unsatisfactory. *Either* experimental physics is purely mathematical and proclaims its disinterest in as well as its ignorance of causes; *or* physics cannot be experimental and mathematical without also being mechanical, and without being involved in a search for causes which are never found.

To the layman there is something mysterious

about all this. He stands in awe of the physicist's practical mastery of matter and its motions, which he naively supposes to depend upon a scientific knowledge of the causes, while all the time the scientists protest that the causes remain unknown to an experimental and mathematical physics. Mechanical explanations may be offered from time to time, but the various "forces" they appeal to can be understood only from their effects, and are nothing more than verbal shorthand for the formulae or equations which express the mathematical laws. Yet they remain cause-names, and seem to stimulate advances in science—both experimental and mathematical—almost as a consequence of the exasperating elusiveness of these hidden causes.

Certain philosophers hold a view which suggests that the clue to the mystery may lie in the word "hidden." Causes exist and we can control them to build machines and explode bombs, but we cannot with our senses catch them in the very act of causing, or perceive the inwardness of their operation. If the fact that they are thus unobservable means that they are occult, then all causes are occult—not least of all the mechanical type of cause which consists in the impact of one body upon another. In the century in which physicists tried to avoid the scandal of forces acting at a distance by postulating mechanical mediums through which one body acted directly on another, philosophers like Locke and Hume express their doubts that such causal action is any less occult than Newton had said Aristotle's causes were.

"The passing of motion out of one body into another," Locke thinks, "is as obscure and unconceivable, as how our minds move or stop our bodies by thought. . . . The increase of motion by impulse, which is observed or believed sometimes to happen, is yet harder to understand. We have by daily experience, clear evidence of motion produced both by impulse and by thought; but the manner how, hardly comes within our comprehension; we are equally at a loss in both." In Locke's judgment we will always remain "ignorant of the several powers, efficacies, and ways of operation, whereby the effects, which we daily see, are produced." If scientific knowledge is knowledge of causes, then "how far soever human industry may advance useful and experimental philosophy in physical things, scientifical will still be out of our reach."

When we try to observe efficient causes at work, what do we see? Hume answers that we only see one thing happening after another. "The impulse of one billiard-ball is attended with motion in the second. This is the whole that appears to the *outward* senses." Nor can we form any "*inward* impression" of what takes place at the moment of impact. "We are ignorant," he writes, "of the manner in which bodies operate on each other"; and we shall always remain so, for "their force or energy is entirely incomprehensible."

As the chapter on CAUSE indicates, Aristotle holds an opposite view of the matter. What takes place in efficient causation may be imperceptible, but it is not incomprehensible. All causes may be occult so far as the senses are concerned, but they are not obscure to the intellect. But Aristotle would also insist that the action of efficient causes cannot be understood if they are totally isolated from other causes—material, formal, final. A purely mechanical physics, in his opinion, defeats itself by its basic philosophical tenets, which exclude all properties that are not quantitative and all causes except the efficient. Only a different metaphysics —one which conceives physical substances in terms of matter and form, or potentiality and actuality—can yield a physics which is able to deal with causes and explain the phenomena; but such an Aristotelian physics, from the modern point of view, stands condemned on other grounds. It is not experimental. It is not productive of useful applications. It is not mathematical; nor is it capable of comprehending all the phenomena of nature under a few simple, universal laws.

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REFERENCES

To find the passages cited, use the numbers in heavy type, which are the volume and page numbers of the passages referred to. For example, in **4** HOMER: *Iliad*, BK II [265–283] **12d**, the number **4** is the number of the volume in the set; the number **12d** indicates that the passage is in section d of page 12.

PAGE SECTIONS: When the text is printed in one column, the letters **a** and **b** refer to the upper and lower halves of the page. For example, in **53** JAMES: *Psychology*, **116a-119b**, the passage begins in the upper half of page 116 and ends in the lower half of page 119. When the text is printed in two columns, the letters **a** and **b** refer to the upper and lower halves of the left-hand side of the page, the letters **c** and **d** to the upper and lower halves of the right-hand side of the page. For example, in **7** PLATO: *Symposium*, **163b-164c**, the passage begins in the lower half of the left-hand side of page 163 and ends in the upper half of the right-hand side of page 164.

AUTHOR'S DIVISIONS: One or more of the main divisions of a work (such as PART, BK, CH, SECT) are sometimes included in the reference; line numbers, in brackets, are given in certain cases; *e.g.*, *Iliad*, BK II [265–283] **12d**.

BIBLE REFERENCES: The references are to book, chapter, and verse. When the King James and Douay versions differ in title of books or in the numbering of chapters or verses, the King James version is cited first and the Douay, indicated by a *(D)*, follows; *e.g.*, OLD TESTAMENT: *Nehemiah*, 7:45—*(D) II Esdras*, 7:46.

SYMBOLS: The abbreviation "esp" calls the reader's attention to one or more especially relevant parts of a whole reference; "passim" signifies that the topic is discussed intermittently rather than continuously in the work or passage cited.

For additional information concerning the style of the references, see the Explanation of Reference Style; for general guidance in the use of *The Great Ideas*, consult the Preface.

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28 GILBERT: *Loadstone*, BK II, 29c-34b esp 29c-30a
28 GALILEO: *Two New Sciences*, FIRST DAY, 134a-153a passim
30 BACON: *Novum Organum*, BK I, APH 66 114d-115c; BK II, APH 8 140b; APH 48 179d-188b
31 DESCARTES: *Meditations*, II, 78c-d / *Objections and Replies*, DEF VII 130c-d; 231a-232a
33 PASCAL: *Vacuum*, 367a-368b
34 NEWTON: *Principles*, DEF I 5a; DEF III 5b; BK I, PROP 73, SCHOL 133b-134a; BK II, GENERAL SCHOL, 218a-219a; PROP 40, SCHOL, 246a-b; BK III, RULE III 270b-271a; PROP 6, COROL III–IV 281b; PROP 7 281b-282b / *Optics*, BK II, 479b-485b; BK III, 520a-522a; 528b; 531a-543a esp 537a-b, 541b-542a
34 HUYGENS: *Light*, CH I, 558b-560a; CH III, 566b-569b; CH V, 601b-603b
35 LOCKE: *Human Understanding*, BK II, CH IV 129b-131a; CH VIII, SECT 7–26 134b-138b passim; CH XIII, SECT 11–27 150d-154d passim; CH XXI, SECT 2–4 178c-179c; CH XXIII, SECT 7–17 205d-209a passim; SECT 22–32 209d-212d; CH XXXI, SECT 2, 239d; BK III, CH X, SECT 15 295a-c
35 BERKELEY: *Human Knowledge*, SECT 9–18 414d-416c passim; SECT 50 422c; SECT 102 432d-433a
45 LAVOISIER: *Elements of Chemistry*, PREF, 3b-4a; PART I, 9a-15c passim, esp 9b-c, 13a-b; 16b-c; 41b-c
45 FOURIER: *Theory of Heat*, 169a-170a
45 FARADAY: *Researches in Electricity*, 685d-686c; 850b,d-855a,c
53 JAMES: *Psychology*, 68a-b
54 FREUD: *Narcissism*, 400d-401a

1*b*. The laws of motion: inertia; the measure of force; action and reaction

8 ARISTOTLE: *Physics*, BK VIII, CH 10 [266^{b}27–267^{a}21] 354b-d / *Heavens*, BK III, CH 2 [301^{a}21–^{b}31] 392c-393b

(1. *The foundations of mechanics.* 1b. *The laws of motion: inertia; the measure of force; action and reaction.*)

9 ARISTOTLE: *Motion of Animals*, CH 2–4 233c-235c / *Gait of Animals*, CH 3 243d-244a / *Generation of Animals*, BK IV, CH 3 [768^{b}16–24] 310b-c
12 LUCRETIUS: *Nature of Things*, BK II [80–99] 16a-b; [184–250] 17b-18b
16 KEPLER: *Epitome*, BK IV, 894a-895b; 899a-900a; 905a-906b; 933b-934b; 936a-937a; 938b-939a
20 AQUINAS: *Summa Theologica*, PART III, Q 84, A 3, REP 2 985d-989b
23 HOBBES: *Leviathan*, PART I, 50a; 72a-d; PART IV, 271d
28 GILBERT: *Loadstone*, BK II, 56b-c
28 GALILEO: *Two New Sciences*, THIRD DAY, 209a-210a; 224d-225d; FOURTH DAY, 240a-d
30 BACON: *Novum Organum*, BK II, APH 35–36 162a-168d passim; APH 48 179d-188b
34 NEWTON: *Principles*, DEF III 5b; LAWS OF MOTION 14a-24a; BK II, PROP 40, SCHOL, 246a-b / *Optics*, BK III, 541b-542a
35 LOCKE: *Human Understanding*, BK II, CH XXI, SECT 2–4 178c-179c; CH XXIII, SECT 17 209a
35 BERKELEY: *Human Knowledge*, SECT III, 434d
35 HUME: *Human Understanding*, SECT IV, DIV 27, 460c; SECT VII, DIV 57, 475d-476b [fn 2]
38 MONTESQUIEU: *Spirit of Laws*, BK I, 1b
45 FOURIER: *Theory of Heat*, 169a-b
51 TOLSTOY: *War and Peace*, EPILOGUE II, 695a-c

1c. Space and time in the analysis of motion

8 ARISTOTLE: *Physics*, BK VI 312b,d-325d
28 GALILEO: *Two New Sciences*, THIRD DAY, 201a-202a
30 BACON: *Novum Organum*, BK II, APH 45–46 176a-179a
33 PASCAL: *Geometrical Demonstration*, 434a-439b
34 NEWTON: *Principles*, DEFINITIONS, SCHOL 8b-13a; BK III, GENERAL SCHOL, 370a-371a / *Optics*, BK III, 528b-529a; 542a-543a
35 BERKELEY: *Human Knowledge*, SECT 110–117 434b-436a
42 KANT: *Pure Reason*, 24a-29d; 74b-76c; 160b-163a
45 FOURIER: *Theory of Heat*, 249a-251b
51 TOLSTOY: *War and Peace*, BK XI, 469a-d

2. The logic and method of mechanics

28 GALILEO: *Two New Sciences*, SECOND DAY, 179c-d; THIRD DAY, 200a-b; 202d-203a
30 BACON: *Advancement of Learning*, 34b / *Novum Organum*, PREF 105a-106d; BK I, APH 8 107c-d; APH 50 111b; APH 64 114b; APH 70 116b-117a; APH 82 120d-121b; APH 99–100 127b-c; APH 121 132b-d; BK II 137a-195d / *New Atlantis*, 210d-214d
31 DESCARTES: *Rules*, VIII, 12b-13a / *Discourse*, PART VI, 61d-62c
33 PASCAL: *Vacuum*, 355a-358b passim; 365b-366a
34 NEWTON: *Principles*, 1a-2a; BK I, PROP 69, SCHOL 130b-131a; BK III, 269a-b; RULES 270a-271b; GENERAL SCHOL, 371b-372a / *Optics*, BK III, 531b; 543a-b
34 HUYGENS: *Light*, PREF, 551b-552a; CH I, 553b-554a
35 LOCKE: *Human Understanding*, BK IV, CH III, SECT 16 317a-c; SECT 25–29 321a-323a passim; CH XII, SECT 9–13 360d-362d
35 BERKELEY: *Human Knowledge*, SECT 104 433a-b; SECT 107 433d-434a
35 HUME: *Human Understanding*, SECT IV, DIV 23–27 459a-460d esp DIV 26–27 460b-d; SECT VII, DIV 57, 475d-476b [fn 2]
42 KANT: *Pure Reason*, 6b-c; 17d-18d; 32a; 69c-72c esp 71b-72a
45 FOURIER: *Theory of Heat*, 169a-170a
45 FARADAY: *Researches in Electricity*, 440b,d; 758a-759c; 831a-d; 850b,d-855a,c esp 850b,d-851c
49 DARWIN: *Origin of Species*, 239c
53 JAMES: *Psychology*, 882a-884b
54 FREUD: *Instincts*, 412a-b

2a. The role of experience, experiment, and induction in mechanics

28 GILBERT: *Loadstone*, PREF, 1a-b; BK I, 6a-7a esp 6d-7a; BK II, 27b-c
28 GALILEO: *Two New Sciences*, THIRD DAY, 200a-b; 207d-208a
30 BACON: *Advancement of Learning*, 16a; 33d-34b; 42a-c
31 DESCARTES: *Rules*, VIII, 12b-13a / *Discourse*, PART VI, 61d-62c
33 PASCAL: *Vacuum*, 356a-357a
34 NEWTON: *Principles*, BK I, PROP 69, SCHOL 130b-131a; BK III, RULE IV 271b; GENERAL SCHOL, 371b-372a / *Optics*, BK I, 379a; BK III, 542a; 543a-b
34 HUYGENS: *Light*, CH I, 553a
35 LOCKE: *Human Understanding*, BK IV, CH III, SECT 16 317a-c; SECT 25–29 321a-323a passim; CH XII, SECT 9–13 360d-362d
35 BERKELEY: *Human Knowledge*, SECT 58–59 424a-b; SECT 104 433a-b; SECT 107 433d-434a
35 HUME: *Human Understanding*, SECT IV, DIV 24–27 459b-460d esp DIV 26 460b-c; SECT VII, DIV 57, 475d-476b [fn 2]
42 KANT: *Pure Reason*, 6b-c; 227b-c
45 LAVOISIER: *Elements of Chemistry*, PREF, 1c-2b; PART I, 23c; PART III, 87b-c
45 FOURIER: *Theory of Heat*, 175b; 181b; 184a
45 FARADAY: *Researches in Electricity*, 385b-c; 440b,d; 467a-b; 607a,c; 659a; 774d-775a
53 JAMES: *Psychology*, 864a

2b. The use of hypotheses in mechanics

12 LUCRETIUS: *Nature of Things*, BK V [509–533] 67d-68a
28 GALILEO: *Two New Sciences*, FOURTH DAY, 240d-241c
33 PASCAL: *Vacuum*, 367a-370a
34 NEWTON: *Principles*, BK III, RULE IV 271b; GENERAL SCHOL, 371b-372a / *Optics*, BK I, 379a; BK III, 528b; 543a
34 HUYGENS: *Light*, PREF, 551b-552a
35 LOCKE: *Human Understanding*, BK IV, CH III, SECT 16 317a-c; CH XII, SECT 12–13 362a-d
35 BERKELEY: *Human Knowledge*, SECT 50 422c; SECT 105–106 433b-d
35 HUME: *Human Understanding*, SECT VII, DIV 57, 475d-476b [fn 2]
36 SWIFT: *Gulliver*, PART III, 118b-119a
42 KANT: *Pure Reason*, 227b-c
45 LAVOISIER: *Elements of Chemistry*, PART I, 9d-10b
45 FOURIER: *Theory of Heat*, 181b; 184a
45 FARADAY: *Researches in Electricity*, 467a-b; 607a,c; 758a-759c; 777d-778c; 850b,d-855a,c esp 850b,d-851c
49 DARWIN: *Origin of Species*, 239c
53 JAMES: *Psychology*, 884a-b
54 FREUD: *Narcissism*, 400d-401a

2c. Theories of causality in mechanics

12 LUCRETIUS: *Nature of Things*, BK V [509–533] 67d-68a
28 GALILEO: *Two New Sciences*, THIRD DAY, 202d-203a
31 DESCARTES: *Discourse*, PART V, 59a
34 NEWTON: *Principles*, DEF VIII, 7b-8a; BK I, PROP 69, SCHOL 130b-131a; BK III, RULE I–II 270a; GENERAL SCHOL, 369b-372a / *Optics*, BK III, 528b-529a; 531b; 541b-542a
34 HUYGENS: *Light*, CH I, 553b-554a
35 LOCKE: *Human Understanding*, BK II, CH XXI, SECT 1–4 178b-179c; BK IV, CH III, SECT 25–26 321a-c
35 BERKELEY: *Human Knowledge*, SECT 50–53 422c-423a passim; SECT 60–66 424b-426a; SECT 102–109 432d-434b
35 HUME: *Human Understanding*, SECT IV, DIV 24–27 459b-460d esp DIV 26 460b-c; SECT VII, DIV 55, 474c-d; DIV 56–57 475a-d esp DIV 57, 475d [fn 2]; SECT VIII, DIV 64, 478d
36 SWIFT: *Gulliver*, PART III, 118b-119a
45 FOURIER: *Theory of Heat*, 169a; 183a-b
51 TOLSTOY: *War and Peace*, EPILOGUE II, 687d; 695b-c
53 JAMES: *Psychology*, 885b-886a

3. The use of mathematics in mechanics: the dependence of progress in mechanics on mathematical discovery

8 ARISTOTLE: *Posterior Analytics*, BK I, CH 9 104b-d; CH 13 [78^b31–79^a16] 108b-c / *Physics*, BK II, CH 2 [194^a7–11] 270b-c; BK VII, CH 5 333a-d / *Metaphysics*, BK XIII, CH 3 [1078^a5–17] 609b-c
11 ARCHIMEDES: *Equilibrium of Planes* 502a-519b / *Floating Bodies* 538a-560b / *Method* 569a-592a
14 PLUTARCH: *Marcellus*, 252a-255a
16 KEPLER: *Epitome*, BK V, 964b-965a
19 AQUINAS: *Summa Theologica*, PART I–II, Q 35, A 8, ANS 779c-780c
23 HOBBES: *Leviathan*, PART I, 72a-d; 73b; PART IV, 268c-d
28 GALILEO: *Two New Sciences*, FIRST DAY, 131b-132a; 133b; SECOND DAY-FOURTH DAY 178a-260a,c
30 BACON: *Advancement of Learning*, 46b-c
31 DESCARTES: *Rules*, IV, 7a; XIV, 31c-d / *Discourse*, PART I, 43b-c; PART III, 50d / *Objections and Replies*, 169c-170a / *Geometry*, BK II, 322b-331a
34 NEWTON: *Principles*, 1a-2a; DEF VIII 7b-8a; BK I, PROP 1–17 and SCHOL 32b-50a; PROP 30–98 and SCHOL 76a-157b esp PROP 69, SCHOL 130b-131a; BK II 159a-267a; BK III, 269a-b
35 HUME: *Human Understanding*, SECT IV, DIV 27 460c-d
36 SWIFT: *Gulliver*, PART III, 94b-103a
42 KANT: *Judgement*, 551a-552a
45 FOURIER: *Theory of Heat*, 169a b; 172a-173b; 175b; 177a; 182b-184a; 249a-b
45 FARADAY: *Researches in Electricity*, 831a-d
50 MARX: *Capital*, 170a-c
51 TOLSTOY: *War and Peace*, BK XI, 469a-d
53 JAMES: *Psychology*, 675b; 876a-b; 882a-883a

3a. Number and the continuum: the theory of measurement

11 EUCLID: *Elements*, BK V 81a-98b esp DEFINITIONS, 5 81a; BK VII, DEFINITIONS, 20 127b; BK X, PROP 1–2 191b-193a; PROP 5–9 195a-198b
11 ARCHIMEDES: *Measurement of a Circle*, PROP 3 448b-451b / *Conoids and Spheroids*, PROP 3–6 458b-460b / *Equilibrium of Planes*, BK I, PROP 6–7 503b-504b
16 PTOLEMY: *Almagest*, BK I, 18b-20b
28 GALILEO: *Two New Sciences*, THIRD DAY, 197b-200a; 205b-206c
31 DESCARTES: *Rules*, XIV, 31b-33b / *Geometry*, BK I, 295a-296b
34 NEWTON: *Principles*, BK I, LEMMA I 25a
42 KANT: *Judgement*, 551a-552a
45 FOURIER: *Theory of Heat*, 183a-b
51 TOLSTOY: *War and Peace*, BK XI, 469a-d

3b. The geometry of conics: the motion of planets and projectiles

11 ARCHIMEDES: *Quadrature of the Parabola* 527a-537b
11 APOLLONIUS: *Conics* 603a-804b
16 KEPLER: *Epitome*, BK V, 975a-979b
28 GALILEO: *Two New Sciences*, SECOND DAY 191c-195c; FOURTH DAY 238a-260a,c passim, esp 238b-240a

(3. *The use of mathematics in mechanics: the dependence of progress in mechanics on mathematical discovery.* 3b. *The geometry of conics: the motion of planets and projectiles.*)

31 DESCARTES: *Geometry*, BK I–II, 298b-314b
34 NEWTON: *Principles*, BK I, PROP 11–29 and SCHOL 42b-75b esp PROP 11–13 42b-46a; BK III, PROP 13 286a-b; PROP 40 337b-338a
34 HUYGENS: *Light*, CH V, 583b-598a; 604b-606b; CH VI, 607b-611a
42 KANT: *Judgement*, 551a-552a

3c. Algebra and analytic geometry: the symbolic formulation of mechanical problems

31 DESCARTES: *Rules*, IV, 5c-d; XIV, 30d-33b; XVI 33d-35c; XVIII 36b-39d / *Geometry* 295a-353b esp BK I–II, 298b-314b, BK II, 322b-331a
34 NEWTON: *Principles*, BK I, LEMMA 19 57b-58b
34 HUYGENS: *Light*, CH VI, 610a-b
45 LAVOISIER: *Elements of Chemistry*, PREF, 1a
45 FOURIER: *Theory of Heat*, 172a-173b; 177a-251b

3d. Calculus: the measurement of irregular areas and variable motions

11 ARCHIMEDES: *Equilibrium of Planes*, BK I, PROP 7 504b / *Quadrature of the Parabola* 527a-537b
16 KEPLER: *Epitome*, BK V, 973a-975a; 979b-983b
28 GALILEO: *Two New Sciences*, SECOND DAY, 193b-194d; THIRD DAY, 205b-d; 224b-c
33 PASCAL: *Equilibrium of Liquids*, 395a-b / *Geometrical Demonstration*, 434b-435b
34 NEWTON: *Principles*, BK I, LEMMA I–II and SCHOL 25a-32a esp LEMMA II, SCHOL, 31a-b; BK II, LEMMA 2 and SCHOL 168a-170a
45 FOURIER: *Theory of Heat*, 172b; 177a; 181a-b; 183a-b; 221a-248b
51 TOLSTOY: *War and Peace*, BK XI, 469a-d; EPILOGUE II, 695b-c

4. The place, scope, and ideal of the science of mechanics: its relation to the philosophy of nature and other sciences

23 HOBBES: *Leviathan*, PART I, 72a-d
30 BACON: *Advancement of Learning*, 16a-b; 33d-34b / *Novum Organum*, BK I, APH 74 118b; BK II, APH 9 140b-c / *New Atlantis*, 210d-214d
31 DESCARTES: *Rules*, IV, 7a; V, 8a / *Discourse*, PART V, 54d-56a; 59a
34 NEWTON: *Principles*, 1b-2a; BK I, PROP 69, SCHOL 130b-131a / *Optics*, BK III, 541b-542a
34 HUYGENS: *Light*, CH I, 553b-554a
35 HUME: *Human Understanding*, SECT I, DIV 9, 454c-d
36 SWIFT: *Gulliver*, PART III, 94b-103a
42 KANT: *Pure Reason*, 32a; 69c-72c esp 71b-72a / *Judgement*, 563a-564c
45 FOURIER: *Theory of Heat*, 169a-b; 172a-173b; 182a-184a
45 FARADAY: *Researches in Electricity*, 468d-469a
53 JAMES: *Psychology*, 69b-70a; 882a-886a esp 883a-884b; 889a-890a

4a. Terrestrial and celestial mechanics: the mechanics of finite bodies and of particles or atoms

9 ARISTOTLE: *Motion of Animals*, CH 3 [699^{a}11]–CH 4 [700^{a}5] 234a-235a
16 KEPLER: *Epitome*, BK IV, 888b-905a passim; 919b; 929a-933a; 935b; 940b-941a; 959a-960a
28 GALILEO: *Two New Sciences*, FOURTH DAY, 245b-d
30 BACON: *Novum Organum*, BK II, APH 5 138b-139a; APH 35 162a-164a; APH 36, 165c-166c; APH 46, 178c; APH 48, 186c-d
34 NEWTON: *Principles*, BK III, RULES 270a-271b; PROP 7 281b-282b / *Optics*, BK III, 539a-542b
51 TOLSTOY: *War and Peace*, BK XIII, 563a-b; EPILOGUE II, 694d-696d

4b. The explanation of qualities and qualitative change in terms of quantity and motion

8 ARISTOTLE: *Metaphysics*, BK I, CH 4 [985^{b}3–19] 503c-d / *Sense and the Sensible*, CH 4 [442^{a}30–^{b}24] 680a-c
10 GALEN: *Natural Faculties*, BK I, CH 2, 167b-168b
12 LUCRETIUS: *Nature of Things*, BK II [398–521] 20a-21c; [677–687] 23c-d; [730–1022] 24b-28a; BK IV [522–721] 51a-53d
23 HOBBES: *Leviathan*, PART I, 49b-d; PART III, 172b
31 DESCARTES: *Objections and Replies*, 231a-b
34 NEWTON: *Optics*, BK I, 431a-455a esp 450a-453a
34 HUYGENS: *Light*, CH I, 553b-554a
35 LOCKE: *Human Understanding*, BK II, CH VIII, SECT 4 133d; SECT 7–26 134b-138b; CH XXI, SECT 3 178d; SECT 75 200b-d; CH XXIII, SECT 8–9 206a-c; SECT 11 206d-207a; SECT 37 213d-214b; CH XXXI, SECT 2 239b-d esp 239d; BK III, CH IV, SECT 10 261b-d; BK IV, CH II, SECT 11–13 311c-312b; CH III, SECT 6, 314b; SECT 12–14 316a-d; SECT 28 322a-c
35 BERKELEY: *Human Knowledge*, SECT 25 417d-418a; SECT 102 432d-433a
45 FOURIER: *Theory of Heat*, 169b; 182a-b

4c. The mechanistic account of the phenomena of life

7 PLATO: *Phaedo*, 240d-242b / *Sophist*, 567a-568a
8 ARISTOTLE: *Sense and the Sensible*, CH 4 [442^{a}30–^{b}24] 680a-c

9 ARISTOTLE: *Parts of Animals*, BK I, CH 1 [640^{b} 5–641^{a}19] 163a-164a / *Motion of Animals*, CH 7 [701^{b}1–30] 236d-237b; CH 8 [702^{a}22]–CH 10 [703^{b}1] 237c-239a / *Gait of Animals* 243a-252a,c / *Generation of Animals*, BK II, CH 1 [734^{b}3–20] 275a-b; CH 5 [741^{b}5–10] 282c
10 GALEN: *Natural Faculties*, BK I, CH 12–BK II, CH 8 172d-195c esp BK I, CH 12 172d-173c, BK II, CH 3, 185a, CH 6 188c-191a; BK III, CH 14–15, 213b-214c
12 LUCRETIUS: *Nature of Things*, BK II [865–1022] 26a-28a; BK III [94-869] 31b-41a; BK V [783–836] 71b-72a
23 HOBBES: *Leviathan*, INTRO, 47a-b
28 HARVEY: *On Animal Generation*, 355b-d; 495c-496d
31 DESCARTES: *Discourse*, PART V, 56a-60b
34 NEWTON: *Optics*, BK I, 384b-385b; 428a-b; BK III, 518b-519b; 522a
35 LOCKE: *Human Understanding*, BK II, CH IX, SECT 11 140b-c; CH X, SECT 10 143c-d; CH XI, SECT 11 145d-146a; CH XXVII, SECT 5 220b-c; BK IV, CH III, SECT 25 321a-b
38 ROUSSEAU: *Inequality*, 337d-338a / *Political Economy*, 368d-369a
42 KANT: *Judgement*, 571c-572a; 575b-578a; 578d-582c
45 LAVOISIER: *Elements of Chemistry*, PART I, 14a
45 FARADAY: *Researches in Electricity*, 440b,d; 540a-541a,c
49 DARWIN: *Origin of Species*, 89b-c
51 TOLSTOY: *War and Peace*, BK X, 449b-c; EPILOGUE II, 689c-690a
53 JAMES: *Psychology*, 5a-6b; 9a-17b; 44a-52a; 68a-71a; 95b-98a
54 FREUD: *Instincts*, 412c-414c / *Beyond the Pleasure Principle*, 651d-657d passim, esp 651d, 652d; 659d-661c esp 660a / *Ego and Id*, 708d-709b; 711c-d

5. The basic phenomena and problems of mechanics: statics and dynamics

5*a*. Simple machines: the balance and the lever

8 ARISTOTLE: *Physics*, BK VIII, CH 4 [255^{a}20–22] 339d
10 HIPPOCRATES: *Fractures*, par 31, 87c
11 ARCHIMEDES: *Equilibrium of Planes*, BK I, POSTULATES, 1–3 502a; 6 502b; PROP 1–3 502b-503a; PROP 6–7 503b-504b
14 PLUTARCH: *Marcellus*, 252c-d
16 KEPLER: *Epitome*, BK IV, 933b-934b; BK V, 970b-972a
28 GALILEO: *Two New Sciences*, SECOND DAY, 178b-180c; THIRD DAY, 209a-210a; FOURTH DAY, 258c-d
33 PASCAL: *Equilibrium of Liquids*, 390a-394b
34 NEWTON: *Principles*, COROL II 15a-16b; LAWS OF MOTION, SCHOL, 23a-24a
35 HUME: *Human Understanding*, SECT IV, DIV 27, 460c
50 MARX: *Capital*, 181a

5*b*. The equilibrium and motion of fluids: buoyancy, the weight and pressure of air, the effects of a vacuum

8 ARISTOTLE: *Heavens*, BK IV, CH 6 404d-405a,c
10 GALEN: *Natural Faculties*, BK I, CH 16, 181a-d; BK II, CH 1–2, 183b,d-184c; CH 6 188c-191a; BK III, CH 14–15, 213b-214c
11 ARCHIMEDES: *Floating Bodies* 538a-560b
28 GALILEO: *Two New Sciences*, FIRST DAY, 135b-138b; 163a-166c
30 BACON: *Novum Organum*, BK II, APH 48, 180a
33 PASCAL: *Vacuum*, 359a-365b / *Great Experiment* 382a-389b / *Equilibrium of Liquids* 390a-403a / *Weight of Air* 403a-429a
34 NEWTON: *Principles*, BK II, PROP 19–23 and SCHOL 194b-203a; PROP 36 226a-231b; HYPOTHESIS–PROP 53 and SCHOL 259a-267a; BK III, PROP 41, 356b-357b / *Optics*, BK III, 518a-b
35 LOCKE: *Human Understanding*, BK II, CH XXIII, SECT 23–24 209d-210c
45 LAVOISIER: *Elements of Chemistry*, PART I, 10c-12d; 15c-16d; PART III, 88d-89d; 96b-99a

5*c*. Stress, strain, and elasticity: the strength of materials

28 GALILEO: *Two New Sciences*, FIRST DAY, 131a-139c; SECOND DAY 178a-196d passim
30 BACON: *Novum Organum*, BK II, APH 48, 180a-d; 187d
34 NEWTON: *Principles*, LAWS OF MOTION, SCHOL, 21b-22a; BK II, PROP 23 and SCHOL 201b-203a / *Optics*, BK III, 540b-541a
34 HUYGENS: *Light*, CH 1, 558b-559b
35 LOCKE: *Human Understanding*, BK II, CH XXIII, SECT 23–27 209d-211b
45 LAVOISIER: *Elements of Chemistry*, PART I, 14c-15c; PART III, 96b-99a
45 FOURIER: *Theory of Heat*, 192a-b

5*d*. Motion, void, and medium: resistance and friction

7 PLATO: *Timaeus*, 460c-d
8 ARISTOTLE: *Physics*, BK IV, CH 6-9 292c-297c / *Heavens*, BK III, CH 2 [301^{a}21–^{b}31] 392c-393b / *Dreams*, CH 2 [459^{a}28–34] 703b
12 LUCRETIUS: *Nature of Things*, BK I [329–448] 5b-6c; [951–1051] 12d-14a; BK II [142–166] 16d-17a; [225–242] 17d-18a; BK VI [830–839] 91b-c
16 KEPLER: *Epitome*, BK IV, 857a-b
20 AQUINAS: *Summa Theologica*, PART III, Q 84, A 3, REP 2 985d-989b
28 GILBERT: *Loadstone*, BK VI, 110c
28 GALILEO: *Two New Sciences*, FIRST DAY, 134a-135b; 157b-171b; FOURTH DAY, 241d-243c
30 BACON: *Novum Organum*, BK II, APH 8 140b; APH 36, 167b-c; APH 48, 186a; 187a; 187c
34 NEWTON: *Principles*, BK II 159a-267a passim, esp GENERAL SCHOL 211b-219a; BK III, PROP 6, COROL III 281b; PROP 10 284a-285a / *Optics*, BK III, 521b-522a; 527a-528b

(5. The basic phenomena and problems of mechanics: statics and dynamics. 5d. Motion, void, and medium: resistance and friction.)

35 LOCKE: *Human Understanding*, BK II, CH XIII, SECT 22-23 153b-d; CH XVII, SECT 4 168b-d
42 KANT: *Pure Reason*, 71b-72a

5e. Rectilinear motion

8 ARISTOTLE: *Physics*, BK V, CH 4 [228b15-229a7] 309d-310a; BK VIII, CH 8 [261b27-263a3] 348b-349c / *Heavens*, BK I, CH 2 [268b15-24] 359d
28 GALILEO: *Two New Sciences*, FIRST DAY, 157b-171b; THIRD DAY 197a-237a,c
30 BACON: *Novum Organum*, BK II, APH 48, 186b-c
34 NEWTON: *Principles*, LAW I-II 14a-b; BK I, PROP 32-39 81a-88a; BK II, PROP 1-14 159a-189a passim

5e(1) Uniform motion: its causes and laws

28 GALILEO: *Two New Sciences*, FIRST DAY, 162c-163a; THIRD DAY, 197b-200a
34 NEWTON: *Principles*, DEF III-IV 5b-6a; LAW I 14a; COROL IV-V 18a-19a; BK II, PROP 1, COROL 159a; PROP 2 159b-160a; PROP 5-6 165a-167a; PROP 11-12 183a-184b

5e(2) Accelerated motion: free fall

8 ARISTOTLE: *Physics*, BK IV, CH 8 [215a24-216a21] 295a-d / *Heavens*, BK III, CH 2 [301b 16-31] 393a-b
12 LUCRETIUS: *Nature of Things*, BK II [225-242] 17d-18a
16 PTOLEMY: *Almagest*, BK I, 10b-11b
19 AQUINAS: *Summa Theologica*, PART I, Q 115, A 1, REP 3 585d-587c
28 GALILEO: *Two New Sciences*, FIRST DAY, 157b-171b; THIRD DAY, 200a-237a,c
30 BACON: *Novum Organum*, BK II, APH 36, 166b-c; APH 48, 181d
34 NEWTON: *Principles*, DEF IV 6a; LAW II 14a-b; COROL VI 19b; BK I, PROP 32-39 81a-88a; BK II, PROP 3-4 160b-165a; PROP 8-10 170a-179a; PROP 13-14 184b-189a; PROP 32-40 and SCHOL 219a-246b esp PROP 40, SCHOL 239a-246b; PROP 41-50 and SCHOL 247a-259a

5f. Motion about a center: planets, projectiles, pendulum

8 ARISTOTLE: *Physics*, BK VIII, CH 8-10 348b-355d / *Heavens*, BK I, CH 2 359d-360d; CH 4 362a-c; BK II, CH 3-12 377c-384c / *Metaphysics*, BK XII, CH 8 603b-605a / *Soul*, BK I, CH 3 [406b26-407b13] 636b-637b
16 KEPLER: *Epitome*, BK IV, 895b-905a passim; 913a; 914b-915a; 918b-928a passim; 933a-946a esp 939a-940b; BK V, 965a-966a / *Harmonies of the World*, 1015b-1023a
28 GALILEO: *Two New Sciences*, FOURTH DAY, 240a-d
30 BACON: *Novum Organum*, BK II, APH 36, 167b-c; APH 46, 177c-178a; APH 48, 186b-d
34 NEWTON: *Principles*, DEF V 6a-7a; LAWS OF MOTION, SCHOL, 19b-20a; BK I, LEMMA I-II and SCHOL 25a-32a; PROP 1-3 and SCHOL 32b-35b esp PROP 3, SCHOL 35b; PROP 46 101a-b; BK II, PROP 51-53 and SCHOL 259a-267a esp PROP 53, SCHOL 266a-267a; BK III, PHENOMENA 272a-275a; PROP 13 286a-b

5f(1) Determination of orbit, force, speed, time, and period

12 LUCRETIUS: *Nature of Things*, BK V [614-649] 69a-c
16 KEPLER: *Epitome*, BK IV, 905a-907a; BK V, 968a-985b esp 975a-979b
28 GALILEO: *Two New Sciences*, FIRST DAY, 166d-168a; 171b-172d; THIRD DAY, 203d-205b; 235b-d; FOURTH DAY 238a-260a,c
30 BACON: *Novum Organum*, BK II, APH 48, 186b-d
34 NEWTON: *Principles*, LAWS OF MOTION, SCHOL, 19b-22a; BK I, PROP 1-17 and SCHOL 32b-50a; PROP 30-31 and SCHOL 76a-81a; PROP 40-42 88b-92b; PROP 46-47 and SCHOL 101a-102a; PROP 51-56 105b-111a; BK II, PROP 4 161b-165a; PROP 10 and SCHOL 173b-183a; LEMMA 3-PROP 18 189b-194b; PROP 24-GENERAL SCHOL 203a-219a; BK III, PROP 1-5 and SCHOL 276a-279a; PROP 13 286a-b; PROP 20 291b-294b; LEMMA 4-PROP 42 333a-368b
35 LOCKE: *Human Understanding*, BK II, CH XIV, SECT 21 159a-d
35 BERKELEY: *Human Knowledge*, SECT III, 434d

5f(2) Perturbation of motion: the two and three body problems

16 KEPLER: *Epitome*, BK IV, 920b-921b; 922b-926a; 957b-959a
28 GILBERT: *Loadstone*, BK II, 54c-d; 55c-56b
34 NEWTON: *Principles*, BK I, PROP 43-45 92b-101a; 111b; PROP 57-69 and SCHOL 111b-131a; BK III, PROP 5, COROL III 279a; PROP 12-14 and SCHOL 285a-287b; PROP 21-39 294b-333a
45 FARADAY: *Researches in Electricity*, 817a-b

6. Basic concepts of mechanics

6a. Center of gravity: its determination for one or several bodies

11 ARCHIMEDES: *Equilibrium of Planes* 502a-519b / *Method*, PROP 6 578a-579a; PROP 8-9 580b-582b
31 DESCARTES: *Objections and Replies*, 231c-d
33 PASCAL: *Equilibrium of Liquids*, 393b-394a
34 NEWTON: *Principles*, COROL IV 18a-19a; BK III, HYPOTHESIS I-PROP 12 285a-286a

6b. Weight and specific gravity: the relation of mass and weight

7 PLATO: *Timaeus*, 462d-463c
8 ARISTOTLE: *Physics*, BK IV, CH 8 [216a12-20] 295c-d / *Heavens*, BK I, CH 3 [269b18-270a12] 360d-361b; CH 6 [273a22-274a18] 364c-365b;

BK III, CH 2 [301a21–b32] 392c-393b; BK IV, CH 1–3 399a-402c
12 LUCRETIUS: *Nature of Things*, BK I [358–369] 5c; BK II [80–108] 16a-b; [294–296] 18d
16 COPERNICUS: *Revolutions of the Heavenly Spheres*, BK I, 521a
16 KEPLER: *Epitome*, BK V, 970b
19 AQUINAS: *Summa Theologica*, PART I–II, Q 26, A 2, ANS 734d-735c
23 HOBBES: *Leviathan*, PART IV, 271d
28 GILBERT: *Loadstone*, BK VI, 115d-116a
28 GALILEO: *Two New Sciences*, FIRST DAY, 158b-c; 160a-164a passim
30 BACON: *Novum Organum*, BK II, APH 24, 154d-155a; APH 35, 163c-d; APH 36, 166b-c; APH 40, 172a-b
31 DESCARTES: *Objections and Replies*, 231b-232a
34 NEWTON: *Principles*, DEF I 5a; BK II, PROP 24 203a-204a; BK III, PROP 6 279b-281b; PROP 8 282b-283b; PROP 20 291b-294b passim
45 LAVOISIER: *Elements of Chemistry*, PART III, 88d-89d
45 FOURIER: *Theory of Heat*, 249a-251b
45 FARADAY: *Researches in Electricity*, 632a

6c. Velocity, acceleration, and momentum: angular or rectilinear, average or instantaneous

8 ARISTOTLE: *Physics*, BK IV, CH 8 [215a24–216a21] 295a-d; BK V, CH 4 [228a20–229a7] 309b-310a; BK VI, CH 1–2 312b,d-315d; BK VII, CH 4 330d-333a
28 GALILEO: *Two New Sciences*, FIRST DAY, 166d-168a; THIRD DAY, 197b-c; 200a-207d; 209a-210a; 224b-225d; FOURTH DAY, 240a-d; 243d-249b
30 BACON: *Novum Organum*, BK II, APH 46, 177d-178d
34 NEWTON: *Principles*, DEF II 5b; DEF VII–VIII 7a-8a; LAW II 14a-b; COROL III 16b-17b; LAWS OF MOTION, SCHOL, 20a-22a; BK I, LEMMA 10 28b-29a; LEMMA 11, SCHOL, 31b-32a; PROP 1, COROL 1 33a / *Optics*, BK III, 540a-541b
35 HUME: *Human Understanding*, SECT IV, DIV 27, 460c
51 TOLSTOY: *War and Peace*, BK XI, 470d-471a; BK XIV, 589d

6d. Force: its kinds and its effects

8 ARISTOTLE: *Physics*, BK VII, CH 5 333a-d; BK VIII, CH 10 [266a25–267a20] 353c-354d / *Heavens*, BK III, CH 2 [301b2–32] 392d-393b
9 ARISTOTLE: *Motion of Animals*, CH 3 234a-c
16 KEPLER: *Epitome*, BK IV, 938b-939a; BK V, 969a-971b
19 AQUINAS: *Summa Theologica*, PART I, Q 105, A 4, REP I 541c-542a; PART I–II, Q 23, A 4 726a-727a
20 AQUINAS: *Summa Theologica*, PART III, Q 84, A 3, REP 2 985d-989b
28 GILBERT: *Loadstone*, BK II, 26d-40b passim
31 DESCARTES: *Rules*, IX, 15c / *Objections and Replies*, 231c-232a
34 NEWTON: *Principles*, DEF III–VIII 5b-8a; DEFINITIONS, SCHOL, 11a-13a; LAW II 14a-b; BK I, LEMMA 10 28b-29a; PROP 6 37b-38b; BK III, PROP 6, COROL V 281b; GENERAL SCHOL, 371b-372a / *Optics*, BK III, 531b; 541b-542a
35 BERKELEY: *Human Knowledge*, SECT 103–106 433a-d
36 SWIFT: *Gulliver*, PART III, 118b-119a
45 FARADAY: *Researches in Electricity*, 338a-b; 514d-532a; 595a; 603d; 646b-655d; 670a-674a; 685d-686b; 817a-818d; 819b,d; 850b,d-855a,c esp 855a,c
54 FREUD: *Narcissism*, 400d-401a

6d(1) The relation of mass and force: the law of universal gravitation

16 KEPLER: *Epitome*, BK IV, 910b
28 GILBERT: *Loadstone*, BK II, 51c-52c
30 BACON: *Novum Organum*, BK II, APH 24, 154d-155a; APH 36, 166b-c; APH 40 170c-173d
31 DESCARTES: *Objections and Replies*, 231c-232a
34 NEWTON: *Principles*, BK I, PROP 69-93 and SCHOL 130a-152b esp PROP 75–76 134b-136a; BK III, PROP 1–7 276a-282b esp PROP 7 281b-282b; GENERAL SCHOL, 371b / *Optics*, BK III, 531b-543a esp 541b-542a
35 BERKELEY: *Human Knowledge*, SECT 103–106 433a-d
35 HUME: *Human Understanding*, SECT VII, DIV 57, 475d [fn 2]
45 FARADAY: *Researches in Electricity*, 850b,d-855a,c esp 855a,c
49 DARWIN: *Origin of Species*, 239c
51 TOLSTOY: *War and Peace*, EPILOGUE II, 695c
54 FREUD: *Narcissism*, 400d-401a

6d(2) Action-at-a-distance: the field and medium of force

8 ARISTOTLE: *Physics*, BK VIII, CH 10 [266b27–267a21] 354b-d / *Heavens*, BK III, CH 2 [301b16–31] 393a-b / *Dreams*, CH 2 [459a28–34] 703b
12 LUCRETIUS: *Nature of Things*, BK VI [906–1089] 92b-94c
16 KEPLER: *Epitome*, BK IV, 897b-905a esp 900b-901b; 906a-b; 922a-b; 934b
19 AQUINAS: *Summa Theologica*, PART I, Q 8, A 1, REP 3 34d-35c
28 GILBERT: *Loadstone*, BK I, 10a-c; BK II, 26d-40b esp 30a-32c; 42b-43c; 45d-47b; 51a-c; 54d-55c; BK V, 102d-104b; BK VI, 112d
28 GALILEO: *Two New Sciences*, THIRD DAY, 202d
30 BACON: *Novum Organum*, BK II, APH 37 168d-169c; APH 45 176a-177c; APH 48, 183a-c; 186a
31 DESCARTES: *Rules*, IX, 15c / *Discourse*, PART V, 55c
34 NEWTON: *Principles*, DEF V–VIII 6a-8a; BK I, PROP 69, SCHOL 130b-131a; BK III, GENERAL SCHOL, 371b-372a / *Optics*, BK III, 507a-516b; 520a-522a esp 521a-b; 531b-542a passim
35 HUME: *Human Understanding*, SECT VII, DIV 57, 475d [fn 2]
42 KANT: *Pure Reason*, 227b

(*6d. Force: its kinds and its effects. 6d(2) Action-at-a-distance: the field and medium of force.*)

45 LAVOISIER: *Elements of Chemistry*, PART I, 9b-c
45 FARADAY: *Researches in Electricity*, 441a-442b; 451a-454a; 463d-465d; 513d-514c; 521a-524a; 528c-532a; 604b-c; 631b-c; 648b-d; 685d-686c; 816b,d-819a,c; 819a-d; 824a-b; 832a-c; 840c-842c; 855a,c

6d(3) The parallelogram law: the composition of forces and the composition of velocities

16 KEPLER: *Epitome*, BK V, 969a-970a
28 GALILEO: *Two New Sciences*, THIRD DAY, 224d-225c; FOURTH DAY, 240a-d; 243d-249b passim
34 NEWTON: *Principles*, COROL I-II 15a-16b
45 FARADAY: *Researches in Electricity*, 691b-692a; 788c-793c; 817a-b
51 TOLSTOY: *War and Peace*, BK XIII, 570d
53 JAMES: *Psychology*, 105a

6e. Work and energy: their conservation; perpetual motion

28 GILBERT: *Loadstone*, BK II, 56b-c
31 DESCARTES: *Rules*, XIII, 27c
33 PASCAL: *Equilibrium of Liquids*, 392b-394b
34 NEWTON: *Principles*, COROL II 15a-16b; LAWS OF MOTION, SCHOL, 23a-24a
45 FARADAY: *Researches in Electricity*, 582b-584a; 837b-c; 837d-840c
53 JAMES: *Psychology*, 884a

7. The extension of mechanical principles to other phenomena: optics, acoustics, the theory of heat, magnetism, and electricity

7a. Light: the corpuscular and the wave theory

8 ARISTOTLE: *Soul*, BK II, CH 7 [418^{a}26-419^{a}24] 649b-650b
12 LUCRETIUS: *Nature of Things*, BK IV [364-378] 48d-49a
16 KEPLER: *Epitome*, BK IV, 896b; 901a-903a; 922b-926a passim
17 PLOTINUS: *Fourth Ennead*, TR V 183a-189b
19 AQUINAS: *Summa Theologica*, PART I, Q 53, A 3, ANS and REP 2 283b-284d; Q 67 349d-354a; Q 104, A 1, ANS and REP 1,4 534c-536c
20 AQUINAS: *Summa Theologica*, PART III SUPPL, Q 92, A 1, REP 15 1025c-1032b
28 GILBERT: *Loadstone*, BK II, 43a-b
30 BACON: *Novum Organum*, BK II, APH 36, 167a-b; APH 37, 169a-c; APH 48, 185a-c / *New Atlantis*, 212d-213a
31 DESCARTES: *Discourse*, PART V, 54d-55b
33 PASCAL: *Vacuum*, 366b-367a
34 NEWTON: *Principles*, BK I, PROP 94-98 and SCHOL 152b-157b; BK II, PROP 41-42 247a-249b; PROP 50, SCHOL, 257b / *Optics* 377a-544a passim, esp BK I, 379a, BK II, 492a-495b, BK III, 525b-531b
34 HUYGENS: *Light* 551a-619b passim, esp CH I 553a-563b
35 LOCKE: *Human Understanding*, BK III, CH IV, SECT 10 261b-d; BK IV, CH II, SECT 11-13 311c-312b
45 LAVOISIER: *Elements of Chemistry*, PART I, 10b-c
45 FARADAY: *Researches in Electricity*, 595a-607a,c; 817b-c
49 DARWIN: *Origin of Species*, 239c

7a(1) The laws of reflection and refraction

7 PLATO: *Timaeus*, 454c-455a
8 ARISTOTLE: *Meteorology*, BK III, CH 2-6 476b-482d / *Soul*, BK II, CH 8 [419^{b}28-33] 651a
12 LUCRETIUS: *Nature of Things*, BK IV [269-323] 47d-48b; [436-442] 49d-50a
20 AQUINAS: *Summa Theologica*, PART III SUPPL, Q 82, A 4, REP 5 972d-974c
21 DANTE: *Divine Comedy*, PURGATORY, XV [16-24] 75c
31 DESCARTES: *Rules*, VIII, 12b-13a / *Geometry*, BK II, 322b-331a
34 NEWTON: *Principles*, BK I, PROP 94 152b-153b; PROP 96-98 and SCHOL 154b-157b / *Optics*, BK I, 379a-423b passim, esp 379a-386b, 409a-412a; BK II, 478b-479b; 485b-495b; BK III, 520b; 522b-530b passim
34 HUYGENS: *Light*, CH II-VI 563b-619b esp CH II-III 563b-575a

7a(2) The production of colors

7 PLATO: *Meno*, 177b-c / *Timaeus*, 465b-d
12 LUCRETIUS: *Nature of Things*, BK II [730-841] 24b-25c; BK VI [524-526] 87b
16 KEPLER: *Epitome*, BK IV, 901b
19 AQUINAS: *Summa Theologica*, PART I, Q 14, A 6, ANS 80a-81c
30 BACON: *Novum Organum*, BK II, APH 23, 154a-b
31 DESCARTES: *Discourse*, PART V, 55c-d / *Objections and Replies*, 231b
34 NEWTON: *Optics*, BK I-II 379a-506b passim, esp BK I, 424a-428b, 440a-441b, 453a-455a, BK II, 481a-482a; BK III, 519a-b
48 MELVILLE: *Moby Dick*, 144b-145a

7a(3) The speed of light

12 LUCRETIUS: *Nature of Things*, BK IV [176-208] 46c-47a; BK VI [164-172] 82b-c
28 GALILEO: *Two New Sciences*, FIRST DAY, 148b-149c
30 BACON: *Novum Organum*, BK II, APH 46, 178a-b
31 DESCARTES: *Discourse*, PART V, 55b
34 NEWTON: *Principles*, BK I, PROP 96, SCHOL, 155a / *Optics*, BK I, 379b; BK II, 488b-492a
34 HUYGENS: *Light*, CH I, 554b-557b; CH III, 570a-575a
45 FARADAY: *Researches in Electricity*, 817b

7a(4) The medium of light: the ether

8 ARISTOTLE: *Soul*, BK II, CH 7 [418a27-419a24] 649b-650b; BK III, CH 12 [434b22-435a11] 667c-668a / *Sense and the Sensible*, CH 3 676a-678b; CH 6 [446a20-447a12] 684c-685c
12 LUCRETIUS: *Nature of Things*, BK V [449-508] 67a-c
16 KEPLER: *Epitome*, BK IV, 857a-b; 901a-b
19 AQUINAS: *Summa Theologica*, PART I, Q 14, A 6, ANS 80a-81c
30 BACON: *Novum Organum*, BK II, APH 48, 186a
33 PASCAL: *Vacuum*, 366a-367a
34 NEWTON: *Principles*, BK III, GENERAL SCHOL, 372a / *Optics*, BK III, 520a-522b; 525b-529a
34 HUYGENS: *Light*, CH I, 553b-560b esp 557b-560b
45 FARADAY: *Researches in Electricity*, 595b [fn 2]

7b. Sound: the mechanical explanation of acoustic phenomena

7 PLATO: *Meno*, 177b-c / *Timaeus*, 471b
8 ARISTOTLE: *Soul*, BK II, CH 8 650c-652c
9 ARISTOTLE: *Generation of Animals*, BK V, CH 7 328c-330b
12 LUCRETIUS: *Nature of Things*, BK IV [524-614] 51a-52b
17 PLOTINUS: *Fourth Ennead*, TR V, CH 5 186b-d
28 GALILEO: *Two New Sciences*, FIRST DAY, 172b-177a,c
30 BACON: *Novum Organum*, BK II, APH 46, 178a; APH 48, 185a-c; 186a / *New Atlantis*, 213b
31 DESCARTES: *Rules*, XIII, 25c
34 NEWTON: *Principles*, BK II, PROP 41-50 and SCHOL 247a-259a passim / *Optics*, BK III, 525b-526a
34 HUYGENS: *Light*, CH I, 554b-558b passim
45 FARADAY: *Researches in Electricity*, 485b-486b

7c. The theory of heat

7c(1) The description and explanation of the phenomena of heat: the hypothesis of caloric

7 PLATO: *Timaeus*, 462c-d / *Theaetetus*, 533b-c
8 ARISTOTLE: *Heavens*, BK II, CH 7 380c-d
12 LUCRETIUS: *Nature of Things*, BK V [592-613] 68d-69a; BK VI [132-322] 82a-84c; [848-905] 91c-92b
19 AQUINAS: *Summa Theologica*, PART I, Q 67, A 3, ANS and REP 1,3 351b-352a; Q 104, A 1, ANS 534c-536c
30 BACON: *Novum Organum*, BK II, APH 10-20 140c-153a; APH 24, 154c-d; APH 26, 157a; APH 33, 161c; APH 36, 168b-d; APH 48, 182b; 183d; 184d-185a; APH 50, 190b-192b
31 DESCARTES: *Objections and Replies*, 231a-b
34 NEWTON: *Principles*, BK III, GENERAL SCHOL, 372a / *Optics*, BK III, 516b-518b; 520a-b; 541a-b
42 KANT: *Judgement*, 545b-546b
45 LAVOISIER: *Elements of Chemistry*, PART I, 9a-16d
45 FOURIER: *Theory of Heat* 169a-251b passim
45 FARADAY: *Researches in Electricity*, 812b-c; 813b-815b; 857a-858d
51 TOLSTOY: *War and Peace*, BK XIII, 587b-c; EPILOGUE II, 687d

7c(2) The measurement and the mathematical analysis of the quantities of heat

33 PASCAL: *Great Experiment*, 388a
45 LAVOISIER: *Elements of Chemistry*, PART I, 14a-c; 33b-36a; PART III, 99d-103b
45 FOURIER: *Theory of Heat*, 184b-185b

7d. Magnetism: the great magnet of the earth

10 GALEN: *Natural Faculties*, BK I, CH 14, 177a-178c
12 LUCRETIUS: *Nature of Things*, BK VI [906-1089] 92b-94c
28 GILBERT: *Loadstone*, BK I, 23b-25d; BK VI 106a-121a,c
30 BACON: *Novum Organum*, BK II, APH 36, 166c-167a; APH 45, 176b-c; APH 48, 183b-c
36 SWIFT: *Gulliver*, PART III, 100a-102a
45 FARADAY: *Researches in Electricity*, 286a-294a; 697b-757d

7d(1) Magnetic phenomena: coition, verticity, variation, dip

7 PLATO: *Ion*, 144b / *Timaeus*, 471b-c
8 ARISTOTLE: *Physics*, BK VIII, CH 10 [266b30-267a2] 354b-c
16 KEPLER: *Epitome*, BK IV, 897b-898b; 935a-936a; 941b-942a
28 GILBERT: *Loadstone*, BK I-V 3a-105d passim
30 BACON: *Novum Organum*, BK II, APH 25, 155c-d; APH 35, 163c-d; APH 36, 166c-167a; APH 37, 169b-c; APH 42, 174b-c; APH 45, 176b-c; APH 48, 182c; 183b-c; 184a; 185a-d
45 FARADAY: *Researches in Electricity*, 595a-600a; 607a-669d; 673b,d-757d; 812b-c; 813b-815b; 855a-866a,c

7d(2) Magnetic force and magnetic fields

16 KEPLER: *Epitome*, BK IV, 897b-898b; 935a-936a; 941b-942a
28 GILBERT: *Loadstone*, BK II, 26d-43c esp 38a-39b; 45d-47b; 54d-55c; BK V, 102d-105d
30 BACON: *Novum Organum*, BK II, APH 37, 169b-c; APH 45, 176b-c
34 NEWTON: *Principles*, BK I, PROP 69, SCHOL, 130b; BK II, PROP 23, SCHOL 202b-203a; BK III, PROP 6, COROL V 281b; PROP 7, COROL I 282a / *Optics*, BK III, 531b
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48 MELVILLE: *Moby Dick*, 376b-379a

(7. *The extension of mechanical principles to other phenomena: optics, acoustics, the theory of heat, magnetism, and electricity.*)

7e. Electricity: electrostatics and electrodynamics

28 GILBERT: *Loadstone*, BK II, 26d-34b
34 NEWTON: *Principles*, BK III, PROP 7, COROL I 282a; GENERAL SCHOL, 372a / *Optics*, BK III, 531b; 542a
45 FARADAY: *Researches in Electricity*, 514d-528c

7e(1) The source of electricity: the relation of the kinds of electricity

45 FARADAY: *Researches in Electricity*, 269a-273a; 277a-316a esp 281d-282c, 302a-d, 315d-316a; 386c-422a,c; 433a-440a,c; 532b-539b; 541b,d-594d; 813a-b; 824b-830b esp 826a-b, 829d-830a
49 DARWIN: *Origin of Species*, 89b-c

7e(2) Electricity and matter: conduction, insulation, induction, electrochemical decomposition

30 BACON: *Novum Organum*, BK II, APH 48, 181b-c
45 FARADAY: *Researches in Electricity*, 265a-269a; 273a-277a; 306a; 309a-312a; 312c-313d; 314b; 315a-b; 319b,d-345d; 361a-432d; 440b,d-514c; 515a-d; 522b,d-532d; 541b,d-584a,c; 824b-830b; 848b,d-855a,c

7e(3) The relation of electricity and magnetism: the electromagnetic field

28 GILBERT: *Loadstone*, BK II, 26d-34b
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45 FARADAY: *Researches in Electricity*, 266b-d; 269a-302d; 305d-306a; 307a-309a; 313d-314c; 315a; 520b-521a; 528c-532a; 595a; 615a-619c; 658b,d-667c; 685d-686b; 759c-788c; 795b,d-813a; 816b,d-819a,c

7e(4) The relation of electricity to heat and light: thermoelectricity

34 NEWTON: *Principles*, BK III, GENERAL SCHOL, 372a / *Optics*, BK III, 516b-517a
45 FARADAY: *Researches in Electricity*, 305b-d; 306d-307a; 313d-314a; 314c-d; 315a; 404b-405a; 476a-506a; 515d-516a; 518a-d; 561b,d-569b; 580d-582b; 595a-607a,c
51 TOLSTOY: *War and Peace*, EPILOGUE II, 687d

7e(5) The measurement of electric quantities

45 FARADAY: *Researches in Electricity*, 277d-279a; 316b-318c; 366d-371d; 377d-390d; 444a-451a; 465d-467a,c; 768d-773d; 778b,d-788c

CROSS-REFERENCES

For: Considerations relevant to the basic concepts and laws of mechanics, *see* CHANGE 7d; QUANTITY 5a–5e; SPACE 2a; TIME 1.

Discussions of the role of experiment, induction, and hypotheses in physical science, *see* EXPERIENCE 5a–5c; HYPOTHESIS 4b–4d; INDUCTION 5; LOGIC 4b; PHYSICS 4a–4d; SCIENCE 5a–5e; and for the physicist's treatment of causes, *see* CAUSE 2, 5b, 6; NATURE 3c(3); PHYSICS 2b; SCIENCE 4c.

The general theory of applied mathematics or mathematical physics, *see* ASTRONOMY 2c; MATHEMATICS 5b; PHYSICS 1b, 3; SCIENCE 5c.

Other discussions of the mathematical ideas or operations which are applied in mechanics, *see* MATHEMATICS 4a–4d; QUANTITY 3d(1), 4c, 6b.

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Another discussion of mass and weight, *see* QUANTITY 5d; for another discussion of velocity, acceleration, and momentum, *see* QUANTITY 5c; for another discussion of force, *see* QUANTITY 5e; and for another discussion of the composition of forces, *see* OPPOSITION 3d.

ADDITIONAL READINGS

Listed below are works not included in *Great Books of the Western World*, but relevant to the idea and topics with which this chapter deals. These works are divided into two groups:

I. Works by authors represented in this collection.
II. Works by authors not represented in this collection.

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Chapter 55: MEDICINE

INTRODUCTION

MEDICINE is the name of an art, of a science or group of sciences, and of a learned profession whose members are proficient in these sciences and experienced in the practice of the art. By derivation it is also the name for curative drugs, physics, or other remedies prescribed by the physician. The archaic usage of the English word "physic" as the name for the art, practice, and profession of what is now generally called "medicine" suggests what the word's Greek root signifies, namely, that the physician, no less than the physicist, is a student of nature.

There is one other historic use of "medicine" which indicates its scope and connections in the western tradition. When mediaeval institutions first shaped the university, the basic divisions of learning then embodied in its structure reflected different uses of learning as well as differences in subject matter. The three faculties of medicine, law, and theology not only disciplined their students in different branches of knowledge, but also trained them for distinct applications of knowledge to practice.

The faculty of medicine represented all the natural sciences, especially those which have come to be called "biological sciences," just as the faculty of law or jurisprudence represented all the moral sciences and their later offshoots, now called "social sciences." The doctor of medicine was concerned with knowledge bearing on the relation of man to nature, as the doctor of laws was concerned with knowledge bearing on the relation of man to man, and the doctor of theology with knowledge bearing on the relation of man to God.

It is a curious accident that the word "doctor," which in origin signified the competence to teach others who might practice in each of these great fields of learning, has come in popular usage to designate, not the teacher, but the practitioner, and chiefly the practitioner in only one of the learned professions. Medicine may not deserve the implied emphasis upon the learning of its practitioners, but there would be some truth in granting it the distinction of being the oldest of the professions in the sense that it comprises a group of men who not only share a common training in the relevant sciences and arts, but who also have adopted a code of practice and obligated themselves to perform a service to their fellow men.

The Hippocratic Oath, sworn to in the name of "Apollo the physician and Aesculapius, and Health . . . and all the gods and goddesses," is the first explicit formulation of a professional ideal. In the collection of writings attributed to Hippocrates, *The Law* explicitly indicates as *The Oath* implies that there are intellectual as well as moral conditions to be fulfilled by those who would dedicate themselves to the service of health. Only those who have satisfied all requisites for the study of medicine and by diligent application have acquired a true knowledge of it shall be "esteemed physicians not only in name but in reality."

The same high conception of medicine appears in the Bible. We read in Ecclesiasticus: "Honor the physician for the need thou hast of him: for the most High hath created him. For all healing is from God, and he shall receive gifts of the king. The skill of the physician shall lift up his head, and in the sight of great men he shall be praised. The most High hath created medicines out of the earth, and a wise man will not abhor them. . . . The virtue of these things is come to the knowledge of men, and the most High hath given knowledge to men, that he may be honored in his wonders. By these he shall cure and shall allay their pains, and of these the apothecary shall make sweet confections, and shall make up ointments of health,

and of his works there shall be no end. For the peace of God is over all the face of the earth."

FIVE OF THE authors of the great books—Hippocrates, Galen, Gilbert, Harvey, and Freud—belonged to the profession of medicine. They were major figures in its history. Practitioners of its arts, they were also contributors to the sciences concerned with health and disease. Three others combined medicine with other pursuits. Copernicus studied medicine at Padua and devoted considerable time to its practice; Locke was Lord Shaftesbury's personal physician; James took a medical degree at Harvard after years spent in the biological sciences. Still another, Rabelais, not only studied and practiced medicine, but also edited the *Aphorisms* of Hippocrates and Galen's little treatise on the medical art. His knowledge of medicine and his observation of its contemporary practices can be readily discerned in his comic exaggerations of anatomical and physiological detail, and of regimens of diet or exercise.

The discussion of medicine in the great books is not limited to its professors or practitioners. Montaigne has many doubts about medical diagnosis and the possibility of charting the causes of disease or the remedies which cure. The patient's ignorance permits the physician to claim credit for his successes and to blame fortune for his failures.

Montaigne, characteristically, delights in observing that the doctors disagree. He offers, as "one example of the ancient controversy in physics," the following: "Herophilus lodges the original cause of all disease in the humours; Erasistratus, in the blood of the arteries; Asclepiades, in the invisible atoms of the pores; Alcmaeon, in the exuberance or defect of our bodily strength; Diocles, in the inequality of the elements of which the body is composed, and in the quality of the air we breathe; Strato, in the abundance, crudity, and corruption of the nourishment we take; and Hippocrates lodges it in the spirits." There is no great danger, he adds, "in our mistaking the height of the sun, or the fraction of some astronomical computation; but here where our whole being is concerned, 'tis not wisdom to abandon ourselves to the mercy of the agitation of so many contrary winds."

Such commentary as this bears more on the history of medicine than on the abiding problems of its science or art, which, from Hippocrates to Freud, have been more generally agreed upon than the theories proposed for their solution. Of similar historical significance are the passages in the great works of history which describe the phenomena of disease as they appeared to contemporary observers, the plagues which ravaged Athens, Rome, and London, or the maladies which afflicted eminent individuals. Poetry, as well as history and biography, contributes to this record. The novels of Tolstoy and Fielding, the plays of Shakespeare, the tales of Cervantes and Chaucer, the Greek tragedies, and the Homeric epics furnish evidence of both the constant and the changing elements in the conception of disease, the vocation of medicine, and the social acceptance of the physician.

The history of medicine is an epitome of the history of the natural sciences. The researches of the Hippocratic school inititate specific methods of empirical investigation, such as the systematic collection and comparison of observations and the painstaking record of individual case histories. The fundamental concepts of medical theory reflect the philosophy of nature and of man. Conflicting notions of the causes of disease focus major issues in biology, such as the controversy in which Galen engages with Asclepiades and Erasistratus in the defense of what he supposes to be Hippocrates' and Aristotle's organic view of nature against mechanism and atomism.

Medicine, moreover, provides some of the clearest examples of the interdependence of theory and practice, for the rules of the healing art put theories to work and to the test; and as the rules are refined or altered by the accumulated experience of particular cases, inductive insight leads to new theoretical generalizations. As the work of Dr. Harvey illustrates, biological science is both the source and the reflection of medical knowledge. Medicine also affords Bacon and Descartes the prime example of a useful application of the knowledge gained by the new methods they propose.

More than engineering or the invention of mechanical utilities, medicine represents for them knowledge in the service of mankind.

That science shall bear fruit in technology "is not merely to be desired," writes Descartes, "with a view to the invention of an infinity of arts and crafts ... but principally because it brings about the preservation of health, which is without doubt the chief blessing and the foundation of all other blessings in this life ... It is true that the medicine which is now in vogue contains little of which the utility is remarkable; but, without any intention of decrying it, I am sure that there is no one, even among those who make its study a profession, who does not confess that all that men know is almost nothing in comparison with what remains to be known."

The subsequent history of medicine, some of the great documents of which are cited in the list of Additional Readings under the names of Jenner, Bichat, Virchow, Claude Bernard, and Koch, seems to substantiate Descartes' prophecy. But it also seems to be true that the major problems of medical practice are not greatly altered or diminished by the tremendous increase in our knowledge of the causes of specific diseases and our vast store of well tested remedies.

What sort of art medicine is; to what extent the physician should let nature run its course; with what restraint or prudence the physician should apply general rules to particular cases; whether health is better served by the general practitioner treating the whole man or by a specialist treating a special organ; how the relation of the physician to his patient is itself a therapeutic factor and underlies the effectiveness of his skill in all other respects; to what extent mind and body interact both in the origin and in the cure of disease—these are the problems of medicine concerning which Hippocrates and Galen can converse with Osler and Freud almost as contemporaries.

THE DISTINCTION made in the chapter on ART between the simply productive and the cooperative arts associates medicine with agriculture and teaching, and separates these arts, which merely help a natural result to come about, from the arts which produce an effect that would never occur without the work of the artist. Plants grow and reproduce without the help of farmers. The mind can discover some truth without the aid of teachers. Animals and men can preserve and regain their health without the care of physicians. But without shoemakers or house builders, shoes and houses would not be produced.

The art of medicine does not produce health in the sense in which the shoemaker produces a shoe, or the sculptor a statue. These other arts imitate nature by embodying natural forms or functions in materials wherein they do not naturally arise. An art like medicine seems to imitate nature by cooperating with natural processes. It follows the course of nature itself and, by working with it, enables the natural result to eventuate more surely than it might if art made no attempt to overcome the factors of chance.

Socrates expresses this understanding of the physician's art when he uses the metaphor of midwifery to characterize his own method of teaching. As it is the mother who labors and gives birth, so it is the student who is primarily active in the process of learning. The teacher, like the midwife, merely assists in a natural process which might be more painful, and might possibly fail, without such help. "The teacher," writes Aquinas, "only brings exterior help as does the physician who heals; just as the interior nature is the principal cause of the healing, so the interior light of the intellect is the principal cause of knowledge.

"Health," he continues, "is caused in a sick man, sometimes by an exterior principle, namely, by the medical art; sometimes by an interior principle, as when a man is healed by the force of nature. ... Just as nature heals a man by alteration, digestion, rejection of the matter that caused the sickness, so does art. ... The exterior principle, art, acts not as a primary agent, but as helping the primary agent, which is the interior principle, and by furnishing it with instruments and assistance, of which the interior principle makes use in producing the effect. Thus the physician strengthens nature, and employs food and medicine, of which nature makes use for the intended end."

The subordination of the medical art to nature seems to be the keystone of the whole structure of Hippocratic medicine. It is implied in the emphasis which Hippocrates places on the control of the patient's regimen, espe-

cially the elements of his diet, the exercise of his body, and the general circumstances of his life. Even in the treatment of acute diseases, Hippocrates looks to the regimen first, prescribing changes or special articles of diet.

Medicines or drugs perform an auxiliary function. Surgery is always a last resort, to be used primarily in the treatment of injuries, and not to be employed in diseases which will yield to a course of regimen and medication. There is an element of violence in surgery which puts it last among the means of an art which should work by cooperating with nature rather than by operating on it. And among medicines, those are preferable which, like ptisan, a special preparation of barley water, derive their efficacy from properties similar to those of normal nutriment.

According to Hippocrates, the control of regimen is not only the primary factor in therapy, but also the original principle of medicine. In the treatise *On Ancient Medicine*, he points out that "the art of medicine would not have been invented at first, nor would it have been made the subject of investigation (for there would have been no need for it), if when men are indisposed, the same food and other articles of regimen which they eat and drink when in good health were proper for them, and if no other were preferable to these. . . . The diet and food which people in health now use would not have been discovered, provided it suited man to eat and drink in like manner as the ox, the horse, and all other animals. . . . What other object, then, has he in view who is called a physician, and is admitted to be a practitioner of the art, who found out the regimen and diet befitting the sick, than he who originally found out and prepared for all mankind that kind of food which we all now use, in place of the former savage and brutish mode of living?"

THE SAME CONCEPTION of medicine's relation to nature seems to be fundamental in Galen's thought. He attributes to Hippocrates his own reformulation of the insight that the art of healing consists in imitating the health-giving and healing powers of nature itself. The medical doctrines which he criticizes were based on the atomism of Epicurus. They regarded the body as a complex piece of machinery. When it gets out of order, it needs a mechanic and mechanical remedies to fix it. On the contrary, it seems to him, the living body is an organic unity, not an aggregation of atoms, or a system of interlocking parts.

"Nature is not posterior to the corpuscles, but a long way prior to them," Galen writes. "Therefore it is nature which puts together the bodies both of plants and animals; and this she does by virtue of certain faculties which she possesses—these being, on the one hand, attractive and assimilative of what is appropriate, and, on the other, expulsive of what is foreign. Further, she skillfully moulds everything during the stage of genesis; and she also provides for the creatures after birth, employing here other faculties again."

Nature, according to Galen, works not by the external impact of part upon part, but by its faculties or powers for the performance of natural functions and the production of natural effects. Galen's polemic against the mechanists thus leads him to reverse the usual statement. Where Hippocrates looks upon nature as the model for art to follow, Galen calls Nature the artist, in order to set his view in sharp contrast to all mechanical conceptions. "Instead of admiring Nature's artistic skill," he declares, "they even go so far as to scoff and maintain that . . . things have been made by Nature for no purpose!" Nature, Galen holds, produces effects according to its powers and in conformity to its needs. It seems to work with intelligence and for an end, not blindly and by chance. The true art of medicine, therefore, borrows its method from "Nature's art."

The conception of nature as an artist may be taken metaphorically or literally, but the insight controlling the practice of medicine remains the same. The physician is a servant, not a master, of nature. Aristotle's doctrine of final causes, summarized in the maxim Galen so often repeats—that "nothing is done by Nature in vain"—furnishes a principle for physiological research, as well as the rules of medical art. Whether because of faulty observation on his part, or because of a failure to apply his own principle, Galen leaves to Harvey one of the great discoveries which can be credited to close attention to final causes. Always observant of the relation between structure and function,

always questioning the purpose which bodily organs serve, Harvey establishes the fact that the blood circulates, and finds therein the reason for the structure of the heart, its motions, and its relation to the lungs.

It may also be possible for a principle to be carried to excess. Montaigne, for example, expresses his distrust of medical theory and the physician's remedies by an unqualified trust in nature's own resourcefulness. Drugs, especially purgatives, do violence to nature. "Men disturb and irritate the disease by contrary oppositions; it must be the way of living that must gently dissolve, and bring it to an end. The violent gripings and contest betwixt the drug and the disease are ever to our loss, since the combat is fought within ourselves, and that the drug is an assistant not to be trusted, being in its own nature an enemy to our health, and by trouble having only access into our condition. Let it alone a little; the general order of things that takes care of fleas and moles, also takes care of men, if they will have the same patience that fleas and moles have, to leave it to itself."

Nor is there any need for an art of medicine when nature can do better by herself. "We ought to grant free passage to diseases; I find they stay less with me, who let them alone; and I have lost some, reputed the most tenacious and obstinate, by their own decay, without help and without art, and contrary to its rules. Let us a little permit Nature to take her own way; she better understands her own affairs than we." The Hippocratic doctrine seems to occupy a middle ground between this view of nature as an unerring artist and the opposite extreme which permits all sorts of tampering and tinkering with the machinery of the body.

THE ART OF MEDICINE "consists in three things," writes Hippocrates: "the disease, the patient, and the physician. The physician is the servant of the art, and the patient must combat the disease along with the physician." With regard to diseases, the physician must "have two special objects in view . . . to do good, and to do no harm."

This celebrated summary indicates the two kinds of knowledge which the physician should possess. He should know about disease in general, so that he can classify diseases according to their special causes, their symptoms, and the typical course each seems to take. Such knowledge underlies the doctor's diagnosis of the patient's malady. That in turn determines his prognosis of the stages through which the illness will run, from its onset through various crises or turning points to its *sequelae* or consequences. Upon the accuracy of his diagnosis and the certainty of his prognosis may depend the effectiveness of any remedy the physician prescribes in the individual case.

But individual cases are seldom completely alike. The physician must therefore know the patient as an individual, and all the relevant circumstances of his life as well as the particular characteristics of this instance of the disease; even though its general characteristics are familiar to him from much experience in the treatment of similar cases. The *Book of Prognostics* and the treatise *Of the Epidemics* in the Hippocratic collection seem to combine both these kinds of knowledge. They enumerate the symptoms by which diseases can be recognized and their future foretold. They also set forth individual case histories from which such generalizations can be drawn.

The practice of medicine thus appears to require more than scientific knowledge of health and disease in general, and more than general rules of art. It requires the sort of experience which can be gained only from actual practice. Without prudence born of experience, general rules can be misapplied, for no general rule, in medicine as in law, fits all cases alike. The most famous of Hippocratic aphorisms conveys a sense of the hazards of medical practice: "Life is short, and Art long; the crisis fleeting; experiment perilous, and decision difficult. The physician must not only be prepared to do what is right himself, but also to make the patient, the attendants, and the externals cooperate."

To persuade the patient to cooperate is the first maxim governing the physician's relation to his patient. Plato contrasts the right and wrong relation between doctor and patient by comparing the practice of the physicians who treated slaves and those who treated free men. "The slave-doctor," he says, "prescribes what mere experience suggests, as if he had exact knowledge, and when he has given his orders, like a tyrant, he rushes off with equal assurance

to some other servant who is ill.... But the other doctor, who is a freeman, attends and practices upon freemen; and he carries his enquiries far back, and goes into the nature of the disorder; he enters into discourse with the patient and with his friends, and is at once getting information from the sick man, and also instructing him as far as he is able, and he will not prescribe for him until he has first convinced him; at last, when he has brought the patient more and more under his persuasive influences and set him on the road to health, he attempts to effect a cure."

In the treatment of mental diseases, as Freud points out, the proper development and management of the relationship between patient and physician is itself a major factor in psychotherapy. "It presupposes a profound interest for psychological incidents, as well as a personal sympathy for the patient," he writes. "It requires the full consent and the attention of the patients, but above all, their confidence, for the analysis regularly leads to the inmost and most secretly guarded psychic processes." Since fears, anxieties, or other temperamental dispositions on the part of the patient may affect the course of an organic ailment, the patient's confidence in the physician and, even more generally, his emotional response to the physician's character play an important role in the successful treatment of bodily ills as well as of mental or functional disorders.

Hippocrates recommends that the physician cultivate prognosis, not only for the guidance of his own actions, but also for the sake of the patient. "By foreseeing and foretelling, in the presence of the sick, the present, the past, and the future, and explaining the omissions which patients have been guilty of, he will be the more readily believed to be acquainted with the circumstances of the sick; so that men will have confidence to entrust themselves to such a physician."

THE RELATION OF physician and patient raises a question about the organization of the practice of medicine, to which opposite answers have been given in both ancient and modern times. Herodotus reports a high degree of medical specialization in Egypt. "Medicine is practised among them on a plan of separation," he writes; "each physician treats a single disorder, and no more: thus the country swarms with medical practitioners, some undertaking to cure diseases of the eye, others of the hand, others again of the teeth, others of the intestines, and some those which are not local." The fact that the next paragraph begins a discussion of funerals can hardly be taken as revealing the attitude of Herodotus toward specialization, though his comment on the Egyptian practice does imply a contrast to Greek medicine.

One sentence in the Hippocratic Oath—"I will not cut persons laboring under the stone, but will leave this to be done by men who are practitioners of this work"—indicates some division of labor in the organization of Greek medicine. But apart from the special tasks and skills of surgery, the Hippocratic conception of the physician's work favors the practice of general medicine rather than specialization. The man, not the disease, is to be treated, and to treat him well the physician must examine the man as a whole, not merely the organ or bodily part in which the disorder seems to be located. The Hippocratic formula for getting a case history calls for an inquiry into the background of the individual's life, his antecedents, his occupation, his temperament, "the patient's habits, regimen, and pursuits; his conversation, manners, taciturnity, thoughts, sleep, or absence of sleep, and sometimes his dreams, what they are and when they occur; his picking and scratching; his tears." From these as well as from the symptoms, says Hippocrates, "we must form our judgment."

The defense of general practice against specialization is part of Galen's argument with his adversaries. Treatment of the disordered part as if it could be isolated from the living unity of the whole man is, to Galen, one of the deplorable consequences in medical practice of atomism or mechanism in medical theory.

This issue is argued again and again in the history of medicine, with each side pressing the advantages in its favor. Montaigne, for example, states the case for the specialist by analogy with the advantages of specialization in other arts. "As we have doublet and breeches makers, distinct trades, to clothe us, and are so much the better fitted, seeing that each of them meddles only with his own business, and has less to

trouble his head with than the tailor who undertakes them all; and as in matter of diet, great persons, for their better convenience, have cooks for the different offices . . . so also as to the cure of our maladies." With Freud and the development of a greater awareness of the psychological origin of many bodily disorders, a new factor enters into the argument. It tends to favor the general practitioner who, from his acquaintance with the patient as a person, may be better able than the specialist to detect hidden psychological causes.

THE CONCEPTION of disease is usually determined by the conception of health. The abnormality is judged and measured as a deviation from the norm. Hippocrates uses the outward appearance of man in a healthy condition as the standard for discerning the visible signs of illness. The physician, he says, "should observe . . . first the countenance of the patient, if it be like those of persons in health, and more so, if like itself, for this is the best of all; whereas the most opposite to it is the worst." He should also take note when he finds the patient reclining in a posture which resembles the normal disposition of the healthy body. "To find the whole body lying in a relaxed state" is a more favorable sign than to find him "upon his back, with the hands, neck, and the legs extended."

The history of medicine, especially on the side of its science and theory, if not so much with regard to its art and practice, can be told in terms of refinements in the classification of diseases and progressive discovery of their specific causes, both internal and external, predisposing and exciting. But the analysis of diseases according to their aetiology and by reference to the typical picture of the disease process leaves unanswered the general question about the nature of disease as a loss of health.

Apart from its causes and its symptoms, its modes and its patterns, what is disease? This is the question of major speculative interest in the tradition of the great books. The answers given have a certain uniformity in spite of the varying terms in which they are expressed.

The humoural hypothesis of ancient medical theory, for example, conceives health as that condition of the body in which the physiological elements are in a proper proportion or balance, and in which the various parts or powers function harmoniously with one another. As health is harmony or good order in the body, so disease consists in imbalance and disharmony—an excess or defect with consequent disproportion of the elements, or the disorder of conflicting bodily processes.

In the *Timaeus*, Plato first states this theory in terms of the four physical elements. "There are four natures out of which the body is compacted, earth and fire and water and air, and the unnatural excess or defect of these, or the change of any of them from its own natural place into another . . . produces disorders and diseases." He then considers the diseases which result from excess or defect of one or another of the four humours—blood, phlegm, black and yellow bile.

The humoural hypothesis, which Hippocrates and Galen share with Plato and Aristotle, undergoes many transformations in the history of medicine. The four elements or humours are replaced by other physiological factors, such as the hormones or internal secretions, or the elements of modern biochemistry. But constant throughout these changing formulations is the conception of health as an equilibrium, and of disease as its loss through disorder and disproportion.

This broad conception of health and disease seems to apply to mental as well as bodily ills. There is not only a basic continuity between Plato's and Freud's discussion of the bodily origin of mental disorders and the psychic origin of physical ailments; but the Freudian emphasis upon conflict and disintegration in the neurotic character—milder forms of the schizophrenia or "split personality" which characterizes insanity—also appeals to harmony as the principle of health. The language of modern psychiatry which refers to "the integrated personality" or "the well-balanced and adjusted individual" defines the norm or the ideal of mental health.

The various kinds and degrees of mental disorder, especially those which seem to be entirely functional rather than organic, represent abnormalities which, though they differ in cause, symptom, and tendency, have in common some excess or defect in the psychic struc-

ture or some unresolved conflict in the nature of man. Freud's psychoanalytic method in the treatment of mental ills places psychotherapy in the main tradition of medical practice; for in addition to insisting that the patient shall help to cure himself, it is directed toward the resolution of conflict, restoring the harmony which is health.

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PAGE SECTIONS: When the text is printed in one column, the letters **a** and **b** refer to the upper and lower halves of the page. For example, in **53** JAMES: *Psychology*, **116a-119b**, the passage begins in the upper half of page 116 and ends in the lower half of page 119. When the text is printed in two columns, the letters **a** and **b** refer to the upper and lower halves of the left-hand side of the page, the letters **c** and **d** to the upper and lower halves of the right-hand side of the page. For example, in **7** PLATO: *Symposium*, **163b-164c**, the passage begins in the lower half of the left-hand side of page 163 and ends in the upper half of the right-hand side of page 164.

AUTHOR'S DIVISIONS: One or more of the main divisions of a work (such as PART, BK, CH, SECT) are sometimes included in the reference; line numbers, in brackets, are given in certain cases; *e.g.*, *Iliad*, BK II [265–283] **12d**.

BIBLE REFERENCES: The references are to book, chapter, and verse. When the King James and Douay versions differ in title of books or in the numbering of chapters or verses, the King James version is cited first and the Douay, indicated by a *(D)*, follows; *e.g.*, OLD TESTAMENT: *Nehemiah*, 7:45—*(D) II Esdras*, 7:46.

SYMBOLS: The abbreviation "esp" calls the reader's attention to one or more especially relevant parts of a whole reference; "passim" signifies that the topic is discussed intermittently rather than continuously in the works or passage cited.

For additional information concerning the style of the references, see the Explanation of Reference Style; for general guidance in the use of *The Great Ideas*, consult the Preface.

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33 PASCAL: *Pensées*, 33 176b

36 SWIFT: *Gulliver*, PART III, 112b-113a

37 FIELDING: *Tom Jones*, 86a-c; 90b

39 SMITH: *Wealth of Nations*, BK I, 44c

51 TOLSTOY: *War and Peace*, BK X, 448d

54 FREUD: *Hysteria*, 108a-b

3. The practice of medicine

3a. The application of rules of art to particular cases in medical practice

7 PLATO: *Statesman*, 599a-b; 600b-d / *Laws*, BK IV, 684c-685a

8 ARISTOTLE: *Metaphysics*, BK I, CH 1 [981^{a}5-24] 499b-c

9 ARISTOTLE: *Parts of Animals*, BK I, CH 1 [639^{b}16-21] 161d-162a / *Ethics*, BK II, CH 2 [1104^{a}1-9] 349b-c; BK III, CH 3 [1112^{a}30-^{b}20] 358b-c; BK VI, CH 1 [1138^{b}25-34] 387b; CH 7 [1141^{b}14-21] 390c-d; BK X, CH 9 [1180^{b}7-23] 435b-c / *Politics*, BK III, CH 15 [1286^{a}10-15] 484b; BK VII, CH 13 [1331^{b}30-38] 536c / *Rhetoric*, BK I, CH 2 [1356^{b}28-32] 596b-c

10 HIPPOCRATES: *Ancient Medicine*, par 12 4b-c; par 20-21 7b-8a / *Airs, Waters, Places*, par 2 9b-c / *Regimen in Acute Diseases*, par 18 34d-35b / *Epidemics*, BK I, SECT III, par 1 49c-d; BK III, SECT III, par 16 59b-c / *Articulations*, par 10 94d-95a; par 71, 117c / *Aphorisms*, SECT I, par 9 131c

12 EPICTETUS: *Discourses*, BK II, CH 17, 159a-b

30 BACON: *Advancement of Learning*, 52a-53c

36 SWIFT: *Gulliver*, PART III, 112b-113a

36 STERNE: *Tristram Shandy*, 372b-373a

37 FIELDING: *Tom Jones*, 70c-71b

42 KANT: *Pure Reason*, 60b-c

51 TOLSTOY: *War and Peace*, BK IX, 372a-373b

54 FREUD: *Hysteria*, 32a-c / *General Introduction*, 607a-b / *New Introductory Lectures*, 871d

(3. *The practice of medicine.*)

3*b*. General and specialized practice: treating the whole man or the isolated part

6 HERODOTUS: *History*, BK II, 65c
7 PLATO: *Charmides*, 2d-3b / *Phaedrus*, 136b-c / *Gorgias*, 282c-d / *Timaeus*, 474d-475d / *Laws*, BK X, 767d
10 HIPPOCRATES: *Ancient Medicine*, par 20 7b-d / *Epidemics*, BK I, SECT III, par 1 49c-d / *Injuries of the Head*, par 20 69d
25 MONTAIGNE: *Essays*, 373c-d
44 BOSWELL: *Johnson*, 350c-d
46 HEGEL: *Philosophy of History*, PART I, 250c
51 TOLSTOY: *War and Peace*, BK IX, 372a-373b
52 DOSTOEVSKY: *Brothers Karamazov*, BK XI, 340c-d
54 FREUD: *Hysteria*, 62b-c / *General Introduction*, 451b-452a; 620b-c / *New Introductory Lectures*, 871d-872a

3*c*. Diagnosis and prognosis: the interpretation of symptoms; case histories

OLD TESTAMENT: *Leviticus*, 13-14
6 HERODOTUS: *History*, BK I, 44d-45a
6 THUCYDIDES: *Peloponnesian War*, BK II, 399c-400c
7 PLATO: *Protagoras*, 59b-c / *Laws*, BK IV, 684c-685a
8 ARISTOTLE: *Prior Analytics*, BK II, CH 27 [70^{a}3-39] 92a-c passim / *Prophesying*, CH 1 [463^{a}3-^{b}10] 707b-708a
9 ARISTOTLE: *History of Animals*, BK IV, CH 10 [537^{b}14-20] 64b; BK VII, CH 12 [588^{a}10-12] 114c; BK VIII, CH 18 [601^{b}6-8] 127c; CH 21 [603^{b}20-24] 129c; CH 23 [604^{a}12]-CH 24 [604^{b}20] 130a-c / *Rhetoric*, BK I, CH 2 [1357^{b}14-21] 597b-c
10 HIPPOCRATES: *Airs, Waters, Places*, par 10-11 13b-14b / *Prognostics* 19a-26a,c esp par 1 19a-b, par 15 22d-23a, par 25 26a,c / *Regimen in Acute Diseases*, APPENDIX, par 9-14 38b-40d / *Epidemics*, BK I, SECT II, par 5 46c-d; SECT III, par 1-CASE XIV 49c-53d; BK III, SECT 1-11 53d-56d; SECT III, par 16-CASE XVI 59b-63d / *Injuries of the Head*, par 5 65a; par 8 65c; par 10-12 65d-67a; par 19 69b-c / *Fractures*, par 5 76d-77a / *Articulations*, par 10 94d-95a; par 26 99a-b; par 30 99c-100b; par 51 109a-b; par 54 111a; par 57 111d-112b; par 58, 112d; par 59 113b / *Instruments of Reduction*, par 4-24 122d-126c passim / *Aphorisms*, SECT I, par 2 131a; par 12 131d; SECT II 132b-134a passim; SECT IV, par 17-SECT V, par 15 135d-138b; SECT V, par 30-SECT VII, par 86 138d-144a,c passim
12 LUCRETIUS: *Nature of Things*, BK VI [1138-1214] 95b-96b
19 AQUINAS: *Summa Theologica*, PART I, Q 13, A 5, ANS 66b-67d; A 6, ANS 67d-68c; Q 57, A 3, ANS 297b-298a; A 4, ANS 298a-299a
24 RABELAIS: *Gargantua and Pantagruel*, BK III, 197a
25 MONTAIGNE: *Essays*, 370c-d; 372b-373b; 531d-532b
30 BACON: *Advancement of Learning*, 49b-50b; 52a; 52c-d
36 SWIFT: *Gulliver*, PART III, 112b-113a; 114b; PART IV, 156b-157a
37 FIELDING: *Tom Jones*, 33c-34a; 70c-71b; 145b-146a; 157a-158a; 373c-d
51 TOLSTOY: *War and Peace*, BK I, 38c-d; BK VIII, 307a-c; BK IX, 372a-373b; BK XI, 524c-525a
52 DOSTOEVSKY: *Brothers Karamazov*, BK XI, 340c
54 FREUD: *Origin and Development of Psycho-Analysis*, 1b-2b / *Hysteria*, 31b-d; 38d-40a; 50b-c; 54b-56c; 60b-62c esp 60b-d; 87a-90d esp 87a-d / *Psycho-Analytical Therapy*, 124b / *"Wild" Psycho-Analysis*, 128a-129d esp 129c-d / *Interpretation of Dreams*, 151a-c / *General Introduction*, 550d-557a esp 556a-b; 593b-c; 605b-607b passim, esp 606c-607b / *New Introductory Lectures*, 872d-873a

3*d*. The factors in prevention and therapy

3*d*(1) Control of regimen: climate, diet, exercise, occupation, daily routine

OLD TESTAMENT: *Proverbs*, 16:24; 17:22
APOCRYPHA: *Ecclesiasticus*, 30:25; 31:19-22; 37:29-31-(*D*) OT, *Ecclesiasticus*, 30:27; 31:22-27; 37:32-34
6 HERODOTUS: *History*, BK II, 64c-d
7 PLATO: *Protagoras*, 50d / *Symposium*, 155c-d / *Gorgias*, 261a-d; 289c-d / *Republic*, BK III, 334b-337a; BK IV, 345b-c / *Timaeus*, 474d-475d / *Laws*, BK II, 656b-c / *Seventh Letter*, 803c-804b
8 ARISTOTLE: *Heavens*, BK II, CH 12 [292^{a}14-^{b}18] 383d-384b
9 ARISTOTLE: *History of Animals*, BK VII, CH 12 114c; BK VIII, CH 21 [603^{b}25-34] 129d / *Ethics*, BK II, CH 2 [1104^{a}10-26] 349c-d; BK VI, CH 7 [1141^{b}14-21] 390c-d / *Politics*, BK VII, CH 11 [1330^{a}34-41] 535a; CH 16 [1335^{b}12-19] 540c; CH 17 [1336^{a}4-39] 541a-c; BK VIII, CH 4 [1338^{b}39-1339^{a}10] 544b-c / *Rhetoric*, BK I, CH 6 [1362^{a}29-33] 603a; CH 7 [1364^{a}3-5] 605b
10 HIPPOCRATES: *Ancient Medicine*, par 3-11 1d-4b; par 13-16 4c-6b; par 20 7b-d / *Airs, Waters, Places*, par 1 9a-b; par 3-7 9c-12a; par 9-10 12d-14a; par 12 14b-d; par 15 15b-c; par 19-21 16c-17b / *Regimen in Acute Diseases* 26a-44a,c esp par 9 29d-30c, APPENDIX, par 18 41a-d / *Epidemics*, BK I, SECT I, par 1 44a-b; SECT II, par 1 45a-c; par 7-8 47a-c; BK III, SECT III, par 1-2 56d-57a; par 15 59b / *Surgery*, par 20 73d / *Fractures*, par 7 77c-78a; par 9 78c-d; par 36 88d-89a / *Articulations*, par 9 94b-c; par 50, 108b-d; par 55 111a-c; par 58 112b-113a; par 81 120d / *Aphorisms*, SECT I, par 3-11 131a-c; par 13-19 131d-132a; SECT II, par 4 132b; par 16-17,22 132d; par 36 133b; par 38,45 133c; par 49-50

133d; SECT III, par 1–19 134a-d; SECT V, par 16–29 138b-d; SECT VII, par 56 143a; par 66 143c / *Ulcers*, par 1, 145a / *Sacred Disease*, 160b-d

10 GALEN: *Natural Faculties*, BK II, CH 8 191b-195c

14 PLUTARCH: *Lycurgus*, 34b-d; 40c-42a / *Caesar*, 583d-584b

22 CHAUCER: *Nun's Priest's Tale* [14,827–852] 450a-b

24 RABELAIS: *Gargantua and Pantagruel*, BK I, 26d-29d; 48d-49a; BK II, 68a-69a,c; BK III, 134d-135a; 152a-153b; 188d-191c

25 MONTAIGNE: *Essays*, 66c-67a; 374a-375a; 524b; 527a-528a

28 HARVEY: *On Animal Generation*, 433c

29 CERVANTES: *Don Quixote*, PART II, 345a-346b

30 BACON: *Advancement of Learning*, 26c-d; 47a-b; 53d-54a / *New Atlantis*, 201b; 211b-212c

32 MILTON: *Paradise Lost*, BK XI [524–534] 310b-311a

36 SWIFT: *Gulliver*, PART IV, 163a

36 STERNE: *Tristram Shandy*, 525a-526b

37 FIELDING: *Tom Jones*, 70c-71b; 145b-146a

38 ROUSSEAU: *Inequality*, 335a-b; 336d-337a

39 SMITH: *Wealth of Nations*, BK IV, 293d-294b

44 BOSWELL: *Johnson*, 171c-d

48 MELVILLE: *Moby Dick*, 353b-354a

49 DARWIN: *Descent of Man*, 356d-357b

50 MARX: *Capital*, 324a-325c

51 TOLSTOY: *War and Peace*, BK I, 52d; BK V, 215c-d; BK IX, 372a-373b

54 FREUD: *Hysteria*, 64d-65a

3d(2) Medication: drugs, specifics

APOCRYPHA: *Wisdom of Solomon*, 16:12—(*D*) OT, *Book of Wisdom*, 16:12 / *Ecclesiasticus*, 38:4-8—(*D*) OT, *Ecclesiasticus*, 38:4-8

4 HOMER: *Iliad*, BK IV [188–219] 25d-26b; BK V [899–906] 39c; BK XI [842–848] 81c

6 HERODOTUS: *History*, BK IV, 143a; 157a

6 THUCYDIDES: *Peloponnesian War*, BK II, 400b-c

7 PLATO: *Timaeus*, 474d-475d / *Statesman*, 601d-602a

9 ARISTOTLE: *History of Animals*, BK III, CH 21 [522^{b}9–13] 47d; BK IV, CH 5 [530^{b}6–10] 57b; BK VIII, CH 21 [603^{b}9–16] 129c; CH 24 [604^{b}26–29] 130c; CH 26 131a; CH 29 [607^{a}21–34] 132c-d; BK IX, CH 6 [612^{b}15–18] 138b / *Ethics*, BK VI, CH 1 [1138^{b}25–34] 387b

10 HIPPOCRATES: *Ancient Medicine*, par 13 4c-5a; par 24 8d-9a,c / *Regimen in Acute Diseases*, par 1 26a-d; par 4–7 27c-29c; par 14–17 32c-34c; APPENDIX, par 11 39c-40b; par 16 40d; par 26–39 43a-44a,c / *Fractures*, par 27, 85b-c; par 29 85d-86a / *Articulations*, par 36 101d; par 63 114d-115b / *Aphorisms*, SECT II, par 22 132d / *Ulcers*, par 1 145a-c; par 4–13 146b-149b / *Fistulae*, par 2–12 150b-152d / *Hemorrhoids*, par 2–3 152b,d-153b; par 6–7 153d-154a,c

10 GALEN: *Natural Faculties*, BK I, CH 13, 176a-177a; CH 14, 179a-b; BK II, CH 9, 195d-196a; BK III, CH 13, 209c

22 CHAUCER: *Prologue* [411–444] 166b-167a / *Tale of Melibeus*, par 10, 403a

24 RABELAIS: *Gargantua and Pantagruel*, BK I, 26d; BK II, 92b-c; 96a-d; 124d-125d; BK III, 140b; 173d-174a; 189a-c; 196d; 225a; 226d; BK IV, 246d-247a; 310d-311c

25 MONTAIGNE: *Essays*, 90d-91b; 365b-379c passim, esp 369c-370a

27 SHAKESPEARE: *All's Well That Ends Well*, ACT I, SC III [227–262] 147d-148b; ACT II, SC I [71–189] 149b-150c; SC III [46–57] 151d-152a / *King Lear*, ACT IV, SC IV [1–19] 272b-c

28 GILBERT: *Loadstone*, BK I, 19c-21c; BK II, 35b-c

28 HARVEY: *Motion of the Heart*, 297d

30 BACON: *Advancement of Learning*, 26c-d; 47a-b; 51d-53d esp 53a-c / *New Atlantis*, 201b; 212c

36 SWIFT: *Gulliver*, PART III, 108b-109a; 112b-113a; PART IV, 156b-157a; 161b-162a; 169a

36 STERNE: *Tristram Shandy*, 372b-373a

37 FIELDING: *Tom Jones*, 63a-c; 76b; 83b

38 ROUSSEAU: *Inequality*, 336d-337a

44 BOSWELL: *Johnson*, 257c-d

49 DARWIN: *Descent of Man*, 323c

51 TOLSTOY: *War and Peace*, BK I, 38b-d; BK V, 215c-d; BK VIII, 337d-338a; BK IX, 372a-373b; 374a-d; BK X, 449b-c; BK XII, 533d-534a; 535b-c; BK XIV, 595a-b; BK XV, 630b

54 FREUD: *Hysteria*, 40a-b

3d(3) Surgery

4 HOMER: *Iliad*, BK XI [842–848] 81c

7 PLATO: *Republic*, BK III, 336a-b / *Statesman*, 599a-b; 601d-602a

9 ARISTOTLE: *History of Animals*, BK III, CH 4 [514^{a}34–^{b}5] 38c; BK VIII, CH 21 [603^{b}5–16] 129b-c; BK IX, CH 50 [631^{b}19–632^{a}32] 157a-c

10 HIPPOCRATES: *Prognostics*, par 23 25a-b / *Regimen in Acute Diseases*, par 7 28d-29c; APPENDIX, par 2–6 35d-37a; par 11 39c-40b; par 24 42d; par 29 43a-b / *Injuries of the Head*, par 9 65c-d; par 13–21 67b-70a,c / *Surgery* 70b,d-74d esp par 2 70b, par 4 71a-b, par 6 71b, par 10 72a-b / *Fractures* 74b,d-91d esp par 1 74b,d-75a, par 47–48 90d-91d / *Articulations* 91b,d-121d esp par 61 113d-114a, par 79 120b / *Instruments of Reduction* 121b,d-130d esp par 40 129d-130c / *Aphorisms*, SECT V, par 68 140a; SECT VI, par 22 140d; par 31 141a; par 47 141c; SECT VII, par 46,48 142d; par 53 143a; par 87 144c / *Ulcers*, par 14–17 149b-150a,c / *Fistulae*, par 5 151a-b / *Hemorrhoids*, par 2–6 152b,d-154a

18 AUGUSTINE: *Christian Doctrine*, BK I, CH 14, 627d-628a

24 RABELAIS: *Gargantua and Pantagruel*, BK II, 119b-c; BK III, 196c

25 MONTAIGNE: *Essays*, 330b-d; 373a-b

(3*d*. *The factors in prevention and therapy.* 3*d*(3) *Surgery.*)

28 HARVEY: *Motion of the Heart*, 289d-290a / *On Animal Generation*, 376d-377a; 438b-c
30 BACON: *Advancement of Learning*, 52b-c / *New Atlantis*, 211d
36 SWIFT: *Gulliver*, PART III, 113b; PART IV, 148b
37 FIELDING: *Tom Jones*, 70c-71b; 162a-c
38 ROUSSEAU: *Inequality*, 336d-337a
51 TOLSTOY: *War and Peace*, BK X, 464a-465c
53 JAMES: *Psychology*, 844a
54 FREUD: *Hysteria*, 81b-c

4. The concept of health: normal balance or harmony

7 PLATO: *Charmides*, 2d-3b / *Symposium*, 155d-157a / *Meno*, 175b / *Gorgias*, 282c-283a / *Republic*, BK III, 334b-337a; BK IV, 355b-d; BK IX, 422c-d; 427a / *Timaeus*, 472a-c; 474d-475d / *Philebus*, 616d-617a / *Laws*, BK V, 690a-c
8 ARISTOTLE: *Categories*, CH 8 [8^b25–9^a28] 13d-14b / *Topics*, BK III, CH 1 [116^b17–22] 163a-b / *Physics*, BK VII, CH 3 [246^a10–$^b19$] 329c-330a / *Metaphysics*, BK V, CH 20 [1022^b10–13] 544a / *Soul*, BK I, CH 4 [407^b31–408^a2] 637c; BK II, CH 2 [414^a4–14] 644a-b / *Sense and the Sensible*, CH 5 [445^a16–31] 683a-b
9 ARISTOTLE: *History of Animals*, BK III, CH 19 [520^b19–521^a14] 45c-46a; BK VII, CH 1 [581^b25–582^a4] 107b-c / *Parts of Animals*, BK I, CH 1 [640^a4–7] 162d; BK II, CH 5 [651^a37–$^b18$] 176c; CH 7 177c-179a; BK IV, CH 2 [677^a5–$^b1$] 206d-207b / *Ethics*, BK II, CH 2 [1104^a10–26] 349c-d; BK V, CH 1 [1129^a12–25] 376b-c; CH 11 [1138^a28–32] 386d; BK VI, CH 12 [1143^b21–1144^a5] 393b-c passim / *Rhetoric*, BK I, CH 5 [1361^b3–26] 602a-b; CH 7 [1363^b34–1364^a5] 605b
10 HIPPOCRATES: *Ancient Medicine*, par 13-19 4c-7b / *Regimen in Acute Diseases*, par 9, 29d / *Sacred Disease*, 156b-c
10 GALEN: *Natural Faculties*, BK II, CH 8, 194c-d; CH 9, 195c-196a
12 LUCRETIUS: *Nature of Things*, BK III [558–565] 37b
12 AURELIUS: *Meditations*, BK V, SECT 8 269d-270b
18 AUGUSTINE: *City of God*, BK XIX, CH 13 519a-520a; BK XXII, CH 24, 610c-611a / *Christian Doctrine*, BK I, CH 16 628c-d
20 AQUINAS: *Summa Theologica*, PART I-II, Q 49, A 2 2b-4a; A 3, REP 3 4b-5a; A 4, ANS 5a-6a; Q 50, A 1, ANS and REP 2–3 6a-7b; A 3, REP 2 8b-9a; Q 51, A 1, ANS 12b-13c; Q 52, A 1, ANS and REP 3 15d-18a; A 2, ANS 18a-19a; Q 54, A 1, ANS 22d-23d; Q 73, A 2, ANS 120d-121c; A 3, ANS 121c-122b; Q 82, A 1, ANS and REP 1 168a-d
24 RABELAIS: *Gargantua and Pantagruel*, BK III, 137d-139b; BK IV, 234a-235a; 239d-240a
25 MONTAIGNE: *Essays*, 233c-236a; 368d; 369d-370a
28 HARVEY: *Motion of the Heart*, 296d-297a / *On Animal Generation*, 493a-b
30 BACON: *Advancement of Learning*, 50c-51d; 72b
32 MILTON: *Paradise Lost*, BK XI [524–543] 310b-311a / *Areopagitica*, 407b
36 SWIFT: *Gulliver*, PART IV, 155b-156a; 170b-171b
36 STERNE: *Tristram Shandy*, 412a-417a
38 ROUSSEAU: *Inequality*, 336b-d / *Political Economy*, 368d-369a
39 SMITH: *Wealth of Nations*, BK IV, 293d-294b
42 KANT: *Pref. Metaphysical Elements of Ethics*, 368d-369a / *Judgement*, 509c-d
51 TOLSTOY: *War and Peace*, BK X, 449b-c
53 JAMES: *Psychology*, 799a-b
54 FREUD: *General Introduction*, 635b-c

5. The theory of disease

5*a*. The nature of disease

6 THUCYDIDES: *Peloponnesian War*, BK II, 400b-c
7 PLATO: *Lysis*, 21d / *Republic*, BK IV, 354d-355c; BK VIII, 409a; BK X, 435a-d / *Timaeus*, 472a-474d
8 ARISTOTLE: *Physics*, BK VII, CH 3 [246^a10–$^b19$] 329c-330a
9 ARISTOTLE: *Generation of Animals*, BK V, CH 4 [784^a31–$^b34$] 326b-d / *Ethics*, BK II, CH 2 [1104^a10–19] 349c; BK V, CH 1 [1129^a12–25] 376b-c
10 HIPPOCRATES: *Ancient Medicine*, par 14 5a-c; par 16 5d-6b; par 19 6d-7b / *Fractures*, par 31, 87a / *Sacred Disease*, 159b
10 GALEN: *Natural Faculties*, BK II, CH 8, 193d; 194c-d; CH 9, 195c-196a; BK III, CH 12 208b-209b esp 208d
17 PLOTINUS: *Second Ennead*, TR IX, CH 14 74b-d
20 AQUINAS: *Summa Theologica*, PART I-II, Q 71, A 1, REP 3 105d-106c; Q 72, A 5, ANS 115a-116b; Q 73, A 2, ANS 120d-121c; A 3, ANS 121c-122b; Q 77, A 3, ANS 147c-148b; Q 82, A 1, ANS and REP 1 168a-d; A 4, REP 2 170b-171a; Q 88, A 1, ANS 193a-194b; PART III SUPPL, Q 81, A 4, REP 4 966d-967d
25 MONTAIGNE: *Essays*, 528c-529b
28 HARVEY: *Circulation of the Blood*, 305a-d
32 MILTON: *Paradise Lost*, BK XI [477–543] 309b-311a
36 SWIFT: *Gulliver*, PART IV, 155b-157a
39 SMITH: *Wealth of Nations*, BK IV, 293d-294b
51 TOLSTOY: *War and Peace*, BK IX, 372a-b
53 JAMES: *Psychology*, 799a-807b esp 799a-800a, 806a-b; 815a
54 FREUD: *Narcissism*, 403a-b

5b. The classification of diseases

7 PLATO: *Timaeus*, 472a-474d
8 ARISTOTLE: *Topics*, BK IV, CH 3 [123^{b}34-37] 172c
9 ARISTOTLE: *History of Animals*, BK VIII, CH 18-27 127b-131b / *Ethics*, BK VII, CH 8 [1150^{b} 29-35] 401c-d
10 HIPPOCRATES: *Airs, Waters, Places*, par 3-6 9c-11a / *Regimen in Acute Diseases*, par 1-2, 26c-d / *Epidemics*, BK I, SECT III, par 2 49d-50a / *Injuries of the Head*, par 4-8 64d-65c / *Fractures*, par 31, 87a / *Articulations*, par 51 109a-b; par 61 113d-114a / *Aphorisms*, SECT III 134a-135b
10 GALEN: *Natural Faculties*, BK II, CH 8, 193c-194c
20 AQUINAS: *Summa Theologica*, PART I-II, Q 73, A 3, ANS 121c-122b; A 7, ANS 124d-125c
30 BACON: *Advancement of Learning*, 51d-52a
36 SWIFT: *Gulliver*, PART III, 112b-113a; PART IV, 155b-157a
54 FREUD: *Hysteria*, 87a-d; 114d / *General Introduction*, 605b-606d passim, esp 606c-d

5c. The disease process: onset, crisis, after-effects

OLD TESTAMENT: *Leviticus*, 13-14
6 THUCYDIDES: *Peloponnesian War*, BK II, 399c-400c
10 HIPPOCRATES: *Prognostics* 19a-26a,c esp par 15-20 22d-24c / *Regimen in Acute Diseases*, APPENDIX, par 1 35c-d; par 9-15 38b-40d; par 22 42b-c / *Epidemics* 44a-63d esp BK I, SECT III, par 2-3 49d-50b / *Injuries of the Head*, par 19 69b-c / *Fractures*, par 31 86d-87d / *Articulations*, par 69 116b-117a / *Aphorisms*, SECT I, par 7-12 131b-d; SECT II, par 13 132c; par 23-32 132d-133b; SECT III, par 28 135a-b; SECT IV, par 22-82 136a-137d esp par 30 136b, par 36 136b-c, par 64 137b
10 GALEN: *Natural Faculties*, BK I, CH 14, 177c
12 LUCRETIUS: *Nature of Things*, BK III [487-505] 36b-c; BK VI [1138-1214] 95b-96b
30 BACON: *Advancement of Learning*, 51d-52a
37 FIELDING: *Tom Jones*, 86a-c
48 MELVILLE: *Moby Dick*, 350b-354a
49 DARWIN: *Descent of Man*, 256c
54 FREUD: *Narcissism*, 402d-403a / *General Introduction*, 618c

5d. The causes of disease: internal and external factors

OLD TESTAMENT: *Leviticus*, 26:16 / *Numbers*, 12:10-15; 16:46-50 / *Deuteronomy*, 28:21-22,27-28,35,58-62 / *II Kings*, 5:27—(*D*) *IV Kings*, 5:27 / *I Chronicles*, 21:14-15—(*D*) *I Paralipomenon*, 21:14-15 / *II Chronicles*, 26:18-21—(*D*) *II Paralipomenon*, 26:18-21 / *Job*, 2:7 / *Psalms*, 107:17-20—(*D*) *Psalms*, 106:17-20
APOCRYPHA: *II Maccabees*, 3:27-29; 9—(*D*) OT, *II Machabees*, 3:27-29; 9
NEW TESTAMENT: *Matthew*, 9:32-33; 17:14-18 / *I Corinthians*, 11:25-30
4 HOMER: *Iliad*, BK I [33-100] 3b-4b
5 SOPHOCLES: *Oedipus the King* [1-215] 99a-101a
6 HERODOTUS: *History*, BK I, 32c-d; 38a-b; BK II, 64c-d; BK IV, 135c-d; 157a
7 PLATO: *Symposium*, 155d-157a / *Republic*, BK II, 318c-319a; BK III, 334b-335d; BK IV, 345b-c; BK VIII, 412d; BK X, 434d-435c / *Timaeus*, 472a-474d; 476b-d
8 ARISTOTLE: *Meteorology*, BK IV, CH 7 [384^{a} 25-34] 488c
9 ARISTOTLE: *History of Animals*, BK III, CH 15 [519^{b}15-19] 44c; CH 19 [521^{a}10-32] 46a-b; BK VII, CH 1 [581^{b}22-582^{a}5] 107b-c; CH 12 114c; BK VIII, CH 18-27 127b-131b passim; CH 29 132c-d / *Parts of Animals*, BK II, CH 5 [651^{a}37-^{b}18] 176c; CH 7 [653^{b}1-7] 178d-179a; BK III, CH 7 [670^{b}5-11] 199a; BK IV, CH 2 [677^{a}5-^{b}1] 206d-207b / *Generation of Animals*, BK IV, CH 7 317d-318b; BK V, CH 4 [784^{a}31-^{b}34] 326b-d / *Ethics*, BK II, CH 2 [1104^{a}10-19] 349c
10 HIPPOCRATES: *Ancient Medicine*, par 1 1a-b; par 3 1d-2b; par 6 2d-3a; par 9-11 3b-4b; par 13-22 4c-8d / *Airs, Waters, Places*, par 1-10 9a-14a esp par 10 13b-14a; par 22 17b-18a / *Regimen in Acute Diseases*, par 9-10 29d-30d; APPENDIX, par 1 35c-d; par 6 36c-37a; par 17 40d-41a / *Epidemics*, BK I, SECT I, par 1 44a-b; SECT II, par 7-8 47a-c; BK III, SECT III, par 1-2 56d-57a; par 15 59b / *Surgery*, par 20 73d / *Articulations*, par 12 96a-b; par 58, 113a / *Aphorisms*, SECT II, par 51 133d; SECT III, par 1-19 134a-d; SECT V, par 16-24 138b-c / *Fistulae*, par 1 150a / *Hemorrhoids*, par 1 152b / *Sacred Disease* 154a-160d esp 155d-156a
10 GALEN: *Natural Faculties*, BK I, CH 11, 172b-c; BK II, CH 8-9 191b-199a,c esp CH 8, 194c-d, CH 9, 195c-196a
12 LUCRETIUS: *Nature of Things*, BK VI [769-829] 90c-91b; [1090-1137] 94d-95b
17 PLOTINUS: *Second Ennead*, TR IX, CH 14 74b-d
20 AQUINAS: *Summa Theologica*, PART I-II, Q 81, A 1, ANS 163a-164d; Q 82, A 2, ANS 168d-169c; A 4, REP 2 170b-171a; Q 83, A 4, ANS 173c-174b; Q 85, AA 5-6 181d-184a
22 CHAUCER: *Prologue* [411-444] 166b-167a
23 HOBBES: *Leviathan*, PART II, 148d; 151b-c; 152b
24 RABELAIS: *Gargantua and Pantagruel*, BK I, 53a-c
25 MONTAIGNE: *Essays*, 367b-368a; 371c-d
28 HARVEY: *Motion of the Heart*, 296a-d / *Circulation of the Blood*, 305a-d; 316c-d; 321d-322a / *On Animal Generation*, 386d-387a; 407a; 423b; 433a-c; 455d-456a; 493a-b

(5. The theory of disease. 5d. The causes of disease: internal and external factors.)

30 BACON: *Advancement of Learning*, 49d-50b; 52b-d
31 DESCARTES: *Discourse*, PART VI, 61c
32 MILTON: *Paradise Lost*, BK XI [477–548] 309b-311a
36 SWIFT: *Gulliver*, PART III, 112b-113a; PART IV, 155b-157a; 161b-162a; 163a
36 STERNE: *Tristram Shandy*, 413b-414b
38 ROUSSEAU: *Inequality*, 336a-337a esp 336b-c; 364b-c
39 SMITH: *Wealth of Nations*, BK I, 34d-35b
41 GIBBON: *Decline and Fall*, 70d-71a
44 BOSWELL: *Johnson*, 306d-307a
48 MELVILLE: *Moby Dick*, 350b-351b
49 DARWIN: *Origin of Species*, 9d-10a / *Descent of Man*, 256a; 325c-327a passim; 351a-355a; 356d-357b
50 MARX: *Capital*, 115c; 118b-124a; 142b,d [fn 4]; 178b [fn 1]; 194b-195b; 204a-c; 229c; 236c-237d; 324a-330d passim
51 TOLSTOY: *War and Peace*, BK I, 52d
53 JAMES: *Psychology*, 69a-b; 535a; 895a
54 FREUD: *General Introduction*, 604c-605c

5*d*(1) The humoural hypothesis: temperamental dispositions

7 PLATO: *Timaeus*, 472a-474d
9 ARISTOTLE: *Parts of Animals*, BK IV, CH 2 [677^{a}5–^{b}1] 206d-207b
10 HIPPOCRATES: *Ancient Medicine*, par 13–20 4c-7d; par 22 8a-d; par 24 8d-9a,c / *Airs, Waters, Places*, par 10 13b-14a / *Regimen in Acute Diseases*, APPENDIX, par 1 35c-d; par 3 35d-36a; par 5–6 36b-37a / *Epidemics*, BK III, SECT III, par 14 59b / *Aphorisms*, SECT III, par 2 134a; par 11 134b; par 14 134c / *Sacred Disease*, 155d-160d esp 159a-b
10 GALEN: *Natural Faculties*, BK II, CH 8–9 191b-199a,c
12 LUCRETIUS: *Nature of Things*, BK III [487–505] 36b-c
14 PLUTARCH: *Alexander*, 542a-c
19 AQUINAS: *Summa Theologica*, PART I, Q 119, A 1, REP 3 604c-607b; PART I-II, Q 46, A 5, ANS and REP 1 815d-816d
20 AQUINAS: *Summa Theologica*, PART I-II, Q 73, A 2, ANS 120d-121c; A 3, ANS 121c-122b; Q 77, A 3, ANS 147c-148b; Q 82, A 1, REP 1 168a-d; A 4, REP 2 170b-171a; PART III SUPPL, Q 80, A 3 958b-959c; Q 82, A 1, ANS and REP 4 968a-970c
22 CHAUCER: *Prologue* [411–444] 166b-167a
24 RABELAIS: *Gargantua and Pantagruel*, BK III, 138a-d
25 MONTAIGNE: *Essays*, 371c-d
28 HARVEY: *On Animal Generation*, 435b-c
30 BACON: *Advancement of Learning*, 26c-d; 52b-c; 77a-c
32 MILTON: *Samson Agonistes* [599–605] 352b
36 SWIFT: *Gulliver*, PART III, 112b-113a; PART IV, 163a
36 STERNE: *Tristram Shandy*, 380a; 412a-417a esp 412a-414b
37 FIELDING: *Tom Jones*, 283a-b

5*d*(2) The psychogenesis of bodily disorders

APOCRYPHA: *Ecclesiasticus*, 30:21–24—(*D*) OT, *Ecclesiasticus*, 30:22–26
7 PLATO: *Charmides*, 2d-3b / *Timaeus*, 474d-475c
10 HIPPOCRATES: *Epidemics*, BK III, SECT III, CASE XI 62b-c; CASE XV 63b-c / *Sacred Disease*, 158a
12 LUCRETIUS: *Nature of Things*, BK III [147–160] 32a
19 AQUINAS: *Summa Theologica*, PART I, Q 117, A 3, REP 3 598c-599b; PART I-II, Q 28, A 5, ANS 743c-744b
25 MONTAIGNE: *Essays*, 36c-42a; 234c-235a; 332d-333c; 532a-b
28 HARVEY: *Motion of the Heart*, 296d / *Circulation of the Blood*, 321d-322a
30 BACON: *Advancement of Learning*, 49d-50b
36 SWIFT: *Gulliver*, PART IV, 163a
37 FIELDING: *Tom Jones*, 253d
44 BOSWELL: *Johnson*, 350c-d
51 TOLSTOY: *War and Peace*, BK III, 142d; BK V, 220b-c; BK VI, 247d-248a; BK VII, 301b-302d passim; BK IX, 373a-b; BK XIII, 567d-568c esp 568b; BK XV, 617a-b
52 DOSTOEVSKY: *Brothers Karamazov*, BK XI, 331d-332a
53 JAMES: *Psychology*, 132a-135b esp 132a-b; 847b-848a
54 FREUD: *Origin and Development of Psycho-Analysis*, 1b-6b esp 4c-5a / *Hysteria*, 25a-59d esp 25a-27a, 30a-d, 35b-c, 37d-38d, 56b-58c; 82d-83c; 88c-89c; 90b-d / *Narcissism*, 403a-c / *Repression*, 426b-c / *General Introduction*, 572a-b / *Inhibitions, Symptoms, and Anxiety*, 718a-719d; 728c-729a / *New Introductory Lectures*, 852a-b

5*e*. The moral and political analogues of disease

OLD TESTAMENT: *Psalms*, 147:3—(*D*) *Psalms*, 146:3 / *Isaiah*, 1:4–6—(*D*) *Isaias*, 1:4–6 / *Jeremiah*, 8:21–22; 30:12–17; 33:6; 46:11—(*D*) *Jeremias*, 8:21–22; 30:12–17; 33:6; 46:11
5 SOPHOCLES: *Oedipus the King* 99a-113a,c esp [1297–1415] 111b-112b
7 PLATO: *Gorgias*, 268b-c / *Republic*, BK IV 345a-d; 354d-355c; BK VIII, 409a; 412d; BK X, 435a-d / *Timaeus*, 474b-d / *Sophist*, 556d-558d / *Laws*, BK IV, 684c-685a; BK V, 690d-691b
8 ARISTOTLE: *Metaphysics*, BK IV, CH 4 [1008^{b} 25–32] 528b
9 ARISTOTLE: *Ethics*, BK II, CH 2 [1104^{a}10–26] 349c-d; BK V, CH 11 [1138^{a}29–^{b}4] 386d-387a; BK VII, CH 8 [1150^{b}29–1151^{a}4] 401c-d

12 AURELIUS: *Meditations*, BK V, SECT 8 269d-270b
14 PLUTARCH: *Agesilaus*, 495c-d / *Phocion*, 605a-b / *Aratus*, 834d
15 TACITUS: *Annals*, BK III, 57d-58b
18 AUGUSTINE: *Christian Doctrine*, BK I, CH 14 627d-628b; CH 16 628c-d
20 AQUINAS: *Summa Theologica*, PART I-II, Q 71, A 1, REP 3 105d-106c; Q 72, A 5, ANS 115a-116b; Q 73, A 2, ANS 120d-121c; A 3, ANS 121c-122b; Q 77, A 3 147c-148b; Q 82, A 1, ANS and REP 1 168a-d; A 4, REP 2 170b-171a; Q 88, A 1, ANS 193a-194b
22 CHAUCER: *Tale of Melibeus*, par 10, 403a
23 HOBBES: *Leviathan*, PART I, 68d-69a; PART II, 148c-153a
25 MONTAIGNE: *Essays*, 330b-d; 462c-465c passim; 504c-505d
27 SHAKESPEARE: *Hamlet*, ACT III, SC IV [144-152] 56a-b / *Othello*, ACT III, SC III [321-333] 225c-d
36 SWIFT: *Gulliver*, PART III, 112b-113a
36 STERNE: *Tristram Shandy*, 215b-216a; 380a
38 ROUSSEAU: *Political Economy*, 368d-369b / *Social Contract*, BK III, 419c-d
39 SMITH: *Wealth of Nations*, BK IV, 293d-294b
43 FEDERALIST: NUMBER 38, 122b-123c

6. Mental disease or disorder: its causes and cure

6a. The distinction between sanity and insanity: the concept of mental health and the nature of madness

7 PLATO: *Timaeus*, 474b-d
8 ARISTOTLE: *Physics*, BK VII, CH 3 [247^{b}1-248^{a}9] 330b-d / *Dreams*, CH 2 [460^{a}32-^{b}18] 704b-c
9 ARISTOTLE: *Ethics*, BK VII, CH 5 399a-d passim
10 HIPPOCRATES: *Sacred Disease*, 159a-b
12 EPICTETUS: *Discourses*, BK II, CH 15 155c-156b
19 AQUINAS: *Summa Theologica*, PART I, Q 84, A 7, ANS 449b-450b; Q 115, A 5, REP 1 590d-591c; PART I-II, Q 6, A 7, REP 3 650a-d; Q 10, A 3, ANS and REP 2 664d-665c; Q 24, A 2, ANS 727d-728c; Q 28, A 3, ANS and REP 1 742a-d; Q 37, A 4, REP 3 785d-786d; Q 48, AA 3-4 824c-826a,c
20 AQUINAS: *Summa Theologica*, PART I-II, Q 74, A 5, REP 1 131d-132b
23 HOBBES: *Leviathan*, PART I, 66d-67b; 68b-69c
24 RABELAIS: *Gargantua and Pantagruel*, BK III, 201b-d
25 MONTAIGNE: *Essays*, 166a-167a; 235b-c
30 BACON: *Advancement of Learning*, 72b
31 DESCARTES: *Objections and Replies*, 155d-156a
31 SPINOZA: *Ethics*, PART IV, PROP 44, SCHOL 437d-438a
35 LOCKE: *Human Understanding*, BK II, CH XI, SECT 13 146b-c; CH XXXIII, SECT 3-4 248c-d
35 HUME: *Human Understanding*, SECT II, DIV II, 455b-c
37 FIELDING: *Tom Jones*, 68c-d
43 MILL: *Liberty*, 299d-300b [fn 1]
44 BOSWELL: *Johnson*, 13c-14a; 111d; 354c-355a
48 MELVILLE: *Moby Dick*, 388b-389b
51 TOLSTOY: *War and Peace*, BK XI, 525c
52 DOSTOEVSKY: *Brothers Karamazov*, BK XII, 356d-359b
53 JAMES: *Psychology*, 137a; 241b-258b esp 242a-244a; 749a-750b; 799a-807a esp 799a-800a, 806a-b
54 FREUD: *Origin and Development of Psychoanalysis*, 18c-19a / *Hysteria*, 86a-d; 102a-106c / *Interpretation of Dreams*, 174d-176d; 289a-b; 364c-d / *Narcissism*, 399b-d / *Unconscious*, 433c; 440a-442b / *General Introduction*, 593c; 624c-625d; 633d-635c esp 635b-c / *War and Death*, 760b / *New Introductory Lectures*, 812a; 830d-832a

6b. The classification of mental diseases

7 PLATO: *Timaeus*, 474b-d
9 ARISTOTLE: *Ethics*, BK VII, CH 5 399a-d passim
10 HIPPOCRATES: *Sacred Disease*, 159b-c
23 HOBBES: *Leviathan*, PART I, 67b; 68c-d
53 JAMES: *Psychology*, 241b
54 FREUD: *Hysteria*, 60b-61c; 87a-d / *Narcissism*, 403b-d / *General Introduction*, 451d; 568c; 605b-606d esp 606c-d; 620c-d

6c. The process and causes of mental disorder

NEW TESTAMENT: *Mark*, 9:17-29—(*D*) *Mark*, 9:16-28
5 AESCHYLUS: *Choephoroe* [1021-1076] 80a-d
5 SOPHOCLES: *Ajax* [1-332] 143a-146a
5 EURIPIDES: *Bacchantes* 340a-352a,c esp [847-1326] 347b-351b / *Heracles Mad* [815-1145] 371d-374d esp [822-873] 372a-c / *Orestes* [1-426] 394a-398b
6 HERODOTUS: *History*, BK II, 86b; BK III, 95d-98a; BK VI, 199c-201c esp 201b-c
7 PLATO: *Timaeus*, 474b-d
8 ARISTOTLE: *Categories*, CH 8 [9^{b}34-10^{a}6] 15a / *Dreams*, CH 2 [460^{a}32-^{b}18] 704b-c
9 ARISTOTLE: *Ethics*, BK VII, CH 5 399a-d passim
10 HIPPOCRATES: *Sacred Disease* 154a-160d esp 155d-156a, 159a-b
12 LUCRETIUS: *Nature of Things*, BK III [487-505] 36b-c
19 AQUINAS: *Summa Theologica*, PART I, Q 115, A 5, REP 1 590d-591c; PART I-II, Q 6, A 7, REP 3 650a-d; Q 10, A 3, ANS and REP 2 664d-665c; Q 24, A 2, ANS 727d-728c; Q 28, A 3, ANS and REP 1 742a-d; Q 37, A 4, REP 3 785d-786d; Q 48, AA 3-4 824c-826a,c
23 HOBBES: *Leviathan*, PART I, 67b; 68b-71b
25 MONTAIGNE: *Essays*, 235b-c
26 SHAKESPEARE: *Midsummer-Night's Dream*, ACT V, SC I [1-27] 370d-371a
27 SHAKESPEARE: *Hamlet*, ACT II, SC II [171-221] 42b-d; ACT III, SC IV [102-144] 55d-56a;

(6. Mental disease or disorder: its causes and cure. 6c. The process and causes of mental disorder.)

ACT IV, SC V [1–75] 59c-60b; [154–200] 61b-d; ACT V, SC II [237–254] 70b-c / *King Lear*, ACT II, SC IV [274–289] 261c-d; ACT III, SC IV 264a-266b; ACT IV, SC IV [1–19] 272b-c; SC VI [80–294] 274b-276c; SC VII [14–82] 276d-277c / *Macbeth*, ACT V, SC I 306b-307a; SC III [37–54] 308a-b

28 HARVEY: *On Animal Generation*, 347c
29 CERVANTES: *Don Quixote* esp PART I, 1a-3b, 32c-33a, 83a-c, 88b-89a, PART II, 205a-209d, 252c-257a, 258d
31 DESCARTES: *Meditations*, I, 75d
31 SPINOZA: *Ethics*, PART IV, PROP 44, SCHOL 437d-438a
35 LOCKE: *Human Understanding*, BK II, CH XI, SECT 13 146b-c; CH XXXIII, SECT 3–4 248c-d
37 FIELDING: *Tom Jones*, 68c-d
40 GIBBON: *Decline and Fall*, 598a-b
44 BOSWELL: *Johnson*, 127a-b; 214b-c; 356b-c
48 MELVILLE: *Moby Dick*, 122b-124b; 135a-138a; 232b-235a; 306a-307a
51 TOLSTOY: *War and Peace*, BK XV, 616a-617a
52 DOSTOEVSKY: *Brothers Karamazov*, BK I, 4c-5a; BK II, 21d-22b; BK III, 62d-63b; BK XI, 337a-348d passim; BK XII, 364d-365d; 376a-377b
53 JAMES: *Psychology*, 132a-138b passim, esp 137a; 244b-252a passim, esp 251b-252a; 258a-b; 533a-538b; 753b-754b; 800a-806b passim; 828b-829a
54 FREUD: *Origin and Development of Psycho-Analysis*, 1b-19a esp 4a-5a, 6a-b, 8a, 14b, 18b-19a / *Hysteria*, 25a-106c passim, esp 25a-27a, 35b-c, 37d-38a, 53b-c, 81c-87a, 93d-96a, 97b-106c; 110d-118a,c / *Narcissism*, 402d-404d / *Unconscious*, 440a-443d esp 440a-b / *General Introduction*, 451d-452a; 546b-623b esp 567d-569c, 585b-591a, 593b-596b, 599d-600d, 602d-607b, 611a-615a, 616b-c / *Beyond the Pleasure Principle*, 641a-c; 648d-650a esp 649c / *Group Psychology*, 690d-691c; 695b-696a,c / *Ego and Id*, 712c-715c; 716d-717a,c / *Inhibitions, Symptoms, and Anxiety*, 720a-752c esp 720a-723d, 744b-747b / *Civilization and Its Discontents*, 774c-d; 798c-799a / *New Introductory Lectures*, 830d-832a; 866b-867a

6c(1) Somatic origins of mental disease

6 HERODOTUS: *History*, BK III, 96c
7 PLATO: *Timaeus*, 474b-d
8 ARISTOTLE: *Physics*, BK VII, CH 3 [247^{b}13–248^{a}6] 330c-d
9 ARISTOTLE: *Parts of Animals*, BK II, CH 7 [653^{b}1–7] 178d-179a / *Ethics*, BK VII, CH 3 [1147^{a}14–17] 397b
10 HIPPOCRATES: *Sacred Disease*, 155d-160d esp 159a-b
12 LUCRETIUS: *Nature of Things*, BK III [459–475] 36a
19 AQUINAS: *Summa Theologica*, PART I, Q 84, A 7, ANS 449b-450b; Q 115, A 5, REP 1 590d-591c
23 HOBBES: *Leviathan*, PART I, 68c
27 SHAKESPEARE: *King Lear*, ACT II, SC IV [106–113] 259c
28 HARVEY: *On Animal Generation*, 347c
30 BACON: *Advancement of Learning*, 49d-50b
31 DESCARTES: *Meditations*, I, 75d
31 SPINOZA: *Ethics*, PART IV, PROP 39, SCHOL 436c-437a; PROP 44, SCHOL 437d-438a
32 MILTON: *Samson Agonistes* [599–605] 352b
36 SWIFT: *Gulliver*, PART IV, 163a
49 DARWIN: *Descent of Man*, 291a; 299c; 318b
51 TOLSTOY: *War and Peace*, BK XI, 524c-527a
53 JAMES: *Psychology*, 2b-3a; 23b-26b esp 25b; 32a-34a; 35b-37b; 40b-41a
54 FREUD: *Hysteria*, 60d-61a; 90d-97b esp 94b-95d; 111b-115a esp 114a-115a / *Narcissism*, 403a-d / *General Introduction*, 604c-606a esp 605c-606a / *Beyond the Pleasure Principle*, 641a; 649c / *Inhibitions, Symptoms, and Anxiety*, 744b-745d / *Civilization and Its Discontents*, 773a-b

6c(2) Functional origins of mental disease

54 FREUD: *Origin and Development of Psycho-Analysis* 1a-20d esp 4a-5c, 7a-9a, 18b-19a / *Hysteria*, 25a-106c passim, esp 25a-27a, 35b-c, 37d-38d, 52c-53c, 81c-87a, 97b-106c / *Interpretation of Dreams*, 364d-365c; 370b-c; 380d-382a esp 381d-382a / *Narcissism*, 406d-410b esp 409c d / *Repression*, 425c-427a,c / *Unconscious*, 434c-436b / *General Introduction*, 546b-623b esp 550d-569c, 577a-591a, 599d-600d, 604c-605b, 611a-615a, 620b-623b / *Group Psychology*, 690c-691c / *Ego and Id*, 699a-c; 704d; 712c-714a / *Inhibitions, Symptoms, and Anxiety*, 720a-752c esp 720a-723d, 728b-731d, 746c-747b

6d. The treatment of functional disorders: psychotherapy as a branch of medicine

12 LUCRETIUS: *Nature of Things*, BK III [31–93] 30b-31b esp [87–93] 31b; [510–522] 36c-d; BK VI [1–42] 80a-c
19 AQUINAS: *Summa Theologica*, PART I–II, Q 38 786d-789d
24 RABELAIS: *Gargantua and Pantagruel*, BK III, 188d-191c
25 MONTAIGNE: *Essays*, 37c-39a; 401b-406a
27 SHAKESPEARE: *King Lear*, ACT IV, SC IV [1–19] 272b-c / *Macbeth*, ACT V, SC I 306b-307a esp [79–83] 307a; SC III [37–54] 308a-b
30 BACON: *Advancement of Learning*, 77d-78d
44 BOSWELL: *Johnson*, 127a-b; 284c-d; 297d-298a; 354c-355a
48 MELVILLE: *Moby Dick*, 357b-358b
51 TOLSTOY: *War and Peace*, BK XV, 614a-d; 616a-618b esp 616b, 617a-b, 618b

52 DOSTOEVSKY: *Brothers Karamazov*, BK II, 21d-23c
53 JAMES: *Psychology*, 132b; 135a-b
54 FREUD: *Origin and Development of Psycho-Analysis* 1a-20d esp 2a-3a, 6c-7a, 8d-9a, 10c-11a, 13c-14a, 19a-20c / *Hysteria*, 26c-d; 30d-81c esp 30d-31a, 59d-81c; 106c-111b esp 107a-108b / *Psycho-Analytic Therapy* 123a-127a,c / *"Wild" Psycho-Analysis* 128a-130d / *General Introduction*, 449a-452a; 545a-550c; 560c-561b; 563a-566a; 606a-c; 623c-638a,c / *Beyond the Pleasure Principle*, 643d-644a / *Group Psychology*, 695c / *Ego and Id*, 712c-713a esp 713b [fn 1] / *Inhibitions, Symptoms, and Anxiety*, 748b-d / *New Introductory Lectures*, 840a; 864a-873d esp 871a-873d

7. The historical record on disease and its treatment: epidemics, plagues, pestilences

OLD TESTAMENT: *Leviticus*, 13-14
4 HOMER: *Iliad*, BK IV [188-219] 25d-26b; BK V [899-906] 39c; BK XI [842-848] 81c
6 HERODOTUS: *History*, BK I, 44d-45a; BK II, 64c-d; 65c; BK III, 117a-118a; BK IV, 135c-d; 157a
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CROSS-REFERENCES

For: Discussions bearing on learned professions or professional education, *see* EDUCATION 5a, 6; LAW 9; RHETORIC 6.

The general theory of art which underlies the consideration of medicine as an art, *see* ART 3, 9a; EXPERIENCE 3a; KNOWLEDGE 8a.

The theory of signs involved in the interpretation of symptoms, *see* LANGUAGE 10; SIGN AND SYMBOL 4e; and for other matters relevant to medical diagnosis and prognosis, *see* HYPOTHESIS 4b, 4d.

Another discussion of health and disease, *see* LIFE AND DEATH 5a, 5c; and for the special problems of mental disease and the methods of psychopathology, *see* EMOTION 3a, 3c-3d; MAN 5b; MEMORY AND IMAGINATION 2e(3)-2e(4), 5c; MIND 2c(2), 8a-8c; WILL 9b.

Discussions relevant to the comparison of mental health or sanity with happiness, *see* HAPPINESS 2a; JUSTICE 1b.

ADDITIONAL READINGS

Listed below are works not included in *Great Books of the Western World*, but relevant to the idea and topics with which this chapter deals. These works are divided into two groups:

I. Works by authors represented in this collection.
II. Works by authors not represented in this collection.

For the date, place, and other facts concerning the publication of the works cited, consult the Bibliography of Additional Readings which follows the last chapter of *The Great Ideas.*

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Chapter 56: MEMORY AND IMAGINATION

INTRODUCTION

CONCERNING memory and imagination, the tradition of western thought seems to be involved in less dispute than it is on other aspects of human and animal life. There are, as we shall see, points of difficulty and debatable theories. But these arise only within the framework of certain fundamental insights which are widely, if not universally, shared. Here at least we can begin without having to deal with verbal ambiguities. Unlike many of the words which are the traditional bearers of the great ideas, "memory" and "imagination" have a constant core of meaning in almost everyone's discourse.

It is understood that memory and imagination depend upon sense-perception or upon previous experience. Except for illusions of memory, we do not remember objects we have never perceived or events in our own life, such as emotions or desires, that we have not experienced. The imagination is not limited in the same way by prior experience, for we can imagine things we have never perceived and may never be able to.

Yet even when imagination outruns perception, it draws upon experience for the materials it uses in its constructions. It is possible to imagine a golden mountain or a purple cow, though no such object has ever presented itself to perception. But, as Hume suggests, the possibility of combining a familiar color and a familiar shape depends upon the availability of the separate images to be combined.

"When we think of a golden mountain," Hume writes, "we only join two consistent ideas, *gold* and *mountain*, with which we were formerly acquainted . . . All this creative power of the mind amounts to no more than the faculty of compounding, transposing, augmenting, or diminishing the materials afforded us by the senses and experience." A congenitally color-blind man who lived entirely in a world of grays would not be able to imagine a golden mountain or a purple cow, though he might be able to imagine things as unreal as these.

Because of their dependence on sense-perception, memory and imagination are usually regarded as belonging to the same general faculty as the external senses. Not all writers, however, conceive of a generic power of sense, which they then divide into the exterior senses such as sight, hearing, and touch, and the interior senses such as memory and imagination. Some, like Hobbes, treat imagination as "nothing but decaying sense," and use the word "memory" to "express the decay, and signify that the sense is fading, old, and past."

The image, whether it is a memory-image or fancy-free, *re-produces* or *re-presents* sensory material. It may be less vivid, less sharp in outline, and less definite in detail than the sensation or perception from which it is derived. But in one important respect the image does not differ from the original sense-impression. That is the respect in which ideas or concepts do differ from sense-impressions—at least according to those who hold that ideas or concepts have a certain universality and abstractness which is not found in sensations and sensory images. Those who, like Berkeley and Hume, call sensations or images "ideas" deny the existence of abstract ideas or universal notions precisely because they, too, agree that sense-impressions or sensory images are always particular in their content and meaning.

THE FUNDAMENTAL controversy about what an idea is and the verbal confusion occasioned by the ambiguity of the word (which appears in the chapter on IDEA) do not seem to affect the understanding of the nature of images or their role in the activities of memory and imagina-

tion. As William James points out, in discussing the "blended" or "generic" image which is somehow associated with abstract or universal meaning, "a blurred thing is just as particular as a sharp thing, and the generic character of either sharp image or blurred image depends on its being felt *with its representative function.*" He speaks of this function as "the mysterious *plus*, the understood meaning," but he denies the possibility of universal or abstract *images*, whatever may be the truth about ideas which are not images at all. Certainly those who deny the presence of anything abstract or universal in the understanding do so on the ground that the content of the mind is basically sensory, whether the mind is perceiving or remembering, imagining or thinking.

The controversy about the nature of the mind does not seem to affect the conception of memory or imagination. As neither is confused with sense-perception, so neither is confused with rational thought. This remains the case whether the theory of mind looks upon the intellect as a faculty separate from the sensitive faculty (including memory and imagination), or conceives the understanding as a single faculty which is active in judgment and reasoning as well as in perceiving, remembering, and imagining.

This and related issues are considered in the chapter on MIND. Except for one point, perhaps, such issues can be ignored here. Sensation is attributed to both animals and men—to all organisms which give evidence of having sense-organs or some sort of sensitive apparatus. Whether all animals, even those which have the most rudimentary sensorium, also have memory and imagination may be disputed; but no one doubts that the higher animals, with central nervous systems and brain structures resembling those of men, can remember and imagine as well as perceive.

All agree, furthermore, that memory and imagination require bodily organs, though the assignment of these two functions to the brain as their organic seat is more uniformly a tenet of modern than of ancient physiology, and can be more clearly expounded as the result of modern researches in neurology. But the question whether the memory or imagination of men and other animals differs more than their bodies do, elicits opposite answers from those who affirm that man alone has reason and those who deny that man has powers of knowing or thinking not possessed by other animals to some degree.

Nevertheless, if man alone is considered, the nature of memory and imagination is clear. The object remembered or imagined need not be physically present to the senses like the object perceived. The object imagined need not be located in the past like the object remembered; nor, for that matter, need it have any definite location in time and space. It need have no actual existence. It may be a mere possibility, unlike the object which cannot be known without being known to exist. As the object of memory is an event which no longer exists, so the object of imagination may be something which has never existed and never will.

Thus memory and imagination greatly enlarge the world of human experience. Without them, man would live in a confined and narrow present, lacking past and future, restricted to what happens to be actual out of the almost infinite possibilities of being. Without memory and imagination, man could be neither a poet nor an historian; and unless he had an angelic sort of intellect which in no way depended on sense-experience, he would be impeded in all the work of science, if memory and imagination did not extend the reach of his senses.

THE PSYCHOLOGICAL analysis of memory usually divides it into a number of separate acts or phases. Recollection presupposes the retention of the material to be recalled. The ingenious experiments of Ebbinghaus that James reports —using the memorization of nonsense syllables to isolate the factors influencing memory— seem to show that retention is affected by the strength of the original associations. But retention is also affected by the interval between the time of learning and the time of revival. The amount of forgetting seems to be a function of two separate factors: the force with which the material to be recalled is originally committed to memory, and the lapse of time.

That retention is not the same as recall may be seen from Ebbinghaus' experimental discovery of the fact that forgetting is never com-

plete. Material which lies below the threshold of recall is nevertheless retained, and manifests its presence by its effect on attempts to relearn the material which *appears* to have been forgotten.

Nothing can be utterly forgotten if, as Augustine suggests, what seems to be forgotten remains in the memory. He considers the effort men make to remember a forgotten name. "Where does that name come back from," he asks, "except from the memory? For even when it is through being reminded of something else that we recognize someone's name, it is still by memory that we do it, for we do not hold it as some new thing learned, but by memory we are sure that this is what the name was. But, were the name utterly blotted out of mind," Augustine argues, "we should not remember it even if we were reminded. For if we had utterly forgotten it, we should not even be able to think of looking for it."

Freud considers forgetting from another point of view. He describes the psychoanalytic method at its inception as a "talking cure" involving efforts in reminiscence. The things which we have put out of mind, he claims, are "hindered from becoming conscious, and forced to remain in the unconscious by some sort of force." He calls this "repression." Freud observed that it occurred when" a wish had been aroused, which was in sharp opposition to the other desires of the individual, and was not capable of being reconciled with the ethical, aesthetic, and personal pretensions of the patient's personality. . . . The end of this inner struggle was the repression of the idea which presented itself to consciousness as the bearer of this irreconcilable wish. This was repressed from consciousness and forgotten."

On this view things which have been put out of mind because we find them unpleasant to contemplate, things which are repressed in order to avoid conflict, are not forgotten when they cannot be consciously remembered. Nor are they below the threshold of recall in the sense that our retention of them has been so weakened by time that no effort at recollection can revive them. On the contrary, they may be capable of quite vivid revival when the emotional obstacles to recollection are removed. Freud applies his theory of the "obliviscence of the disagreeable" to such everyday occurrences as the forgetting of familiar names as well as to the repression of memories connected with the emotional traumas of early life.

Recollection is distinct not only from retention, but also from recognition. The illusion known as *déjà vu* consists in the experience of intense familiarity with a place or scene that, so far as one can recall, has never been witnessed before. In contrast, normal recognition depends upon previous acquaintance with the object being cognized again, *i.e.*, *re-cognized*. The fact, noted by many observers, that recognition may or may not be accompanied by recollection of the previous circumstances, indicates the separation of recall and recognition as acts of memory. Whereas recollection is remembering through the recall of images, recognition consists in remembering at the very moment of perceiving. Both, however, depend upon what seems to be memory's fundamental act —retention.

WITH REGARD TO retention, there are two problems which have been the subject of inquiry throughout the whole tradition. The first concerns what is usually called "the association of ideas." From Aristotle through Hobbes and Hume to James and Freud, there have been various formulations of the laws of association and various interpretations of what such laws signify about the mind. Ebbinghaus, for example, used nonsense syllables in order to measure the effect upon retention of the associations formed by repetition of a series of sounds. All meaning had been removed in order to avoid the influence upon recollection of associations resulting from meaningful connections of the sort which exists among ordinary words. The repetition of nonsense syllables in pairs or series illustrates association by contiguity or succession. According to most writers, the elements of experience become associated through other modes of relation also, such as their similarity or contrast with one another in any significant respect.

It is not the association itself which is remembered. Rather it is through the association of one part of experience with another that memory seems to work, one particular tending to recall others with which it has been asso-

ciated in one or more ways. Recollection seems to occur through activating connections which have been formed and retained. The modern differentiation of controlled and free association indicates two ways in which this can happen—either by a purposeful pursuit of the past or by the apparently chance recall of one thing by another. The ancients make a parallel distinction between reminiscence and reverie. The former is a process in which recollection resembles reasoning in proceeding step by step through a series of related terms; the latter is more like daydreaming or spontaneous fantasy.

The second problem can be stated, perhaps, as the mystery of retention itself. In describing the capacity of the memory to hold the innumerable things which are not now in mind but can be recalled, the ancients speak of memory as "the storehouse of images." Every variety of thing which can be perceived can be "stored up in the memory," says Augustine, and "called up at my pleasure. . . . When I speak of this or that," he goes on, "the images of all the things I mention are at hand from the same storehouse of memory, and if the images were not there I could not so much as speak of the things . . . The things themselves are not brought into the memory; it is only their images which are seized with such marvellous speed, and stored away marvellously as if in cabinets, and as marvellously brought forth again when we remember."

The marvel of memory deepens into a mystery when we ask what the metaphor of the storehouse literally means. Where actually are the images when they are not actually in mind? If an image is by its nature an act of consciousness, whereby we apprehend objects not immediately present to our senses, how do images exist outside of consciousness during intervals when they do not function in remembering, imagining, or other acts of knowing? Their return to consciousness seems to imply that they have been retained, but where and how is the problem not solved by the metaphor of things stored away in a capacious barn.

The physical storehouse does not require any fundamental transformation in the being of the things it holds between periods when they are actually in use. The memory does. This problem of the nature and causes of retention William James seems to think can be solved only in terms of the retentive power of nervous tissue—what he calls "physiological retentiveness"—though in the view of others the problem becomes no easier (and may even be more complicated) when it is transferred from mind to matter. On either view, there seems to be no question that changes in the brain are somehow causally connected with the activity of memory and imagination, especially retention and recall. Aquinas, for example, observes that the imagination and memory may be "hindered by a lesion of the corporeal organ . . . or by lethargy," an observation many times extended by more recent investigations of the brain pathology underlying amnesia and aphasia.

JAMES' TREATMENT of retention as somehow based on pathways traced in the brain, with recall the result of a retracing of these paths, tends to emphasize the affinity between memory and habit. His theory, discussed in the chapter on HABIT, that the plasticity of matter, certainly living matter, underlies learning or habit formation, while the inertia or retentiveness of matter, especially the neural matter of the brain, explains memory or the persistence of habits during periods of disuse, seems almost to identify habit and memory. Ice skating after many years of absence from the sport is as much remembering how to ice skate as reciting a poem committed to memory in youth is the exercise of an old habit.

Not all conceptions of habit and memory permit this fusion of the two—or even their affinity as related aspects of the same phenomenon. Aquinas, for example, restricts memory to an act of knowledge. The performance popularly called "reciting from memory" would not be for him an act of memory, though it might involve memory if the recitation were accompanied by knowledge of the time or place and occasion when the poem was first learned. Such knowledge would be a memory, but the recitation itself would not be, any more than ice skating is. These performances represent the exercise of habits of skill or art.

In view of this, Aquinas raises the question whether the act of knowledge, of the sort involved in reconsidering a geometric proof

learned at some earlier moment and now recalled to mind, is an act of memory. The knowledge of the proof which is retained by the intellect during periods when it is not actually exercised, he would call an intellectual habit or habit of knowledge. But should the recollection of this retained knowledge, or the activation of this intellectual habit, also be called an act of memory? Aquinas answers No, on the ground that no reference to the past need be involved in reworking a geometrical problem solved at some earlier time. But if the individual also happens to recall *when* he first solved the problem, that is another matter. Even so, Aquinas claims that "if in the notion of memory we include its object as something past, then the memory is not in the intellectual, but only in the sensitive part." The intellect is said to remember only in the sense of recalling a truth retained by habit, and "not in the sense that it understands the past as something here and now."

Memory is considered in still another way in relation to speculative truths about scientific or philosophical matters. The question is one of the origin of such knowledge. In the usual conception of memory as knowledge of past particulars, one traditional view, found in Aristotle, holds that "out of sense-perception comes to be what we call memory, and out of frequently repeated memories of the same thing develops experience"—the generalized experience which gives rise to induction and the apprehension of the universal. But in the tradition of the great books we also find a more radical and, perhaps, less familiar conception of memory as the chief source of knowledge.

This is Plato's doctrine of reminiscence, in which all learning is a kind of remembering of knowledge already present in the soul. All teaching takes the form of helping the learner to recollect things he may not be aware he knows, by reminding him through a process of questioning which awakens the knowledge already latent in him.

In the *Meno*, Meno asks Socrates, "What do you mean by saying that we do not learn, and that what we call learning is only a process of recollection?" Socrates undertakes to show Meno what he means by taking a slave boy who appears not to know the solution of a certain geometrical problem and merely by questioning him, without ever giving him a single answer, getting the slave boy to find the right solution for himself. Meno assures Socrates that the slave boy had never been taught geometry. Since the boy was not told the answer, he must have always known it, and needed only some reminding to remember what he knew. Socrates suggests the explanation that the boy's soul always possessed this knowledge, bringing it from another life.

Before he undertook the demonstration with the slave boy, Socrates had proposed this hypothesis. "The soul, being immortal, and having been born again many times, and having seen all things that exist . . . has knowledge of them all; and it is no wonder that it should be able to call to remembrance all that it ever knew about virtue, and about everything; for as all nature is akin, and the soul has learned all things, there is no difficulty in her eliciting, or as men say learning, out of a single recollection all the rest, if a man is strenuous and does not faint; for all enquiry and all learning is but recollection."

Though he differs from Plato in his conception of the soul and the origin of the knowledge which it innately possesses, Augustine seems to hold a similar view. As he examines his own memory, it appears to contain much that has not been implanted there by sense-experience. Certain things, referred to by words he understands, he says, "I never reached with any sense of my body, nor ever discerned them otherwise than in my mind; yet in my memory have I laid up not their images, but themselves. How they entered into me, let them say if they can; for I have gone over all the avenues of my flesh, but cannot find by which they entered." If the seeds of learning are in the soul at its creation, memory can draw from these "seminal reasons" the full fruit of knowledge.

THE DOCTRINE OF reminiscence changes the meaning of both learning and memory at the same time. When learning consists in remembering knowledge not acquired in this life, then the activity of memory cannot be, as it is usually conceived, a recollection of knowledge previously acquired in this life by learning. In order to understand a doctrine in which famil-

iar meanings are so profoundly altered, it is perhaps necessary to understand the problem it tries to solve.

That problem exists only for those who make an absolute distinction between particular sensory images and universal ideas or abstract concepts. Those who, like Hobbes, Berkeley, or Hume, deny universals or abstractions as any part of the mind's content, see no special problem in the origin of that part of the mind's content which is not received as sense-impressions. The original impressions are somehow externally caused, and all the rest of the mind's content—its images and memories and all constructions of the sort Locke calls "complex ideas"—then arise by natural derivation from the original sense-impressions.

But those who, on the contrary, maintain that ideas or concepts are *not* images of any sort, cannot avoid the problem of how the mind comes by its ideas. One solution of this problem attributes existence to ideas as intelligible objects, and attributes to the mind the power to apprehend them by direct intuition, just as the senses directly apprehend sensible objects. But if ideas, whether or not they exist outside the mind, cannot be apprehended intuitively, then what is the origin of the ideas whereby the mind understands intelligible objects?

To this question, the doctrine of reminiscence is one answer. Another answer is the doctrine of abstraction, as formulated by Aristotle and Aquinas. Locke and James also seem to recognize a distinction in kind between abstractions and other mental content, but they do not appear to find any need for a special power to perform the act of abstracting general ideas or universal concepts from the sensory particulars of perception and imagination. Aquinas, however, thinks that a special faculty called "the active intellect" must be postulated to account for the mind's possession of the ideas or concepts whereby it actually understands what it cannot perceive or imagine.

THESE THEORIES are considered in the chapters on IDEA and MIND. But just as the doctrine of reminiscence is relevant here for its bearing on the discussion of memory, so the doctrine of abstraction which posits an active intellect is relevant to the discussion of imagination.

"Imagination," writes Aristotle, "is different from either perceiving or discursive thinking, though it is not found apart from sensation or judgment without it. That this activity is not the same kind of thinking as judgment is obvious. For imagining lies within our own power whenever we wish (*e.g.*, we can call up a picture, as in the practice of mnemonics by the use of mental images), but in forming opinions we are not free; we cannot escape the alternatives of falsehood or truth."

The point is not that images cannot be false. They frequently are, as (according to Aristotle) sensations never are. But the falsity of our imaginations involves a judgment that things really are as we imagine them to be. If imagination is not accompanied by judgment, the question of truth or falsity does not arise, for in pure imagination we are not concerned with the way things actually exist, but with the possible, *i.e.*, the imaginary rather than the real. "Everyone knows the difference," says James, "between imagining a thing and believing in its existence."

Conceiving imagination as an activity depending upon the prior activity of the senses, Aristotle holds that imagination is "incapable of existing apart from sensation." In this he does not differ from other psychologists. But he also holds that rational thought, which for him is quite distinct from imagination, cannot exist apart from imagination. "To the thinking soul images serve as if they were the contents of perception. . . . That is the why the soul never thinks without an image."

Aristotle is here saying more than that a special faculty of mind or intellect abstracts the universal form—or what Aquinas calls "the intelligible species"—from the sensory matter of the image, or what Aquinas calls "the phantasm." Aristotle is, in addition, insisting that the act of understanding is always accompanied by imaginative activity. The kind of thinking which depends upon the abstraction of ideas from imagery also depends upon the presence of images when the thinking takes place. "The faculty of thinking," says Aristotle, "thinks the forms in the images"; or, as Aquinas expresses it, "for the intellect to understand actually, not only when it acquires new knowledge, but also when it uses knowledge already acquired, there is need for the act of imagination. . . It must of

necessity turn to the phantasms in order to perceive the universal nature existing in the individual." The cooperation of the imagination with the intellect is shown, furthermore, by the fact that "when the act of imagination is hindered by a lesion of the corporeal organ . . . we see that a man is hindered from understanding actually even those things of which he had a previous knowledge."

Augustine, on the contrary, refers to things "which we know within ourselves without images." When we consider numbers, for example, "it is not their images which are in [our] memory, but themselves." The question of imageless thought—of thinking abstractly without the use of images—seems to be peculiarly insistent in sciences like mathematics, metaphysics, and theology, in which the conceivable may not be imaginable. The objects peculiar to these sciences seem to require the scientist to do without imagery, or, as Aquinas says, "to rise above his imagination."

This may be true even in physics. Atoms, according to Lucretius, are conceivable, but they are no more imaginable than they are perceptible. If we need images to think of them, we must use imagery in a metaphorical way, picturing the atom as the smallest particle imaginable—only more so! To the objection that there must be imageless thought if we can think of incorporeal beings, of which there can be no images or phantasms, Aquinas replies that we do so "by comparison with sensible bodies of which there are phantasms."

ARISTOTLE'S THEORY that the operations of thinking are always dependent on (though not reducible to) acts of imagination, does not imply that imagination is always accompanied by abstract or rational thought. Normally, human thinking and knowing is a work which combines both sense and intellect, both reason and imagination, but sometimes even in man imagination may be active without judgment or reasoning. Brute animals, according to Aristotle, are largely guided by their imaginations "because of the non-existence in them of mind." But when imagination takes the place of thought in men, it is "because of the temporary eclipse of their minds by passion or disease or sleep."

Dreaming seems to be the striking case of imagination divorced from reason's judgment or control. It has long been suspected that animals also dream, but the question whether they can distinguish their dreams from their waking perceptions may prove forever unanswerable. Philosophers and psychologists have, however, asked themselves whether there is any way of being certain of the difference between waking thought and the phantasmagoria of dreams.

Descartes, for example, asks, "How do we know that the thoughts that come in dreams are more false than those that we have when we are awake, seeing that often enough the former are not less lively and vivid than the latter?" It seems to him that "there are no certain indications by which we may clearly distinguish wakefulness from sleep." Even as he writes these words, he can almost persuade himself that he is dreaming. Yet he does find one probable sign whereby to tell dreaming from waking. "Our memory," he observes, "can never connect our dreams with one another, or with the whole course of our lives, as it unites events which happen to us while we are awake."

Aquinas finds other evidences of the difference. When a man is fully asleep, he does not dream at all, for his imagination is inactive as well as his senses and his mind. But as sleep passes gradually into waking, his faculties begin to act again, not merely the imagination, but the reason also, so that "a man may judge that what he sees is a dream, discerning, as it were, between things and their images. Nevertheless, the common sense remains partly suspended, and therefore, although it discriminates some images from reality, yet it is always deceived in some particular. Even while a man is asleep, his sense and imagination may be to some extent free, and similarly the judgment of his intellect may be unfettered, though not entirely. Consequently, if a man syllogizes while asleep, when he wakes up he invariably recognizes a flaw in some respect."

APART FROM QUESTIONS of truth and falsity, or reality and illusion, the nature and causes of dreaming are perennial themes in the tradition of western thought. As different suppositions are made concerning the cause of dreams, so different interpretations are given of their content.

When it is supposed that the dream is inspired by the gods or is a divine visitation, it becomes a medium of divination or prophecy—a way of foretelling the future, or of knowing what the gods intend in general, or for the guidance of some particular man. In the great books of ancient poetry and history, and in the Old Testament as well, dreams, like oracles, are interpreted as supernatural portents, and figure as one of the major sources of prophecy. Aristotle discounts both the fulfillment of dreams and their non-fulfillment, "for coincidences do not occur according to any universal or general law." Regarding prophetic dreams as mere coincidences, he does not find it surprising that "many dreams have no fulfillment." From the fact that "certain of the lower animals also dream," he thinks "it may be concluded that dreams are not sent by God, nor are they designed for the purpose of revealing the future."

Instead, Aristotle proposes natural causes for the origin of dreams. Slight stimulations of the sense-organs awaken the dream process and determine its content. "Dreamers fancy that they are affected by thunder and lightning, when in fact there are only faint ringings in their ears . . . or that they are walking through fire and feeling intense heat, when there is only a slight warmth affecting certain parts of the body." Lucretius similarly explains dreams by natural causes, but attributes their content to events which have dominated the thought of waking life.

"On whatever things we have before spent much time," he writes, "so that the mind was more strained in the task than is its wont, in our sleep we seem mostly to traffic in the same things; lawyers think that they plead their cases and confront law with law, generals that they fight and engage in battles, sailors that they pass a life of conflict waged with winds." This is true even of animals. "Strong horses, when their limbs are lain to rest," Lucretius continues, "yet sweat in their sleep, and pant forever, and strain every nerve as though for victory. . . . And hunters' dogs often in their soft sleep yet suddenly toss their legs, and all at once give tongue, and again and again sniff the air with their nostrils, as if they had found and were following the tracks of wild beasts."

In the tradition of the great books, modern writers like their ancient forebears appeal thus to sensation and memory as the natural causes of the origin and content of dreams. But, except for daydreams or waking fantasy, they do not observe that dreaming may be even more profoundly a product of desire. If Freud's extraordinary insight on this point is supported by all the evidences he assembles in his great work, the *Interpretation of Dreams*, then the lateness of this discovery may be thought even more extraordinary than the theory itself.

The theory is not simply that the content of dreams is determined by desires. When Oedipus tells Jocasta of his fear that in taking her to wife he has unwittingly married his mother, she tells him to fear not, for "many men ere now have so fared in dreams also." If that is so, then such dreams do not call for the interpretation which Freud gives. If there are men who suffer from what Freud calls "the Oedipus complex," involving repressed incestuous desires, then the expression of those desires in dreaming will not take the form of imagining them to be actually fulfilled.

On the contrary, Freud's theory of dream symbolism holds that "the dream as remembered is not the real thing at all, but a distorted substitute." Beneath what he calls "the manifest dream-content"—the actual moving images which occupy the dreaming consciousness—lie "the latent dream-thoughts" which are distorted in the actual dream. This distortion "is due to the activities of censorship, directed against the unacceptable unconscious wish-impulses . . . invariably of an objectionable nature, offensive from the ethical, aesthetic, or social point of view, things about which we do not dare to think at all, or think of only with abhorrence." The repressed desires or wishes, the loves or fears, which the dreamer refuses to acknowledge consciously must, therefore, appear in dreams in a disguised form. The imagery of dreams seems to Freud to be a kind of language in which the repressed materials of thought and feeling employ a special symbolism to express what the moral censor will not permit us to express in the ordinary language of our conscious thought or social conversation.

As ordinary language contains symbols conventionally agreed upon, so Freud finds that

the recurrence again and again of certain images in the dreams of neurotic patients, and of normal persons as well, gives them the character of conventional symbols. "The number of things which are represented symbolically in dreams is," according to Freud, "not great." They are, he says, "the human body as a whole, parents, children, brothers and sisters, birth, death, nakedness—and one thing more. The only typical, that is to say, regularly occurring, representation of the human form as a whole is that of a *house*. . . . When the walls are quite smooth, the house means a man; when there are ledges and balconies which can be caught hold of, a woman. Parents appear in dreams as *emperor* and *empress*, *king* and *queen*, or other exalted personages . . . Children and brothers are less tenderly treated, being symbolized by little *animals* or *vermin*. Birth is almost invariably represented by some reference to *water*. . . . For dying we have setting out upon a *journey* or *travelling* by train. *Clothes* and *uniforms* stand for nakedness." The one thing more, which Freud mentions in his enumeration, comprises the sexual organs and acts. In contrast to all the others, these, he says, "are represented by a remarkably rich symbolism. . . . An overwhelming majority of symbols in dreams are sexual symbols."

Freud points out why it would be a mistake to treat dream symbols like the words of an ordinary language. "Their object is not to tell anyone anything; they are not a means of communication; on the contrary, it is important to them not to be understood." Wresting their secret from such symbols is a remarkable achievement. Aristotle's remark, which Freud quotes, that "the most skilful interpreter of dreams is he who has the faculty of observing resemblances," seems to be borne out in the Freudian method of discovering the latent content of the dream symbolism. But Freud's therapeutic use of what can thus be discovered makes the psychoanalytic method a thing totally unanticipated by any of his predecessors.

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PAGE SECTIONS: When the text is printed in one column, the letters **a** and **b** refer to the upper and lower halves of the page. For example, in **53** JAMES: *Psychology*, **116a-119b**, the passage begins in the upper half of page 116 and ends in the lower half of page 119. When the text is printed in two columns, the letters **a** and **b** refer to the upper and lower halves of the left-hand side of the page, the letters **c** and **d** to the upper and lower halves of the right-hand side of the page. For example, in **7** PLATO: *Symposium*, **163b-164c**, the passage begins in the lower half of the left-hand side of page 163 and ends in the upper half of the right-hand side of page 164.

AUTHOR'S DIVISIONS: One or more of the main divisions of a work (such as PART, BK, CH, SECT) are sometimes included in the reference; line numbers, in brackets, are given in certain cases; *e.g.*, *Iliad*, BK II [265–283] **12d**.

BIBLE REFERENCES: The references are to book, chapter, and verse. When the King James and Douay versions differ in title of books or in the numbering of chapters or verses, the King James version is cited first and the Douay, indicated by a *(D)*, follows; *e.g.*, OLD TESTAMENT: *Nehemiah*, 7:45—*(D) II Esdras*, 7:46.

SYMBOLS: The abbreviation "esp" calls the reader's attention to one or more especially relevant parts of a whole reference; "passim" signifies that the topic is discussed intermittently rather than continuously in the work or passage cited.

For additional information concerning the style of the references, see the Explanation of Reference Style; for general guidance in the use of *The Great Ideas*, consult the Preface.

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54 FREUD: *Hysteria*, 32c-33d / *Interpretation of Dreams*, 156b-157a; 353d-354a / *Unconscious*, 438b-d / *General Introduction*, 485a-486a; 488c-489c; 566c-567b / *Ego and Id*, 697d-698d; 700b-c

2*c*. The association of ideas: controlled and free association; reminiscence and reverie

7 PLATO: *Republic*, BK V, 361a
8 ARISTOTLE: *Memory and Reminiscence*, CH 2 [451^{b}10–453^{a}31] 693a-695d

(2. *The activity of memory.* 2c. *The association of ideas: controlled and free association; reminiscence and reverie.*)

23 HOBBES: *Leviathan*, PART I, 52b-53b; 67d; 69b-c
26 SHAKESPEARE: *Richard II*, ACT V, SC V [1-41] 349d-350a
29 CERVANTES: *Don Quixote*, PART I, 1a-3b; 18d-19b; 50b-52d; 134b-135d
31 DESCARTES: *Objections and Replies*, 143a,c
31 SPINOZA: *Ethics*, PART II, PROP 18 381d-382b; PART III, PROP 14-17 400d-402a
35 LOCKE: *Human Understanding*, BK II, CH XXXIII 248b-251d
35 BERKELEY: *Human Knowledge*, SECT 30 418c
35 HUME: *Human Understanding*, SECT III 457c-458a; SECT V, DIV 41-45 467d-469c passim
36 STERNE: *Tristram Shandy*, 193a-194b; 319a-320b; 393a-394a
42 KANT: *Pure Reason*, 51c-d / *Judgement*, 493c-d; 528c-529b
49 DARWIN: *Descent of Man*, 292d-293a
51 TOLSTOY: *War and Peace*, BK II, 82a-d; BK III, 125b c; 146d-148c; BK VI, 254a; BK VII, 293c-295a; BK X, 394d; 422b-c; 443c-444a; 464a-465c esp 464d-465a; BK XIV, 608c-d; BK XV, 615a-616a
53 JAMES: *Psychology*, 360a-395a esp 370a-385b; 667a-678b passim; 827a-835a
54 FREUD: *Hysteria*, 65a-67b esp 66c-67b; 74a-79d esp 74a-77b / *Interpretation of Dreams*, 180b-181b; 253d-254a; 347b-350a esp 348a-349a; 352b-c; 375b-376a / *Repression*, 423c-d / *General Introduction*, 486b-489c esp 486d-488a

2*d*. Recognition with or without recall

7 PLATO: *Theaetetus*, 538d-541a
18 AUGUSTINE: *Confessions*, BK X, par 27-28 78b-d
35 LOCKE: *Human Understanding*, BK I, CH III, SECT 21 118b-119a; BK II, CH X, SECT 2 141b-c; SECT 7 142c-d
53 JAMES: *Psychology*, 163b; 384a; 440b-441a esp 441b-442b [fn 2]
54 FREUD: *Hysteria*, 33c; 79a-d passim

2*e*. The scope and range of normal memory: failure or defect of memory and its causes

4 HOMER: *Odyssey*, BK IX [82-104] 230a
7 PLATO: *Phaedrus*, 138c-141a,c / *Philebus*, 621a-b
8 ARISTOTLE: *Memory and Reminiscence*, CH I [450^{a}26-451^{a}19] 691a-692b
12 LUCRETIUS: *Nature of Things*, BK III [830-869] 40c-41a
17 PLOTINUS: *Fourth Ennead*, TR III, CH 29, 157c-d
18 AUGUSTINE: *Confessions*, BK X, par 12-36 74b-80d
21 DANTE: *Divine Comedy*, PURGATORY, XXXI [91-111] 101d-102a; XXXIII [79-102] 105a-b; PARADISE, I [1-12] 106a; XXXIII [46-75] 156c-157a
25 MONTAIGNE: *Essays*, 15a-16c; 236c-d; 316a-317a; 465c-466c
35 LOCKE: *Human Understanding*, BK II, CH X, SECT 4-5 141d-142b; CH XXIX, SECT 3 234b-c; BK III, CH III, SECT 2 254d-255a
36 STERNE: *Tristram Shandy*, 234b-236b
40 GIBBON: *Decline and Fall*, 88d
51 TOLSTOY: *War and Peace*, BK III, 129d-130b
53 JAMES: *Psychology*, 131a; 179a-b; 216a-b; 240a-258b; 443a-450a; 841b-842a; 844b
54 FREUD: *Interpretation of Dreams*, 155a-156a; 341b-345b passim / *General Introduction*, 453b-456a esp 454b-455b; 526d-527c; 561c-562b

2*e*(1) Forgetting as a function of the time elapsed

18 AUGUSTINE: *Confessions*, BK X, par 18 75d-76a
20 AQUINAS: *Summa Theologica*, PART III SUPPL, Q 98, A 7, REP 3 1076d-1077b
23 HOBBES: *Leviathan*, PART I, 50b-c
25 MONTAIGNE: *Essays*, 404a-b
26 SHAKESPEARE: *Henry V*, ACT IV, SC III [40-67] 556a-b
35 LOCKE: *Human Understanding*, BK II, CH X, SECT 5 142a-b
51 TOLSTOY: *War and Peace*, BK X, 422b-c
53 JAMES: *Psychology*, 438a-b

2*e*(2) The obliviscence of the disagreeable: conflict and repression

25 MONTAIGNE: *Essays*, 177d-180b esp 180a-b; 236b-d
49 DARWIN: *Descent of Man*, 312b
51 TOLSTOY: *War and Peace*, BK V, 200c-d; BK IX, 355d-356a; BK XIV, 605c-d; BK XV, 616a-617a; 630b-c
54 FREUD: *Origin and Development of Psycho-Analysis*, 6d-8b; 13a-b / *Hysteria*, 65b-66a; 82b-d / *Interpretation of Dreams*, 343c-345a esp 344d-345a; 346d-347a; 378b-380d esp 378b-379a / *Repression*, 422d-425b / *General Introduction*, 464b-467a; 472c-475a esp 474a; 566a-567a; 579d / *Inhibitions, Symptoms, and Anxiety*, 720a-d; 732b-c / *New Introductory Lectures*, 811a-b

2*e*(3) Organic lesions: amnesia and the aphasias

8 ARISTOTLE: *Memory and Reminiscence*, CH I [450^{a}26-^{b}12] 691a-c; CH 2 [453^{b}1-11] 695d
19 AQUINAS: *Summa Theologica*, PART I, Q 84, A 7, ANS 449b-450b
35 LOCKE: *Human Understanding*, BK II, CH X, SECT 5, 142b
49 DARWIN: *Descent of Man*, 299c
53 JAMES: *Psychology*, 25b-26b; 32a-34a; 35b-37b; 241b-258b esp 251b-252a, 258a-b; 447a; 448a-b; 490a-493a passim
54 FREUD: *Civilization and Its Discontents*, 770a

2e(4) False memories: illusions of memory; *déjà vu*

8 ARISTOTLE: *Memory and Reminiscence*, CH I [451a8–12] 692a
51 TOLSTOY: *War and Peace*, BK VII, 293c-295a; BK X, 393a-b
53 JAMES: *Psychology*, 241a-b; 442a
54 FREUD: *General Introduction*, 597b-599b esp 597b-d

3. Remembering as an act of knowledge and as a source of knowledge

7 PLATO: *Phaedrus*, 124c-126c / *Meno*, 179d-183a / *Phaedo*, 228a-230d / *Republic*, BK VI, 374d-375a
8 ARISTOTLE: *Posterior Analytics*, BK II, CH 19 [99b34–100a9] 136b-c / *Topics*, BK II, CH 4 [111b24–31] 156d-157a / *Metaphysics*, BK I, CH 1 [980a28–981a1] 499a-b / *Memory and Reminiscence*, CH 1 690a-692b
17 PLOTINUS: *Fourth Ennead*, TR III, CH 25–31 154d-158c passim; TR IV, CH 1–17 159a-166d passim; TR VI, CH 3 190b-191c
18 AUGUSTINE: *Confessions*, BK X, par 12–36 74b-80d / *Christian Doctrine*, BK II, CH 9 640c-d; CH 14, 643b; BK IV, CH 5, 677b-c
19 AQUINAS: *Summa Theologica*, PART I, Q 78, A 4, ANS and REP 5 411d-413d; Q 79, AA 6-7 419b-421c; Q 84, A 3, REP 3 443d-444d; Q 89, A 6, REP 1 478b-d
20 AQUINAS: *Summa Theologica*, PART III SUPPL, Q 70, A 2, REP 4 896a-897d
21 DANTE: *Divine Comedy*, PARADISE, V [34–42] 112c
23 HOBBES: *Leviathan*, PART I, 53a-d
30 BACON: *Advancement of Learning*, 32d; 61d-62c
31 DESCARTES: *Rules*, III, 4d; VII, 10b-c; VIII, 14b; XI 17b-18b; XII, 18c; 19d-20d / *Discourse*, PART I, 41d / *Meditations*, V, 95d / *Objections and Replies*, 125a-b
33 PASCAL: *Pensées*, 369 236b
35 LOCKE: *Human Understanding*, BK I, CH III, SECT 21 118b-119a; BK II, CH X, SECT 2 141b-c; SECT 8 142d-143a; BK IV, CH I, SECT 8–9 308b-309b
46 HEGEL: *Philosophy of Right*, PART I, par 69, 30b-c
53 JAMES: *Psychology*, 145a; 396a-397a; 424b-427a; 450a-451b
54 FREUD: *Unconscious*, 428d / *General Introduction*, 484c-486a esp 485a-b

3a. Reminiscence as the process of all learning: innate ideas or seminal reasons

7 PLATO: *Phaedrus*, 124c-126c / *Meno*, 179d-183a; 188d-189a / *Phaedo*, 228a-230d / *Theaetetus*, 515d-517b
8 ARISTOTLE: *Posterior Analytics*, BK II, CH 19 [99b20–33] 136a-b / *Metaphysics*, BK I, CH 9 [992b24–993a11] 511a-c / *Memory and Reminiscence*, CH 2 [451a19–452a13] 692b-693d
10 GALEN: *Natural Faculties*, BK I, CH 12, 173a-b
12 EPICTETUS: *Discourses*, BK II, CH 11, 150a-c
17 PLOTINUS: *First Ennead*, TR II, CH 4, 8b-c / *Fourth Ennead*, TR III, CH 25–26 154d-156c; TR IV, CH 5 160d-161b
18 AUGUSTINE: *Confessions*, BK X, par 10 73d-74a; par 16–19 75b-76b; par 26–38 78a-81a / *City of God*, BK VIII, CH 6, 269b-c / *Christian Doctrine*, BK I, CH 9 627a
19 AQUINAS: *Summa Theologica*, PART I, Q 54, A 4, ANS and REP 1 287b-288a; Q 55, A 2 289d-290d; Q 57, A 1, REP 3 295a-d; Q 58, A 1 300c-301a; Q 60, A 2, ANS 311a-d; Q 84, A 3 443d-444d; A 4, ANS 444d-446b; A 6, ANS 447c-449a; Q 89, A 1, REP 3 473b-475a; Q 117, A 1, ANS and REP 4 595d-597c
25 MONTAIGNE: *Essays*, 264b-265b
28 HARVEY: *On Animal Generation*, 333d-334d
30 BACON: *Advancement of Learning*, 1b-c
31 DESCARTES: *Rules*, IV, 5c-d; 6d; VI, 8d-9a; VIII, 13c-d / *Discourse*, PART V, 54c; PART VI, 62a / *Meditations*, II 77d-81d passim; III, 83b; 88c-d / *Objections and Replies*, 120c-d; 140c; 215b-c; 224b,d-225a
31 SPINOZA: *Ethics*, PART V, PROP 23, SCHOL 458c-d
35 LOCKE: *Human Understanding*, 90d-91b; BK I 95b,d-121a,c passim, esp CH I, SECT 15–16 98d-99c, SECT 23 101b-102a, CH III, SECT 21 118b-119a; BK II, CH I, SECT 1 121a-b; SECT 6 122b-c; CH IX, SECT 6 139a
35 HUME: *Human Understanding*, SECT II, DIV 17, 457b,d [fn 1]
42 KANT: *Pure Reason*, 113b-115a / *Practical Reason*, 352c-353a
53 JAMES: *Psychology*, 851a-862a esp 851a-852b, 856a-860a; 867a-868a; 879b-880a; 889a-b; 897a-b

3b. Sensitive and intellectual memory: knowledge of the past and the habit of knowledge

7 PLATO: *Theaetetus*, 538d-544a
8 ARISTOTLE: *Topics*, BK II, CH 4 [111b24–31] 156d-157a; BK IV, CH 4 [125b4–14] 174c; BK VIII, CH 2 [157b11–16] 214a / *Soul*, BK III, CH 5 [430a20–25] 662d / *Memory and Reminiscence*, CH 1 [449b3–450a26] 690a-691a; CH 2 [451a19–b6] 692b-d
17 PLOTINUS: *Fourth Ennead*, TR III, CH 25–31 154d-158c passim
18 AUGUSTINE: *Confessions*, BK X, par 16–19 75b-76b; par 23–25 77a-d; par 30 79b-c; par 36 80c-d / *City of God*, BK XXII, CH 30, 618a
19 AQUINAS: *Summa Theologica*, PART I, Q 54, A 5 288a-d; Q 77, A 8, REP 4 406b-407a; Q 79, AA 6-7 419b-421c; Q 89, A 6, REP 1 478b-d
20 AQUINAS: *Summa Theologica*, PART I-II, Q 51, A 3 14b-15a; PART III SUPPL, Q 70, A 2, REP 4 896a-897d
23 HOBBES: *Leviathan*, PART I, 53a-54a; 60a-b; 65c

(3. ***Remembering as an act of knowledge and as a source of knowledge. 3b. Sensitive and intellectual memory: knowledge of the past and the habit of knowledge.***)

31 DESCARTES: *Rules*, III, 4c-d; XI 17b-18b
31 SPINOZA: *Ethics*, PART II, PROP 18, SCHOL 382a-b; PART V, PROP 21 458a
35 LOCKE: *Human Understanding*, BK I, CH III, SECT 21 118b-119a; BK II, CH X, SECT 2 141b-c; SECT 7-8 142c-143a; BK IV, CH I, SECT 8-9 308b-309b; CH XI, SECT 11 357b-c; CH XVI, SECT 1-2 366d-367a
38 ROUSSEAU: *Inequality*, 341d
53 JAMES: *Psychology*, 324a; 424b-427a esp 424b-425b [fn 3]; 433a-434a; 450a-451b

3c. The scientist's use of memory: collated memories as the source of generalized experience

8 ARISTOTLE: *Posterior Analytics*, BK II, CH 19 [99^{b}34-100^{a}9] 136b-c / *Metaphysics*, BK I, CH 1 [980^{a}28 981^{b}13] 499a-500a
28 GILBERT: *Loadstone*, PREF 1a-2d
28 HARVEY: *Motion of the Heart*, 273d / *On Animal Generation*, 332a-335c esp 334c-d
30 BACON: *Advancement of Learning*, 59a-b / *Novum Organum*, PREF 105a-106d; BK I 107a-136a,c esp APH 11-26 107d-108d, APH 97-98 126c-127b, APH 105 128b-c
31 DESCARTES: *Rules*, III, 4c-d; VII 10b-12a passim; VIII, 14b; XVI 33d-35c / *Discourse*, PART II, 47c-d
33 PASCAL: *Vacuum*, 355a-358b
53 JAMES: *Psychology*, 385a-b; 677b-678a

3d. Memory as the muse of poetry and history: the dependence of history on the memory of men

4 HOMER: *Iliad*, BK II [484-493] 14d-15a / *Odyssey*, BK I [1-10] 183a; BK VIII [62-82] 222d-223a; [469-520] 226d-227b
6 HERODOTUS: *History*, BK I, 1a,c; BK III, 114a
6 THUCYDIDES: *Peloponnesian War*, BK I, 353d-354c; BK V, 489a-b; 500d-501a
7 PLATO: *Timaeus*, 443d-444c / *Critias*, 479a-b
13 VIRGIL: *Aeneid*, BK VII [641-646] 254a
14 PLUTARCH: *Pericles*, 128d-129a
15 TACITUS: *Annals*, BK III, 48c; BK IV, 66b-d
21 DANTE: *Divine Comedy*, HELL., II [1-9] 2c; PARADISE, I [1-12] 106a; XXXIII [46-75] 156c-157a
23 HOBBES: *Leviathan*, PART I, 71c
25 MONTAIGNE: *Essays*, 41b-42a; 199c-d; 305b-306a
30 BACON: *Advancement of Learning*, 13d-14b; 32d; 33b; 34c; 38c-39a
33 PASCAL: *Pensées*, 626 286b
36 SWIFT: *Gulliver*, PART IV, 169a
36 STERNE: *Tristram Shandy*, 193a-194b
40 GIBBON: *Decline and Fall*, 88c-d; 296a; 354c-d; 413b-d
41 GIBBON: *Decline and Fall*, 337c; 501c-503a passim, esp 502a
44 BOSWELL: *Johnson*, 1b-c; 3d-4a
46 HEGEL: *Philosophy of History*, INTRO, 153a-154c; 181a-182a; PART I, 239c-240a; 247d-248a
47 GOETHE: *Faust*, DEDICATION 1a-b
51 TOLSTOY: *War and Peace*, BK III, 134a-c; BK IX, 366d-367b

4. The contribution of memory: the binding of time

4a. Memory in the life of the individual: personal identity and continuity

4 HOMER: *Odyssey*, BK IX [82-104] 230a
7 PLATO: *Phaedrus*, 138c-140a / *Republic*, BK VI, 374d-375a / *Philebus*, 614a-c
8 ARISTOTLE: *Soul*, BK III, CH 5 [430^{a}20-25] 662d
9 ARISTOTLE: *Rhetoric*, BK II, CH 12 [1389^{a}20-24] 636c; CH 13 [1390^{a}6-10] 637b-c
12 LUCRETIUS: *Nature of Things*, BK III [670-678] 38d; [830-869] 40c-41a
13 VIRGIL: *Aeneid*, BK I [441-493] 115a-116b; BK II [1-12] 124a; BK VI [703-751] 229b-231a
17 PLOTINUS: *Fourth Ennead*, TR III, CH 25-31 154d-158c passim; TR IV, CH 1-17 159a-166d passim
18 AUGUSTINE: *Confessions*, BK XI, par 17-38 93b-98c esp par 36-38 97d-98c
20 AQUINAS: *Summa Theologica*, PART III SUPPL, Q 87, A 1 997b-998c; Q 98, A 7 1076d-1077b
21 DANTE: *Divine Comedy*, PURGATORY, XXXI-XXXIII 100d-105d passim
25 MONTAIGNE: *Essays*, 15a-16c; 236b-237a; 316a-317a; 465c-466c
31 DESCARTES: *Meditations*, VI, 103a-d
35 LOCKE: *Human Understanding*, BK II, CH XXVII, SECT 9-26 222a-227d passim, esp SECT 20 225c-d
40 GIBBON: *Decline and Fall*, 544c-545d
47 GOETHE: *Faust*, PART I [779-784] 20b
48 MELVILLE: *Moby Dick*, 19a-20a
49 DARWIN: *Descent of Man*, 297a-c
51 TOLSTOY: *War and Peace*, BK X, 394d
52 DOSTOEVSKY: *Brothers Karamazov*, EPILOGUE, 411b-412c
53 JAMES: *Psychology*, 145a; 154a-155b; 213a-259b esp 214a-216b, 229a-230a, 240a, 258b-259a; 396a-397a; 412b-413a; 418a; 421a-422a
54 FREUD: *Origin and Development of Psychoanalysis*, 12c / *War and Death*, 760a-b / *Civilization and Its Discontents*, 769a-770c esp 770b-c

4b. Memory in the life of the group or race: instinct, legend, and tradition

OLD TESTAMENT: *Exodus*, 3:15; 12:14-20; 13:1-16; 17:14; 20:8-11 / *Leviticus*, 23:24-25 / *Numbers*, 15:38-41 / *Deuteronomy*, 4:32-40; 5:15; 6; 7:18-19; 8:2-6; 9:7; 15:12-15; 16:1-

12; 24:17-22; 32:7 / *Joshua*, 1:12-13; 3:14-4:9—(*D*) *Josue*, 1:12-13; 3:14-4:9 / *Esther*, 9:25-32 / *Psalms*, 102:12; 135:13—(*D*) *Psalms*, 101:13; 134:13 / *Ecclesiastes*, 1:11; 2:16; 9:5 / *Isaiah*, 44:21; 46:9—(*D*) *Isaias*, 44:21; 46:9 / *Malachi*, 4:4—(*D*) *Malachias*, 4:4

APOCRYPHA: *I Maccabees*, 14:16-49—(*D*) OT, *I Machabees*, 14:16-49

NEW TESTAMENT: *Matthew*, 26:6-13 / *Mark*, 14:3-9 / *Luke*, 22:19-20 / *I Corinthians*, 11:23-25

7 PLATO: *Laws*, BK VII, 716a-b; 717d-718c

13 VIRGIL: *Aeneid*, BK I [441-493] 115a-116b; BK III [84-191] 149b-152a

15 TACITUS: *Annals*, BK III, 60d-61a

20 AQUINAS: *Summa Theologica*, PART I-II, Q 97, A 2 236d-237b

26 SHAKESPEARE: *Henry V*, ACT IV, SC III [40-67] 556a-b / *Julius Caesar*, ACT III, SC II [79-82] 584c

31 DESCARTES: *Discourse*, PART II, 46b-c

33 PASCAL: *Pensées*, 626 286b

36 SWIFT: *Gulliver*, PART IV, 169a

40 GIBBON: *Decline and Fall*, 88b-d; 97c-98c; 398b; 413b-d; 544c-545c; 627b-d

41 GIBBON: *Decline and Fall*, 527d-528a,c

43 MILL: *Representative Government*, 424c-425b

46 HEGEL: *Philosophy of Right*, PART III, par 356 113a-b / *Philosophy of History*, INTRO, 153b-c; 181a-182a; 186d-190b; PART I, 227b-c; 230c-231b; 239c-241a; PART II, 259b-c; 261b; 263d-266a

49 DARWIN: *Descent of Man*, 318a-c; 570b-571b

51 TOLSTOY: *War and Peace*, EPILOGUE I, 647b-c

53 JAMES: *Psychology*, 717a-719a esp 718b-719a; 722b-725a esp 724b-725a; 731b; 851b; 853a-858a

54 FREUD: *Origin and Development of Psycho-Analysis*, 4a-b / *Instincts*, 413c / *Unconscious*, 439d / *General Introduction*, 509a-513d passim, esp 512b-513b; 526c-d; 591d-592b; 599a-b; 608c-d; 613a / *Group Psychology*, 686c-689b esp 688d-689a, 689b [fn 1]; 692a-693a / *Ego and Id*, 706c-708b esp 707b, 708b / *War and Death*, 763b-c; 764d-765a / *Civilization and Its Discontents*, 795b-796c; 800a-b / *New Introductory Lectures*, 834b-d

5. The activity of imagination, fancy, or fantasy: the nature and variety of images

7 PLATO: *Sophist*, 577a-b / *Philebus*, 623d-624c

8 ARISTOTLE: *Soul*, BK III, CH 3 659c-661b; CH II [433^b32-434^a9] 666d

9 ARISTOTLE: *Rhetoric*, BK I, CH II [1370^a28-$^b29$] 613c-614b

13 VIRGIL: *Aeneid*, BK VIII [18-25] 259b

17 PLOTINUS: *Fourth Ennead*, TR III, CH 31 158b-c

18 AUGUSTINE: *Confessions*, BK X, par 13-14 74c-75a

19 AQUINAS: *Summa Theologica*, PART I, Q 12, A 9, REP 2 58b-59a; Q 78, A 4, ANS 411d-413d; Q 84, A 6, ANS and REP 1-2 447c-449a

21 DANTE: *Divine Comedy*, PURGATORY, XVII [1-45] 78c-79a

23 HOBBES: *Leviathan*, PART I, 49a-52b; 61a-b; PART III, 172b-d; PART IV, 258b-d; 261a; 262a-c

25 MONTAIGNE: *Essays*, 14c-15a

26 SHAKESPEARE: *Romeo and Juliet*, ACT I, SC IV [96-103] 291c / *Richard II*, ACT V, SC V [1-41] 349d-350a / *Midsummer-Night's Dream*, ACT V, SC I [1-22] 370d-371a

30 BACON: *Advancement of Learning*, 66c-67b

31 DESCARTES: *Rules*, XII, 19d-20a / *Meditations*, II, 79a-c; VI, 96b-97a; 98d-99a

31 SPINOZA: *Ethics*, PART II, PROP 17, SCHOL 381b-d; PROP 40, SCHOL 2 388a-b; PART V, PROP 34, DEMONST 460c-d

32 MILTON: *Paradise Lost*, BK V [95-113] 177b

35 LOCKE: *Human Understanding*, BK II, CH II, SECT 2 128a-b; CH XI, SECT 6 145a; CH XII, SECT 1-CH XIII, SECT 1 147b-149a; CH XIII, SECT 4-6 149b-d; SECT 27 154c-d; CH XIV, SECT 24-31 160b-162a passim; CH XV, SECT 2-3 162c-d; CH XVI, SECT 1-2 165c-d; SECT 5 166b-c; CH XVII, SECT 3-7 168b-169c; CH XXII, SECT 2 201a-b; CH XXIII, SECT 33-37 212d-214b passim; BK III, CH XI, SECT 15 303b-c; BK IV, CH IV, SECT 5 324d

35 BERKELEY: *Human Knowledge*, INTRO, SECT 10 406d-407b; SECT 1, 413a; SECT 5 414a-b

35 HUME: *Human Understanding*, SECT II, DIV II, 455b-c; DIV 13 455d-456b; SECT V, DIV 39, 466c-d

42 KANT: *Pure Reason*, 173b-174a / *Judgement*, 493c-d; 528c-529c

46 HEGEL: *Philosophy of History*, INTRO, 153a-c; 155b; PART I, 219d-221a; 254b-d

49 DARWIN: *Descent of Man*, 292a-b

51 TOLSTOY: *War and Peace*, BK II, 105d-106b; BK VII, 294b-295a; 297a-298a; BK VIII, 318b-c; BK XI, 523d-524c; BK XII, 542d-543a; 544a-b; BK XIV, 601c-602d; 605c-d

53 JAMES: *Psychology*, 480a-501b

54 FREUD: *General Introduction*, 483b; 597b-599d esp 599b-d / *New Introductory Lectures*, 877d

***5a.* The distinction between reproductive and creative imagination: the representative image and the imaginative construct**

7 PLATO: *Sophist*, 577c

12 LUCRETIUS: *Nature of Things*, BK IV [722-748] 53d-54a

18 AUGUSTINE: *Confessions*, BK X, par 14 74d-75a

19 AQUINAS: *Summa Theologica*, PART I, Q 12, A 9, REP 2 58b-59a; Q 78, A 4, ANS 411d-413d; Q 84, A 6, REP 2 447c-449a

23 HOBBES: *Leviathan*, PART I, 50d; PART IV, 262a-c

30 BACON: *Novum Organum*, BK I, APH 60 112c-113a

31 DESCARTES: *Discourse*, PART IV, 54a-b / *Meditations*, I, 76a-b; III, 82d-83b

(5. *The activity of imagination, fancy, or fantasy: the nature and variety of images.* 5a. *The distinction between reproductive and creative imagination: the representative image and the imaginative construct.*)

31 SPINOZA: *Ethics*, PART II, PROP 49, SCHOL, 392c-d; 393c-d
32 MILTON: *Paradise Lost*, BK V [95–113] 177b
35 LOCKE: *Human Understanding*, BK II, CH XXII, SECT 2 201a-b; CH XXX 238a-239b passim
35 BERKELEY: *Human Knowledge*, INTRO, SECT 10, 406d-407a; SECT 1, 413a
35 HUME: *Human Understanding*, SECT II, DIV 13 455d-456b; SECT V, DIV 39-40 466c-467c
42 KANT: *Pure Reason*, 89b-c; 173b-174a; 211c-212a / *Judgement*, 493c-495a,c; 528c-529b
53 JAMES: *Psychology*, 480a-b
54 FREUD: *Interpretation of Dreams*, 270c-271a

5b. The image distinguished from the idea or concept: the concrete and particular as contrasted with the abstract and universal

7 PLATO: *Cratylus*, 108c-111c; 113c-114a,c / *Phaedrus*, 126b-c / *Republic*, BK III, 333c-d / *Theaetetus*, 534d-536a / *Seventh Letter*, 809c-810d
8 ARISTOTLE: *Posterior Analytics*, BK I, CH 18 111b-c; CH 31 120a-c; BK II, CH 19 [100^{a}15-^{b}5] 136d / *Metaphysics*, BK I, CH 1 [980^{a}28-981^{b}13] 499a-500a; CH 9 [990^{b}9-15] 508d; BK III, CH 4 [999^{a}24-^{b}5] 518a-b / *Soul*, BK II, CH 5 [417^{b}17-28] 648b-c; BK III, CH 8 [432^{a}9-14] 664c-d
9 ARISTOTLE: *Ethics*, BK VII, CH 3 [1147^{b}3-6] 397d
18 AUGUSTINE: *Confessions*, BK X, par 16-19 75b-76b; par 23 77a-b
19 AQUINAS: *Summa Theologica*, PART I, Q 55, A 2, REP 2 289d-290d; Q 75, A 2, REP 3 379c-380c; A 3, REP 2 380c-381b; Q 81, A 3, ANS 430c-431d; Q 84, A 1, ANS and REP 1 440d-442a; A 2, ANS and REP 1 442b-443c; AA 6-7 447c-450b; Q 85, AA 1-2 451c-455b; Q 86, A 1, ANS 461c-462a; PART I-II, Q 17, A 7, ANS 690d-692a; Q 29, A 6, ANS and REP 1,3 748b-749a
20 AQUINAS: *Summa Theologica*, PART III SUPPL, Q 70, A 2, REP 3 896a-897d
23 HOBBES: *Leviathan*, PART IV, 262a-b
31 DESCARTES: *Discourse*, PART IV, 53b / *Meditations*, II, 79a-c; 80a-81d; III, 82d-83b; VI, 96b-97a; 98d-99a / *Objections and Replies*, DEF II 130a-b; 136d-137a; 137d; 138d; 211d-212a; 218c-d
31 SPINOZA: *Ethics*, PART II, PROP 44 389b-390a; PROP 48, SCHOL 391b-c; PROP 49, SCHOL, 391d-392c; PART V, PROP 34, DEMONST 460c-d
35 LOCKE: *Human Understanding*, BK II, CH XI, SECT 8-9 145b-c; CH XXXII, SECT 8-9 244d-245a; BK III, CH VI, SECT 32-33 277c-278c; BK IV, CH VII, SECT 9, 339a-b
35 BERKELEY: *Human Knowledge*, INTRO, SECT 6-19 405d-410c passim, esp SECT 12-16 408a-409d; SECT 25-27 417d-418b esp SECT 27 418a-b; SECT 89 430b-c; SECT 135-142 440a-441c esp SECT 140 440d-441a, SECT 142 441b-c
38 ROUSSEAU: *Inequality*, 341c-342a
42 KANT: *Pure Reason*, 15d-16c; 23a-24a; 34a-c; 115b-c / *Judgement*, 542b-543c; 570c-572b
46 HEGEL: *Philosophy of History*, INTRO, 155b; PART I, 219d-220a; 230c-231b; 254b-d
53 JAMES: *Psychology*, 305a-311a esp 307b-308b, 311b-312b [fn 1]; 480b-484a
54 FREUD: *Unconscious*, 442b-443d

5c. The pathology of imagination: hallucinations, persistent imagery

7 PLATO: *Theaetetus*, 520c-522b
8 ARISTOTLE: *Memory and Reminiscence*, CH 2 [453^{a}15-31] 695b-d / *Dreams*, CH 2 [460^{a}31-^{b}27] 704b-d
14 PLUTARCH: *Marcus Brutus*, 816d-817c
19 AQUINAS: *Summa Theologica*, PART I, Q 17, A 2, REP 2 102a-d; Q 51, A 2, ANS 276b-277a; Q 54, A 5 288a-d; Q 84, A 6, REP 1 447c-449a; A 8, REP 2 450b-451b; Q 111, A 3, ANS and REP 4 570b-571b
20 AQUINAS: *Summa Theologica*, PART I-II, Q 53, A 3, ANS 21d-22d
22 CHAUCER: *Miller's Tale* [3611-3617] 219b
23 HOBBES: *Leviathan*, PART I, 50d; 51b-52b; 80a; PART III, 172c-d; 174b; PART IV, 258b d; 261a
25 MONTAIGNE: *Essays*, 36c-41b; 237a-b; 405d-406a
27 SHAKESPEARE: *Macbeth*, ACT II, SC I [33-61] 290d-291a; ACT III, SC IV [38-121] 298a-299a
29 CERVANTES: *Don Quixote* esp PART I, 1d-2b, 4b-c, 18d-22a, 44b-46b, 50b-52d, 134b-136a, PART II, 285a-288c
31 DESCARTES: *Rules*, XII, 22c-23a / *Meditations*, I, 75c-77c / *Objections and Replies*, 209c
31 SPINOZA: *Ethics*, PART IV, PROP 44, SCHOL 437d-438a
32 MILTON: *Paradise Lost*, BK V [95-128] 177b-178a / *Samson Agonistes* [599-605] 352b
35 HUME: *Human Understanding*, SECT II, DIV 11, 455b-c
40 GIBBON: *Decline and Fall*, 598a-b
44 BOSWELL: *Johnson*, 13c-d; 114b-115a
46 HEGEL: *Philosophy of History*, INTRO, 196d-197c
47 GOETHE: *Faust*, PART I [4405-4612] 110a-114b
48 MELVILLE: *Moby Dick*, 148b-150a; 232b-235a
51 TOLSTOY: *War and Peace*, BK II, 109d-110a; BK VII, 293c-294a; BK XI, 524c-527a; BK XV, 616a-617a
52 DOSTOEVSKY: *Brothers Karamazov*, BK XI, 337a-348d
53 JAMES: *Psychology*, 274a; 490a-493a; 506a-507a esp 507b-508b [fn 1]; 515a-520a; 527a-538b esp 527a-533a; 662a-663a [fn 1]; 747b [fn 3]; 842b-844a

54 FREUD: *Origin and Development of Psycho-Analysis*, 3a-d / *Hysteria*, 76d; 86a-d; 102b-106b esp 106a-b; 115a-117d / *Interpretation of Dreams*, 176b-c; 354c-355b / *General Introduction*, 551b-552a; 597b-600b esp 599d-600b / *Ego and Id*, 700c

6. The role of imagination in thinking and knowing

6*a*. Imagination as knowledge: its relation to possible and actual experience

7 PLATO: *Republic*, BK VI, 383d-388a / *Sophist*, 575d-577b
8 ARISTOTLE: *Soul*, BK III, CH 3 659c-661b
18 AUGUSTINE: *Confessions*, BK X, par 14 74d-75a
19 AQUINAS: *Summa Theologica*, PART I, Q 46, A 1, REP 8 250a-252d
23 HOBBES: *Leviathan*, PART I, 50a-54c
30 BACON: *Advancement of Learning*, 55b-d
31 DESCARTES: *Rules*, XII, 19d-20d; XIV, 28a-d / *Discourse*, PART IV, 54a-b / *Meditations*, II, 79a-81d; VI, 96b-97a; 98d-99a / *Objections and Replies*, DEF II 130a-b
31 SPINOZA: *Ethics*, PART II, PROP 17, SCHOL 381b-d; PROP 26, COROL and DEMONST 384b; PROP 40, SCHOL 1-2 387b-388b; PROP 44, COROL 1 and SCHOL 389c-390a; PART IV, DEF 6 424b; PROP 1, SCHOL 424d-425a; PART V, PROP 34, DEMONST 460c-d
42 KANT: *Pure Reason*, 72c-88a; 227a-230c
53 JAMES: *Psychology*, 285a-287b esp 285b; 480b; 520a-521a; 617a-625a passim, esp 621a

6*b*. The effect of intellect on human imagination: the imaginative thinking of animals

8 ARISTOTLE: *Soul*, BK III, CH 3 [429^{a}4-8] 661b; CH II [433^{b}32-434^{a}11] 666d-667a / *Memory and Reminiscence*, CH 2 [453^{a}5-14] 695b
9 ARISTOTLE: *Ethics*, BK VII, CH 3 [1147^{b}3-6] 397d
19 AQUINAS: *Summa Theologica*, PART I, Q 78, A 4, ANS and REP 4-5 411d-413d; Q 81, A 3, ANS and REP 2-3 430c-431d; Q 84, A 2, REP 1 442b-443c; A 6, REP 1-2 447c-449a; Q 85, A 1, REP 4 451c-453c; PART I-II, Q 17, A 7 690d-692a; Q 29, A 6, ANS 748b-749a
20 AQUINAS: *Summa Theologica*, PART I-II, Q 50, A 3, REP 3 8b-9a; Q 51, A 3 14b-15a
23 HOBBES: *Leviathan*, PART I, 52b; 53a-b
25 MONTAIGNE: *Essays*, 229d-230b
30 BACON: *Advancement of Learning*, 55b-d
31 DESCARTES: *Meditations*, VI, 96d-97a
35 LOCKE: *Human Understanding*, BK II, CH XI, SECT 11 145d-146a
38 ROUSSEAU: *Inequality*, 341d-342a
42 KANT: *Judgement*, 479a-c
49 DARWIN: *Descent of Man*, 292a-294b esp 292a-293a; 296c-297b
53 JAMES: *Psychology*, 665a-666b; 678b-686b esp 681b-682a, 686a-b

6*c*. The dependence of rational thought and knowledge on imagination

7 PLATO: *Phaedrus*, 126b-c / *Republic*, BK III, 333b-d; BK VI-VII, 383d-398c / *Seventh Letter*, 809c-810b; 810d
8 ARISTOTLE: *Soul*, BK I, CH 1 [403^{a}2-15] 632a-b / *Memory and Reminiscence*, CH 1 [449^{b}30-450^{a}14] 690c-d
17 PLOTINUS: *Fourth Ennead*, TR III, CH 30-31 157d-158c
19 AQUINAS: *Summa Theologica*, PART I, Q 75, A 3, REP 2 380c-381b; Q 84, AA 6-8 447c-451b; Q 85, A 1 451c-453c; A 7, ANS 459c-460b; Q 88, A 1, ANS 469a-471c; Q 89, A 1, ANS and REP 1 473b-475a; A 5, ANS and REP 4 477a-478b
20 AQUINAS: *Summa Theologica*, PART I-II, Q 51, A 1, ANS 12b-13c; Q 52, A 1, ANS 15d-18a; PART III, Q 11, A 2 773a-d
23 HOBBES: *Leviathan*, PART I, 52b-54c; 66c-67a
31 DESCARTES: *Rules*, VII, 10b-c; VIII, 13a-b; 14b; XII, 18c; 19a-20d; XIV, 28a-d; 30b-31a / *Discourse*, PART I, 41d / *Meditations*, II, 79a-c; VI, 96b-97a / *Objections and Replies*, 136d-137a
31 SPINOZA: *Ethics*, PART II, PROP 40, SCHOL 1 387b-388a
42 KANT: *Pure Reason*, 14a-108a,c esp 14a-15c, 23a-33d, 41c-42b, 48d-51d, 53b-55a, 56d-59b, 61a-64a, 66d-93c; 194d-195a / *Judgement*, 542b-543c
53 JAMES: *Psychology*, 158a-161a; 301a-302a; 328a-331b esp 328a-b, 331a-b; 549a-550a; 677a-678b
54 FREUD: *Interpretation of Dreams*, 367b-c; 385b-c / *Unconscious*, 442b-443a / *Ego and Id*, 700b-701a; 701d

6*c*(1) The abstraction of ideas from images: the image as a condition of thought

8 ARISTOTLE: *Posterior Analytics*, BK I, CH 31 [87^{b}39-88^{a}17] 120a-c / *Topics*, BK VI, CH 4 [141^{b}2-14] 194d-195a; BK VIII, CH 1 [156^{a}4-6] 211d-212a / *Soul*, BK III, CH 7 [431^{a}14-^{b}19] 663d-664b; CH 8 [432^{a}2-14] 664c-d / *Memory and Reminiscence*, CH 1 [449^{b}30-450^{a}25] 690c-691a
19 AQUINAS: *Summa Theologica*, PART I, Q 55, A 2, REP 2 289d-290d; Q 70, A 3, ANS 365b-367a; Q 75, A 2, REP 3 379c-380c; A 3, REP 2 380c-381b; A 6, REP 3 383c-384c; A 7, CONTRARY 384d-385c; Q 76, A 1, ANS 385d-388c; Q 79, A 4, REP 3 417a-418c; Q 84, AA 6-8 447c-451b; Q 85, A 1 451c-453c; Q 86, A 1, ANS 461c-462a; PART I-II, Q 29, A 6, ANS and REP 1,3 748b-749a
20 AQUINAS: *Summa Theologica*, PART I-II, Q 50, A 4, REP 1,3 9a-10b
31 DESCARTES: *Discourse*, PART IV, 53b
35 LOCKE: *Human Understanding*, BK I, CH 1, SECT 15 98d-99a; BK II, CH XI, SECT 8-9

(6c. The dependence of rational thought and knowledge on imagination. 6c(1) The abstraction of ideas from images: the image as a condition of thought.)

145b-c; CH XII, SECT 1, 147b-c; CH XXXII, SECT 8-9 244d-245a; BK IV, CH VII, SECT 9, 339a-b

35 BERKELEY: *Human Knowledge*, INTRO, SECT 6-19 405d-410c passim, esp SECT 12-16 408a-409d; SECT 97-100 431d-432c

35 HUME: *Human Understanding*, SECT XII, DIV 122 505c-d; DIV 124-125 506a-507a esp DIV 125, 507b [fn 1]

38 ROUSSEAU: *Inequality*, 341d-342a

46 HEGEL: *Philosophy of History*, PART I, 254b-d

53 JAMES: *Psychology*, 305a-308a; 330a-331b

6c(2) The schema of the imagination as mediating between concepts of the understanding and the sensory manifold of intuition: the transcendental unity of apperception

42 KANT: *Pure Reason*, 14a-108a,c esp 48d-55a, 61a-64a, 66d-93c; 193a-195a / *Practical Reason*, 319c-320b / *Judgement*, 542b-543c

53 JAMES: *Psychology*, 232b-235a passim

6d. The limits of imagination: imageless thought; the necessity of going beyond imagination in the speculative sciences

7 PLATO: *Symposium*, 167a-d / *Republic*, BK VII, 388a-398c esp 396d-398c / *Statesman*, 595a-c / *Seventh Letter*, 809c-810b

8 ARISTOTLE: *Soul*, BK III, CH 7 [431^{b}12-19] 664b / *Memory and Reminiscence*, CH 1 [449^{b}30-450^{a}10] 690c-d

12 LUCRETIUS: *Nature of Things*, BK I [265-328] 4b-5a; [599-612] 8b-c; BK II [80-141] 16a-d; [308-332] 19a-b

18 AUGUSTINE: *City of God*, BK II, CH 2 323a-c / *Christian Doctrine*, BK I, CH 7 626b-c

19 AQUINAS: *Summa Theologica*, PART I, Q 1, A 9 8d-9c; Q 12, A 3 52c-53b; Q 75, A 1, ANS and REP 1-2 378b-379c; A 2, CONTRARY 379c-380c; A 3, ANS 380c-381b; Q 84, A 1, ANS and REP 2 440d-442a; A 2, REP 1 442b-443c; A 6 447c-449a; A 7, REP 3 449b-450b; Q 85, A 1, ANS and REP 2 451c-453c; QQ 87-89 464d-480c; Q 93, A 6, REP 4 496b-498a; PART I-II, Q 17, A 7, REP 3 690d-692a

23 HOBBES: *Leviathan*, PART I, 52c; 54b-c; 78d-79a; 80a-b; PART II, 162b-d; PART IV, 262a-b

30 BACON: *Advancement of Learning*, 55b-d / *Novum Organum*, BK I, APH 48 110d-111a

31 DESCARTES: *Rules*, IV, 6b-7d; XIV, 30b-31a / *Discourse*, PART II, 46c-47a; PART IV, 53b / *Meditations*, 72b-c; 1 75a-77c; II, 79a-c; IV, 89a-b; VI, 96b-97a / *Objections and Replies*, 128d-129a; 215b-c; 217c-d; 218c-d

31 SPINOZA: *Ethics*, PART I, PROP 8, SCHOL 2 356d-357d passim; PROP 15, SCHOL 360b-361d; APPENDIX 369b-372d passim

32 MILTON: *Paradise Lost*, BK V [544-576] 187a-b

33 PASCAL: *Pensées*, I 171a-172a

35 LOCKE: *Human Understanding*, BK II, CH I, SECT 24 127b-c; CH XIV, SECT 26 160c-d; CH XV, SECT 12 165b-c; CH XVII, SECT 7-21 169b-173d esp SECT 15 171b-172a; CH XXIX, SECT 16 237b-238a; BK III, CH I, SECT 5 252b-c; CH VI, SECT 9 270d-271a; BK IV, CH VII, SECT 9 338d-339b; CH XVI, SECT 12 370b-371a

35 BERKELEY: *Human Knowledge*, INTRO, SECT 6-19 405d-410c; SECT 27 418a-b; SECT 135-142 440a-441c passim

38 ROUSSEAU: *Inequality*, 341c-342b

42 KANT: *Pure Reason*, 1a-b; 15c-16c; 17d-19a; 19d-20c; 85d-93c; 211c-212a; 217d-218a; 227a-230c / *Fund. Prin. Metaphysic of Morals*, 264d / *Science of Right*, 399a / *Judgement*, 497a-502d; 506a-511a esp 506d, 509d-510a; 578a-b; 603b-d

45 LAVOISIER: *Elements of Chemistry*, PART I, 10c

46 HEGEL: *Philosophy of History*, PART I, 257c-258a

53 JAMES: *Psychology*, 158a-161a esp 158b-159a; 301a-302a; 549a-550b

54 FREUD: *Beyond the Pleasure Principle*, 661d-662b / *Civilization and Its Discontents*, 769b-770b esp 770a

7. Imagination and the fine arts

7a. The use of imagination in the production and appreciation of works of art

9 ARISTOTLE: *Parts of Animals*, BK I, CH 1 [639^{b}12-20] 161d-162a; [640^{a}29-33] 162d

18 AUGUSTINE: *Confessions*, BK XI, par 7 90d-91a

23 HOBBES: *Leviathan*, PART I, 67b-c; PART IV, 262c

26 SHAKESPEARE: *Midsummer-Night's Dream*, ACT V, SC I [1-27] 370d-371a / *Henry V*, PROLOGUE 532b,d; ACT III, PROLOGUE 543c-d

29 CERVANTES: *Don Quixote*, PART II, 285a-288c

30 BACON: *Advancement of Learning*, 32d; 38c-39a

31 DESCARTES: *Meditations*, I, 76a-b

36 STERNE: *Tristram Shandy*, 198a-b

37 FIELDING: *Tom Jones*, 280a; 296b,d-298a

42 KANT: *Pure Reason*, 173b-174a / *Judgement*, 473a-c; 482b-483d; 491a-c; 493c-495a,c; 498b-502d; 506a-511a esp 506d, 509d-510a; 523c-524a; 525c-532a esp 528c-530c

46 HEGEL: *Philosophy of History*, INTRO, 153a-c; PART I, 254b-d; PART II, 263d-265c

47 GOETHE: *Faust*, DEDICATION 1a-b

50 MARX: *Capital*, 85c

52 DOSTOEVSKY: *Brothers Karamazov*, BK X, 284b-d

54 FREUD: *Origin and Development of Psycho-Analysis*, 18d / *Interpretation of Dreams*, 181a-b; 383d / *General Introduction*, 483c; 600d-601b / *Group Psychology*, 692c-693a

7b. The fantastic and the realistic in poetry: the probable and the possible in poetry and history

6 HERODOTUS: *History*, BK II, 73a-b
6 THUCYDIDES: *Peloponnesian War*, BK I, 354b
7 PLATO: *Phaedrus*, 140a-d / *Ion* 142a-148a,c esp 145d-148a / *Republic*, BK II, 320d-324c; BK X, 427c-434c / *Sophist*, 561b-d; 577d-579d
9 ARISTOTLE: *Poetics*, CH 8 [1451a16]-CH 9 [1451b39] 685d-686c; CH 15 [1454a23-b9] 689b-c; CH 17 [1455a21-35] 690c; CH 24 [1460a12-b2] 696b-c; CH 25 [1460b6-1461a8] 696d-697c; [1461a31-b25] 697d-698c
14 PLUTARCH: *Theseus*, 1a-b / *Coriolanus*, 189b-c
21 DANTE: *Divine Comedy*, HELL, XVI [124-136] 23d; XXIV [79]-XXV [151] 35b-38a; XXVIII 41b-43a; XXXII [1-12] 47c; PARADISE, X [28-48] 120c-d; XXXIII [49-75] 156d-157a
22 CHAUCER: *Troilus and Cressida*, BK II, STANZA 147-149 40b-41a / *Prologue to Melibeus* 400b-401a
23 HOBBES: *Leviathan*, PART I, 67b
25 MONTAIGNE: *Essays*, 41b-c
29 CERVANTES: *Don Quixote*, PART I, 183d-193a esp 184a-d, 186b-d; PART II, 208d-209d; 212a-215b esp 213b-c; 237b-c
30 BACON: *Advancement of Learning*, 38c-39b
31 DESCARTES: *Discourse*, PART I, 43a-b
37 FIELDING: *Tom Jones*, 19a-20a; 49b-50c; 152a-155b
40 GIBBON: *Decline and Fall*, 186c-d; 345c; 471c-d
44 BOSWELL: *Johnson*, 446c-447a
46 HEGEL: *Philosophy of History*, INTRO, 153a-b
47 GOETHE: *Faust*, PART II [7428-7433] 181b-182a
48 MELVILLE: *Moby Dick*, 150a-152a
51 TOLSTOY: *War and Peace*, BK III, 134a-c

8. The nature and causes of dreaming

7 PLATO: *Republic*, BK IX, 416a-c / *Timaeus*, 454d / *Theaetetus*, 520c-521b
8 ARISTOTLE: *Dreams* 702a-706d
12 LUCRETIUS: *Nature of Things*, BK IV [722-822] 53d-55a; [962-1036] 56d-57c
14 PLUTARCH: *Marcus Brutus*, 817b-c
18 AUGUSTINE: *Confessions*, BK X, par 41-42 81c-82a
19 AQUINAS: *Summa Theologica*, PART I, Q 17, A 2, REP 2 102a-d; Q 84, A 8, REP 2 450b-451b
22 CHAUCER: *Troilus and Cressida*, BK V, STANZA 36-37 125a; STANZA 52-55 127a-b; STANZA 183 144a; STANZA 245 152a / *Nun's Priest's Tale* [14,889-15,162] 451a-455b
23 HOBBES: *Leviathan*, PART I, 50d-51d; PART IV, 258b-c
25 MONTAIGNE: *Essays*, 290b-c; 533d-534a
26 SHAKESPEARE: *Romeo and Juliet*, ACT I, SC IV [49-103] 291a-c / *Midsummer-Night's Dream*, ACT II, SC II [145-156] 360b-c; ACT IV, SC I [191-223] 369d-370b
27 SHAKESPEARE: *Hamlet*, ACT II, SC II [260-266] 43b
31 DESCARTES: *Discourse*, PART IV, 51c; 53c-54b / *Meditations*, I, 75d-76a; VI, 103a-d / *Objections and Replies*, 143a,c; 209c
32 MILTON: *Paradise Lost*, BK V [95-128] 177b-178a
35 LOCKE: *Human Understanding*, BK II, CH XIX, SECT I, 175c
40 GIBBON: *Decline and Fall*, 295b
42 KANT: *Judgement*, 560b
44 BOSWELL: *Johnson*, 443c
46 HEGEL: *Philosophy of History*, PART I, 220c-221a
48 MELVILLE: *Moby Dick*, 94a-95b
51 TOLSTOY: *War and Peace*, EPILOGUE I, 672b
53 JAMES: *Psychology*, 387b-388a; 534a-535a; 643b [fn 1]
54 FREUD: *Origin and Development of Psycho-Analysis*, 11a-13a / *Interpretation of Dreams* 135a-387a,c esp 137a-139b, 168d-174d, 231b-232b, 234b-236b, 252c-253a, 262c-278a, 294d-295b, 336d-340a, 346d-347b, 350a-b, 356a-360d, 363b-377c / *General Introduction*, 476a-544d esp 478b-482c, 495d-497a, 532d-535d; 618b-c / *Beyond the Pleasure Principle*, 641c-d; 649d-650b / *New Introductory Lectures*, 807b,d-818b esp 812d-813c, 817a-818b; 820c-822b

8a. Dreams as divinely inspired: their prophetic portent; divination through the medium of dreams

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4 HOMER: *Iliad*, BK I [59-67] 3d; BK II [1-75] 10a-d / *Odyssey*, BK XIX [509-581] 294c-295a,c
5 AESCHYLUS: *Persians* [176-230] 17a-d / *Prometheus Bound* [442-506] 44c-45a esp [484-486] 45a; [645-657] 46d-47a / *Choephoroe* [523-552] 75b-c
5 SOPHOCLES: *Oedipus the King* [976-986] 108b

(8. *The nature and causes of dreaming.* 8a. *Dreams as divinely inspired: their prophetic portent; divination through the medium of dreams.*)

5 EURIPIDES: *Iphigenia Among the Tauri* [42–66] 411c-d; [1234–1283] 422b-c
6 HERODOTUS: *History*, BK I, 8a-10a; 25b-31a; 47a-c; BK II, 78d-79c; BK III, 95d; 103b-104b; 116a-b; BK IV, 154c-d; BK V, 170c-d; BK VI, 205d-206a; 208b; 211a; BK VII, 218b-220b
7 PLATO: *Crito*, 213b-d / *Timaeus*, 466d-467c
8 ARISTOTLE: *Prophesying* 707a-709a,c
13 VIRGIL: *Aeneid*, BK III [147–179] 151a-152a; BK VIII [26–93] 259b-261b
14 PLUTARCH: *Themistocles*, 98d-99a / *Alcibiades*, 174a-d / *Coriolanus*, 185b-186a / *Pelopidas*, 239d-240c / *Aristides*, 268a-d / *Pyrrhus*, 329c-d / *Cimon*, 398d-399b / *Lucullus*, 411a-b / *Eumenes*, 473a-b / *Agesilaus*, 483a-b / *Pompey*, 514d-515a; 532b; 534d-535a / *Alexander*, 548d-549a / *Caesar*, 601d-604d / *Demosthenes*, 702c-703b / *Cicero*, 721c-722a / *Demetrius*, 727b-d / *Marcus Brutus*, 816d-817c
15 TACITUS: *Annals*, BK II, 26c; BK XI, 101b; BK XII, 112d-113a; BK XVI, 176b-d
18 AUGUSTINE: *Confessions*, BK III, par 19–20 18b-19a
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20 AQUINAS: *Summa Theologica*, PART III, Q 7, A 8, REP 1 750d-751d
21 DANTE: *Divine Comedy*, HELL, XXXII [124]–XXXIII [90] 49a-50c; PURGATORY, IX [1–69] 65d-66c; XIX [1–69] 81c-82a
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23 HOBBES: *Leviathan*, PART III, 165d-166a; 173c; 175c; 176d-177b; 184a-185a passim; 186c-d
24 RABELAIS: *Gargantua and Pantagruel*, BK III, 150d-156c
25 MONTAIGNE: *Essays*, 533d-534a
26 SHAKESPEARE: *Julius Caesar*, ACT II, SC II [75-94] 578d-579a
27 SHAKESPEARE: *Cymbeline*, ACT V, SC IV [30–151] 481c-482c; SC V [426–465] 488b-d
30 BACON: *Advancement of Learning*, 54c-55a
32 MILTON: *Paradise Lost*, BK VIII [283–499] 238b-243a / *Areopagitica*, 389a-b
40 GIBBON: *Decline and Fall*, 294d-296b
46 HEGEL: *Philosophy of History*, PART I, 244c-245a; PART II, 263d-265c
53 JAMES: *Psychology*, 643b [fn 1]
54 FREUD: *Origin and Development of Psychoanalysis*, 11c / *Interpretation of Dreams*, 137b-138d; 145d-146a; 178b-179c esp 179d [fn 2]; 383d-384a; 387a,c / *General Introduction*, 477b-d

8b. The role of sensation and memory in the dreams of sleep

6 HERODOTUS: *History*, BK VII, 219b
8 ARISTOTLE: *Dreams* 702a-706d
12 LUCRETIUS: *Nature of Things*, BK IV [722–822] 53d-55a; [962–1036] 56d-57c
19 AQUINAS: *Summa Theologica*, PART I, Q 84, A 8, REP 2 450b-451b
20 AQUINAS: *Summa Theologica*, PART III SUPPL, Q 70, A 2, REP 3 896a-897d
23 HOBBES: *Leviathan*, PART I, 50d-51d
25 MONTAIGNE: *Essays*, 36d-37a; 229d-230b; 333b-c
27 SHAKESPEARE: *Macbeth*, ACT V, SC I 306b-307a
32 MILTON: *Paradise Lost*, BK IV [797–809] 169b-170a; BK V [95–121] 177b-178a
35 LOCKE: *Human Understanding*, BK II, CH I, SECT 17, 125c
42 KANT: *Judgement*, 560b
48 MELVILLE: *Moby Dick*, 19a-20a
51 TOLSTOY: *War and Peace*, BK II, 86a; BK III, 147c-148c; BK XI, 481a-482a; BK XIV, 601a-602d
53 JAMES: *Psychology*, 535a-536a
54 FREUD: *Origin and Development of Psychoanalysis*, 12c / *Interpretation of Dreams*, 139b-155a esp 141a-b, 145d-146c, 149c-153c; 173c-174b; 189d-190b; 205c-237b passim, esp 205d-206a, 210d-212d, 215b, 228b-232b; 250c-251c; 297c-298a; 351a-356d esp 353b-356b; 362b-363a / *General Introduction*, 478d-483a esp 480b-482a; 497d-499a; 526c-527c; 532b-c; 538d-539a / *New Introductory Lectures*, 809d

8c. The expression of desire in daydreaming or fantasy

7 PLATO: *Republic*, BK V, 361a
23 HOBBES: *Leviathan*, PART I, 52d-53a; 67d; 69b-c; PART II, 138d-139a
25 MONTAIGNE: *Essays*, 14c-15a; 37b; 177c-d; 405d-406a
26 SHAKESPEARE: *Richard II*, ACT V, SC V [1–41] 349d-350a
29 CERVANTES: *Don Quixote*, PART I, 1b-2b; 18d-19b; 50b-52d; 134b-135d
33 PASCAL: *Pensées*, 82–88 186b-189b
47 GOETHE: *Faust*, PART II [10,039–066] 245a-b
51 TOLSTOY: *War and Peace*, BK II, 82a-d; BK III, 125b-c; 146d-148c; BK VI, 254b-c; BK X, 394d; BK XI, 497c-499c esp 498c-d; BK XII, 542d-543a; 544a-b; BK XIV, 601a-602d; BK XV, 615c-617a
54 FREUD: *Origin and Development of Psychoanalysis*, 18c / *Hysteria*, 115b-116c esp 115c / *Interpretation of Dreams*, 333c-d / *General Introduction*, 483b-d; 599b-d

8d. The symbolism of dreams

8d(1) The manifest and latent content of dreams: the dream-work

4 HOMER: *Odyssey*, BK XIX [509–581] 294c-295a,c
5 AESCHYLUS: *Persians* [176–230] 17a-d / *Choephoroe* [523–552] 75b-c
5 EURIPIDES: *Iphigenia Among the Tauri* [42–66] 411c-d
6 HERODOTUS: *History*, BK I, 25b-c; 28c-29a; 47a-c; BK II, 78d
7 PLATO: *Crito*, 213b-d / *Phaedo*, 221d-222a
8 ARISTOTLE: *Prophesying*, CH 2 [464b7–18] 709c
14 PLUTARCH: *Pyrrhus*, 329c-d / *Cimon*, 398d-399b / *Eumenes*, 473a-b / *Alexander*, 548d-549a / *Demosthenes*, 702c-703b / *Demetrius*, 727b-d
21 DANTE: *Divine Comedy*, PURGATORY, IX [1–69] 65d-66c; XIX [1–69] 81c-82a; XXVII [91–108] 95c
22 CHAUCER: *Troilus and Cressida*, BK V, STANZA 52–55 127a-b; STANZA 177–185 143b-144b; STANZA 207–217 147a-148b; STANZA 245 152a
26 SHAKESPEARE: *2nd Henry VI*, ACT I, SC II [17–55] 36c-37a / *Richard III*, ACT I, SC IV 114d-117c / *Romeo and Juliet*, ACT I, SC IV [49–103] 291a-c / *Julius Caesar*, ACT II, SC II [75–90] 578d-579a
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32 MILTON: *Paradise Lost*, BK V [28–128] 176a-178a
46 HEGEL: *Philosophy of History*, PART II, 263d-265c
51 TOLSTOY: *War and Peace*, BK II, 86a; BK VI, 249a-250a; BK XI, 481a-482b; BK XII, 561c-d; BK XIV, 608a-b; EPILOGUE I, 672b; 673d-674a,c
54 FREUD: *Origin and Development of Psycho-Analysis*, 11c-12c / *Interpretation of Dreams*, 178a-205c esp 189b-190a, 194b-d, 204c-d; 252c-340a esp 252c-253a, 332a-333b, 336d-340a; 356d-373a passim / *General Introduction*, 489c-504d esp 489c-494d; 513d-526c esp 513d-519d; 532d-544d passim, esp 536c-539a, 541b-542b / *New Introductory Lectures*, 809b-810b; 812d-814d; 816b-818b

8d(2) The recurrent use of specific symbols in dreams: the dream-language

54 FREUD: *Origin and Development of Psycho-Analysis*, 12c-d / *Psycho-Analytic Therapy*, 123d-124a / *Interpretation of Dreams*, 173a-174d; 178b-179c; 230b-231c; 265a-272c; 277b-298a esp 278d-285c / *General Introduction*, 504d-513d; 516a-518c; 523a-526c / *New Introductory Lectures*, 813d; 815a-817a

8e. Dream-analysis as uncovering the repressed unconscious

54 FREUD: *Origin and Development of Psycho-Analysis*, 11a-13a / *Interpretation of Dreams*, 178a-205c esp 178a-179c, 204c-d; 282d-283a; 285c; 294d-295a; 319d-320c; 340a-387a,c esp 345c-350a, 356d-358c, 365a, 383d-384a, 386b-387a / *General Introduction*, 483d-494d esp 486b-c, 488b-c, 489c-490a; 501c-504d esp 504b-d; 519d-524a passim; 531d-532c; 538d-539b; 585a; 635a / *New Introductory Lectures*, 808d-813b esp 811a-812b, 812d

CROSS-REFERENCES

For: The discussion of memory and imagination in relation to the faculties of sense and understanding, desire and will, *see* DESIRE 5a; IDEA 1c, 2e–2f; SENSE 3b(2), 3d(2).

The controversy over the distinction between image and idea, *see* IDEA 2f–2g; MIND 1a(1); SENSE 1d, 5a; UNIVERSAL AND PARTICULAR 4d.

Other discussions of the association of ideas, and of reverie or daydreaming, *see* DESIRE 5a; IDEA 5e; RELATION 4f.

The consideration of memory as knowledge of the past, *see* KNOWLEDGE 6b(2); TIME 6e; TRUTH 3a(2); and for the distinction between memory and intellectual habit, *see* HABIT 1, 5d; MIND 4c.

The doctrine of reminiscence which identifies learning with remembering, or for the doctrine of innate ideas, *see* IDEA 2b; KNOWLEDGE 6c(3); MIND 4d(2).

The role of memory in science, history, and poetry, *see* EXPERIENCE 2a–2b; HISTORY 1; INDUCTION 2; POETRY 2.

The problem of personal identity, *see* SAME AND OTHER 1b; SOUL 1d.

The theory of racial memory in relation to instinct and tradition, *see* HABIT 3e; LANGUAGE 3c; POETRY 3.

For: The function of imagination in thinking and knowing, *see* MIND 1a(2); REASONING 1c; and for the doctrine that universal concepts are abstracted from sensory images, *see* IDEA 2g; SENSE 5a; UNIVERSAL AND PARTICULAR 4c.

The theory of the transcendental unity of apperception, to which memory or imagination contributes, *see* KNOWLEDGE 6b(4); ONE AND MANY 4b; SENSE 1c, 3c(5).

The imagination as a factor in art, *see* ART 5; and for another discussion of the probable and the possible in poetry, *see* POETRY 8a(2).

Other discussions of dreams, their causes and meaning, *see* DESIRE 5a, 6c; LANGUAGE 10; PROPHECY 3c; SIGN AND SYMBOL 6a; and for the theory of conflict, censorship, and repression involved in the Freudian interpretation of dreams, *see* DESIRE 4a–4d, 6b.

Matters relevant to the psychopathology of memory and imagination, *see* DESIRE 5a–5b; EMOTION 3a–3b; MAN 5b; MIND 8b; SENSE 4d(2); TRUTH 3a(2).

ADDITIONAL READINGS

Listed below are works not included in *Great Books of the Western World*, but relevant to the idea and topics with which this chapter deals. These works are divided into two groups:

I. Works by authors represented in this collection.
II. Works by authors not represented in this collection.

For the date, place, and other facts concerning the publication of the works cited, consult the Bibliography of Additional Readings which follows the last chapter of *The Great Ideas.*

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VOLTAIRE. "Imagination," in *A Philosophical Dictionary*
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Chapter 57: METAPHYSICS

INTRODUCTION

IN this chapter, as in MATHEMATICS, we must distinguish controversies about the science we are considering from controversies in it. But here the situation is complicated by many ambiguities. In the tradition of western thought, the name of science has never been denied to mathematics, no matter how its subject matter has been defined or what conception of science has prevailed. But controversies about metaphysics often begin, in modern times at least, by questioning our right to use the word "science" when we speak of metaphysical inquiry or speculation. The challenge usually implies that metaphysics cannot be regarded as a body of valid knowledge because the peculiar objects it has chosen to investigate are not susceptible to scientific inquiry.

If experimentation were the *sine qua non* of scientific knowledge, it would follow, of course, that a discipline which could not perform experiments or even less rigorous types of empirical research could not be called a science. But by that standard mathematics would also be ruled out. It does not seem to be the case, however, that mathematics and metaphysics stand or fall together.

Hume, for example, admits the one and excludes the other. If we are persuaded of his principles concerning science, what havoc, he says, must we make when we run over our libraries. "If we take in our hand any volume; of divinity or school metaphysics, for instance; let us ask, *Does it contain any abstract reasoning concerning quantity or number?* No. *Does it contain any experimental reasoning concerning matter of fact and existence?* No. Commit it then to the flames; for it can contain nothing but sophistry and illusion."

Nor does Kant make experimentation or empirical research indispensable to valid and certain knowledge. On the contrary, pure, as opposed to empirical, physics is for him like mathematics in having the superior status of *a priori* knowledge. They are both sciences in the highest sense of the term because they consist of valid synthetic judgments *a priori*. Kant, therefore, does not exclude metaphysics from the ranks of science because he thinks that "metaphysic, according to its proper aim, consists merely of synthetic propositions *a priori*." Not the method of metaphysics, nor the form of its propositions, but the character of its objects seems to be the cause of its frustration, reducing it to what Kant calls an "illusory dialectic" rather than a valid science.

It might be supposed that those who take the opposite view—that metaphysics is a science, even, perhaps, the highest of the sciences—would agree in defining its objects or the scope of its inquiry. This does not seem to be the case, any more than it seems to be true that all those who criticize metaphysics conceive its subject matter in the same way.

Following what he takes to be the traditional conception of metaphysics in the mediaeval schools, which appears to him to be continued in the writings of Descartes, Leibnitz, and Wolff, Kant says that "metaphysic has for the proper object of its inquiries only three grand ideas: God, Freedom, and Immortality." This also seems to be at least part of what Hume has in mind when he refers to "school metaphysics" and associates it with "divinity," by which he means theology, natural or sacred. Yet we find William James saying that "Hume is at bottom as much of a metaphysician as Thomas Aquinas," because he is engaged in speculations concerning the relation or lack of relation, the identity or lack of identity, in the discrete elements of immediate experience. Here the question seems to be not about God, freedom, and immortality, but about the existence of enduring

substances underlying all perceptible qualities, or about a fixed order of reality behind the sequence of phenomena in experience. According to James, "the whole question of interaction and influence between things is a metaphysical question, and cannot be discussed at all by those who are unwilling to go into matters thoroughly."

In the Preface to his *Principles of Psychology*, James declares his plan to limit his own inquiries to what can be known by the empirical methods of the natural sciences. Psychology like physics must assume certain data. The discussion of these assumptions, he says, "is called metaphysics and falls outside the province of this book. . . . . The data assumed by psychology, just like those assumed by physics and the other natural sciences, must sometime be overhauled. The effort to overhaul them clearly and thoroughly is metaphysics; but metaphysics can only perform her task well when distinctly conscious of its great extent." The implication seems to be not that metaphysics is impossible but rather that metaphysics, as James conceives it, does not yet exist in any mature or satisfactory development. "Only a metaphysics alive to the weight of her task," he writes, can hope to be successful. "That will perhaps be centuries hence."

WE CANNOT FULLY explore the issue concerning the objects of metaphysics without observing that other names are used in the tradition of the great books to designate the discipline which, rightly or wrongly, claims to be the highest human science. The Greeks initiated the conception of a discipline which should be preeminent because it deals with first principles and highest causes. It not only searches for wisdom about the ultimate realities; it also lays the foundations for all other sciences. But the Greeks do not have one name for this discipline, nor is "metaphysics" even among the various names they use.

Aristotle, whose *Metaphysics* is the first great book to have this word in its title, never uses the word to refer to the science which he is trying to define and establish. In the opening chapters, he speaks of it under the name of wisdom, for "all men suppose what is called Wisdom to deal with the first causes and the principles of all things." There are other theoretical sciences, such as physics and mathematics, which investigate causes or deal with principles, but they do not reach to the highest causes or first principles, nor do they take all things in their most universal aspect as the object of their inquiry.

Though "physics also is a kind of Wisdom," says Aristotle, "it is not the first kind"; and elsewhere he says that "both physics and mathematics must be classed as *parts* of Wisdom." Physics deals only with material things in motion; and "the mathematician investigates abstractions"—objects which, except as abstracted, cannot exist apart from matter and motion. "If there is something which is eternal and immovable and separated from matter, clearly the knowledge of it belongs to a theoretical science —not, however, to physics nor to mathematics, but to a science prior to both." It is that science which is the highest part of wisdom.

Aristotle gives two names to the supreme form of human wisdom or the highest of the theoretical sciences. He denominates it both from the position it occupies in relation to all other disciplines and also in terms of the kind of substance which it alone investigates. If there is "no substance other than those which are formed by nature, natural science (*i.e.*, physics) will be the first science, but if there is an immovable substance, the science of this must be prior and must be first philosophy." But this highest science also deserves to be called "theology" as well as "first philosophy." There are, Aristotle says, "three theoretical philosophies, mathematics, physics, and what we may call theology, since it is obvious that if the divine is present anywhere, it is present in things of this sort," *i.e.*, the eternal, immutable, immaterial.

THERE IS STILL another name for the highest speculative discipline in the Greek conception of the order of the sciences. "Dialectic" is the name which Plato gives to the search for first principles and for the knowledge of the most intelligible realities. As appears in the chapter on DIALECTIC, Aristotle contrasts the dialectician and the philosopher as respectively concerned with opinion and knowledge, but Plato regards the dialectician as preeminently the

philosopher. Not only does dialectic belong to the realm of knowledge rather than opinion, but in the realm of knowledge, mathematics occupies the lower, dialectic the upper part. The mathematical sciences build upon hypotheses which they do not and cannot establish. Dialectic uses hypotheses only "as steps and points of departure into a world which is above hypotheses, in order that she may soar beyond them to the first principle of the whole; and . . . by successive steps she descends again without the aid of any sensible object from ideas, through ideas, and in ideas she ends."

Despite all the relevant differences between Plato and Aristotle concerning being and becoming, reason and sense, the intelligible and the sensible, it seems possible to compare the knowledge which Plato calls "dialectic" with what Aristotle calls "first philosophy" or "theology."

Both, for example, proceed from first principles and establish the foundations of the inferior sciences. On its downward path, dialectic, according to Plato, brings the light of reason to bear on the understanding of the hypotheses which are the principles of mathematics. Though Aristotle thinks that mathematics rests on axioms or self-evident truths, he also says that "it must be the business of first philosophy to examine the principles of mathematics" because the mathematician only uses them in a special application without investigating their general truth. Furthermore, the question concerning how the objects of mathematics exist is a question for the first philosopher, not the mathematician.

In the *Sophist*, Plato, to illustrate the difference between the sophist and the dialectician or philosopher, develops an analysis of such terms as being and non-being, true and false, same and other, one and many, rest and motion. These, it seems, are the fundamental concepts in the philosopher's knowledge of the ultimate reality. But these are also the fundamental concepts in Aristotle's *Metaphysics*. In the mediaeval period when "metaphysics" generally replaces "dialectic" as the name for the first philosophy, the so-called transcendental terms—such as *being*, *essence*, *other*, *one*, *true*, *good*—are treated as the basic metaphysical concepts; and what is characteristic of them as abstractions helps to characterize the nature of metaphysics as a science.

The word "metaphysics" comes into use as a result of the title supposedly given by the Alexandrian librarians to the work in which Aristotle treats the problems of the first philosophy. The word is short for "the books which come after the books on physics." Plotinus uses the word and connects it with the Platonic meaning of "dialectic. "In the training of the metaphysician he says, dialectic is the ultimate study.

Dialectic, according to Plotinus, "is the method, or discipline, that brings with it the power of pronouncing with final truth upon the nature and relation of things—what each is, how it differs from others, what common quality all have, to what kind each belongs and in what rank each stands in its kind and whether its being is real-being, and how many beings there are, and how many non-beings to be distinguished from beings." But we must not think of dialectic, Plotinus declares, "as the mere tool of the metaphysician." It goes beyond metaphysics as vision or contemplative wisdom goes beyond discursive reasoning and demonstration. "It leaves to another science all that coil of premises and conclusions called the art of reasoning."

THE QUESTION which Plotinus raises—whether there is a higher science or form of knowledge than metaphysics—is naturally considered by the great Christian theologians. In part their answer resembles that of Plotinus; in part it differs. Where Plotinus speaks of dialectic as "the most precious part of philosophy" because it transcends reasoning and argument and reaches the sort of immediate apprehension of reality which cannot be expressed in words, theologians recognize the supremacy of mystical knowledge—a foretaste in this life of what the vision of God will be like in the life to come. But, unlike Plotinus, they do not think such knowledge, here or hereafter, is natural wisdom. Rather it is supernatural knowledge, the divine gift to man of a contemplative wisdom to which his nature cannot attain by its own unaided powers.

The subordination of metaphysical science to knowledge which is both supernatural and non-scientific (*i.e.*, neither discursive nor analytical nor demonstrative) is considered in the chap-

ters on THEOLOGY and WISDOM. Another subordination of metaphysics, considered there also, must be mentioned here as well. That is the subordination of metaphysics to theology. Both metaphysics and theology may be conceived as sciences which are engaged in reasoning and argument and in trying to demonstrate conclusions from principles. But one is merely a human science working with the principles of reason, whereas the other is what Aquinas calls "sacred doctrine," in order to signify that its principles are articles of religious faith.

In the hierarchy of human sciences, metaphysics remains supreme—the first philosophy. It suffers only by comparison with theology insofar as the latter rests upon divine revelation and, since it enjoys the certainty of faith, escapes the insecurity of reason. Though metaphysics and theology differ in their principles and somewhat in their methods, they do not differ entirely in their subject matter. Both, for example, may treat of God and of the existence of immaterial and imperishable beings. Aquinas, therefore, must face the objection that there is no need for any knowledge in addition to metaphysics because "everything that is, is treated of in philosophical science—even God Himself, in that part of philosophy called theology, or the divine science, by Aristotle." To this he replies by giving two reasons for sacred theology.

It is necessary, he says, "for the salvation of man that certain truths which exceed human reason should be made known to him by divine revelation. Even as regards those truths about God which human reason could have discovered, it was necessary that man should be taught by a divine revelation; because the truth about God such as reason could discover, would only be known by a few, and that after a long time, and with the admixture of many errors." Furthermore, he continues, there is no reason "why those things which may be learnt from philosophical science, so far as they can be known by natural reason, may not also be taught us by another science so far as they fall within revelation. Hence the theology included in sacred doctrine differs in kind from that theology which is a part of philosophy."

These two kinds of theology are traditionally distinguished as natural and sacred. When Francis Bacon divides the sciences "into theology and philosophy," he adds that "in the former we do not include natural theology." Natural theology is the divine part of philosophy, yet it is clearly distinct from sacred theology or what Bacon calls "inspired divinity."

This distinction, in whatever language it is made, raises two problems. The first concerns the relation of natural to sacred theology, especially with regard to the scope of natural theology and the precise nature of its independence of sacred doctrine. On this question there seems to be considerable difference between such writers as Augustine and Aquinas, or Bacon and Descartes. As already noted, the various issues involved are reserved for discussion in the chapter on THEOLOGY. The second problem is directly pertinent to metaphysics alone. The question is whether metaphysics and natural theology are identical in subject matter or scope, or whether natural theology is only a part of metaphysics.

Aristotle seems to answer this question when he suggests that "first philosophy" and "theology" are interchangeable designations for the highest branch of speculative knowledge. To the extent that he declares this science to be an inquiry concerning the existence and nature of immaterial and imperishable substances, his definition of the object of metaphysics would seem to justify the title of theology.

Descartes, who also separates metaphysics from physics by reference to the immateriality and materiality of the substances which are their objects, even more explicitly seems to give the whole of metaphysics a theological character. In the Preface to his *Meditations on the First Philosophy*, he says that he is concerned to treat of "God and the human soul"; for, as he explains to the professors of Sacred Theology of the Sorbonne, "I have always considered that the two questions respecting God and the soul were the chief of those that ought to be demonstrated by philosophical rather than theological argument."

Though he adds the freedom of the human will to the existence of God and the immortality of the soul, Kant's definition of the objects of metaphysical speculation similarly makes metaphysics an inquiry into things which lie outside the realm of physics and associates it

with the traditional subject matter of theology, at least in the sense that here reason tries to prove propositions which are the main tenets of religious faith. In his Preface to the first edition of the *Critique of Pure Reason*, Kant remarks that when reason "finds itself compelled to have recourse to principles which transcend the region of experience," it "falls into confusion and contradictions. . . . The arena of these endless contests is called Metaphysic."

IF NOTHING IMMATERIAL exists, if there are no beings apart from the changing things of sense-experience, or if, although such things exist, they cannot be known by reason proceeding in the manner of speculative science, does it follow that metaphysics must also be denied existence, at least as a speculative science? The answer seems to be clear. If the declared objects of a science do not exist, or if those objects are unknowable by the methods which that science proposes to follow, then it seems difficult to defend its claims to be a valid science against those who challenge them. The controversy over the validity of metaphysics would thus appear to turn on the truth or falsity of the two "ifs" just mentioned.

But the matter cannot be so resolved if natural theology does not exhaust the whole of metaphysics; that is, if metaphysics considers objects other than the immaterial, and if it inquires into their nature rather than their existence. Aristotle's definition of the subject matter of the first philosophy seems to contain an alternative conception of metaphysics, one which may be quite consistent with the conception of it as theology, but which, however, gives it problems to solve in the realm of physical things.

"There is a science," Aristotle writes, "which investigates being as being and the attributes which belong to being in virtue of its own nature." This definition of the first philosophy seems to differentiate it from mathematics and physics as sharply as the other definition in terms of immaterial and imperishable substances. The other sciences, according to Aristotle, do not treat of "being *qua* being universally." The properties of anything which is "in so far as it has being, and the contraries in it *qua* being, it is the business of no other science to investigate; for to physics one would assign the study of things not *qua* being, but rather *qua* sharing in movement"; and mathematics is concerned with the attributes of things insofar as they are "quantitative and continuous." These sciences "mark off some particular kind of being, some genus, and inquire into this, but not being simply, nor *qua* being. . . . Similarly, these sciences omit the question whether the genus with which they deal exists or does not exist, because it belongs to the same kind of thinking to show what it is and that it is."

Only the first philosophy "does not inquire about particular subjects in so far as each has some attribute or other, but speculates about being, in so far as each particular thing is." Its subject matter, then, includes *all* existing things as existing, and involves not only the question how anything which exists exists (*i.e.*, the properties of being), but also the question whether certain things, whose existence can be questioned, do in fact exist. Whatever truths hold good for all things *qua* being—such as the principle that the same thing cannot both be and not be in the same respect at the same time —belong to the first philosophy, even though, as in this case Aristotle points out, the law of contradiction may also belong to logic as the principle of demonstration.

THIS BROADER CONCEPTION of the first philosophy explains, as its restriction to natural theology could not explain, why the central books in Aristotle's *Metaphysics* treat of sensible, physical substances; their nature as substances; the distinction between substance and accident, form and matter, potentiality and actuality, as principles of the composite nature of changing substances; and the properties of such existences in virtue of their having being, *e.g.*, their unity and divisibility, their sameness and otherness.

Aristotle does not inquire whether such substances exist. He seems to take their existence as unquestionable, for he frequently refers to physical things as "the readily recognized substances." But in addition to the question "how sensible substances exist," there are such questions as "whether there are or are not any besides sensible substances. . . and whether there

is a substance capable of separate existence, apart from sensible substances, and if so why and how." These latter questions lead to the concluding books of the *Metaphysics* which inquire into the existence of the non-sensible, the immaterial, the immutable. If Aristotle's theology begins here, then theology is only a part—the crowning part, perhaps—of a larger science whose object is not a special realm of being, but all of being.

Hobbes and Bacon go further than Aristotle in the direction of opposing the identification of metaphysics with theology. Where Aristotle seems to admit theological subject matter as a part of the first philosophy, they exclude it entirely.

Hobbes does not use the word "metaphysics" in his own classification of the sciences; he employs it only as a term of derogation to refer to scholastic doctrines which he repudiates. His own classification makes *philosophia prima* that branch of natural philosophy which is prior to the mathematical and mechanical sciences. The latter deal with determinate quantity and motion. The antecedent science deals with "quantity and motion *indeterminate*." These "being the principles or first foundation of philosophy," the science which deals with them "is called *Philosophia Prima*."

Bacon distinguishes between first philosophy and metaphysics and between metaphysics and natural theology. First philosophy, he says, is "the common parent of sciences." It is concerned with "axioms, not peculiar to any science, but common to a number of them" and also with "the adventitious or transcendental condition of things, such as little, much, like, different, possible, impossible, entity, nonentity, etc." Natural theology, which is the divine part of philosophy because it inquires about "God, unity, goodness, angels, and spirits," is separate from the rest of natural philosophy.

"But to assign the proper office of metaphysics, as contra-distinguished from primary philosophy and natural theology," Bacon writes, "we must note that as physics regards the things which are wholly immersed in matter and movable, so metaphysics regards what is more abstracted and fixed; that physics supposes only existence, motion, and natural necessity, whilst metaphysics supposes also mind and idea. . . . As we have divided natural philosophy into the investigation of causes and the production of effects, and referred the investigation of causes to theory, which we again divide into physical and metaphysical, it is necessary that the real difference of these two be drawn from the nature of the causes they inquire into." Physics, according to Bacon, inquires into efficient and material causes; metaphysics, into formal and final causes; and as mechanics is the practical application of physical theory, so what Bacon calls "magic" is the practical doctrine that corresponds to the metaphysical theory of forms.

AGREEMENT OR disagreement concerning the subject matter and problems of that which claims to be the highest human science, however named, does not seem to be uniformly accompanied by agreement or disagreement concerning the status and development of the discipline in question.

There seems to be some similarity, for example, between Plato's dialectic as an inquiry into forms and Bacon's notion of metaphysics as concerned with formal causes—a similarity which Bacon himself observes. But where Plato seems to think that dialectic exists, to be taught and learned, Bacon's judgment is that this part of metaphysics, if not the part dealing with final causes, has not yet been developed because the right method has not been employed.

Again, Aristotle's conception of metaphysics as concerned with the primary axioms, the universal principles applicable to all existence, and the transcendental properties of being, seems to bear some resemblance to Bacon's primary philosophy. But Bacon writes as if Aristotle's *Metaphysics* had not been written, or at least as if it had not succeeded, as Aristotle might have supposed it had, in establishing the science which Bacon finds for the most part in a defective or undeveloped condition.

If we turn to natural theology, either as a part of metaphysics (with Aristotle), or as separate from metaphysics (with Bacon), or as identical with metaphysics (with Descartes), we find the same situation. Aside from some verbal and some real differences concerning the objects of the inquiry, Aristotle, Bacon, and Descartes think that the existence of beings

apart from the sensible world of matter and change can be demonstrated and that something can be known of their nature—whether they are called immaterial substances, spirits, and intelligences, or God, angels, and souls.

With some alterations in language and thought, Plato and Plotinus, Augustine and Aquinas, Spinoza and Locke can be added to this company. They are theologians in that sense of "theology" which implies a rational knowledge—without religious faith, and either by intuition or demonstration—of beings which really exist, yet are not sensible or material or mutable or finite. Spinoza, for example, does not use the word "metaphysics," but he holds that "the human mind possesses an adequate knowledge of the eternal and infinite essence of God." Although Locke's use of the word "metaphysics" is derogatory, and though the purpose of his *Essay Concerning Human Understanding* is to prevent human inquiries from extending beyond man's capacities, he attributes greater certainty to our knowledge of God and the soul than to our knowledge of bodies, and finds no greater difficulty in our speculations about spirits than about particles of matter.

"Experimenting and discovering in ourselves knowledge, and the power of voluntary motion, as certainly as we experiment, or discover in things without us, the cohesion and separation of solid parts, which is the extension and motion of bodies," Locke writes, "we have as much reason to be satisfied with our notion of immaterial spirit, as with our notion of body, and the existence of the one as well as the other. . . . But whichever of these complex ideas be clearest, that of body, or immaterial spirit, this is evident, that the simple ideas that make them up are no other than what we have received from sensation or reflection; and so is it of all our other ideas of substances, even of God himself."

As we have already seen, Hume and Kant deny metaphysics (so far as it is identified with what is traditionally natural theology) the status of a valid theoretical science. For them it is incapable of taking its place beside physics and mathematics. Hume, in addition, denies validity to metaphysical speculation concerning causes and substances in the natural order. Unlike Hume, who simply removes metaphysical problems from the realm of questions worth thinking about, Kant does not reject the problems but rather offers alternative methods of stating and solving them. He hopes thereby to accomplish a reformation rather than an abolition of metaphysical inquiry.

The existence of God, freedom, and immortality must be affirmed, Kant thinks, in the order of practical, not speculative reason. They are indispensable "conditions of the necessary object of our will . . . . that is to say, conditions of the practical use of pure reason." Yet, he adds, "we cannot affirm that we *know* and *understand*, I will not say the actuality, but even the possibility, of them."

Furthermore, by redefining metaphysics to mean "any system of knowledge *a priori* that consists of pure conceptions," Kant not only gives his fundamental treatises in morals and ethics a metaphysical character, but sees the possibility of a genuine metaphysic emerging from the *Critique of Pure Reason*. Once "the dogmatism of metaphysic" has been removed, "that is, the presumption that it is possible to achieve anything in metaphysic without a previous criticism of pure reason. . . . it may not be too difficult to leave a bequest to posterity in the shape of a systematical metaphysic, carried out according to the critique of pure reason."

Kant's transcendental philosophy, and especially what he calls "the architectonic of pure reason," is in a sense that metaphysic already begun. In subject matter, if not in its method or conclusions, it resembles the traditional inquiry concerning the universal principles and transcendental properties of being. The objects of natural theology are, of course, excluded as being beyond the power of reason to know in a speculative manner.

Metaphysics as a possible science is for Kant "nothing more than the inventory of all that is given us by *pure reason*, systematically arranged. . . . Such a system of pure speculative reason," he says in his original preface to the *Critique*, "I hope to be able to publish under the title of *Metaphysic of Nature*." And in the last pages of the *Critique*, wherein he criticizes all speculative efforts in the sphere of natural theology, Kant reaffirms "the speculative and the practical use of pure reason" to constitute "a Metaphysic of Nature and a Metaphysic of

Ethics." The former, he says, is "what is commonly called Metaphysic in the more limited sense." Both together "form properly that department of knowledge which may be termed, in the truest sense of the word, philosophy. The path which it pursues is that of science, which, when it has once been discovered, is never lost, and never misleads."

CONTROVERSIES ABOUT metaphysics can be distinguished from metaphysical controversies—that is, disputes within the field of metaphysical thought. We have confined our attention to the former throughout this chapter. But it may not be possible to judge, much less to resolve, the issues about the scope, methods, and validity of metaphysics without engaging in, or at least facing, issues which are themselves metaphysical.

The only way to escape this would be to suppose that psychology (as an analysis of the powers of the mind) or epistemology (as a theory of the criteria of valid knowledge) could determine in advance of any examination of metaphysical discussion whether the matters to be discussed fall within the range of questions concerning which the human mind has the power to find and validate answers. But if this supposition is untenable in itself; or if it is untenable because psychology and epistemology, when they are treated as the first philosophy, themselves presuppose a metaphysics or conceal their metaphysical presuppositions; then no alternative remains but to judge metaphysics directly by its fruits.

In that case, the issues surveyed in this chapter require an examination of the metaphysical discussions to be found in such chapters as GOD, ANGEL, IDEA, SOUL, IMMORTALITY, WILL (which are relevant particularly to the problems of natural theology); and (as relevant to other parts or problems of metaphysics) such chapters as BEING, CAUSE, FORM, MATTER, ONE AND MANY, RELATION, SAME AND OTHER.

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REFERENCES

To find the passages cited, use the numbers in heavy type, which are the volume and page numbers of the passages referred to. For example, in **4** HOMER: *Iliad*, BK II [265-283] **12d**, the number **4** is the number of the volume in the set; the number **12d** indicates that the passage is in section d of page 12.

PAGE SECTIONS: When the text is printed in one column, the letters **a** and **b** refer to the upper and lower halves of the page. For example, in **53** JAMES: *Psychology*, **116a-119b**, the passage begins in the upper half of page 116 and ends in the lower half of page 119. When the text is printed in two columns, the letters **a** and **b** refer to the upper and lower halves of the left-hand side of the page, the letters **c** and **d** to the upper and lower halves of the right-hand side of the page. For example, in **7** PLATO: *Symposium*, **163b-164c**, the passage begins in the lower half of the left-hand side of page 163 and ends in the upper half of the right-hand side of page 164.

AUTHOR'S DIVISIONS: One or more of the main divisions of a work (such as PART, BK, CH, SECT) are sometimes included in the reference; line numbers, in brackets, are given in certain cases; *e.g.*, *Iliad*, BK II [265-283] **12d**.

BIBLE REFERENCES: The references are to book, chapter, and verse. When the King James and Douay versions differ in title of books or in the numbering of chapters or verses, the King James version is cited first and the Douay, indicated by a *(D)*, follows; *e.g.*, OLD TESTAMENT: *Nehemiah*, 7:45—*(D) II Esdras*, 7:46.

SYMBOLS: The abbreviation "esp" calls the reader's attention to one or more especially relevant parts of a whole reference; "passim" signifies that the topic is discussed intermittently rather than continuously in the work or passage cited.

For additional information concerning the style of the references, see the Explanation of Reference Style; for general guidance in the use of *The Great Ideas*, consult the Preface.

1. Conceptions of the highest human science: dialectic, first philosophy, metaphysics, natural theology, transcendental philosophy

7 PLATO: *Charmides*, **7d-13d** / *Symposium*, **167a-d** / *Republic*, BK VI-VII, **383d-398c** / *Timaeus*, **476a-b** / *Parmenides* **486a-511d** esp **491a-d** / *Sophist*, **561d-574c** esp **571a-c** / *Statesman*, **585c** / *Philebus*, **611d-612b**; **633a-635a** esp **634b-635a** / *Seventh Letter*, **809c-810d**

8 ARISTOTLE: *Physics*, BK I, CH 9 [192^a33-$^b2$] **268c-d**; BK II, CH 2 [194^b9-15] **271a**; CH 7 [198^a22-31] **275b-c** / *Heavens*, BK III, CH I [298^b13-24] **390a-b** / *Metaphysics*, BK I, CH 1-2 **499a-501c**; BK II, CH I **511b,d-512b**; BK III, CH I [995^a23-$^b27$] **513b,d-514b**; CH 2 [996^a18-997^a34] **514d-516a**; BK IV, CH 1-3 **522a-525a**; BK VI, CH I **547b,d-548c**; BK XI, CH 1-4 **587a-590a**; CH 7 **592b-593a** / *Soul*, BK I, CH I [403^b10-17] **632d**

9 ARISTOTLE: *Ethics*, BK VI, CH 7 **390a-d**

11 NICOMACHUS: *Arithmetic*, BK I, **811a-813a**

16 PTOLEMY: *Almagest*, PREF, **5a-b**

17 PLOTINUS: *First Ennead*, TR III **10a-12b**

18 AUGUSTINE: *City of God*, BK VIII, CH 1-12 **264b,d-273a**

19 AQUINAS: *Summa Theologica*, PART I, Q I, A I **3b-4a**; A 8, ANS **7c-8d**

20 AQUINAS: *Summa Theologica*, PART I-II, Q 57, A 2 **36a-37b**; PART II-II, Q 45, A I, ANS **598d-599d**

23 HOBBES: *Leviathan*, PART I, **72a-d**; PART IV, **269b-272b**

30 BACON: *Advancement of Learning*, **15d**; **40a-48d** esp **40a-41b**, **43a-c**, **44c-45a** / *Novum Organum*, BK II, APH 9 **140b-c**

31 DESCARTES: *Discourse*, PART IV **51b-54b**

31 SPINOZA: *Ethics*, PART II, PROP 40, SCHOL 2 **388a-b**; PROP 47, SCHOL **390c-391a**; PART V, PROP 25-42 **458d-463d**

35 HUME: *Human Understanding*, SECT I **451a-455b** passim

42 KANT: *Pure Reason*, **1a-13d**; **19a**; **115d-117d**; **120b** [fn 1]; **172d-174a**; **243c-250a,c** esp **246a-248d** / *Fund. Prin. Metaphysic of Morals*, **253b-d**; **264b-d** esp **264d** / *Pref. Metaphysical Elements of Ethics*, **365a-366a** / *Intro. Metaphysic of Morals*, **387a-388d** esp **388a-c**; **390b,d-391a** / *Judgement*, **551a-552c**; **603d-607c** esp **606d-607c**

46 HEGEL: *Philosophy of History*, INTRO, **165a-b**

51 TOLSTOY: *War and Peace*, BK V, **197b**

53 JAMES: *Psychology*, **xiiib-xiva**; **95a**

54 FREUD: *New Introductory Lectures*, **874a**

2. The analysis of the highest human science: the character of dialectical, metaphysical, or transcendental knowledge

2a. The distinctive objects or problems of the supreme science

7 PLATO: *Charmides*, 7d-13d / *Republic*, BK V, 368c-373c; BK VI-VII, 383d-398c esp BK VII, 396d-398c / *Timaeus*, 476a-b / *Sophist*, 564d-574c / *Philebus*, 633a-635a esp 634b-635a / *Seventh Letter*, 809c-810d

8 ARISTOTLE: *Physics*, BK I, CH 9 [192a33-b2] 268c-d; BK II, CH 2 [194b9-15] 271a; CH 7 [198a22-31] 275b-c / *Heavens*, BK III, CH 1 [298b13-24] 390a-b / *Metaphysics*, BK I-IV 499a-532d; BK VI, CH 1-BK VII, CH 1 547b,d-551a; BK XI, CH 1-8 587a-593d; BK XII, CH 1 598a-c / *Soul*, BK I, CH 1 [403b10-17] 632d

9 ARISTOTLE: *Ethics*, BK VI, CH 7 390a-d

11 NICOMACHUS: *Arithmetic*, BK I, 811a-813a

16 PTOLEMY: *Almagest*, PREF, 5a-b

17 PLOTINUS: *First Ennead*, TR III, CH 4-6 11a-12b

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30 BACON: *Advancement of Learning*, 42c-46a; 60b-c / *Novum Organum*, BK II, APH 9 140b-c

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31 SPINOZA: *Ethics*, PART II, PROP 40, SCHOL 2 388a-b; PROP 47 390c-391a; PART V, PROP 25-33 458d-460c

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46 HEGEL: *Philosophy of History*, INTRO, 165a-b

51 TOLSTOY: *War and Peace*, EPILOGUE II, 694c-d

53 JAMES: *Psychology*, xiiib-xiva; 89b-90a; 118b; 141a; 258b-259b esp 259b; 291a

2b. The nature of the concepts, abstractions, or principles of the highest science

7 PLATO: *Republic*, BK VI-VII, 383d-398c / *Sophist*, 564d-574c / *Seventh Letter*, 809c-810d

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53 JAMES: *Psychology*, 884b-886a

2c. The method of metaphysics: the distinction between empirical and transcendental methods

7 PLATO: *Phaedrus*, 134a-c; 139d-140b / *Republic*, BK VI-VII, 383d-398c esp BK VII, 396d-398c / *Parmenides* 486a-511d esp 491a-d / *Sophist* 551a-579d esp 552b-c, 553d-554a, 561b, 570c-571d / *Statesman* 580a-608d esp 580d, 582d-583c, 586c-589c, 591a-d, 594d-596a / *Philebus*, 610d-613a / *Seventh Letter*, 809c-810d

8 ARISTOTLE: *Metaphysics*, BK II, CH 3 513c-d; BK IV, CH 2 [1004a25-31] 523b-c; CH 4 [1005b35-1006a28] 525a-c; CH 7 [1012a18-24] 532a-b; CH 8 [1012b5-8] 532c; BK VI, CH 1 [1025b1-18] 547b,d; BK IX, CH 6 [1048a25-b9] 573c-574a; BK XI, CH 5 [1061b34-1062a19] 590a-c; CH 7 [1063b36-1064a9] 592b / *Soul*, BK I, CH 1 [402a10-22] 631b

19 AQUINAS: *Summa Theologica*, PART I, Q 1, A 8, ANS 7c-8d

23 HOBBES: *Leviathan*, PART IV, 269b-c

30 BACON: *Advancement of Learning*, 44c-45a

31 DESCARTES: *Rules*, IV 5a-7d / *Discourse*, PART II, 46c-47b; PART IV 51b-54b passim / *Meditations*, 69a-71a,c passim; I-II 75a-81d / *Objections and Replies*, 119c; 126a-b; 128a-129c; POSTULATE I-II 130d-131a; POSTULATE VII 131c; 167a-c; 206c-207b; 237b-238b; 239a-240a; 242c-244c; 245b-246a

31 SPINOZA: *Ethics*, PART II, PROP 40, SCHOL 2 388a-b; PROP 44, COROL 2 and DEMONST 390a; PROP 47 390c-391a; PART V, PROP 25-26 458d-459a; PROP 28 459b; PROP 29, SCHOL 459c-d; PROP 31 459d-460b

35 HUME: *Human Understanding*, SECT XII, DIV 132 509a-d

42 KANT: *Pure Reason*, 19a; 121a-d; 249c-250a,c / *Fund. Prin. Metaphysic of Morals*, 253a-d; 263d-264d esp 264d; 277d-279d / *Practical Reason*, 298d-332d; 349b-351a / *Pref. Metaphysical Elements of Ethics*, 365a-366a

53 JAMES: *Psychology*, 95a

(2. *The analysis of the highest human science: the character of dialectical, metaphysical, or transcendental knowledge.*)

2d. The distinction between a metaphysic of nature and a metaphysic of morals: the difference between the speculative treatment and the practical resolution of the metaphysical problems of God, freedom, and immortality

42 KANT: *Pure Reason*, 5a-d; 15c-16c; 33a-d; 120b [fn 1]; 124d-128a; 143a-145c; 152a-153c; 164a-171a esp 169c-170a, 170c-171a; 177b-192d esp 177b-179c; 200c-209d; 218d-223d; 234c-240b esp 239a-c; 241d-242c; 246a-250a,c / *Fund. Prin. Metaphysic of Morals*, 253a-d; 263d-264d; 277d-287d esp 277d-279d, 283d-285a / *Practical Reason*, 291a-293c esp 292a-293b; 296a-d; 301d-302d; 307d-314d; 331a-337a,c; 340a-342d; 344a-349b esp 344a-c, 348b-349b; 351b-352c; 353a-354d / *Intro. Metaphysic of Morals*, 386b-388d esp 386d-387a,c, 388a-d; 390b,d-391a / *Judgement*, 568c-570a; 588a-613a,c passim, esp 607c, 609b-610a

3. Metaphysics in relation to other disciplines

3a. The relation of metaphysics to theology

18 AUGUSTINE: *City of God*, BK VIII, CH 1-12 264b,d-273a / *Christian Doctrine*, BK II, CH 40 655b-656a

19 AQUINAS: *Summa Theologica*, PART I, Q 1 3a-10c esp A 1 3b-4a, AA 4-6 5a-7a, A 8 7c-8d; Q 2, A 2 esp REP 1 11d-12c; Q 12, AA 12-13 60d-62b; Q 32, A 1 175d-178a; Q 39, AA 7-8 209a-213a; Q 46, A 2 253a-255a; Q 84, A 5 446c-447c

20 AQUINAS: *Summa Theologica*, PART II-II, Q 2, AA 3-4 392d-394b; Q 45 598c-603c passim

23 HOBBES: *Leviathan*, PART I, 83b; 84a; PART II, 163a-b; PART III, 165b; PART IV, 247d; 269b-271c

25 MONTAIGNE: *Essays*, 155a-c

30 BACON: *Advancement of Learning*, 4c; 15d-16b; 19d-20a; 39d-40c; 41b-d; 44c-45a; 95d-101d / *Novum Organum*, BK I, APH 65 114b-c

31 DESCARTES: *Discourse*, PART I, 43c / *Meditations*, 69a-71a,c / *Objections and Replies*, 125b-126b; 283d-284d

33 PASCAL: *Pensées*, 543 266a

39 SMITH: *Wealth of Nations*, BK V, 335b-337a

40 GIBBON: *Decline and Fall*, 307b-310a passim, esp 308b-309a; 670b-c

42 KANT: *Pure Reason*, 119a-c; 177b-192d esp 190a-c; 238b-240b / *Practical Reason*, 346b-347a; 351b-352c / *Judgement*, 599d-600a; 600d-601c; 604d-606d esp 606a-d; 607d-609b

46 HEGEL: *Philosophy of History*, INTRO, 158c-160b; PART III, 308c-309d

3b. The relation of metaphysics to mathematics, physics or natural philosophy, psychology, and the empirical sciences

7 PLATO: *Republic*, BK VI-VII, 386d-398c / *Philebus*, 634b-635b / *Seventh Letter*, 809c-810a

8 ARISTOTLE: *Physics*, BK I, CH 9 [192^{a}33-^{b}2] 268c-d; BK II, CH 2 [194^{b}9-15] 271a; CH 7 [198^{a}22-31] 275b-c / *Heavens*, BK III, CH 1 [298^{b}13-24] 390a-b / *Metaphysics*, BK I, CH 8 [989^{b}29-990^{a}8] 508a; CH 9 [992^{a}24-^{b}9] 510c-d; BK II, CH 3 [994^{b}31]-BK III, CH 2 [997^{a}34] 513c-516a; BK IV, CH 1-3 522a-525a; BK VI, CH 1 547b,d-548c; BK XI, CH 1 587a-588a; CH 3 [1061^{a}29]-CH 4 [1061^{b}34] 589c-590a; CH 7 592b-593a; BK XII, CH 1 [1069^{a}30-^{b}2] 598b-c; CH 8 [1073^{b}1-7] 603d / *Soul*, BK I, CH 1 [403^{b} 10-17] 632d

11 NICOMACHUS: *Arithmetic*, BK I, 812b-813d

16 PTOLEMY: *Almagest*, BK I, 5a-6a

17 PLOTINUS: *First Ennead*, TR III 10a-12b

19 AQUINAS: *Summa Theologica*, PART I, Q 1, A 8, ANS 7c-8d; Q 85, A 1, REP 2 451c-453c

20 AQUINAS: *Summa Theologica*, PART I-II, Q 57, A 2 36a-37b; PART II-II, Q 45, A 1, ANS 598d-599d

23 HOBBES: *Leviathan*, PART I, 72a-d

30 BACON: *Advancement of Learning*, 15d; 42c-44c / *Novum Organum*, BK II, APH 9 140b-c

31 DESCARTES: *Objections and Replies*, 128d-129a

39 SMITH: *Wealth of Nations*, BK V, 335b-337a

42 KANT: *Pure Reason*, 1a-13d; 15c-16c; 17d-19a; 211c-218d esp 215d-216d; 243c-248d passim, esp 245c-246b / *Fund. Prin. Metaphysic of Morals*, 253a-d; 254b-c; 264b-d / *Practical Reason*, 292d-293b; 295b-d; 307d-310c; 311d-313d; 330d-332d esp 331a-332d; 351b-352c

43 MILL: *Utilitarianism*, 445b-c

46 HEGEL: *Philosophy of History*, INTRO, 182d-183c

51 TOLSTOY: *War and Peace*, BK V, 197b; EPILOGUE II, 694c-d

53 JAMES: *Psychology*, xiiib-xiva; 90a; 118b; 884b-886a esp 886a

3c. The relation of metaphysics to logic and dialectic

8 ARISTOTLE: *Sophistical Refutations*, CH 11 [172^{a}12-22] 237a / *Metaphysics*, BK III, CH 1 [995^{b}4-10] 513d-514a; CH 2 [996^{b}26-997^{a}14] 515b-d; BK IV, CH 2 [1004^{b}18-27] 523d; CH 3 524b-525a; BK XI, CH 1 [1059^{a}23-26] 587a; CH 3-4 589a-590a esp CH 3 [1061^{b}9-12] 589d; CH 8 [1064^{b}23-29] 593a

19 AQUINAS: *Summa Theologica*, PART I, Q 1, A 8, ANS 7c-8d

23 HOBBES: *Leviathan*, PART I, 72a-d; PART IV, 269b-c

30 BACON: *Advancement of Learning*, 43d-46a; 57b-58b

38 ROUSSEAU: *Inequality*, 341b-342b

39 SMITH: *Wealth of Nations*, BK V, 335b-337a

42 KANT: *Pure Reason*, 36d-37d / *Fund. Prin. Metaphysic of Morals*, 253b c
46 HEGEL: *Philosophy of History*, INTRO, 165a-b; 182d-183c
53 JAMES: *Psychology*, 671a-672a; 852a; 873a-874a; 881b-886a esp 881b-882a, 884b-886a; 890a

4. The criticism and reformation of metaphysics

4*a*. The dismissal or satirization of metaphysics as dogmatism or sophistry

23 HOBBES: *Leviathan*, PART I, 49d; 52a-b; 54b-c; 56b-d; 57c-d; 59a-60a; 71a-b; 80b; 84a; PART II, 163a-b; PART III, 183c-d; PART IV, 247d; 267a-272b; 274a-b; 276c
25 MONTAIGNE: *Essays*, 240a-246a; 257d-264a
30 BACON: *Advancement of Learning*, 40a-c; 57d-58b; 60a-c / *Novum Organum*, BK I, APH 62-65 113b-114c; APH 71 117a-c
35 LOCKE: *Human Understanding*, BK III, CH X, SECT 2 291d-292a; SECT 6-14 293a-295a; BK IV, CH VIII, SECT 9 347d-348a
35 BERKELEY: *Human Knowledge*, INTRO, SECT 6 405d-406a; SECT 17 409d-410a; SECT 97 431d-432a; SECT 143 441c-d
35 HUME: *Human Understanding*, SECT I, DIV 6-7 453b-454a passim; SECT VIII, DIV 62, 478c; SECT XII, DIV 132, 509d
36 STERNE: *Tristram Shandy*, 329b-336a; 421b-422b
39 SMITH: *Wealth of Nations*, BK V, 335b-336c
41 GIBBON: *Decline and Fall*, 526c-527a
42 KANT: *Pure Reason*, 1a-4a,c; 20b-c; 36a-37d; 109b-c; 120c-121c; 129c-130a; 133d; 157d; 187c-188b; 192a-b; 218d-222b esp 221c-222b; 229b-c / *Practical Reason*, 299d; 304d-305a; 335b-c / *Judgement*, 600d-601c; 607d-608c
47 GOETHE: *Faust*, PART I [1948-1963] 46a-b; [4343-4367] 107a-b; PART II [7843-7846] 191a
48 MELVILLE: *Moby Dick*, 115b-117a; 255a
51 TOLSTOY: *War and Peace*, BK VI, 243b
53 JAMES: *Psychology*, xiva; 90a; 227b; 235b; 702a-b

4*b*. Reconstructions of metaphysics: critical philosophy as a propaedeutic to metaphysics

23 HOBBES: *Leviathan*, PART IV, 269b-c
31 DESCARTES: *Discourse*, PART II, 46c-48b; PART IV 51b-54b / *Meditations*, 72b,d; I 75a-77c / *Objections and Replies*, 237b-238b passim; 267a-277a,c passim
35 BERKELEY: *Human Knowledge*, INTRO 405a-412a,c passim, esp SECT 21-25 411b-412a,c; SECT 133 439c-440a
35 HUME: *Human Understanding*, SECT I, DIV 7-10 453c-455b; SECT XII, DIV 116, 503d-504a
42 KANT: *Pure Reason*, 1a-13d; 15c-16d; 19a-22a,c; 101d-102b; 133c-134d; 146a-149d; 157d; 196b-197c; 218d-227a; 248d-250a,c / *Fund. Prin. Metaphysic of Morals*, 270c-d; 273d-274a / *Practical Reason*, 292d-293b; 296a-d; 307a-d; 331a-332d / *Judgement*, 567c-568a

CROSS-REFERENCES

For: Statements in other contexts concerning the highest human science, *see* DIALECTIC 2a, 4; PHILOSOPHY 2b; SCIENCE 1a(2); THEOLOGY 3a; WISDOM 1a.

Discussions relevant to the objects, problems, and concepts of metaphysics or the highest human science, *see* BEING 2, 3, 4-4a, 7a-7b, 7c, 7d, 7e, 8a-8b; CAUSE 5a, 5d; GOD 2b-2c, 6b; GOOD AND EVIL 1a-1b; IDEA 1f; IMMORTALITY 2; KNOWLEDGE 6a(1), 6a(4); LIBERTY 4a; MIND 10f; NECESSITY AND CONTINGENCY 1, 2a-2b; ONE AND MANY 1-1b; RELATION 3; SAME AND OTHER 1, 2c, 2e; SOUL 4b; TRUTH 1b-1c.

Considerations relevant to the nature of metaphysical concepts or abstractions, *see* BEING 1; DEFINITION 6a; IDEA 1d, 2g, 4b(4); MEMORY AND IMAGINATION 6d; SIGN AND SYMBOL 3d.

The method or character of metaphysical thought, *see* KNOWLEDGE 6c(4); LOGIC 4d; PHILOSOPHY 3a-3b; REASONING 6a; TRUTH 4c.

The relation of metaphysics to theology, *see* KNOWLEDGE 6c(5); THEOLOGY 2, 3a, 4a; WISDOM 1a, 1c; and for the relation of metaphysics to mathematics and physics, *see* MATHEMATICS 1a; NATURE 4b; PHILOSOPHY 2b; PHYSICS 1a; SCIENCE 1a(2).

The problem of principles common to metaphysics and logic, *see* PRINCIPLE 1c; and for the statement of the law of contradiction, *see* OPPOSITION 2a.

Criticisms of metaphysics, and for the substitution of psychology or epistemology for metaphysics as the first philosophy, *see* DIALECTIC 2c, 3c, 6; KNOWLEDGE 5d-5e; MAN 2b(4); PHILOSOPHY 3d, 6b; SOUL 5a; THEOLOGY 5.

Considerations relevant to a metaphysic of morals, and for the solution therein of the problems of God, freedom, and immortality, *see* GOD 2d; IMMORTALITY 3a; NECESSITY AND CONTINGENCY 4b; PHILOSOPHY 2a; WILL 5b(4).

ADDITIONAL READINGS

Listed below are works not included in *Great Books of the Western World*, but relevant to the idea and topics with which this chapter deals. These works are divided into two groups:

I. Works by authors represented in this collection.
II. Works by authors not represented in this collection.

For the date, place, and other facts concerning the publication of the works cited, consult the Bibliography of Additional Readings which follows the last chapter of *The Great Ideas.*

I.

AQUINAS. *On the Trinity of Boethius*, QQ 5–6
HUME. *A Treatise of Human Nature*, BK I, PART IV, SECT III–IV
KANT. *De Mundi Sensibilis (Inaugural Dissertation)*, SECT V
——. *Prolegomena to Any Future Metaphysic*, par 1–5, 40–60; SCHOLIA
——. *Metaphysical Foundations of Natural Science*
HEGEL. *Science of Logic*, VOL I, BK I
W. JAMES. *Some Problems of Philosophy*, CH 2–3

II.

MAIMONIDES. *The Guide for the Perplexed*, PART I, CH 33–36
BONAVENTURA. *Itinerarium Mentis in Deum (The Itinerary of the Mind to God)*
SUÁREZ. *Disputationes Metaphysicae*, esp I
MALEBRANCHE. *Dialogues on Metaphysics and Religion*
LEIBNITZ. *Philosophical Works*, CH II (*On the Reform of Metaphysics and on the Notion of Substance*)
VOLTAIRE. "Metaphysics," in *A Philosophical Dictionary*
SCHOPENHAUER. *The World as Will and Idea*, VOL II, SUP, CH 17
COMTE. *The Positive Philosophy*, INTRO
LOTZE. *Metaphysics*, INTRO
C. S. PEIRCE. *Collected Papers*, VOL VI, par 318–394
A. E. TAYLOR. *Elements of Metaphysics*
BERGSON. *The Creative Mind*, CH 6
SANTAYANA. *Dialogues in Limbo*, CH 10
HEIDEGGER. *Was ist Metaphysik?*
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T. WHITTAKER. *Prolegomena to a New Metaphysic*
MARITAIN. *The Degrees of Knowledge*, INTRO; CH 4
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CARNAP. *The Unity of Science*
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B. RUSSELL. *Mysticism and Logic*, CH 5
——. *An Inquiry into Meaning and Truth*, CH 25

Chapter 58: MIND

INTRODUCTION

IN the tradition of the great books, the word "mind" is used less frequently than "reason," "intellect," "understanding," or "soul." There are still other words, like "intelligence," "consciousness," and even "spirit" or "psyche," which often carry some part of the connotation of the word "mind." Certain authors use "mind" as a synonym for one or another of these words, and give it the meaning which other writers express exclusively in terms of "reason" or "understanding." Some discuss mind without reference to soul, some identify mind with soul or spirit, and some conceive mind as only a part of soul or spirit.

For the purpose of assembling in a single chapter references to all discussions which fall within the area of meaning common to all these terms, it was necessary to adopt some single covering word. Our choice of "mind" is partly the result of its present currency, partly the result of the fact that it is somewhat more neutral than the others and therefore less prejudicial to the conflicting theories which are juxtaposed in this chapter.

Words like "reason" or "intellect" usually imply a sharper distinction between the functions or faculties of sensation and thought than does the word "mind." Imagination and memory, for example, are attributed to the understanding in the writings of Locke and Hume, whereas, in the analytical vocabulary of Aristotle and Aquinas, imagination and memory belong to sense, not to reason or intellect. Similarly, words like "soul" or "spirit" usually connote a substantial as well as an immaterial mode of being, whereas "mind" can have the meaning of a faculty or a power to be found in living organisms.

The adoption of the word "mind" is purely a matter of convenience. It begs no questions and decides no issues. The relations between what is here discussed and the matters considered in the chapters on SOUL, SENSE, MEMORY AND IMAGINATION, remain the same as they would be if "reason" or "intellect" were used in place of "mind." Different formulations of these relationships are not affected by the words used, but by different theories of what the mind is, however it is named.

Before we consider the diverse conceptions of the human mind which are enumerated under the seven main divisions of the first section in the Outline of Topics, it may be useful to examine the elements of meaning more or less common to the connotation of all the words which "mind" here represents. Even here we must avoid begging the question whether mind is a peculiarly human possession. Other animals may have minds. Mind may be, as it is on one theory, a universal property of matter. According to another theory, there may be superhuman minds or intelligences, or a single absolute mind, a transcendent intelligence.

What, then, does the universe contain because there is mind in it, which would be lacking if everything else could remain the same with mind removed? The facts we are compelled to mention in answering this question should give us some indication of the elements of meaning common to "mind" and all its synonyms.

FIRST IS THE FACT of thought or thinking. It there were no evidence of thought in the world, mind would have little or no meaning. The recognition of this fact throughout the tradition accounts for the development of diverse theories of mind. None of the great writers denies the phenomenon of thought, however differently each may describe or explain it; none, therefore, is without some conception of mind.

It may be supposed that such words as "thought" or "thinking" cannot, because of their own ambiguity, help us to define the sphere of mind. But whatever the relation of thinking to sensing, thinking seems to involve more—for almost all observers—than a mere reception of impressions from without. This seems to be the opinion of those who make thinking a consequence of sensing, as well as of those who regard thought as independent of sense. For both, thinking goes beyond sensing, either as an elaboration of the materials of sense or as an apprehension of objects which are totally beyond the reach of the senses. To the extent that this insight is true, the elements or aspects of thought discussed in the chapters on IDEA, JUDGMENT, and REASONING have an obvious relevance to the various theories of mind discussed in this chapter.

THE SECOND FACT which seems to be a root common to all conceptions of mind is that of knowledge or knowing. This may be questioned on the ground that if there were sensation without any form of thought, judgment, or reasoning, there would be at least a rudimentary form of knowledge—some degree of consciousness or awareness by one thing of another. Granting the point of this objection, it nevertheless seems to be true that the distinction between truth and falsity, and the difference between knowledge, error, and ignorance, or knowledge, belief, and opinion, do not apply to sensations in the total absence of thought. The chapter on KNOWLEDGE reports formulations of these distinctions or differences. Any understanding of knowledge which involves them seems to imply mind for the same reason that it implies thought.

There is a further implication of mind in the fact of self-knowledge. Sensing may be awareness of an object and to this extent it may be a kind of knowing, but it has never been observed that the senses can sense or be aware of themselves. Take, for example, definitions of sense, or theories of sensation and the objects of sense. Such definitions and theories must be regarded as works of reflective thought; they are not products of sensation.

Thought seems to be not only reflective, but reflexive, that is, able to consider itself, to define the nature of thinking and to develop theories of mind. This fact about thought—its reflexivity—also seems to be a common element in all the meanings of "mind." It is sometimes referred to as "the reflexivity of the intellect" or as "the reflexive power of the understanding" or as "the ability of the understanding to reflect upon its own acts" or as "self-consciousness." Whatever the phrasing, a world without self-consciousness or self-knowledge would be a world in which the traditional conception of mind would probably not have arisen.

THE THIRD FACT is the fact of purpose or intention, of planning a course of action with foreknowledge of its goal, or working in any other way toward a desired and foreseen objective. As in the case of sensitivity, the phenomena of desire do not, without further qualification, indicate the realm of mind. According to the theory of natural desire, for example, the natural tendencies of even inanimate and insensitive things are expressions of desire. But it is not in that sense of desire that the fact of purpose or intention is here taken as evidence of mind.

It is rather on the level of the behavior of living things that purpose seems to require a factor over and above the senses, limited as they are to present appearances. It cannot be found in the passions which have the same limitation as the senses, for unless they are checked they tend toward immediate emotional discharge. That factor, called for by the direction of conduct to future ends, is either an element common to all meanings of "mind" or is at least an element associated with mind.

It is sometimes called the faculty of will—rational desire or the intellectual appetite. Sometimes it is treated as the act of willing which, along with thinking, is one of the two major activities of mind or understanding; and sometimes purposiveness is regarded as the very essense of mentality. Considerations relevant to this aspect of mind are discussed in the chapter on WILL.

THESE THREE OR FOUR FACTS—thought, knowledge or self-knowledge, and purpose—seem to be common to all theories of mind. More than that, they seem to be facts which require the

development of the conception. They are, for the most part, not questioned in the tradition of the great books; but they are not always seen in the same light. They are not always related in the same way to one another and to other relevant considerations. From such differences in interpretation and analysis arise the various conflicting conceptions of the human mind.

The conflict of theories concerning *what* the human mind is, what *structure* it has, what *parts* belong to it or what *whole* it belongs to, does not comprise the entire range of controversy on the subject. Yet enough is common to all theories of mind to permit certain other questions to be formulated.

How does the human mind operate? How does it do whatever is its work, and with what intrinsic excellences or defects? What is the relation of mind to matter, to bodily organs, to material conditions? Is mind a common possession of men and animals, or is whatever might be called mind in animals distinctly different from the human mind? Are there minds or a mind in existence apart from man and the whole world of corporeal life?

Such questions constitute the major topics of this chapter. Other topics which appear here, such as the moral and political aspects of mind, are reserved for discussion in the many other chapters devoted to the great ideas of moral and political thought. Still others, like the problem of insanity—the loss or derangement of mind—are obviously relevant here even though the more general consideration of psychopathology belongs elsewhere, *e.g.*, in the chapter on MEDICINE.

The intelligibility of the positions taken in the dispute of the issues which are here our major concern depends to some degree on the divergent conceptions of the human mind from which they stem. It seems necessary, therefore, to examine the seven notions of mind which appear in the great books. This will at least provide the general context for the reader's further explorations, even if it is not possible to trace the implications each of these notions may have for the great controversial issues.

Seven is, of course, a fiction of analysis. There are, from one point of view, more—perhaps as many as there are, among the great authors, thinkers who have dwelt at length on the subject. From another point of view, there may be fewer than seven, for when the lines are drawn according to certain basic differences, several of these theories appear to be variants of a single doctrine.

"THAT IN THE SOUL which is called mind," Aristotle writes, is "that whereby the soul thinks and judges." For him, as for Plato, the human intellect or reason is a part or power of the soul of man, distinct from other parts or faculties, such as the senses and the imagination, desire and the passions. Though the human soul is distinguished from the souls of other living things by virtue of its having this part or power, and is therefore called by Aristotle a "rational soul," these writers do not identify mind and soul. As soul is the principle of life and all vital activities, so mind is the subordinate principle of knowledge and the activities of thinking, deliberating, deciding.

Within the general framework of this theory, many differences exist between Plato and Aristotle and between them and others who share their views. These differences arise not only with respect to the soul of which the intellect is a part, but also with respect to the power or activity of the intellect itself. For example, the distinction which Aristotle initiates, between mind as an active and as a passive power, is more explicitly formulated by Aquinas in his theory of the active intellect and the intellect as potential.

The human intellect, Aquinas writes, "is in potentiality to things intelligible, and is at first *like a clean tablet on which nothing is written*, as the Philosopher says. This is made clear from the fact that at first we are only in potentiality towards understanding, and afterwards we are made to understand actually. And so it is evident that with us to understand is *in a way to be passive*." But the forms of things, or what Aquinas calls their "intelligible species," are not actually intelligible as they exist in material things. He therefore argues that in addition to the "power receptive of such species, which is called the *possible intellect* by reason of its being in potentiality to such species," there must also be another intellectual power, which he calls the active or "agent" intellect.

Nothing, he says, can be "reduced from potentiality to act except by something in act" or already actual. "We must therefore assign on the part of the intellect some power to make things actually intelligible, by the abstraction of the species from material conditions. Such is the necessity for positing an agent intellect."

The more explicit formulation which Aquinas gives of the distinction between the active and the possible intellects as distinct powers has further consequences for the analysis of three states of the passive or possible intellect distinguished by Aristotle. The intellectual power which is receptive of the intelligible species may either be in complete potentiality to them, as it is when it has not yet come to understand certain things. Or it may be described as in habitual possession of the intelligible species when it has previously acquired the understanding of certain things, but is not now actually engaged in understanding them. In the third place, the potential intellect may also be actual or in act whenever it is actually exercising its habit of understanding or is for the first time actually understanding something.

In this traditional theory of mind, many other distinctions are made in the sphere of mental activity, but none is thought to require a division of the mind into two distinct powers, or even to require the discrimination of several states of the same power. Just as Plato regards the intuition or direct apprehension of intelligible objects as an activity of the same intelligence which is able to reason discursively about the ideas it can contemplate, so Aristotle and Aquinas assign three different activities to the intellectual power which apprehends intelligible objects, not by intuition, but only as the result of the abstraction of forms from matter by the active intellect.

Once the possible intellect is actualized by the reception of the abstracted species, it can act in three ways. It can express in concepts the species which have been impressed upon it. This—the first act of the intellect—is conception. Its second and third acts—of judgment and of reasoning—consist in forming propositions out of concepts and in seeing how one proposition follows from others in inference or proof.

Unlike abstraction and conception, which Aquinas assigns to the active and the possible intellect respectively, conception, judgment, and reasoning do not, in his opinion, require distinct powers. Nor do the two kinds of thought or reasoning which Aquinas calls "speculative" and "practical." The speculative and practical intellects, he maintains, "are not distinct powers," for they differ only in their ends. The speculative intellect "directs what it apprehends, not to operation, but to the sole consideration of truth"; the practical intellect "directs what it apprehends to operation" or action. But to the nature of intellect as a power of apprehension, "it is accidental whether it be directed to operation or not."

NOT ALL THE foregoing distinctions are made, or made in the same way, by Plato, Aristotle and other authors like Plotinus, Augustine, or Aquinas, who stand together in regarding mind as only a part of the human soul. Lucretius belongs with them on this point, though he differs radically from them on the issue of mind and matter. Mind, for him, is only "the directing principle" of the soul, "the head so to speak, and reigns paramount in the whole body." It is only the thinking or deciding part of the soul. But Plato, Aristotle, and their followers make a distinction in kind between sensations or images and universal ideas or abstract concepts. Sense and intellect are for them distinct faculties of knowing and have distinct objects of knowledge. For Lucretius, on the other hand, thinking is merely a reworking of the images received by the senses. In this one respect at least, Lucretius is more closely associated with the theory of mind to be found in Hobbes, Locke, and Hume.

In the consideration of mind, agreement on one point seems everywhere to be accompanied by disagreement on another. Locke does not agree with Lucretius or Hobbes about the materiality of mind; and though he agrees with Berkeley that mind is a spiritual entity, he does not agree with him, any more than he agrees with Hobbes and Hume, about the abstraction of general concepts from particular sense-impressions. Plato and Aristotle agree that the senses and the intellect or reason are quite distinct, but they do not agree about the relation of these faculties, especially not on the extent

to which the mind can act independently of sense and imagination. Augustine seems to share Plato's doctrine of reminiscence as an account of how the senses recall actively to mind ideas it has always somehow possessed. Aquinas adopts Aristotle's doctrine of abstraction as the quite contrary account of the role the senses play in providing the materials on which the mind works to obtain ideas. But Augustine and Aquinas come together on another point in which they depart alike from Aristotle and Plato. They distinguish with precision between the intellect and will as separate faculties of the soul, whereas Plato and Aristotle treat thinking and willing (or knowing and loving) as merely diverse aspects of mental life.

THE SAME SITUATION prevails with respect to the other theories of mind which we must now consider in their own terms. Descartes, for example, resembles Plato and Augustine on the point on which we have seen that they together differ from Aristotle and Aquinas, namely, the relation of mind or reason to the senses or imagination. Yet he is also closer to Aristotle and Plato in a respect in which they together differ from Augustine and Aquinas, namely, in regarding thinking and willing as acts of the mind rather than as belonging to completely separate faculties.

These agreements and differences occur in the context of a basic opposition between Descartes and all the other writers so far mentioned. Unlike all of them, he *identifies* the human mind with the rational soul of man. In the dual nature of man, he says, "there are certain activities, which we call corporeal, *e.g.*, magnitude, figure, motion, and all those that cannot be thought of apart from extension in space; and the substance in which they exist is called *body*. . . . Further, there are other activities, which we call *thinking* activities, *e.g.*, understanding, willing, imagining, feeling, etc., which agree in falling under the description of thought, perception, or consciousness. The substance in which they reside we call a *thinking thing* or *the mind*, or any other name we care, provided only we do not confound it with corporeal substance, since thinking activities have no affinity with corporeal activities, and thought, which is the common nature in which the former agree, is totally different from extension, the common term for describing the latter." Descartes denies that brutes possess thought, but "even though I were to grant," he says, "that thought existed in them, it would in nowise follow that the human mind was not to be distinguished from the body, but on the contrary that in other animals also there was a mind distinct from their body."

The two components of human nature are, according to Descartes, each of them substances —a *res cogitans* or a thinking substance and a *res extensa* or an extended substance. Descartes uses the phrases "rational soul" and "mind" interchangeably. Reason or intellect—the capacity to think—is not a power of the soul. Nor is thinking an act which the soul sometimes performs, sometimes does not. It is the very essence of the soul itself, even as extension is the essence of body. Just as bodies cannot exist without actually having three dimensions, so the mind cannot exist without thinking.

Though it is literally translated into English by "I think, therefore I am," Descartes' *cogito, ergo sum* can be rendered by "Thinking is; therefore, the mind is," or by the strictly equivalent statement, "The mind exists; therefore, there is thinking." It is precisely this equation of the mind's existence with the activity of thought which Locke challenges. "We know certainly, by experience," he writes, "that we sometimes think, and thence draw this infallible consequence, that there is something in us that has the power to think; but whether that substance perpetually thinks or not, we can be no farther assured than experience informs us. . . . I grant that the soul in a waking man is never without thought, because it is the condition of being awake: but whether sleeping, without dreaming, be not an affection of the whole man, mind as well as body, may be worth a waking man's consideration. . . . Methinks every drowsy nod shakes their doctrine, who teach that the soul is always thinking."

What is striking about this disagreement is that Locke and Descartes agree in their conception of man as a union of two distinct substances—the union of a material substance or body with a spiritual substance, a mind or soul. It is not surprising, however, that Berkeley

should hold the Cartesian view against Locke. Considering the flow of time in terms of the succession of ideas, Berkeley affirms it to be "a plain consequence that the soul always thinks." To try to "abstract the *existence* of a spirit from its cogitation" is, he adds modestly, "no easy task." He might have said it is impossible, for since he holds that bodies do not exist and that man consists of mind or spirit alone, he need not hesitate to assert that the mind cannot cease to think without ceasing to be. Neither he nor Descartes is, in James' opinion, "free to take the appearances for what they seem to be, and to admit that the mind, as well as the body, may go to sleep."

Despite these differences, Descartes, Locke, and Berkeley seem to agree on the range of activities within the sphere of mind. The mind is a thinking substance for Descartes, yet it also senses and imagines, suffers passions, and exercises acts of will. What Descartes says in terms of acts, Locke says in terms of powers. Mind has many distinct powers, among which Locke includes all the cognitive faculties (not only the powers of abstract thought and reasoning, but also those of sense and imagination), and such voluntary faculties as choosing and willing. Berkeley also includes the whole range of psychological phenomena--sensation, imagination, memory, the passions, reasoning, and choice.

Hume takes a similar view, though in his case one basic qualification must be added. He does not conceive the mind as a soul or a spirit or any other sort of substance. He even has some difficulty with the notion of its continuity or identity from moment to moment in the flow of experience. Yet, he says, "it cannot be doubted that the mind is endowed with several powers and faculties, that these powers are distinct from each other. . . . There are many obvious distinctions of this kind, such as those between will and understanding, the imagination and the passions, which fall within the comprehension of every human creature." What the mind is or how it exists, we may not be able to say; but Hume thinks that "if we can go no farther than this mental geography, or delineation of the distinct parts and powers of the mind, it is at least a satisfaction to go so far."

Descartes' theory of mind seems to serve as a point of departure in another direction from that taken by Locke. Spinoza agrees that the mind is a thinking thing. He agrees that man consists of an individual body united with an individual mind. But he differs from Descartes on the meaning of substance. By its very nature, substance is infinite; and because it is infinite, there can be only one substance, which is God. Finite individual things, whether bodies or minds, do not exist as substances, but as modes of the divine attributes.

"The human mind is a part of the infinite intellect of God, and therefore," Spinoza declares, "when we say that the human mind perceives this or that thing, we say nothing less than that God has this or that idea." He includes love and desire, as well as perception and imagination, among the affections of the mind, even calling them "modes of thought." He adds, however, that these do not exist apart from the idea of the thing loved or desired, "though the idea may exist although no other mode of thinking exist."

Of the remaining three of the seven conceptions of mind here being considered, two bear certain resemblances to theories already mentioned.

Hegel's view of the human mind as a phase or dialectical moment of the Absolute Mind or Spirit seems comparable to Spinoza's conception of the human mind as a part of God's infinite intellect. The Hegelian theory of mind, developed in such works as the *Phenomenology of Mind* and the *Philosophy of Mind*, is reflected in his *Philosophy of History* and in his *Philosophy of Right*. The expression of his view of mind appears, therefore, in the chapters on History and State, as well as here.

There seems to be similar justification for associating the views of William James with those of Locke and Hume. Willing to posit a soul "influenced in some mysterious way by the brain states and responding to them by conscious affections of its own," James goes on to say that "the bare phenomenon, however, the immediately known thing which on the mental side is in apposition with the entire brain-process is the state of consciousness and not the soul itself."

What the soul is and whether it exists belong to metaphysics. So far as psychological obser-

vation and analysis are concerned, the phenomena of mind are to be found in the stream of thought or consciousness. States of mind are states of consciousness. James uses the words "feeling" or "thought" to cover every type of mental operation, every state of mind, every form of consciousness, including sensations and emotions, desires and wishes, as well as conception and reasoning.

Locke and Hume distinguish powers of the mind according to different types of mental operation. James tends rather to analyze the mind in terms of its diverse states according to different types of mental content. But he also lays great stress on the dynamic interconnection of the various elements of consciousness in the continuous flow of the stream of thought.

Freud too presents an analysis of different types of mental content, and accompanies it by a theory of the different layers of mind—or psychic structure. He holds, for example, that "we have two kinds of unconscious—that which is latent but capable of becoming conscious, and that which is repressed and not capable of becoming conscious in the ordinary way. . . . That which is latent, and only unconscious in the descriptive and not in the dynamic sense, we call *preconscious*; the term unconscious we reserve for the dynamically unconscious repressed, so that we have three terms, conscious (Cs), preconscious (Pcs), and unconscious (Ucs)."

Like James, Freud is concerned with the dynamic interaction of various mental operations or contents. In addition, a further point of similarity exists between them. James says that "the pursuance of future ends and the choice of means for their attainment are . . . the mark and criterion of the presence of mentality . . . No actions but such as are done for an end, and show a choice of means, can be called indubitable expressions of Mind." Freud goes further in the same direction. By identifying "psychic energy in general" with what he calls "libido," he implies that mind in its most primitive form has entirely the aspect of desire or seeking. It expresses itself in "two fundamentally different kinds of instincts, the sexual instincts in the widest sense of the word . . . and the aggressive instincts, whose aim is destruction."

FINALLY, THERE IS the theory in which mind is neither one of the faculties of the soul, nor itself a thinking substance; nor is it a soul or spirit with a diversity of powers. "All our knowledge," Kant writes, "begins with sense, proceeds thence to understanding, and ends with reason beyond which nothing higher can be discovered in the human mind for elaborating the matter of intuition and subjecting it to the highest unity of thought." These three faculties have distinct functions for Kant. The sensitive faculty is a faculty of intuition. The faculty of understanding is a faculty of judgment and scientific knowledge. The faculty of reason, when properly employed, performs a critical and regulative function in the realm of thought, but when employed beyond the province of its power leads thought into blind alleys or dialectical frustrations.

Mind is not one of these faculties, nor is it the being in which these faculties inhere. The notion of mind seems to have significance, for Kant, primarily in a collective sense. It represents the unity and order of the triad of cognitive faculties. The faculties of feeling and will—which Kant adds to these in his enumeration of "the higher faculties"—belong to the "transcendental ego," but they do not fall within that part of the transcendental structure which is mind. Kant's distinction between the speculative and the practical use of reason, and his distinction between the moral and the aesthetic judgment, involve different relationships between mind—or its triad of faculties—and these other faculties.

THE FOREGOING SURVEY of conceptions of the human mind gives some indication of the way in which other questions about mind are answered.

With regard to the relation of mind and matter, for example, the theories of Descartes, Spinoza, Locke, and James seem to affirm a duality of substances, or of modes of substance, or at least of realms—the physical and the mental. They are confronted by the problem of the relation which obtains between the two—their independence or interaction.

"Mental and physical events," writes James, "are, on all hands, admitted to present the strongest contrast in the entire field of being.

The chasm which yawns between them is less easily bridged over by the mind than any interval we know. Why, then, not call it an absolute chasm," he asks, "and say not only that the two worlds are different, but that they are independent?"

James thinks that to urge this theory of the complete independence of mind and body "is an *unwarrantable impertinence in the present state of psychology.*" He prefers the common-sense theory that each acts on the other somehow. But earlier writers who consider body and mind as distinct substances, find grave difficulties in the way of conceiving their interaction. "How our minds move or stop our bodies by thought, which we every moment find they do," is, according to Locke, "obscure and inconceivable." According to Hume, there is no "principle in all nature more mysterious than the union of soul with body." He interprets one consequence of the union to be that "a supposed spiritual substance acquires such an influence over a material one, that the most refined thought is able to actuate the grossest matter. Were we empowered by a secret wish, to remove mountains, or control planets in their orbit; this extensive authority," Hume thinks, "would not be more extraordinary, nor more beyond our comprehension."

Denying that bodies exist, Berkeley nevertheless argues that even if they did, they could exert no influence upon mind. "Though we give the materialists their external bodies," he says, "they by their own confession are never the nearer knowing how our ideas are produced; since they own themselves unable to comprehend in what manner body can act upon spirit, or how it is possible that it should imprint any idea in the mind. Hence it is evident that the production of ideas or sensations in our minds can be no reason why we should suppose matter or corporeal substances, since that is acknowledged to remain equally inexplicable with or without this supposition."

Those who deny the existence of matter, like Berkeley, or the existence of anything immaterial, like Lucretius or Hobbes, are confronted by problems of their own. Berkeley must explain the mind's perception of bodies or why the mind thinks of matter. Lucretius must explain perception, thought, and choice as functions of material particles in motion.

The reduction of mind to matter raises a question which leads in the opposite direction. Why may it not be supposed that thought and feeling are present in the universe wherever matter is—an atom of mind inseparably conjoined with every atom of matter, as in the "mind-stuff" or "mind-dust" theory which William James considers and criticizes? Still another formulation of the relation of mind to matter is found in the theory of Aristotle and Aquinas, according to whom the rational soul is "the substantial form of an organic body," but the intellect—one of its powers—is not united to matter in any way. Mind is said to be immaterial in that understanding or thought does not require a bodily organ.

The angelic intellect, according to Aquinas, is a "cognitive power which is neither the act of a corporeal organ, nor in any way connected with corporeal matter." The human mind is not so completely divorced from matter, for, though man's intellect "is not the act of an organ, yet it is a power of the soul, which is the form of the body." Among all bodily forms, the human soul alone has the distinction of possessing "an operation and a power in which corporeal matter has no share whatever." But Aquinas also maintains that "the body is necessary for the action of the intellect, not as its organ of action, but on the part of the object" —the phantasm or image produced by the sensitive faculty. He conceives this dependence in the following manner. "For the intellect to understand actually ... there is need for the act of the imagination and of the other powers" that are acts of bodily organs. "When the act of the imagination is hindered by a lesion of the corporeal organ, for instance, in a case of frenzy, or when the act of the memory is hindered, as in the case of lethargy, we see that a man is hindered from understanding actually even those things of which he had a previous knowledge."

The problem of body and mind is discussed more fully in the chapter on MATTER. Other problems involved in the theory of mind similarly occur in other chapters as well as in this one, *e.g.*, the problem of mind in animals and men (in the chapters on ANIMAL and MAN); the problem of the existence of minds superior to that of man (in the chapters on ANGEL and

GOD); the problem of the origin of ideas in the human mind (in the chapters on IDEA and MEMORY AND IMAGINATION). It should be noted, however, that agreement or disagreement on the nature of the human mind does not always determine agreement or disagreement with respect to these other questions.

Sharing the view that the mind is a spiritual substance, Locke and Descartes do not agree about innate ideas or principles. Locke tends to agree with Aristotle when he says that the mind is a *tabula rasa*, "void of all characters, without any ideas. How comes it to be furnished?" he asks. "Whence has it all the *materials* of reason and knowledge? To this I answer in one word, from *Experience*. In that all our knowledge is founded; and from that it ultimately derives itself. Our observation employed either about external sensible objects, or about the internal operations of our own minds, is that which supplies our understandings with all the *materials* of thinking."

But Locke does not accept Aristotle's sharp distinction between the faculties of sense and reason, nor does he find it necessary to adopt Aristotle's notion of an active intellect to explain how the mind abstracts general ideas from the particulars of sense-perception. So far as his theory attributes to mind the power of sense, Locke has more affinity with Berkeley and Hume than with Aristotle; yet on the question of abstract ideas or the distinction between men and brutes, he is as much opposed to them as they are to Aristotle.

These few observations may be taken as a sample of the many intricately crossing lines of thought which make the complex pattern of the traditional discussion of mind. With few exceptions, almost any other choice of authors and topics would provide similar examples. That fact, combined with the fact that almost every major topic in this chapter leads into the discussion of other great ideas, tends to make the chapter on MIND a kind of focal point for perspective on the whole world of thought. It is not surprising that this should be the case, for on any theory, mind is somehow the place of ideas or, as Aristotle says, "the form of forms."

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To find the passages cited, use the numbers in heavy type, which are the volume and page numbers of the passages referred to. For example, in **4** HOMER: *Iliad*, BK II [265-283] **12d**, the number **4** is the number of the volume in the set; the number **12d** indicates that the passage is in section d of page 12.

PAGE SECTIONS: When the text is printed in one column, the letters **a** and **b** refer to the upper and lower halves of the page. For example, in **53** JAMES: *Psychology*, **116a-119b**, the passage begins in the upper half of page 116 and ends in the lower half of page 119. When the text is printed in two columns, the letters **a** and **b** refer to the upper and lower halves of the left-hand side of the page, the letters **c** and **d** to the upper and lower halves of the right-hand side of the page. For example, in **7** PLATO: *Symposium*, **163b-164c**, the passage begins in the lower half of the left-hand side of page 163 and ends in the upper half of the right-hand side of page 164.

AUTHOR'S DIVISIONS: One or more of the main divisions of a work (such as PART, BK, CH, SECT) are sometimes included in the reference; line numbers, in brackets, are given in certain cases; *e.g.*, *Iliad*, BK II [265 283] **12d**.

BIBLE REFERENCES: The references are to book, chapter, and verse. When the King James and Douay versions differ in title of books or in the numbering of chapters or verses, the King James version is cited first and the Douay, indicated by a *(D)*, follows; *e.g.*, OLD TESTAMENT: *Nehemiah*, 7:45—*(D) II Esdras*, 7:46.

SYMBOLS: The abbreviation "esp" calls the reader's attention to one or more especially relevant parts of a whole reference; "passim" signifies that the topic is discussed intermittently rather than continuously in the work or passage cited.

For additional information concerning the style of the references, see the Explanation of Reference Style; for general guidance in the use of *The Great Ideas*, consult the Preface.

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7 PLATO: *Republic*, BK IV, 350a-353d; BK VI, 386d-388a; BK VII, 392c-393c; BK IX, 421a-c / *Timaeus*, 466a-467a / *Theaetetus*, 534d-535c

8 ARISTOTLE: *Physics*, BK VII, CH 3 [247^{b}1-248^{a}9] 330b-d / *Soul*, BK II, CH 2 [413^{b}24-26] 643d-644a; CH 3 [414^{b}14-20] 644d; [414^{b}33-415^{a}13] 645a-b; BK III, CH 3-8 659c-664d

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12 LUCRETIUS: *Nature of Things*, BK III [136-160] 31d-32a

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42 KANT: *Pure Reason*, 113b-115c esp 113c-114b; 248d-250a,c / *Judgement*, 551a-552c

1*a*(1) The difference between the acts of sensing and understanding, and the objects of sense and reason

7 PLATO: *Phaedo*, 224a-225a; 228a-230c; 231c-232a / *Republic*, BK VI-VII, 383d-398c / *Timaeus*, 447b-d; 457b-458a / *Theaetetus*, 534d-536b / *Sophist*, 565a-569a esp 568a-569a / *Philebus*, 634b-635b

8 ARISTOTLE: *Posterior Analytics*, BK I, CH 18 111b-c; CH 31 120a-c; BK II, CH 19 136a-137a,c / *Topics*, BK II, CH 8 [114^{a}18-26] 159d-160a / *Physics*, BK I, CH 5 [188^{b}26-189^{a}9] 264b c; BK VII, CH 3 [247^{b}1-248^{a}9] 330b-d / *Metaphysics*, BK I, CH 1 [980^{a}28-981^{b}13] 499a-500a; CH 5 [986^{b}25-987^{a}1] 504d 505a; CH 6 [987^{a}29-^{b}18] 505b-d; BK III, CH 4 [999^{a}24-^{b}5] 518a-b; BK VII, CH 10 [1035^{b}35-1036^{a}12] 559b-c; CH 15

563c-564c; BK VIII, CH 2 [1043a12-28] 567c-d; CH 3 [1043b28-33] 568b; BK X, CH 9 586a-c; BK XI, CH 7 [1064a4-9] 592b / *Soul*, BK II, CH 5 [417b17-28] 648b-c; BK III, CH 8 664b-d

12 LUCRETIUS: *Nature of Things*, BK IV [353-521] 48d-51a esp [469-521] 50b-51a; [722-756] 53d-54a

12 EPICTETUS: *Discourses*, BK I, CH 6, 110c-111c

17 PLOTINUS: *First Ennead*, TR I, CH 7 3d-4a / *Third Ennead*, TR VI, CH 2, 107b-c / *Fourth Ennead*, TR III, CH 23 153d-154b; TR VI, CH 1-2 189b-190b; TR VII, CH 8, 195b-196a / *Fifth Ennead*, TR III, CH 2 216b-c

18 AUGUSTINE: *Confessions*, BK III, par 10 15b-d; BK IV, par 15-17 23a-c; BK VII, par 23 50b-c / *City of God*, BK VIII, CH 6, 269b-c; BK XIX, CH 18 523a-b

19 AQUINAS: *Summa Theologica*, PART I, Q 12, A 3, ANS 52c-53b; Q 13, A 1, REP 3 62c-63c; Q 14, A 11 84c-85c; Q 18, A 2, ANS 105c-106b; A 3, ANS 106b-107c; Q 55, A 2, REP 2 289d-290d; Q 57, A 1, REP 2 295a-d; A 2, ANS and RLP 1 295d-297a; Q 75, A 3, RLP 2 380c-381b; A 5, ANS 382a-383b; Q 76, A 2, REP 4 388c-391a; Q 79, A 5, REP 2 418c-419b; A 6, REP 2 419b-420d; Q 84, A 1, ANS and REP 2 440d-442a; A 2, ANS and REP 1 442b-443c; AA 6-8 447c-451b; Q 85, A 1, RLP 3 451c-453c; A 2 453d-455b; Q 86, A 1 461c-462a; PART I-II, Q 1, A 2, REP 3 610b-611b; Q 2, A 6, ANS 619d-620d; Q 29, A 6 748b-749a

20 AQUINAS: *Summa Theologica*, PART I-II, Q 50, A 3, REP 3 8b-9a; PART III SUPPL, Q 70, A 2, REP 3 896a-897d

1a(2) The cooperation of intellect and sense: the dependence of thought upon imagination and the direction of imagination by reason

7 PLATO: *Phaedrus*, 126b-c / *Phaedo*, 228a-230c / *Republic*, BK III, 333b-d; BK VI-VII, 383d-398c / *Theaetetus*, 535a-536b / *Seventh Letter*, 809c-810d

8 ARISTOTLE: *Posterior Analytics*, BK I, CH 18 111b-c; BK II, CH 19 136a-137a,c / *Physics*, BK VII, CH 3 [246b20-248a8] 330a-d / *Soul*, BK I, CH 1 [403a2-10] 632a; BK III, CH 7 [431a1]-CH 8 [432a13] 663d-664d / *Sense and the Sensible*, CH 6 [445b4-18] 683b-d / *Memory and Reminiscence*, CH 1 [449b30-450a25] 690c-691a

18 AUGUSTINE: *City of God*, BK XIX, CH 18 523a-b

19 AQUINAS: *Summa Theologica*, PART I, Q 75, A 3, REP 2 380c-381b; Q 79, A 4, REP 3 417a-418c; Q 81, A 3, ANS and REP 2-3 430c-431d; Q 84, A 2, CONTRARY and REP 1 442b-443c; A 3, ANS 443d-444d; A 4, ANS 444d-446b; AA 6-8 447c-451b; Q 85, A 1 451c-453c; A 5, REP 2 457d-458d; A 7, ANS 459c-460b; Q 86, A 1, ANS and REP 2 461c-462a; A 4, REP 3 463d-464d; Q 88, AA 1-2 469a-472c; Q 89, A 1, ANS and REP 1 473b-475a; A 5, ANS and REP 4 477a-478b; Q 91, A 3, REP 1-3 486b-487d

20 AQUINAS: *Summa Theologica*, PART I-II, Q 50, A 3, REP 3 8b-9a; A 4, REP 1,3 9a-10b; Q 51, A 1, ANS 12b-13c; Q 52, A 1, ANS 15d-18a; Q 56, A 5, ANS 33c-34b; PART III, Q 11, A 2 773a-d

1a(3) The functioning of intellect: the acts of understanding, judgment, and reasoning

7 PLATO: *Phaedo*, 228a-230c / *Republic*, BK VII, 392a-394a / *Theaetetus*, 535a-536b; 537d-538a

8 ARISTOTLE: *Categories*, CH 4 [2a4-10] 6a / *Interpretation*, CH 1 [16a9-18] 25a-b / *Prior Analytics*, BK I, CH 1 39a-d / *Metaphysics*, BK VI, CH 4 [1027b18-28] 550a,c; BK IX, CH 10 577c-578a,c / *Soul*, BK I, CH 3 [407a25-33] 636d-637a; BK III, CH 6 662d-663c

12 LUCRETIUS: *Nature of Things*, BK IV [353-521] 48d-51a esp [469-521] 50b-51a

17 PLOTINUS: *Third Ennead*, TR VI, CH 2, 107b-c

18 AUGUSTINE: *Confessions*, BK XIII, par 37 120d-121a / *Christian Doctrine*, BK II, CH 31 651d-652b

19 AQUINAS: *Summa Theologica*, PART I, Q 13, A 9, ANS 71b-72c; Q 14, A 7, ANS 81d-82b; Q 46, A 2, REP 3 253a-255a; Q 58, A 3 301d-302d; A 4, ANS 302d-303c; Q 59, A 1, REP 1 306c-307b; Q 79, AA 8-9 421c-423d; A 10, REP 2-3 423d-424d; Q 82, A 4, REP 1 434c-435c; QQ 84-89 440b-480c; PART I-II, Q 1, A 4, REP 2 612a-613a; Q 5, A 1, REP 1 636d-637c; Q 15, A 4, REP 1 683b-684a; Q 16, A 1, REP 3 684b-d

20 AQUINAS: *Summa Theologica*, PART I-II, Q 90, A 1, REP 2 205b-206b; PART II-II, Q 1, A 2, REP 2-3 381a-c; Q 8, A 1, REP 2 417a-d; Q 180, A 6 613a-614d; PART III, Q 11, A 3 773d-774c; PART III SUPPL, Q 92, A 1, ANS 1025c-1032b

30 BACON: *Advancement of Learning*, 32d; 56b; 59b-61d esp 59c / *Novum Organum*, BK I, APH 48 110d-111a

1a(4) The distinction of the active and the possible intellect in power and function

8 ARISTOTLE: *Soul*, BK III, CH 4-5 661b-662d

19 AQUINAS: *Summa Theologica*, PART I, Q 54, A 1, REP 1 285a-d; A 4 287b-288a; Q 55, A 2, REP 2 289d-290d; Q 79, AA 2-5 414d-419b; Q 84, A 4, ANS and REP 3 444d-446b; A 6 447c-449a; Q 85, A 1 451c-453c; Q 87, A 1 465a-466c; Q 88, A 1, ANS and REP 2 469a-471c; Q 117, A 1 595d-597c

20 AQUINAS: *Summa Theologica*, PART I-II, Q 50, A 4 9a-10b; A 5, REP 1-2 10b-d; Q 67, A 2, ANS 82c-83b; PART III, Q 9, A 1, ANS 763b-764c; AA 3-4 765b-767b; Q 12, A 1, ANS and REP 3 776c-777b; PART III SUPPL, Q 92, A 3, REP 11 1034b-1037c

31 SPINOZA: *Ethics*, PART I, PROP 31, SCHOL 366d-367a

(1. *Diverse conceptions of the human mind.*)

1*b*. Mind as identical with thinking substance

31 DESCARTES: *Discourse*, PART IV, 51d-52a; PART V, 56a-b / *Meditations*, 71b-d; II 77d-81d; IV, 89b; VI, 98c-d / *Objections and Replies*, 114d-115a,c; DEF VI-VII 130c-d; PROP IV 133c; 135b-136b; 152b,d-156a; 207a; 208c-d; 209c; 224d-225d; 248b; 249d-250b; 261a-b; 276b-c

35 LOCKE: *Human Understanding*, BK II, CH I, SECT 9-25 123a-127d; CH XIX, SECT 4 176a-b

35 BERKELEY: *Human Knowledge*, SECT 2 413b; SECT 26-27 418a-b; SECT 98 432a; SECT 135-142 440a-441c passim

53 JAMES: *Psychology*, 130b-131a; 221a-226a esp 221a-222b

1*b*(1) The relation of the mind as thinking substance to sense and imagination

31 DESCARTES: *Rules*, VIII, 13a-b; 14b; XII, 18b-c; 20a-c; XIV 28a-33b passim / *Discourse*, PART I, 41d; PART IV, 53b; PART V, 59a-60c / *Meditations*, II 77d-81d; VI 96b-103d esp 96b-98c, 99d-101a / *Objections and Replies*, DEF I-II 130a-b; POSTULATE II 131a; 136d-137a; 137d; 207d-208a; 209c; 215b-c; 218c-d; 224d-225d; 229d-230c

35 BERKELEY: *Human Knowledge*, SECT 2 413b; SECT 138-139 440c-d

1*b*(2) Thinking and willing as the acts of the thinking substance

31 DESCARTES: *Rules*, III 3b-5a; XI 17b-18b; XIV 28a-33b passim / *Meditations*, III 81d-89a esp 81d-82a; IV 89a-93a passim; VI, 101d-102a / *Objections and Replies*, DEF I-II 130a-b; 137d; 162b; 170d; 218c-d

35 BERKELEY: *Human Knowledge*, SECT 2 413b; SECT 26-28 418a-c; SECT 138-139 440c-d

1*c*. Mind as a particular mode of that attribute of God which is thought

31 SPINOZA: *Ethics*, PART I, PROP 14 359d-360a; PROP 25, COROL 365b; PROP 29-31 366b-367a; PART II, AXIOM 2 373d; PROP I, SCHOL 374a; PROP 5 374c-d; PROP 10, COROL 376d; PROP 11-13 377b-378c; PROP 20 382d; PART III, PROP 1 396a-c; PROP 2, DEMONST 396c; PART V, PROP 40, SCHOL 462d

1*c*(1) The origin of the human mind as a mode of thought

31 SPINOZA: *Ethics*, PART I, PROP 14, COROL 2 360a; PROP 25, COROL 365b; PROP 29-31 366b-367a; PART II 373a-394d passim, esp PROP I 373d-374a, PROP 5-6 374c-375a, PROP 10, COROL 376d, PROP 11-13 377b-378c

1*c*(2) The properties of the human mind as a mode of thought

31 SPINOZA: *Ethics*, PART II, DEF 3 373b; AXIOM 2-3 373d; PROP 11-13 377b-378c; PROP 17-19 380d-382c; PROP 40 387a-388b; PROP 48-49 391a-394d; PART III, PROP 1-2, DEMONST 396a-c; PROP 3 398b-c; PROP 9-14 399b-401a; PART V, PROP 23, SCHOL 458c-d

1*d*. Mind as soul or spirit, having the power to perform all cognitive and voluntary functions

35 LOCKE: *Human Understanding*, BK II, CH I, SECT 4 121d-122a; SECT 10 123b-d; CH VI 131b-c; CH IX 138b-141a passim, esp SECT 1 138b-c, SECT 15 141a; CH XI, SECT 1-CH XII, SECT 1 143d-147d; CH XIX 175b-176b; CH XXI, SECT 5-6 179c-180a; CH XXIII, SECT 5 205a-b; SECT 15 208c-d; SECT 18 209a; SECT 22 209d; SECT 28-32 211b-212d; BK IV, CH XIV 364b-365a

35 BERKELEY: *Human Knowledge*, SECT 2 413b; SECT 7 414b-c; SECT 26-28 418a-c; SECT 89 430b-c; SECT 135-142 440a-441c passim

42 KANT: *Pure Reason*, 194d-195a

53 JAMES: *Psychology*, 1a; 118b-119b; 221a-226a esp 221a-222b

1*d*(1) The origin of the mind's simple ideas: sensation and reflection

35 LOCKE: *Human Understanding*, BK II, CH I, SECT 1-8 121a-123a; SECT 23-25 127b-d; CH II, SECT 2 128a-b; CH III, SECT 1 128d-129a; CH VII 131c-133b; CH XI, SECT 17-CH XII, SECT 1 147a-d; CH XII, SECT 8 148c-d; CH XIV, SECT 31 161d-162a; CH XVII, SECT 22 173d-174a; CH XVIII, SECT 6 174c-d; CH XX, SECT 1-2 176b-c; SECT 15 177d; CH XXI, SECT 4 178d-179c; SECT 75 200b-d; CH XXIII, SECT 1 204a-b; SECT 5 205a-b; SECT 15 208c-d; SECT 29-30 211d-212b; SECT 32-37 212c-214b; CH XXV, SECT 9 216d; SECT 11 217a

35 BERKELEY: *Human Knowledge*, SECT 1, 413a

35 HUME: *Human Understanding*, SECT II, DIV 12-14 455d-456b

1*d*(2) The activity of the understanding in relating ideas: the formation of complex ideas

35 LOCKE: *Human Understanding*, BK II, CH II, SECT 2 128a-b; CH VII, SECT 10 133a-b; CH XI, SECT 6-7 145a-b; CH XII, SECT 1-CH XIII, SECT 1 147b-149a; CH XIII, SECT 4-6 149b-d; SECT 27 154c-d; CH XIV, SECT 27 160d-161a; SECT 30-31 161c-162a; CH XV, SECT 2-3 162c-d; CH XVI, SECT 1-2 165c-d; SECT 5 166b-c; CH XVII, SECT 3 168b; SECT 5 168d-169a; CH XVIII, SECT 1 174a; SECT 6 174c-d; CH XXII, SECT 2 201a-b; SECT 9 202c-203a; CH XXIII, SECT 15 208c-d; CH XXX, SECT 3 238c-d; CH XXXII, SECT 12 245b-c; BK III, CH II, SECT 3 253c; CH V 263d-268a; CH VI, SECT 11 271b-d; SECT 26-51 274d-283a; CH XI, SECT 15 303b-c; BK IV, CH IV, SECT 5 324d

35 BERKELEY: *Human Knowledge*, SECT I, 413a
35 HUME: *Human Understanding*, SECT II, DIV 13–14 455d-456b; SECT III, DIV 18 457c-d; SECT V, DIV 39, 466c-d; DIV 40, 467b
42 KANT: *Pure Reason*, 101b-102a esp 101d-102a

1e. Mind as a triad of cognitive faculties: understanding, judgment, reason

42 KANT: *Pure Reason*, 15c-16a; 34a-41c esp 38c-41c; 51d-52b; 59c-64a esp 60a-c; 89c-94b; 108a-113b esp 111d-113b; 115b-c; 119a-b; 129c-130c esp 130b-c; 166c-171a; 173b-174a; 187a-c; 193a-200c esp 193a-195a, 199b-c / *Fund. Prin. Metaphysic of Morals*, 281c-282d / *Practical Reason*, 329a-d; 343a; 349b-350c / *Judgement*, 461a-475d esp 461a-462d, 464c-467a, 472c-d, 474b-475d; 542b-543c; 570b-572c; 604a-b

1e(1) The relation of understanding to sense or intuition: its application in the realm of nature; conformity to law

42 KANT: *Pure Reason*, 14a-108a,c esp 15b-c, 16a-c, 22a,c, 23a-24a, 30b-c, 31a-d, 34a-c, 37b-39c, 41c-42a, 45d-46a, 47c-48a, 48d-51d, 53b-55a, 58a-64a, 64d-65c, 94d-95d, 98c, 101b-107b; 109d-112d; 115b-c; 164a-171a / *Fund. Prin. Metaphysic of Morals*, 275b; 281c-282d esp 282b-c / *Practical Reason*, 292a-293b; 296a-d; 301d-302d; 319c-320b; 329b-c / *Intro. Metaphysic of Morals*, 383c-d; 385a-c; 386d-387a,c / *Judgement*, 461a-475d esp 464c-465c, 474b-475d; 482d-483d; 492c-d; 542b-544c; 550a-551a,c; 562d-563b; 570c-572b; 609b-610a

1e(2) The relation of judgment to pleasure and displeasure: its application in the realm of art; aesthetic finality

42 KANT: *Pure Reason*, 101b-107b esp 102b-103a / *Judgement*, 461a-475d esp 467d-473a, 474b-475d; 480d-482b; 486d-491c; 493c-495a,c; 497a-501b; 542b-544c; 546d-548c; 558a-b; 559a 560c esp 560b-c; 562a-564c esp 562a-d; 567c-568c; 570b-572c; 577b; 584d-585a; 588c; 597b-599b

1e(3) The relation of reason to desire or will: its application in the realm of freedom; the *summum bonum*

42 KANT: *Pure Reason*, 164a-171a esp 164a-165c; 234c-240b esp 236b-240b / *Fund. Prin. Metaphysic of Morals*, 264d-265b; 271c-d; 275b; 279b; 281c-283b esp 282d-283b; 284d-285a / *Practical Reason*, 292a-293b; 296a-d; 301d-302d; 303b-304b; 307d-314d esp 314a-d; 315c; 319c-321b; 327d-329c; 337a-355d esp 337a-338c, 343b-d, 348d-355d / *Pref. Metaphysical Elements of Ethics*, 367c / *Intro. Metaphysic of Morals*, 383c-d; 386b-387a,c; 388a-d; 390b / *Judgement*, 461a-475d esp 465a-c, 474b-475d; 483d-484b; 587a-588a; 594b-595c; 601d; 604d-606d esp 606a-d; 607c; 609b-610a

1f. Mind as intelligence or self-consciousness, knowing itself as universal: the unity of intellect and will

46 HEGEL: *Philosophy of Right*, INTRO, par 4–9 12d-14d; par 13 15c-d; par 21 17a-c; par 27 18d; PART I, par 35 21a-b; par 66 29a-c; PART III, par 353–360 112b-114a,c; ADDITIONS, 4 116a-d / *Philosophy of History*, INTRO, 160d-161a; 170b-d; PART III, 306b
53 JAMES: *Psychology*, 235a-238a esp 236a-237b

1g. Mind as the totality of mental processes and as the principle of meaningful or purposive behavior

53 JAMES: *Psychology*, 1a-9a esp 1a, 5a-b, 6b-7a; 51a-b; 121b-122b
54 FREUD: *Interpretation of Dreams*, 383b / *Unconscious*, 428a-430c esp 428d-429b / *General Introduction*, 452a-c; 467c-468a

1g(1) The nature of the stream of thought, consciousness, or experience: the variety of mental operations

53 JAMES: *Psychology*, 43a-44a; 51a-52a; 90b-93a esp 92b; 140b-184a esp 140b-141a, 145a, 146a-b, 157b-161a, 165a-167b; 300a-311a esp 300a-b, 307b-308a, 311a; 313a-314a; 315a-319a esp 317b-319a; 323a-327a esp 326a-b [fn 1]; 360a; 381b-385b; 396a-397a; 421a-427a esp 424b-426a; 452a-457a; 480a-b; 502a-505b; 561a; 664a-666b; 767a; 851a-862a esp 852b-853a
54 FREUD: *Interpretation of Dreams*, 180c-181b; 337a-b; 348a-d; 351d-353b esp 352d; 363c-364b; 375a-385c esp 375b-376a, 377c-380d, 383b-c, 384a-385c / *Unconscious*, 442b-443d / *General Introduction*, 452a-c / *Beyond the Pleasure Principle*, 646b-648b / *Ego and Id*, 700a-701d / *New Introductory Lectures*, 835d-836a; 837d-838c

1g(2) The topography of mind

53 JAMES: *Psychology*, 9a-15a esp 13a-14a; 17b-49b esp 43a-44a, 47b-49b
54 FREUD: *Interpretation of Dreams*, 351b-353b; 382a-c / *Unconscious*, 430d-432c / *Ego and Id*, 701d-703a / *New Introductory Lectures*, 836c-d; 839b-d

1g(3) The unity of attention and of consciousness: the selectivity of mind

53 JAMES: *Psychology*, 91a; 184a-187b; 260a-286a esp 260a-262a, 264b-265a, 270b-272b; 388a; 445a-446a; 606b-610b esp 608a-609a; 692a-693b; 773a-774a; 830a; 862b-863b [fn 2]
54 FREUD: *Interpretation of Dreams*, 375b-c / *Unconscious*, 438c-d / *Ego and Id*, 698d-699b [fn 1]

2. The human mind in relation to matter or body

2*a*. The immateriality of mind: mind as an immaterial principle, a spiritual substance, or as an incorporeal power functioning without a bodily organ

7 PLATO: *Phaedrus*, 124b-126c / *Phaedo*, 223b-225c; 231c-234b / *Timaeus*, 452d-453b; 466a-b

8 ARISTOTLE: *Soul*, BK I, CH 4 [408^{b}18–29] 638c; CH 5 [411^{b}13–18] 641c-d; BK II, CH 2 [413^{b}24–29] 643d-644a; BK III, CH 4 [429^{a}10–^{b}23] 661b-662a; CH 5 662c-d

9 ARISTOTLE: *Generation of Animals*, BK II, CH 3 [736^{b}25–30] 277c

17 PLOTINUS: *Third Ennead*, TR VI, CH 2, 107b-c / *Fourth Ennead*, TR VII, CH 8, 195b-196a; 197c-198b

18 AUGUSTINE: *Confessions*, BK VII, par 2, 43c-d / *City of God*, BK VIII, CH 5, 268c-d; BK XIX, CH 18 523a-b

19 AQUINAS: *Summa Theologica*, PART I, Q 3, A 1, REP 2 14b-15b; Q 7, A 2, REP 2 31d-32c; Q 75, A 2 379c-380c; A 3, REP 2 380c-381b; A 5, ANS 382a-383b; A 6 383c-384c; Q 79, A 1, REP 4 414a-d; A 2, REP 2 414d-416a; A 3, REP 3 416a-417a; A 4, REP 4–5 417a-418c; A 5, REP 1–2 418c-419b; A 6, REP 1–2 419b-420d; Q 83, A 1, REP 5 436d-438a; Q 84, A 1, ANS 440d-442a; A 2, ANS 442b-443c; A 4, ANS 444d-446b; A 6, ANS 447c-449a; Q 85, A 6, ANS 458d-459c; Q 87, A 3, REP 3 467b-468a; Q 89, A 1, ANS 473b-475a; PART I–II, Q 2, A 6, ANS 619d-620d; Q 35, A 5, ANS 775d-777a

20 AQUINAS: *Summa Theologica*, PART I–II, Q 50, A 4 9a-10b; Q 53, A 1, ANS and REP 2–3 19d-21a

21 DANTE: *Divine Comedy*, PURGATORY, XXV [61–84] 92a-b

28 HARVEY: *On Animal Generation*, 494a-b

31 DESCARTES: *Rules*, XII, 20a-b / *Discourse*, PART IV, 51d-52a; 53b; PART V, 59a-60c / *Meditations*, II 77d-81d; VI 96b-103d esp 98c-99a, 99d, 101d-102a / *Objections and Replies*, 114d-115a,c; 119d-120a; DEF VI–VII 130c-d; DEF X 130d; PROP IV 133c; 135d-136b; 152b,d-156d; 207d-208a; 209c; 224d-225d; 231a-232d; 261a-b; 276b-c

31 SPINOZA: *Ethics*, PART V, PREF 451a-452c

35 LOCKE: *Human Understanding*, BK II, CH XXIII, SECT 5 205a-b; SECT 15–22 208c-209d; SECT 28–32 211b-212d esp SECT 32 212c-d; CH XXVII, SECT 12–14 223a-224b passim; SECT 27 227d-228a; BK IV, CH III, SECT 6 313c-315b

35 BERKELEY: *Human Knowledge*, SECT 26 418a; SECT 137 440b-c; SECT 141 441a-b

40 GIBBON: *Decline and Fall*, 186a-b

46 HEGEL: *Philosophy of Right*, PART I, par 48 24b-c

53 JAMES: *Psychology*, 130a; 221a-223a

2*b*. The potentiality of intellect or reason compared with the potentiality of matter or nature

8 ARISTOTLE: *Physics*, BK VII, CH 3 [247^{b}1–248^{a}9] 330b-d / *Metaphysics*, BK IX, CH 2 [1046^{a}37–^{b}24] 571c-d; CH 5 573a-c / *Soul*, BK III, CH 5 662c-d; CH 11 [434^{a}16–22] 667a

19 AQUINAS: *Summa Theologica*, PART I, Q 7, A 2, ANS and REP 2–3 31d-32c; Q 14, A 2, REP 3 76d-77d; A 8, ANS 82c-83b; Q 19, A 1, ANS 108d-109c; Q 50, A 2, REP 2–4 270a-272a; Q 55, A 1 289a-d; A 2, ANS 289d-290d; Q 58, A 1, ANS 300c-301a; Q 75, A 5, REP 1–2 382a-383b; Q 79, A 2 414d-416a; A 6, ANS 419b-420d; Q 84, A 2, ANS and REP 2 442b-443c; A 3, REP 1–2 443d-444d; Q 85, A 5, REP 3 457d-458d; Q 87, A 1, ANS 465a-466c; Q 91, A 3, REP 2 486b-487d; PART I–II, Q 2, A 6, ANS 619d-620d; Q 22, A 1, ANS and REP 1 720d-721c

20 AQUINAS: *Summa Theologica*, PART I–II, Q 50, A 4, REP 1–2 9a-10b; Q 55, A 1, ANS and REP 5 26b-27a; PART III, Q 9, A 3, ANS and REP 3 765b-766b; PART III SUPPL, Q 92, A 1, ANS and REP 10 1025c-1032b

28 HARVEY: *On Animal Generation*, 494a-b

53 JAMES: *Psychology*, 153a

2*c*. The interaction of mind and body

7 PLATO: *Timaeus*, 452d-453b; 474b-476b

12 LUCRETIUS: *Nature of Things*, BK III [94–829] 31b-40c

17 PLOTINUS: *First Ennead*, TR I, CH 5–7 2d-4a

30 BACON: *Advancement of Learning*, 48d-50b esp 48d-49c

31 DESCARTES: *Discourse*, PART V, 60b-c; PART VI, 61c / *Meditations*, VI, 99d / *Objections and Replies*, 207d-208a; 209c

31 SPINOZA: *Ethics*, PART V, PREF 451a-452c

35 LOCKE: *Human Understanding*, BK IV, CH III, SECT 28 322a-c

36 STERNE: *Tristram Shandy*, 229b-232a

42 KANT: *Judgement*, 538d-539a

49 DARWIN: *Descent of Man*, 281a-282c

53 JAMES: *Psychology*, 2b-4a; 8a-52b esp 8a-9a, 14b-15a, 19a-b, 47b-49b, 51b-52a; 82b; 84a-94b esp 89b-93a; 116a-119b; 139a-140b; 208a-b; 222b-223a; 259a; 288a-289b; 311a; 450a-451b; 694a; 742b-755a; 758a-759a; 827b-835a esp 829b-830a

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2*c*(1) The physiological conditions of mental activity

8 ARISTOTLE: *Physics*, BK VII, CH 3 [246^{b}20–248^{a}9] 330a-d / *Soul*, BK II, CH 9 [421^{a}19–26] 652d / *Dreams* 702a-706d

9 ARISTOTLE: *Parts of Animals*, BK IV, CH 10 [686b22–29] 218b-c
10 HIPPOCRATES: *Sacred Disease*, 155d-160d esp 159a-c
12 LUCRETIUS: *Nature of Things*, BK IV [722–776] 53d-54b
12 AURELIUS: *Meditations*, BK III, SECT 1 259b,d
19 AQUINAS: *Summa Theologica*, PART I, Q 84, A 7, ANS 449b-450b; A 8, REP 2 450b-451b; Q 85, A 7, ANS 459c-460b
30 BACON: *Advancement of Learning*, 48d-50b
31 DESCARTES: *Rules*, XII, 19a-20d / *Objections and Replies*, 207d-208a; 208d-209a; 209c
31 SPINOZA: *Ethics*, PART II, PROP 14 380c; PROP 16–17 380d-381d; PROP 26 384a-b; PART V, PREF 451a-452c passim; PROP 39 462a-c
35 LOCKE: *Human Understanding*, BK II, CH I, SECT 23 127b; CH XIX, SECT 1, 175b; CH XXVII, SECT 27 227d-228a; CH XXXIII, SECT 6 249a-b; BK IV, CH III, SECT 28 322a-c
35 BERKELEY: *Human Knowledge*, SECT 18–20 416b-417a; SECT 50 422c
49 DARWIN: *Descent of Man*, 288c-d; 299c; 595d-596a
51 TOLSTOY: *War and Peace*, EPILOGUE II, 689c-690a
53 JAMES: *Psychology*, 2b-3a; 9a-73b; 152a-153a; 157a-b; 166b-167a; 367a-373a esp 370a-b; 380a-b; 381b-383b; 387b-388a; 413b-420b; 427b-430b; 453a; 455b-456a; 497a-501b; 506a-507a; 520a-521a; 533a-538b; 690a-691b; 758a-759a; 829b; 865a
54 FREUD: *Hysteria*, 87a / *Interpretation of Dreams*, 351b-352c; 378a-b; 382a-c / *Unconscious*, 431d / *General Introduction*, 586c-d / *Beyond the Pleasure Principle*, 639b-d; 646b-648a

2c(2) The influence of mental activity on bodily states

7 PLATO: *Timaeus*, 474d-475b
9 ARISTOTLE: *Motion of Animals*, CH 7 [701b 13]–CH 8 [702a22] 237a-c; CH 11 239a-d
12 LUCRETIUS: *Nature of Things*, BK III [136–176] 31d-32b
19 AQUINAS: *Summa Theologica*, PART I, Q 18, A 3, ANS 106b-107c; Q 117, A 3, REP 3 598c-599b
25 MONTAIGNE: *Essays*, 36c-40d; 234c-235a; 332d-333c; 532a-b
28 HARVEY: *Motion of the Heart*, 296d / *Circulation of the Blood*, 321d-322a; 322c-d
30 BACON: *Advancement of Learning*, 48d-50b
35 LOCKE: *Human Understanding*, BK II, CH XXI, SECT 5, 179c; BK IV, CH III, SECT 28 322a-c; CH X, SECT 19 354a-c
35 HUME: *Human Understanding*, SECT VII, DIV 51–52 472b-473c; DIV 57–58, 475c-476b
42 KANT: *Judgement*, 538d-539a; 560b
44 BOSWELL: *Johnson*, 350c-d
51 TOLSTOY: *War and Peace*, BK III, 141d-142a; 142d; BK V, 213c-d; BK VI, 247d-248a; BK IX, 350d-354a passim, esp 351d-352a, 353b-d; BK XIII, 567d-568c esp 568b; BK XV, 617a-b; 618a-b
53 JAMES: *Psychology*, 3a-b; 64a-67a; 132a-134b; 694a-699a; 767a-794a esp 767b-768a, 787a-794a; 827b-835a esp 828a-830a; 841a-848a passim, esp 842a-b, 847b-848a
54 FREUD: *Origin and Development of Psycho-Analysis*, 1b-6b esp 4c-5a / *Hysteria*, 25a-59d esp 25a-27a, 30a-d, 35b-c, 37d-38a, 56b-58c; 82d-83c / *Narcissism*, 403a-c / *Repression*, 426b-c / *General Introduction*, 572a-b / *Inhibitions, Symptoms, and Anxiety*, 718a-719d; 728c-729a / *New Introductory Lectures*, 852a-b

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31 SPINOZA: *Ethics*, PART I, DEF 2 355a; PROP 14, COROL 2 360a; PROP 25, COROL 365b; PART II, PROP 1–2 373d-374a; PROP 5–7 374c-375c; PROP 11–13 377b-378c; PROP 15–28 380c-384c; PART III, PROP 2 396c-398b; PROP 10–14 399c-401a; PART V, PROP 1 452d
53 JAMES: *Psychology*, 84a-90b esp 84b-85b, 88a-90a; 96a-b; 116a-119b esp 119b

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7 PLATO: *Phaedo*, 241d-242b / *Sophist*, 567a-568a
8 ARISTOTLE: *Soul*, BK I, CH 2–5 633a-641d passim, esp CH 2 [403b31–404a30] 633a-c, [405a7–13] 634b
12 LUCRETIUS: *Nature of Things*, BK II [251–293] 18b-d; [865–990] 26a-27c; BK III [94–829] 31b-40c; BK IV [722–817] 53d-54d; [877–961] 55d-56d
17 PLOTINUS: *Second Ennead*, TR IX, CH 5, 68b / *Third Ennead*, TR I, CH 2, 78d; CH 3 79b-c / *Fourth Ennead*, TR VII, CH 8, 195b-196c
19 AQUINAS: *Summa Theologica*, PART I, Q 84, A 2, ANS and REP 2 442b-443c; A 6, ANS 447c-449a
23 HOBBES: *Leviathan*, PART I, 49a-d; 52c; PART II, 162c
31 DESCARTES: *Objections and Replies*, 224d-226d; 261a-b
35 LOCKE: *Human Understanding*, BK IV, CH III, SECT 6 313c-315b; CH X, SECT 5 350a-b; SECT 10 351b-352a; SECT 17 353b-c
35 BERKELEY: *Human Knowledge*, SECT 93 431b; SECT 137 440b-c; SECT 141 441a-b
42 KANT: *Judgement*, 599d-600d
53 JAMES: *Psychology*, 95a-107b esp 95b-98a; 115a-118b esp 117a-118b
54 FREUD: *New Introductory Lectures*, 829a-b

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3*a*. Mind, reason, or understanding as a specific property of human nature: comparison of human reason with animal intelligence and instinct

5 AESCHYLUS: *Prometheus Bound* [442–444] 44c

5 SOPHOCLES: *Antigone* [332–375] 134a-b; [683–684] 137a

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7 PLATO: *Protagoras*, 44a-c / *Timaeus*, 452c-454a

8 ARISTOTLE: *Topics*, BK V, CH 3 [132^{a}17–22] 183a / *Physics*, BK II, CH 8 [199^{a}20–23] 276c / *Metaphysics*, BK I, CH 1 [980^{a}28–^{b}27] 499a-b / *Soul*, BK II, CH 3 [414^{b}17–20] 644d; [415^{a}7–12] 645b; BK III, CH 3 [427^{b}7–14] 659d-660a; [428^{a}20–24] 660c; CH 10 [433^{a}8–13] 665d / *Memory and Reminiscence*, CH 2 [453^{a}5–14] 695b

9 ARISTOTLE: *History of Animals*, BK I, CH 1 [488^{b}20–27] 9d; BK VIII, CH 1 [588^{a}18–^{b}4] 114b,d / *Parts of Animals*, BK I, CH 1 [641^{b}5–8] 164b-c / *Generation of Animals*, BK I, CH 23 [731^{a}24–^{b}8] 271c-d; BK II, CH 6 [744^{a}27–31] 285c / *Ethics*, BK I, CH 7 [1097^{b}23–1098^{a}7] 343a-b; CH 13 [1102^{a}33–1103^{a}3] 347d-348c; BK III, CH 2 [1111^{b}6–12] 357b-c; BK VI, CH 2 [1139^{a}17–26] 387d; BK VII, CH 3 [1147^{a}25–^{b}5] 397c-d; BK IX, CH 9 [1170^{a}16–18] 423d-424a; BK X, CH 7 [1177^{b}26–1178^{a}8] 432c; CH 8 [1178^{b}23–32] 433c / *Politics*, BK I, CH 5 [1254^{b}20–25] 448b; BK VII, CH 13 [1332^{a}39–^{b}10] 537a-b; CH 15 [1334^{b}12–28] 539c-d / *Rhetoric*, BK I, CH 1 [1355^{b}1–3] 594d

12 EPICTETUS: *Discourses*, BK I, CH 3 108b-c; CH 6 110c-112b; CH 9 114c-116b; BK II, CH 8, 146a-147a; BK III, CH 7, 183c-184a; BK IV, CH 7, 233a-b

12 AURELIUS: *Meditations*, BK III, SECT 16 262d-263a,c; BK V, SECT 16 271c-d; BK VI, SECT 23 276b; BK VIII, SECT 7 286a; SECT 41 288d; BK IX, SECT 9 292b-d

17 PLOTINUS: *First Ennead*, TR I, CH 7–13, 4a-6b esp CH 10, 5a / *Third Ennead*, TR III, CH 4 94c-95c; TR IV, CH 2 97d-98a / *Fifth Ennead*, TR I, CH 10, 213d-214a / *Sixth Ennead*, TR VII, CH 4–6 323c-325a

18 AUGUSTINE: *Confessions*, BK X, par 11 74a-b; BK XIII, par 37 120d-121a / *City of God*, BK V, CH 11 216c-d; BK VII, CH 23, 256b-c; BK VIII, CH 6, 269a; BK XI, CH 27, 337d-338a; BK XXIX, CH 24, 610c-d / *Christian Doctrine*, BK I, CH 8 626c-627a; CH 22, 629b-c

19 AQUINAS: *Summa Theologica*, PART I, Q 3, A 1, REP 2 14b-15b; Q 18, A 2, REP 1 105c-106b; A 3, ANS 106b-107c; Q 30, A 2, REP 3 168a-169b; Q 59, A 3, ANS 308b-309a; Q 76, A 5, REP 4 394c-396a; Q 78, A 4, ANS and REP 4–6 411d-413d; Q 79, A 5, REP 3 418c-419b; A 6, REP 1 419b-420d; A 8, REP 3 421c-422b; A 10, REP 2 423d-424d; Q 83, A 1, ANS 436d-438a; Q 84, A 2, REP 1 442b-443c; Q 86, A 4, REP 3 463d-464d; Q 91, A 3, REP 1–2 486b-487d; Q 96, A 1, REP 4 510b-511b; A 2, ANS 511b-d; Q 115, A 4, ANS 589d-590c; Q 118, A 2, ANS and REP 2 601c-603b; PART I–II, PROLOGUE 609a,c; Q 1, A 1, ANS 609b-610b; Q 10, A 3, ANS 664d-665c; Q 12, A 5 672a-c; Q 13, A 2, REP 3 673c-674c; Q 17, A 2 687d-688b

20 AQUINAS: *Summa Theologica*, PART I–II, Q 50, A 3, REP 2 8b-9a; Q 110, A 4, REP 3 350d-351d; PART III SUPPL, Q 79, A 1, ANS 951b-953b

21 DANTE: *Divine Comedy*, HELL, XXXI [40–57] 46c; PURGATORY, XXV [52–84] 91d-92b; PARADISE, V [19–24] 112b

23 HOBBES: *Leviathan*, PART I, 57d; 59b-c; PART II, 100a-c

25 MONTAIGNE: *Essays*, 119b-d; 184a-c

27 SHAKESPEARE: *Hamlet*, ACT IV, SC IV [32–39] 59a

28 HARVEY: *On Animal Generation*, 428a; 454a

30 BACON: *Novum Organum*, BK II, APH 35, 163d-164a

31 DESCARTES: *Discourse*, PART I, 41b,d; PART IV, 51d-52a; PART V, 56a-b; 59a-60c / *Meditations*, 71b-d; II 77d-81d / *Objections and Replies*, 156a-d; 209b; 226a-d; 276c

31 SPINOZA: *Ethics*, PART III, PROP 57, SCHOL 415b

32 MILTON: *Paradise Lost*, BK VIII [379–411] 240b-241a; BK IX [549–566] 259b

33 PASCAL: *Pensées*, 339–348 233a-234a; 365 236a; 397 240b / *Vacuum*, 357a-358a

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36 SWIFT: *Gulliver*, PART IV, 151b-152a; 159b-160a

38 MONTESQUIEU: *Spirit of Laws*, BK I, 1d-2b

38 ROUSSEAU: *Inequality*, 336b-c; 337d-338a; 341d; 349b-c / *Social Contract*, BK I, 393b-c

40 GIBBON: *Decline and Fall*, 409d-410a

42 KANT: *Pure Reason*, 199c-200c / *Fund. Prin. Metaphysic of Morals*, 256d-257a; 264d-265a; 281c-282c / *Practical Reason*, 316c-317a / *Pref. Metaphysical Elements of Ethics*, 372a-b / *Intro. Metaphysic of Morals*, 386b-d / *Judgement*, 479a-c; 584d-585c; 587a-588a; 602b,d [fn 1]

43 MILL: *Liberty*, 294d-295b

46 HEGEL: *Philosophy of Right*, INTRO, par 21 17a-c; PART III, par 262–264 83d-84a; ADDI-

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49 DARWIN: *Descent of Man*, 287a-c; 319b-c; 331b-332a

51 TOLSTOY: *War and Peace*, EPILOGUE II, 689c-690a

53 JAMES: *Psychology*, 85a-b; 678b-686b esp 686a-b; 691a-b

54 FREUD: *Unconscious*, 429c-d

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9 ARISTOTLE: *History of Animals*, BK VIII, CH I [588^{a}18-^{b}4] 114b,d; BK IX, CH 7 [612^{b}18-32] 138b-c / *Parts of Animals*, BK IV, CH 10 [686^{b}22-687^{a}23] 218b-d

12 LUCRETIUS: *Nature of Things*, BK V [1028-1090] 74c-75b

23 HOBBES: *Leviathan*, PART I, 52b; 53a-b; 53d; 54a; 63a; 64a-c; 79c; PART II, 100a-c; PART IV, 267b

25 MONTAIGNE: *Essays*, 215a-232c esp 216c-219a, 231d-232c

30 BACON: *Novum Organum*, BK II, APH 35, 163d-164a

31 DESCARTES: *Objections and Replies*, 209b; 226a-d

32 MILTON: *Paradise Lost*, BK VIII [369-397] 240a-b

35 LOCKE: *Human Understanding*, BK II, CH XXVII, SECT 8 221a-222a; BK III, CH VI, SECT 12 271d-272b esp 272b; SECT 22 273d-274a; BK IV, CH XVI, SECT 12, 370c-371a

35 HUME: *Human Understanding*, SECT IX 487b-488c

38 ROUSSEAU: *Inequality*, 337d-338a

42 KANT: *Judgement*, 602b,d [fn 1]

43 MILL: *Utilitarianism*, 448a-449c passim; 469c-d

49 DARWIN: *Descent of Man*, 287a-303d esp 287a-c, 294c; 319b-d; 591d-592a

51 TOLSTOY: *War and Peace*, EPILOGUE II, 689c-690a

53 JAMES: *Psychology*, 5a-6b; 13a-15a passim; 47b-51a passim, esp 49b-50a; 85a-b; 676b-677a; 678b-686b; 690b; 691a-b; 704a-706b; 873a

54 FREUD: *Interpretation of Dreams*, 385b-c

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38 ROUSSEAU: *Inequality*, 337d-342c; 348d-349c

49 DARWIN: *Descent of Man*, 281a-c; 286c-288d; 299b-c; 320a-330a,c esp 320a-321b, 328b-d; 349b-d; 566b-567b; 591d-592a

53 JAMES: *Psychology*, 41b; 51a-52b; 95b-98a; 800b; 851a-861a esp 851a-b, 857b-858a, 859a-860a; 878a; 890a-897b esp 897a-b

54 FREUD: *Instincts*, 413a-d / *General Introduction*, 591d-592b / *Beyond the Pleasure Principle*, 647a-648a / *Ego and Id*, 707b-708b esp 708a-b

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4 HOMER: *Odyssey*, BK VIII [165-185] 223d-224a

5 ARISTOPHANES: *Frogs* [1482-1499] 581d-582a

7 PLATO: *Republic*, BK V, 358a-360c; BK VI, 373c-375b; 383c-d; BK VII, 401b-c / *Theaetetus*, 513a-d; 528a; 540c-541a / *Seventh Letter*, 809c-810d esp 810c

8 ARISTOTLE: *Posterior Analytics*, BK I, CH 34 [89^{b}10-15] 122c / *Topics*, BK VIII, CH 14 [163^{b} 8-16] 222a

9 ARISTOTLE: *Parts of Animals*, BK IV, CH 10 [686^{b}22-29] 218b-c / *Rhetoric*, BK III, CH I [1404^{a}15-19] 654b; CH 2 [1405^{a}7-9] 655b / *Poetics*, CH 22 [1459^{a}5-7] 694d

12 EPICTETUS: *Discourses*, BK III, CH 6, 182a-b

18 AUGUSTINE: *Confessions*, BK IV, par 31 26c-27a; BK XIII, par 47, 123d-124a

19 AQUINAS: *Summa Theologica*, PART I, Q 89, A 1, ANS 473b-475a; Q 117, A 1, ANS 595d-597c

20 AQUINAS: *Summa Theologica*, PART III, Q 10, A 4, REP 1 771b-772a

23 HOBBES: *Leviathan*, PART I, 60a-61a; 66c-67a; 67d-68c; 84c-d; PART II, 154a-b

25 MONTAIGNE: *Essays*, 60a-c; 65a; 71d-72b; 150c-151a; 240a-c; 319c-320a

31 DESCARTES: *Discourse*, PART I, 41b,d

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33 PASCAL: *Pensées*, 1-2 171a-172b; 7 173a

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36 STERNE: *Tristram Shandy*, 235b-236a; 269b-270a; 271b-273a

39 SMITH: *Wealth of Nations*, BK I, 7d-8a

42 KANT: *Judgement*, 525c-532a esp 526a-d, 528c-530c; 586a-587a

43 FEDERALIST: NUMBER 79, 234b-d

43 MILL: *Liberty*, 297c-299a / *Representative Government*, 385b-d

44 BOSWELL: *Johnson*, 20c; 283c

46 HEGEL: *Philosophy of Right*, PART III, par 166 59d-60a; ADDITIONS, 107 134a-b / *Philosophy of History*, INTRO, 166b-168a

47 GOETHE: *Faust*, PART I [522-613] 15a-17a

49 DARWIN: *Descent of Man*, 266c; 566a-567b

51 TOLSTOY: *War and Peace*, BK VI, 263c-d; BK XV, 639a-b

53 JAMES: *Psychology*, 14b-15a; 274a-275a; 315a-b; 345b; 381a; 431b-432a esp 432b-433b [fn 1]; 678b; 686b-690a; 691b-693a passim

54 FREUD: *Civilization and Its Discontents*, 787d-788b [fn 3]

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7 PLATO: *Laches*, 35d / *Apology*, 200c-d / *Gorgias*, 261a-c / *Republic*, BK II, 320c-321d esp 321d; BK IV, 353b-c
8 ARISTOTLE: *Physics*, BK I, CH I [184a21–b14] 259b; BK VII, CH 3 [247b13–248a6] 330c-d / *Memory and Reminiscence*, CH I [450a26–b9] 691a-b
9 ARISTOTLE: *History of Animals*, BK VIII, CH I [588a18–b1] 114b,d / *Parts of Animals*, BK IV, CH 10 [686b22–29] 218b-c / *Ethics*, BK I, CH 3 [1094b29–1095a12] 340a-b; BK III, CH 12 [1119a 34–b19] 366a,c; BK VI, CH 8 [1142a12–19] 391b; BK X, CH 3 [1174a1–4] 428b
12 LUCRETIUS: *Nature of Things*, BK III [445–450] 35d
18 AUGUSTINE: *Confessions*, BK I, par 7–13 2c-4c / *City of God*, BK XXI, CH 16 573b-574a
19 AQUINAS: *Summa Theologica*, PART I, Q 85, A 3, ANS 455b-457a
23 HOBBES: *Leviathan*, PART I, 60b
25 MONTAIGNE: *Essays*, 72b-73c
27 SHAKESPEARE: *Troilus and Cressida*, ACT II, SC II [163–173] 115b
35 LOCKE: *Civil Government*, CH VI, SECT 54–63 36c-38c passim / *Human Understanding*, BK I, CH I 95b,d-103d esp SECT 15–16 98d-99c; CH II, SECT 22 111a-b; BK II, CH I, SECT 1–8 121a-123a esp SECT 6–8 122b-123a; SECT 21–22 126d-127a; CH IX, SECT 5–7 138d-139b; CH XI, SECT 8–9 145b-c; CH XXXIII, SECT 7–10 249b-d
35 BERKELEY: *Human Knowledge*, INTRO, SECT 14 408d-409a
35 HUME: *Human Understanding*, SECT IV, DIV 33, 463c-d
51 TOLSTOY: *War and Peace*, BK XII, 559d
53 JAMES: *Psychology*, 270a; 413b [fn 2]; 456b-457a; 684b-685a
54 FREUD: *Interpretation of Dreams*, 241b-c; 363b-364b; 379d-380b / *Narcissism*, 400a / *General Introduction*, 526d-527b / *Civilization and Its Discontents*, 768b-c

4c. The states of the possible intellect: its potentiality, habits, and actuality

8 ARISTOTLE: *Physics*, BK VII, CH 3 [247b1–248a9] 330b-d / *Soul*, BK II, CH I [412a6–12] 642a; [412a22–28] 642b; CH 5 [417a21–418a6] 647d-648d; BK III, CH 4 [429b5–430a2] 661d-662b
19 AQUINAS: *Summa Theologica*, PART I, Q 19, A 1, ANS 108d-109c; Q 34, A 1, REP 2 185b-187b; Q 79, A 4, REP 2 417a-418c; AA 6–7 419b-421c; A 10, ANS 423d-424d; A 12, ANS 425c-426b; Q 84, A 7, REP 1 449b-450b; Q 86, A 2, ANS and REP 2 462a-463a; Q 87, AA 1–3 465a-468a
31 SPINOZA: *Ethics*, PART I, PROP 31, SCHOL 366d-367a

4d. The condition of the mind prior to experience

4d(1) The mind as completely potential: the mind as a *tabula rasa*

8 ARISTOTLE: *Soul*, BK III, CH 4 [429b23–430a2] 662a-b
19 AQUINAS: *Summa Theologica*, PART I, Q 79, A 2, ANS 414d-416a; Q 84, A 3 443d-444d; A 6 447c-449a; Q 89, A 1, REP 3 473b-475a; Q 117, A 1, ANS 595d-597c
20 AQUINAS: *Summa Theologica*, PART III, Q 9, A 1, ANS 763b-764c
33 PASCAL: *Pensées*, 327 231a-b
35 LOCKE: *Human Understanding*, 90d-91b; BK I 95b,d-121a,c esp CH I, SECT 1 95b,d-96a, SECT 15 98d-99a, SECT 23 101b-102a, CH II, SECT 22 111a-b, CH III, SECT 23 119b-120a; BK II, CH I 121a-127d esp SECT 2 121b-c, SECT 6 122b-c, SECT 9 123a, SECT 17 125c-d, SECT 20–25 126d-127d; CH IX, SECT 6 139a; CH XI, SECT 16–17 147a-b
35 HUME: *Human Understanding*, SECT II 455b-457b
36 STERNE: *Tristram Shandy*, 234b-235a
53 JAMES: *Psychology*, 49b-50a; 852b-861a esp 852b, 859b-860b

4d(2) The innate endowment of the mind with ideas: instinctive determinations

7 PLATO: *Phaedrus*, 124a-126c esp 126a-c / *Meno*, 179d-183a; 188d-189a / *Phaedo*, 228a-230d
8 ARISTOTLE: *Posterior Analytics*, BK I, CH I 97a-d; BK II, CH 19 [99b20–33] 136a-b / *Metaphysics*, BK I, CH 9 [992b2 1–993a11] 511a c
12 EPICTETUS: *Discourses*, BK I, CH 22, 127c-d; BK II, CH 11, 150a-c
17 PLOTINUS: *First Ennead*, TR II, CH 4, 8b-c / *Fourth Ennead*, TR III, CH 25, 155b; TR IV, CH 5 160d-161b / *Fifth Ennead*, TR III, CH 2, 216b
18 AUGUSTINE: *Confessions*, BK X, par 10 73d-74a; par 16–19 75b-76b; par 26–38 78a-81a / *City of God*, BK VIII, CH 6, 269b-c / *Christian Doctrine*, BK I, CH 9 627a
19 AQUINAS: *Summa Theologica*, PART I, Q 84, A 3 443d-444d; A 4, ANS 444d-446b; A 6, ANS 447c-449a; Q 89, A 1, REP 3 473b-475a; Q 117, A 1, ANS 595d-597c
28 HARVEY: *On Animal Generation*, 333d-335a esp 334c-d
30 BACON: *Advancement of Learning*, 1b-c
31 DESCARTES: *Rules*, IV, 5c-d; 6d; VIII, 13c-d / *Discourse*, PART IV, 53b; PART V, 54c / *Meditations*, II–III 77d-89a esp III, 83b; VI, 96d-97a / *Objections and Replies*, 120c-d; 140c; 215b-c; 224b,d
31 SPINOZA: *Ethics*, PART V, PROP 23, SCHOL 458c-d
35 LOCKE: *Human Understanding*, 90d-91b; BK I 95b,d-121a,c esp CH I, SECT 1 95b,d-96a, SECT 15 98d-99a, SECT 23 101b-102a, CH III,

SECT 21 118b-119a; BK II, CH I, SECT 9-25 123a-127d esp SECT 9 123a, SECT 17 125c-d, SECT 20-24 126d-127c; CH IX, SECT 6 139a; CH XI, SECT 16-17 147a-b

35 HUME: *Human Understanding*, SECT II, DIV 17, 457b,d [fn 1]

42 KANT: *Pure Reason*, 58c-59b; 113c-118a / *Practical Reason*, 352c-353a / *Judgement*, 551a-552c

53 JAMES: *Psychology*, 49b-50a; 767b

54 FREUD: *General Introduction*, 512b-513b; 526d; 532b; 599a-b / *Group Psychology*, 688d-689b / *Ego and Id*, 707c-708b esp 708b / *Inhibitions, Symptoms, and Anxiety*, 721a

4d(3) The transcendental or *a priori* forms and categories of the mind

42 KANT: *Pure Reason*, 14a-108a,c esp 14a-15c, 22a,c, 23a-24a, 25b-c, 27c, 28d-29d, 32a-c, 34a-c, 37b-39c, 41c-45b, 48d-51d, 52c-55a, 56d-59b, 61a-62c, 65d-66d, 94b-95a, 99a-101b; 146a; 186d-187a; 192a-b / *Practical Reason*, 307d-308b; 349b-350c

53 JAMES: *Psychology*, 628b-631a; 851a-852a; 859a 882a esp 859b-861b, 865b, 867a 868a, 879b; 886b-889a esp 889a

4e. The condition of the human mind when the soul is separate from the body

7 PLATO: *Phaedrus*, 124a-126c / *Phaedo*, 223a-225c; 246d-247b / *Republic*, BK X, 440d-441a,c

8 ARISTOTLE: *Soul*, BK III, CH 5 [430^{a}20-25] 662d

12 AURELIUS: *Meditations*, BK IV, SECT 21 265b-c

13 VIRGIL: *Aeneid*, BK VI [724-751] 230b-231a

17 PLOTINUS: *Fourth Ennead*, TR III, CH 18 151b-c; TR III, CH 25-TR IV, CH 5 154d-161b

18 AUGUSTINE: *City of God*, BK XXII, CH 30, 618a

19 AQUINAS: *Summa Theologica*, PART I, Q 77, A 8 406b-407a; Q 89 473a-480c

21 DANTE: *Divine Comedy*, PURGATORY, XXV [1-108] 91b-92c esp [79-84] 92b

31 SPINOZA: *Ethics*, PART V, PROP 21 458a; PROP 23 458b-d; PROP 40 462c-d

41 GIBBON: *Decline and Fall*, 233d

44 BOSWELL: *Johnson*, 192d-193c

4f. Supernatural states of the human intellect: the state of innocence; beatitude; the human intellect of Christ

OLD TESTAMENT: *Genesis*, 2:17-20; 3:4-7,22 / *Exodus*, 33:11-23 / *Ezekiel*, 1; 10—(*D*) *Ezechiel*, 1; 10

NEW TESTAMENT: *Matthew*, 5:8 / *John*, 14:19-21 / *I Corinthians*, 13:12 / *II Corinthians*, 12:1-4 / *I John*, 3:2

18 AUGUSTINE: *Confessions*, BK IX, par 25 68c / *City of God*, BK X, CH 2 299d-300a; CH 28 316b-d; BK XXII, CH 29 614b-616d

19 AQUINAS: *Summa Theologica*, PART I, Q 84, A 5 446c-447c; Q 86, A 2, REP 1 462a-463a; Q 94 501c-506a; Q 101 522c-523d

20 AQUINAS: *Summa Theologica*, PART III, Q 5, A 4 739a-740b; Q 6, A 2 741c-742a; QQ 9-12 763b-779d; PART III SUPPL, Q 92 1025b-1037c

21 DANTE: *Divine Comedy*, PARADISE, V [1-12] 112a-b; VII [64-84] 115d-116a; XIII [31-111] 125d-126c; XIV [1-66] 126d-127c; XV [37-84] 128d-129b; XXI [82-102] 139a-b; XXXII [139]-XXXIII [145] 156a-157d

5. The weakness and limits of the human mind

5a. The fallibility of the human mind: the causes of error

7 PLATO: *Phaedo*, 224a-225a / *Republic*, BK VII, 388a-389d / *Theaetetus*, 536c-544a / *Sophist*, 557b-558d esp 558b

8 ARISTOTLE: *Prior Analytics*, BK II, CH 21 87d-89b / *Posterior Analytics*, BK I, CH 16-18 109b-111c / *Sophistical Refutations*, CH 1 [165^{a}13-18] 227c / *Metaphysics*, BK IV, CH 5 [1009^{a}15-1010^{a}14] 528c-529d; CH 6 [1011^{a}3-13] 530d; CH 7 [1012^{a}18-22] 532a; BK IX, CH 10 [1051^{b}18-1052^{a}4] 577d-578a,c; BK XI, CH 6 [1062^{b}12-24] 590d-591a / *Soul*, BK II, CH 6 [418^{a}6-18] 648d-649a; BK III, CH 3 [427^{b}6-15] 659d-660a; [428^{a}5-429^{a}2] 660b-661a; CH 6 [430^{a}26-^{b}5] 662d-663a; [430^{b}26-30] 663b-c; CH 10 [433^{a}21-28] 665d-666a / *Dreams*, CH 2 [460^{a}33-^{b}27] 704b-d

9 ARISTOTLE: *Rhetoric*, BK III, CH 7 [1408^{a}20-25] 659b

12 LUCRETIUS: *Nature of Things*, BK IV [353-521] 48d-51a esp [469-521] 50b-51a

12 AURELIUS: *Meditations*, BK VII, SECT 55 283b-c

18 AUGUSTINE: *City of God*, BK XI, CH 2, 323c; BK XIX, CH 18 523a-b / *Christian Doctrine*, BK I, CH 9 627a; CH 12 627c-d; BK III, CH 28 668a

19 AQUINAS: *Summa Theologica*, PART I, Q 17, A 1, ANS and REP 2 100d-101d; A 3 102d-103c; Q 84, A 8 450b-451b; Q 85, A 1, REP 1 451c-453c; A 6 458d-459c; Q 89, A 5, ANS 477a-478b; Q 94, A 4 505a-506a

20 AQUINAS: *Summa Theologica*, PART I-II, Q 53, A 1, ANS 19d-21a

21 DANTE: *Divine Comedy*, PARADISE, XIII [88-142] 126b-d

23 HOBBES: *Leviathan*, PART I, 57d-58a; 58d-60a

25 MONTAIGNE: *Essays*, 14c-15a; 271a-276a esp 273b-274a; 287b-292d; 497c-d; 500b-d; 517d-518b

26 SHAKESPEARE: *Troilus and Cressida*, ACT V, SC II [106-114] 136a

28 HARVEY: *Motion of the Heart*, 268a-c / *On Animal Generation*, 333b-c

30 BACON: *Advancement of Learning*, 2c-4c; 11a-15a passim; 27a-c; 38d-39a; 51c-d; 60a-61c esp 61b-c; 90b-d / *Novum Organum*, BK I 107a-136a,c passim, esp APH 38-68 109c-116a

(5. *The weakness and limits of the human mind.* *5a. The fallibility of the human mind: the causes of error.*)

31 DESCARTES: *Rules*, II, 3a; VIII, 13a-b; XII, 22c-23b / *Meditations*, I–II 75a-81d esp II, 80a, 80d-81a; III, 83a; IV 89a-93a; VI, 100a-103d / *Objections and Replies*, 141a; 142c; 215b-216c; 229d-230d

31 SPINOZA: *Ethics*, PART II, PROP 17, SCHOL 381b-d; PROP 24–31 383c-385c; PROP 40, SCHOL 2–PROP 41 388a-c; PROP 44, COROL I, SCHOL 389c-390a; PROP 47, SCHOL 390c-391a; PROP 49, SCHOL 391d-394d

32 MILTON: *Paradise Lost*, BK VIII [179–197] 236a-b

33 PASCAL: *Pensées*, 82–88 186b-189b; 365–366 236a; 394–395 240b / *Geometrical Demonstration*, 440b-441b

35 LOCKE: *Human Understanding*, BK II, CH XI, SECT 3 144c-d; CH XXI, SECT 60–70 194a-197b passim; CH XXX, SECT 2 238b-c; CH XXXIII 248b-251d esp SECT 18 251a-c; BK III, CH IX, SECT 21 290c-291a; CH X, SECT 16 295d; CH XI, SECT 4 300c; BK IV, CH XVII, SECT 9–13 377d-378c; CH XX 388d-394c

35 BERKELEY: *Human Knowledge*, INTRO, SECT 1–4 405a-d

35 HUME: *Human Understanding*, SECT I, DIV 6, 453c; SECT V, DIV 45 469c; SECT VII, DIV 48 470d-471c

36 STERNE: *Tristram Shandy*, 194a; 234b-236b

38 MONTESQUIEU: *Spirit of Laws*, BK I, 1d

42 KANT: *Pure Reason*, 1a-b; 108a-d; 109b-c; 129c-173a esp 133c-d; 193a-b; 200c-209d; 229b-c; 233d-234b / *Fund. Prin. Metaphysic of Morals*, 260d-261b; 283d-284d

43 FEDERALIST: NUMBER 1, 29d; NUMBER 37, 118c

43 MILL: *Liberty*, 274b-293b passim; 293d

53 JAMES: *Psychology*, 122b-125b; 241a-b; 361a-b; 460a-469a esp 462b-464a, 468b-469a; 508a-520a esp 508a; 610b-625a passim, esp 618b-621a, 625a

54 FREUD: *Interpretation of Dreams*, 148d-149a; 210c-d; 337a-c; 379b-d / *General Introduction*, 453b-476a,c passim; 602b-c / *War and Death*, 760d-761a / *New Introductory Lectures*, 819b-c

5b. The natural limits of the mind: the unknowable; objects which transcend its powers; reason's critical determination of its own limits or boundaries

OLD TESTAMENT: *Exodus*, 33:12–33 / *Job*, 9:21; 11:7–9; 26:14; 28:12–21; 36:26; 37:14–23; 38:1–42:6 / *Psalms*, 139:1–6—(*D*) *Psalms*, 138:1–6 / *Proverbs*, 20:24; 25:3; 27:1 / *Ecclesiastes*, 3:11; 6:11–12; 8:7,16–17; 9:11–12; 11:2–6—(*D*) *Ecclesiastes*, 3:11; 6:11–7:1; 8:7,16–17; 9:11–12; 11:2–6 / *Isaiah*, 55:8–9—(*D*) *Isaias*, 55:8–9

APOCRYPHA: *Wisdom of Solomon*, 9:9–18—(*D*) OT, *Book of Wisdom*, 9:9–19 / *Ecclesiasticus*, 1:1–3; 18:4–7; 24:27–29—(*D*) OT, *Ecclesiasticus*, 1:1–2; 18:4–6; 24:37–39

NEW TESTAMENT: *Mark*, 13:31–37 / *John*, 1:18 / *Acts*, 1:6–7 / *Romans*, 11:33–34 / *I Corinthians*, 2:16 / *I Timothy*, 6:14–16 / *James*, 4:13–15

5 AESCHYLUS: *Suppliant Maidens* [86–95] 2a-b

5 SOPHOCLES: *Ajax* [1419–1421] 155c

5 EURIPIDES: *Helen* [1137–1150] 309a

7 PLATO: *Parmenides*, 489d-491a

8 ARISTOTLE: *Physics*, BK II, CH 4 [196^{a}5–7] 272c; [196^{b}5–7] 273a / *Metaphysics*, BK I, CH 2 [982^{b}28–983^{a}11] 501a-b; BK II, CH 1 [993^{a}30–^{b}11] 511b,d; BK XII, CH 7 [1072^{b}13–29] 602d-603a

9 ARISTOTLE: *Parts of Animals*, BK I, CH 5 [644^{b}20–645^{a}4] 168c-d / *Ethics*, BK X, CH 7 [1177^{b}29–1178^{a}2] 432c

12 LUCRETIUS: *Nature of Things*, BK IV [469–521] 50b-51a

18 AUGUSTINE: *Confessions*, BK I, par 1 1a-b; BK VI, par 6–8 36c-37c / *City of God*, BK VIII, CH 6, 269b-c; BK X, CH 31 319b-d; BK XII, CH 7 346c-d

19 AQUINAS: *Summa Theologica*, PART I, Q 1, A 1 3b-4a; Q 3, A 4, REP 2 16d-17c; Q 12, A 4 53b-54c; AA 11–12 59d-61c; Q 29, A 1, REP 1 162a-163b; Q 32, A 1 175d-178a; Q 46 250a-255d; Q 50, A 2, ANS 270a-272a; Q 79, A 4, ANS 417a-418c; Q 84, A 5 446c-447c; AA 7–8 449b-451b; Q 85, A 8 460b-461b; Q 86 461b-464d; Q 88 468d-473a; Q 94, AA 1–2 501d-504a; Q 117, A 2, ANS and REP 1 597c-598c

20 AQUINAS: *Summa Theologica*, PART I–II, Q 68, A 2 89c-90c; Q 91, A 4 210c-211c; Q 93, A 2 216c-217b; Q 109, A 1 338b-339c; Q 112, A 5 359c-360c; PART II–II, Q 2, A 3 392d-393c; Q 8, A 1 417a-d; Q 9, A 1 423c-424b

21 DANTE: *Divine Comedy*, HELL, VII [61–96] 10b-c; PURGATORY, III [22–45] 56a-b; X [121–129] 68c-d; PARADISE, II [46–148] 108b-109b passim; IV [28–48] 111a; XIX [40–90] 135c-136a; XXI [82–102] 139a-b

23 HOBBES: *Leviathan*, PART I, 49a; 52c; 54a-c; 78d-79a; PART II, 163a

25 MONTAIGNE: *Essays*, 80b-82b; 209a-c; 212a-215a; 238c-239c; 267c-268a; 271b-273b; 291b-294b; 497b-502c passim, esp 501d-502c

28 HARVEY: *Motion of the Heart*, 273c-d / *On Animal Generation*, 389b; 492c

30 BACON: *Advancement of Learning*, 2c-4c; 17b-c; 41b-d; 54b-c; 96d-97b / *Novum Organum*, BK I, APH 1–2 107a-b; APH 9–10 107d; APH 21 108b-c; APH 37 109b-c; APH 48 110d-111a; BK II, APH 15 149a

31 DESCARTES: *Discourse*, PART I, 43c / *Meditations*, I 75a-77c passim; III, 86d-87a; IV 89a-93a; VI 96b-103d passim / *Objections and Replies*, 112a-c; 123d-126b; 168d-169a; 215d-216c; 259a-b

31 SPINOZA: *Ethics*, PART II, AXIOM 5 373d; PROP 24–31 383c-385c
32 MILTON: *Paradise Lost*, BK V [544–576] 187a-b; BK VI [296–301] 202b; BK VII [109–130] 219b-220a; BK VIII [114–130] 234b-235a / *Samson Agonistes* [293–314] 346a-b
33 PASCAL: *Pensées*, 72 181a-184b; 184–241 205a-217b
35 LOCKE: *Human Understanding*, 87d; INTRO 93a-95d; BK II, CH I, SECT 5 122a-b; SECT 24 127b-c; CH II, SECT 3 128b-c; CH VII, SECT 10 133a-b; CH X, SECT 9 143a-c; CH XIV, SECT 26 160c-d; CH XV, SECT 11 165a-b; CH XXII, SECT 9 202c-203a; CH XXIII, SECT 12–13 207a-208b passim; SECT 36 213c-d; BK III, CH III, SECT 2 254d-255a; CH VI, SECT 9 270d-271a; CH XI, SECT 23 305a-b; BK IV, CH III 313a-323d; CH VI, SECT 4–16 331d-336d passim; CH X, SECT 19 354a-c; CH XII, SECT 9–13 360d-362d passim; CH XIV, SECT 1–2 364b-c; CH XVI, SECT 12 370b-371a; CH XVIII, SECT 7 383b
35 BERKELEY: *Human Knowledge*, INTRO, SECT 1–3 405a-c; SECT 81 428c-d; SECT 101 432c-d
35 HUME: *Human Understanding*, SECT I, DIV 2 451b c; DIV 6–10 453b-455b passim; SECT II, DIV 13–16 455d-457a; SECT IV, DIV 26 460b-c; DIV 29 461a-d; SECT V, DIV 36, 464d-465a; SECT VII, DIV 57, 475b-c; DIV 60 477a-c; SECT VIII, DIV 62, 478c; DIV 71–72 482c-483c; DIV 81 487a; SECT XI, DIV 110 501a-b; SECT XII 503c-509d passim, esp DIV 130 508c-d
40 GIBBON: *Decline and Fall*, 308c-d
42 KANT: *Pure Reason* 1a-250a,c esp 1a-13d, 15c-16c, 19a, 20a, 25b-26b, 27b-28b, 29d-33d, 53b-54b, 93c-99a, 101b-107b, 129c-130a, 133a-134d, 146a-149d, 153a-c, 157d, 175b [fn 1], 196b-197c, 200c-209d, 215d-216c, 217d-218a, 219a-227a, 229b-c, 230c-235a, 247a-b, 248d-250a,c / *Fund. Prin. Metaphysic of Morals*, 260d-261b; 281c-282d; 283d-287d / *Practical Reason*, 296a-d; 307d-308b; 309b; 310d 314d; 331a-332d; 335c-337c esp 337a c; 354d-355d / *Judgement*, 461a-c; 465a-c; 497a-498b; 547b-d; 551a-552c; 564a-c; 570b-572b; 574b-577a; 579a; 581a-b; 584c-d; 599d-600d; 603a-604b
44 BOSWELL: *Johnson*, 126b; 129a
47 GOETHE: *Faust*, PART I [354–376] 11a-b; [558–565] 15b; [602–655] 16b-17b; [1064–1067] 26b; [1765–1784] 42b; [1810–1815] 43a; PART II [4917–4922] 122a; [11,433–452] 278a-b
48 MELVILLE: *Moby Dick*, 244b-245b; 272b-276b esp 276a-b; 366a-b
51 TOLSTOY: *War and Peace*, BK I, 50b-c; BK V, 196a-197c; EPILOGUE II, 693d-694d
52 DOSTOEVSKY: *Brothers Karamazov*, BK V, 120d-121c
53 JAMES: *Psychology*, 223b-224a; 262a-269a; 388a; 400a-b; 822b
54 FREUD: *Interpretation of Dreams*, 383b-c / *Unconscious*, 430b-c

5c. The elevation of the human mind by divine grace: faith and the supernatural gifts

OLD TESTAMENT: *Genesis*, 15; 17:1–19:23; 22:9–18; 26:1–6; 46:1–4 / *Exodus*, 19; 24 esp 24:12–18; 31:1–11; 33:11–23 / *Numbers*, 12 / *Joshua*, 3:7–8; 5:13–6:5—(*D*) *Josue*, 3:7–8; 5:13–6:5 / *Judges*, 6:11–24 / *I Kings*, 3:5–15; 4:29–34; 9:1–9; 19—(*D*) *III Kings*, 3:5–15; 4:29–34; 9:1–9; 19 / *I Chronicles*, 17—(*D*) *I Paralipomenon*, 17 / *Isaiah*, 6—(*D*) *Isaias*, 6 / *Ezekiel*, 1; 10—(*D*) *Ezechiel*, 1; 10 / *Daniel*, 1; 7–12
NEW TESTAMENT: *Matthew*, 17:1–9 / *Luke*, 2:25–35 / *John*, 1:1–18 / *Acts*, 2:1–21; 9:1–8; 10:44–47 / *I Corinthians*, 2:6–16; 14 / *II Corinthians*, 12:1–9 / *Revelation—(D) Apocalypse*
18 AUGUSTINE: *Confessions*, BK I, par 1 1a-b; BK VI, par 6–8 36c-37c; BK IX, par 23–25 68a-c; BK X, par 65 87d-88a / *City of God*, BK X, CH 2–3 299d-301a; BK XI, CH 2 323a-c; BK XIX, CH 18 523a-b; BK XXII, CH 29, 614b-d / *Christian Doctrine*, BK III, CH 37, 674c-d; BK IV, CH 15–16 685c-686c
19 AQUINAS: *Summa Theologica*, PART I, Q 1, A 1 3b-4a; Q 2, A 2, REP 1 11d-12c; Q 12 50b-62b; Q 32, A 1 175d-178a; Q 79, A 4, ANS and REP 1 417a-418c; Q 84, A 5 446c 447c; Q 86, A 4, REP 2 463d-464d; Q 105, A 3 540c-541b
20 AQUINAS: *Summa Theologica*, PART I–II, QQ 68–69 87c-101c; Q 109, A 1 338b-339c; PART II–II, QQ 8–9 416d-426c; Q 45 598c-603c
21 DANTE: *Divine Comedy*, PARADISE, II [34–45] 108a; XIV [34–66] 127b-c; XIX [40–66] 135c-d
25 MONTAIGNE: *Essays*, 209a-c; 212a-d; 238c-239c; 267c-268a; 292a-294b esp 294a-b
30 BACON: *Advancement of Learning*, 17b-c; 19b-c; 39d-40a; 41b-d; 54b-c; 55b-c; 95d-97b
31 DESCARTES: *Objections and Replies*, 125b-126a; 168d-169a
32 MILTON: *Paradise Lost*, BK XII [552–587] 331a-332a
33 PASCAL: *Pensées*, 202 211a; 430–435 245a-251a; 881 345b
40 GIBBON: *Decline and Fall*, 190d-191a
44 BOSWELL: *Johnson*, 394a-b; 395a-b
51 TOLSTOY: *War and Peace*, BK I, 50b-c; BK V, 196a-198b; BK XI, 525c-d
52 DOSTOEVSKY: *Brothers Karamazov*, BK I, 13c-d; BK VII, 189a-191a,c esp 191a,c

6. The reflexivity of mind: the mind's knowledge of itself and its acts

7 PLATO: *Charmides*, 8b-9d
8 ARISTOTLE: *Metaphysics*, BK XII, CH 7 [1072^b13–29] 602d-603a; CH 9 [1074^b35–1075^a4] 605c / *Soul*, BK III, CH 4 [429^b5–9] 661d; [429^b25–430^a9] 662b-c; CH 6 [430^b21–26] 663b / *Memory and Reminiscence*, CH 2 [452^b23–28] 694d-695a
9 ARISTOTLE: *Ethics*, BK IX, CH 9 [1170^a28–$^b1$] 424a

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12 EPICTETUS: *Discourses*, BK I, CH I, 105a-b; CH 17 122d-124a; CH 20, 126c-d
12 AURELIUS: *Meditations*, BK XI, SECT I 302a-b
17 PLOTINUS: *Third Ennead*, TR IX, CH 3, 137c-d / *Fifth Ennead*, TR III, CH 1-6 215d-219b
18 AUGUSTINE: *City of God*, BK XI, CH 26 336d-337b
19 AQUINAS: *Summa Theologica*, PART I, Q 14, A 2, REP 1-3 76d-77d; Q 16, A 2 95c-96b; Q 28, A 4, REP 2 160c-161d; Q 56, A 1, ANS 292a-d; Q 85, A 2, ANS and REP 1 453d-455b; Q 86, A 1, REP 3 461c-462a; Q 87 464d-468d; Q 88, A 2, REP 3 471c-472c; Q 89, A 2, ANS 475a-d; PART I-II, Q 17, A 6 690b-d
21 DANTE: *Divine Comedy*, PURGATORY, XVIII [49-60] 80b-c
31 DESCARTES: *Discourse*, PART IV, 51d-52a / *Meditations*, II 77d-81d esp 77d-79a; VI, 96d-97a / *Objections and Replies*, 162b; 207b; 209d-210b; 276b-c
31 SPINOZA: *Ethics*, PART II, PROP 21, SCHOL 383a; PROP 23 383b-c; PROP 27-29 384b-385a
35 LOCKE: *Human Understanding*, 87d; INTRO 93a-95d; BK II, CH I, SECT 1-8 121a-123a; SECT 10 123b-d; SECT 24 127b-c; CH VI 131b-c; CH IX, SECT 1-2 138b-c; CH XI, SECT 14, 146d; CH XIV, SECT 4 155d-156a; CH XIX 175b-176b; CH XXI, SECT 30 185a-c; CH XXIII, SECT 1 204a-b; SECT 5 205a-b; SECT 15 208c-d; SECT 32 212c-d
35 HUME: *Human Understanding*, SECT I, DIV 7-9 453c-455a passim
38 ROUSSEAU: *Inequality*, 349b-c
41 GIBBON: *Decline and Fall*, 150c
42 KANT: *Pure Reason*, 15d-16c; 31a-32c; 49c-51d; 55a-56c; 99a-101b; 120c-129c esp 121a-123b, 126a-128b; 200c-204c / *Fund. Prin. Metaphysic of Morals*, 271a-c; 281c-282d / *Practical Reason*, 292a-c; 307d-310c; 337a-b / *Judgement*, 600c-d
46 HEGEL: *Philosophy of Right*, PART II, par 138 48c-d / *Philosophy of History*, INTRO, 160c-161a; 165a-b; PART I, 257d-258a; PART II, 259a-b; PART III, 306a-b
52 DOSTOEVSKY: *Brothers Karamazov*, BK XI, 341c
53 JAMES: *Psychology*, 121a-b; 122b-126a; 177a-178a; 191a-b; 196a-197a; 222b-224a; 685a-686a
54 FREUD: *Interpretation of Dreams*, 180b-181b; 383b-c / *Narcissism*, 408c-409a / *Unconscious*, 429c-430c

7. The nature and phases of consciousness: the realm of the unconscious

53 JAMES: *Psychology*, 43a-44a; 90b-93a esp 92b; 98a-115a esp 107b-114b; 146a-167a esp 154a-155b, 157b-161a, 165a-167a
54 FREUD: *Interpretation of Dreams*, 197d-198a; 367b-c; 382a-385c esp 384a-385c / *Unconscious* 428a-443d esp 428b-429b, 430d-431d, 436b-437a, 438c-d, 439d, 442b-443a / *General Introduction*, 452a-c; 531d-532c esp 532b; 566c-567b / *Beyond the Pleasure Principle*, 646b-647c / *Ego and Id*, 697b-702c esp 697b-698d, 700a-701d / *War and Death*, 760a-b / *Civilization and Its Discontents*, 769a-770c / *New Introductory Lectures*, 834d-838c esp 836b-837d

7a. The nature of self-consciousness

31 DESCARTES: *Discourse*, PART IV, 51d-52a / *Meditations*, II, 77d-79a
35 LOCKE: *Human Understanding*, BK II, CH XXVII, SECT 9-26 222a-227d passim; BK IV, CH IX, SECT 2-3 349a-c
42 KANT: *Pure Reason*, 121a-123b / *Practical Reason*, 292d [fn 1]
46 HEGEL: *Philosophy of Right*, PART II, par 137-140, 48a-50a / *Philosophy of History*, INTRO, 160c-161a; 165a-b
49 DARWIN: *Descent of Man*, 297a-c
51 TOLSTOY: *War and Peace*, EPILOGUE II, 688a-689b
53 JAMES: *Psychology*, 147a-149a; 188a-197a esp 191a-197a; 204b-259b esp 205a-206a, 213a-240a; 471b-472b; 685a-686a
54 FREUD: *Civilization and Its Discontents*, 767d-768d

7b. The degrees or states of consciousness: waking, dreaming, sleeping

7 PLATO: *Republic*, BK V, 370d-371b; BK IX, 416a-c
8 ARISTOTLE: *Physics*, BK VII, CH 3 [247^{b}13-248^{a}6] 330c-d / *Metaphysics*, BK XII, CH 7 [1072^{b}13-29] 602d-603a / *Soul*, BK II, CH 1 [412^{a}22-28] 642b / *Sleep*, CH 1 [454^{a}1-6] 696b-c; [454^{b}23-27] 697b; CH 2 [455^{b}3-13] 698a-b; [456^{a}26-29] 699a; CH 3 [456^{b}9-17] 699c / *Dreams*, CH 1 702a-703a; CH 3 [460^{b}28-461^{a}8] 704d-705a; [461^{a}31-^{b}11] 705c; [462^{a}15-31] 706b-d
12 LUCRETIUS: *Nature of Things*, BK IV [749-776] 54a-b; [907-1036] 56a-57c
19 AQUINAS: *Summa Theologica*, PART I, Q 84, A 8, CONTRARY and REP 2 450b-451b; Q 86, A 4, REP 2 463d-464d
20 AQUINAS: *Summa Theologica*, PART III SUPPL, Q 82, A 3, ANS 971a-972d
23 HOBBES: *Leviathan*, PART I, 50d-51d
25 MONTAIGNE: *Essays*, 176c-180b; 290b-c
31 DESCARTES: *Discourse*, PART IV, 51c; 53c-54b / *Meditations*, I, 75d-76b; VI, 103b-d / *Objections and Replies*, 162b
31 SPINOZA: *Ethics*, PART II, PROP 49, SCHOL, 393b-c
32 MILTON: *Paradise Lost*, BK V [28-128] 176a-178a esp [100-109] 177b
35 LOCKE: *Human Understanding*, BK II, CH I, SECT 10-19 123b-126c; CH XIX 175b-176b
46 HEGEL: *Philosophy of History*, PART I, 220c-221a
48 MELVILLE: *Moby Dick*, 19a-20a; 115b-117a; 149a-150a; 313a-b

51 TOLSTOY: *War and Peace*, BK III, 147c-148c; BK XI, 481a-482b; 524c-527a; BK XIII, 583d; BK XIV, 601c-602d
52 DOSTOEVSKY: *Brothers Karamazov*, BK XI, 337a-346a
53 JAMES: *Psychology*, 98a-103b; 107a-114b esp 108b-109b; 130a-139a esp 130a-132a, 137a-139a; 154a-b; 261a-262a; 643b [fn 1]; 836a-850a passim, esp 839b-840b
54 FREUD: *Interpretation of Dreams*, 137a-176d passim, esp 149c-153c, 157a-164d, 169b-174d; 229d-230a; 234b-235c; 314c-320c esp 315b, 319c-320b; 332a-340a esp 336d-340a; 352d-357c esp 353d-354a, 357a; 358d-359d; 366d-370a esp 367c-d; 373a-377b / *Narcissism*, 408d-409a / *General Introduction*, 477d-483d esp 478b-d; 485a-486a; 518c-519c esp 519b; 535a-c; 537a-539b esp 538d-539a; 617b-c / *Ego and Id*, 703b / *New Introductory Lectures*, 811d-812c

7c. The conscious, pre-conscious, and unconscious activities of mind

53 JAMES: *Psychology*, 8b-9a; 74b-78b; 107a-114b; 295b-298a; 774a; 849a-b
54 FREUD: *Origin and Development of Psycho-Analysis*, 5b-c / *Hysteria*, 110b-c / *Interpretation of Dreams*, 348a-c; 352d-353b; 367b-d; 369a-370d; 377c-385c passim, esp 382a-383c, 384a-385c / *Repression*, 422a-425b / *Unconscious*, 430d-443d esp 433b-c, 436b-437c, 438b-439b / *General Introduction*, 452a-c; 453b-476a,c passim, esp 455b, 473b-475a; 484a-491b esp 485a-486a, 489d; 499b-504d esp 502d-504d; 512b-c; 531d-532c; 537a-539b esp 537b-c, 538d-539b; 558d-568a esp 558d-561b, 566a-567d; 586b-d / *Ego and Id*, 697d-701d; 703a-c / *New Introductory Lectures*, 835a-839b esp 835c-836d

8. The pathology of mind: the loss or abeyance of reason

5 AESCHYLUS: *Choephoroe* [1021-1064] 80a-c
5 SOPHOCLES: *Ajax* 143a-155a,c esp [282-345] 145d-146b
5 EURIPIDES: *Bacchantes* 340a-352a,c esp [847-1297] 347b-351a / *Heracles Mad* [815-1145] 371d-374d / *Orestes* [1-423] 394a-398b
9 ARISTOTLE: *Ethics*, BK VII, CH 5 399a-d passim
13 VIRGIL: *Aeneid*, BK VII [323-405] 245a-247b
19 AQUINAS: *Summa Theologica*, PART I, Q 84, A 7, ANS 449b-450b; Q 115, A 5, REP 1 590d-591c; PART I-II, Q 6, A 7, REP 3 650a-d; Q 24, A 2, ANS 727d-728c; Q 28, A 3, ANS and REP 1 742a-d; Q 37, A 4, REP 3 785d-786d; Q 48, AA 3-4 824c-826a,c
20 AQUINAS: *Summa Theologica*, PART I-II, Q 74, A 5, REP 1 131d-132b
21 DANTE: *Divine Comedy*, HELL, XXX [1-33] 44c-d
27 SHAKESPEARE: *Hamlet*, ACT IV, SC V 59c-62a; ACT V, SC II [236-255] 70b-c / *King Lear*, ACT II, SC IV [274-289] 261c-d; ACT III, SC IV 264a-266b; ACT IV, SC IV [1-20] 272b-c; SC VI [80-294] 274b-276c; SC VII [14-82] 276d-277c / *Macbeth*, ACT V, SC I 306b-307a; SC III [37-46] 308a
31 DESCARTES: *Meditations*, I, 75d
31 SPINOZA: *Ethics*, PART IV, PROP 44, SCHOL 437d-438a
48 MELVILLE: *Moby Dick*, 148b-150a; 306a-307a
51 TOLSTOY: *War and Peace*, BK XI, 513d-515a; 524c-527a
53 JAMES: *Psychology*, 241b-258b; 818b-819a
54 FREUD: *Hysteria*, 86a-d; 90a-b / *Interpretation of Dreams*, 174d-176d; 364c-d / *War and Death*, 760b / *New Introductory Lectures*, 830d-831a

8a. The distinction between sanity and madness: the criterion of lucidity or insight

6 HERODOTUS: *History*, BK III, 96b-98a
10 HIPPOCRATES: *Sacred Disease*, 159a-b
19 AQUINAS: *Summa Theologica*, PART I-II, Q 10, A 3, ANS and REP 2 664d-665c
23 HOBBES: *Leviathan*, PART I, 67b; 67d; 68b-c; 69a
25 MONTAIGNE: *Essays*, 166a-167a; 235b-c
26 SHAKESPEARE: *Midsummer-Night's Dream*, ACT V, SC I [1-27] 370d-371a
27 SHAKESPEARE: *Hamlet*, ACT II, SC II [171-221] 42b-d; ACT III, SC IV [137-144] 56a; ACT IV, SC V [1-75] 59c-60b; [154-200] 61b-d / *King Lear*, ACT IV, SC VII [14-82] 276d-277c
35 LOCKE: *Human Understanding*, BK II, CH XI, SECT 13 146b-c; CH XXXIII, SECT 3-4 248c-d
35 HUME: *Human Understanding*, SECT II, DIV II, 455b-c
43 MILL: *Liberty*, 299d-300b [fn 1]
44 BOSWELL: *Johnson*, 13c-14a; 111d; 354c-355a
48 MELVILLE: *Moby Dick* esp 122b-123b, 135a-138a
51 TOLSTOY: *War and Peace*, BK XI, 525c
52 DOSTOEVSKY: *Brothers Karamazov*, BK XI, 337a-348d passim; BK XII, 356d-359c; 364d-365d
53 JAMES: *Psychology*, 137a; 241b-244a esp 244a; 749a-750b esp 750b; 799a-806b esp 799a-800a, 806a-b
54 FREUD: *Hysteria*, 86c / *Interpretation of Dreams*, 364c-d / *Narcissism*, 399b-d / *Unconscious*, 433b-c; 440a-442b / *New Introductory Lectures*, 812a-b

8b. The causes of mental pathology: organic and functional factors

6 HERODOTUS: *History*, BK II, 86b; BK VI, 199c-d; 201b-c
7 PLATO: *Timaeus*, 474b-d
8 ARISTOTLE: *Categories*, CH 8 [9^b34-10^a10] 15a / *Physics*, BK VII, CH 3 [247^b13-248^a6] 330c-d / *Soul*, BK III, CH 3 [429^a4-8] 661b / *Dreams*, CH 2 [460^a32-$^b16$] 704b-c
9 ARISTOTLE: *Parts of Animals*, BK II, CH 7 [653^b1-7] 178d-179a
10 HIPPOCRATES: *Sacred Disease* 154a-160d esp 155d-156a, 159a-b

(*8. The pathology of mind: the loss or abeyance of reason. 8b. The causes of mental pathology: organic and functional factors.*)

19 AQUINAS: *Summa Theologica*, PART I, Q 84, A 7, ANS 449b-450b; Q 115, A 5, REP 1 590d-591c; PART I-II, Q 6, A 7, REP 3 650a-d; Q 10, A 3, ANS and REP 2 664d-665c; Q 28, A 3, ANS and REP 1 742a-d; Q 37, A 4, REP 3 785d-786d; Q 48, AA 3-4 824c-826a,c

23 HOBBES: *Leviathan*, PART I, 68b-71b

27 SHAKESPEARE: *King Lear*, ACT II, SC IV [106-113] 259c

28 HARVEY: *On Animal Generation*, 347c

30 BACON: *Advancement of Learning*, 49d-50b

31 DESCARTES: *Objections and Replies*, 155d-156a

40 GIBBON: *Decline and Fall*, 598a-b

44 BOSWELL: *Johnson*, 127a-b; 355a; 356b-c

48 MELVILLE: *Moby Dick*, 135a-136b

49 DARWIN: *Descent of Man*, 299c; 318b

51 TOLSTOY: *War and Peace*, BK XV, 616a-617a

52 DOSTOEVSKY: *Brothers Karamazov*, BK I, 4c-d; BK II, 21d-22b; BK III, 62d-63b; BK XI, 337a-348d passim; BK XII, 376a-d

53 JAMES: *Psychology*, 3a; 25b-26b; 32a-37b passim; 40b-41a; 258a-b; 533a-538b

54 FREUD: *Hysteria*, 81c-87a; 97b-106c / *Interpretation of Dreams*, 176a-d; 380d-382a esp 381d-382a / *General Introduction*, 451d-452a; 547b-549d; 616d-623b passim; 627a-b / *Group Psychology*, 690c-691c / *Ego and Id*, 716d-717a / *Civilization and Its Discontents*, 774c-d / *New Introductory Lectures*, 812a; 866c-867a; 872b-d

8c. The abnormality peculiar to mind: systematic delusion

29 CERVANTES: *Don Quixote* esp PART I, 1a-3b, 50b-52d, PART II, 205a-209d

35 LOCKE: *Human Understanding*, BK II, CH XI, SECT 13 146b-c

44 BOSWELL: *Johnson*, 13c-14a

48 MELVILLE: *Moby Dick*, 232b-236a

51 TOLSTOY: *War and Peace*, BK X, 391d-394d; BK XI, 510b-d; 515a-517a; 525c

52 DOSTOEVSKY: *Brothers Karamazov*, BK XI, 337a-346a passim

53 JAMES: *Psychology*, 242a-244b; 527b-528b [fn 3]; 818b-819a

54 FREUD: *Hysteria*, 86a-d; 102a-106c / *Narcissism*, 408a-d / *General Introduction*, 547b-550c; 620c-622a esp 620c-d / *Civilization and Its Discontents*, 774c-d

9. Mind in the moral and political order

9a. The distinction between the speculative and practical intellect or reason: the spheres of knowledge, belief, and action

8 ARISTOTLE: *Metaphysics*, BK II, CH 1 [993^{b}20-23] 512a / *Soul*, BK I, CH 3 [407^{a}22-30] 636d-637a; BK III, CH 7 663c-664b; CH 9 [432^{b}26-433^{a}6] 665c

9 ARISTOTLE: *Motion of Animals*, CH 7 [701^{a}6-39] 236b-d / *Ethics*, BK VI 387a-394d passim, esp CH 1 [1139^{a}3]-CH 2 [1139^{b}13] 387b-388b, CH 5 389a-c, CH 7 390a-d, CH 8 [1142^{a}11-19] 391b / *Politics*, BK VII, CH 14 [1333^{a}16-29] 538a

19 AQUINAS: *Summa Theologica*, PART I, Q 79, AA 11-12 424d-426b; Q 86, A 1, REP 2 461c-462a; PART I-II, Q 3, A 5 626b-627a; Q 9, A 1, REP 2 657d-658d; Q 38, A 4, REP 2-3 788d-789b

20 AQUINAS: *Summa Theologica*, PART I-II, Q 57, A 5, REP 3 39a-40a; Q 94, A 4, ANS 223d-224d; PART II-II, Q 8, A 3 418c-419a; Q 9, A 3 425b-d; Q 45, A 3 600c-601a; PART III, Q 13, A 1, REP 3 780a-781b

30 BACON: *Advancement of Learning*, 16d-17a; 18a-b; 42a-c; 55b-d; 65d-66a; 86b-c / *Novum Organum*, BK II, APH 4 137d-138b

31 DESCARTES: *Objections and Replies*, 126a-b; 243c-d

33 PASCAL: *Pensées*, 265-290 221b-225a

35 LOCKE: *Human Understanding*, INTRO, SECT 5-6 94b-95a; BK IV, CH XI, SECT 8 356b-d; CH XIV 364b-365a

35 BERKELEY: *Human Knowledge*, INTRO, SECT 2 405b

35 HUME: *Human Understanding*, SECT V, DIV 34, 464b; SECT XII, DIV 126-128 507a-508a

42 KANT: *Pure Reason*, 190c-191a; 240b-243c / *Fund. Prin. Metaphysic of Morals*, 253a-255d; 260d-261b; 264b-d; 271a-c; 283d-287d / *Practical Reason*, 291a-297c; 300d [fn 1]; 307d-314d esp 310d-311d; 319c-321b; 329a-337a,c esp 329a-330c; 343a-d / *Intro. Metaphysic of Morals*, 388a-d; 390b,d-391a / *Judgement*, 461a-475d esp 463a-467a, 474b-475d; 523d-524a; 596c-598b; 599d-607c

43 MILL: *Representative Government*, 346c-347a

46 HEGEL: *Philosophy of Right*, PREF, 6a-7a; ADDITIONS, 1 115a-d; 4 116a-d / *Philosophy of History*, PART IV, 360d-361a; 362d

47 GOETHE: *Faust*, PART I [1224-1237] 30b

51 TOLSTOY: *War and Peace*, BK I, 15a-b; 47b-c; BK IX, 361d-365c

53 JAMES: *Psychology*, 655a-661a passim, esp 656b; 729a-730a; 865b

9b. The relation of reason to will, desire, and emotion

5 SOPHOCLES: *Oedipus at Colonus* [658-660] 120c

5 EURIPIDES: *Hippolytus* [373-430] 228b-d

7 PLATO: *Phaedrus*, 120a-c; 128a-129d / *Phaedo*, 224a-226c; 230d-234c / *Gorgias*, 275b-280d / *Republic*, BK IV, 346a-355a; BK IX, 425c-427b / *Timaeus*, 466a-467b

8 ARISTOTLE: *Topics*, BK V, CH 1 [129^{a}10-16] 179a / *Metaphysics*, BK IX, CH 5 573a-c; CH 7 [1049^{a}5-12] 574c-d / *Soul*, BK I, CH 3 [407^{a}34-^{b}4] 637a; BK III, CH 10 665d-666d

9 ARISTOTLE: *Motion of Animals*, CH 7 236b-237b / *Ethics*, BK I, CH 13 [1102^{b}13-1103^{a}10]

348a-d; BK II, CH 6 [1106^{b}8–1107^{a}6] 352a-c; BK III, CH 12 [1119^{a}35–^{b}19] 366a,c; BK VI, CH 2 387d-388b; BK IX, CH 4 [1166^{a}10–28] 419b-c; CH 8 [1168^{b}28–1169^{a}12] 422b-d / *Politics*, BK VII, CH 14 [1333^{a}17–29] 538a; CH 15 [1334^{b}8–28] 539b-d

12 EPICTETUS: *Discourses*, BK I, CH 4 108d-110a; BK II, CH 18 161a-162b; CH 23 170a-172d

12 AURELIUS: *Meditations*, BK VII, SECT 55 283b-c

18 AUGUSTINE: *Confessions*, BK IV, par 15–17 23a-c; BK VIII, par 19–24 58b-60a

19 AQUINAS: *Summa Theologica*, PART I, Q 14, A 8, ANS 82c-83b; Q 16, A 1, ANS 94b-95c; A 4 97a-c; Q 57, A 4, REP 3 298a-299a; Q 59, A 2 307c-308b; Q 79, A 1, REP 2 414a-d; A 2, REP 2 414d-416a; A 11, REP 1 424d-425b; Q 80, A 2 428a-d; Q 81, A 3 430c-431d; QQ 82-83 431d-440b; Q 93, AA 6-8 496b-500c; PART I-II, Q 6, A 2 646a-c; Q 9, A 1 657d-658d; Q 10, A 1, REP 3 662d-663d; Q 11, A 2 667b-d; Q 12, A 5 672a-c; Q 13, A 2 673c-674c; Q 15, A 1, REP 3 681b d; A 2 682a-c; Q 16, A 1, REP 3 684b-d; A 2 684d-685b; Q 17 686b,d-693d; Q 19, AA 3-6 704c-708a; Q 26, A 1, ANS 734a-d; Q 28, A 1, ANS 740b-741a; A 2, ANS and REP 2 741a-742a; Q 30, A 1 749a-d; A 3 750d-751c; Q 31, A 3 754a-d; Q 46, A 4, REP 1,3 815b-d; Q 48, A 3, REP 1,3 824c-825b

20 AQUINAS: *Summa Theologica*, PART I-II, Q 50, A 5, ANS and REP 3 10b-d; Q 56, A 4 32b-33c; A 5, REP 1 33c-34b; Q 60, A 1, ANS 49d-50c; Q 72, A 2, REP 1,4 112b-113a; Q 74, AA 5-10 131d-137c; Q 77, AA 1-3 145a-148b; Q 90, A 1, ANS and REP 1 205b-206b; PART II-II, Q 45, A 2, ANS 599d-600c; PART III, Q 18, A 2 811d-812b

21 DANTE: *Divine Comedy*, HELL, XXXI [46-57] 46c; PURGATORY, XVIII [19-75] 80a-c

22 CHAUCER: *Troilus and Cressida*, BK IV, STANZA 82 99a

23 HOBBES: *Leviathan*, PART I, 64a-c; PART II, 141a-b; CONCLUSION, 279a-c

25 MONTAIGNE: *Essays*, 184b-d; 200d-205b; 232b-238d passim; 273d-276a; 432a-d; 486b-495a

26 SHAKESPEARE: *Merchant of Venice*, ACT I, SC II [13-20] 408b-c

27 SHAKESPEARE: *Troilus and Cressida*, ACT II, SC II [51-68] 114a-b; [163-182] 115b-c; ACT III, SC II [74-81] 121a / *Othello*, ACT I, SC III [322-337] 212b-c / *Sonnets*, CXLVII 608d

30 BACON: *Advancement of Learning*, 27a-c; 55b-d; 66c-67b; 78a-b

31 DESCARTES: *Discourse*, PART III, 50b

31 SPINOZA: *Ethics*, PART II, PROP 48, SCHOL 391b-c; PART IV, PROP 18, SCHOL 429a-d; APPENDIX, II 447b; PART V, PREF 451a-452c

32 MILTON: *Paradise Lost*, BK VIII [521-594] 243b-245a

33 PASCAL: *Pensées*, 412-413 242a; 423 243b / *Geometrical Demonstration*, 440b

35 LOCKE: *Human Understanding*, BK II, CH XXI, SECT 69 196d-197a; BK IV, CH XX, SECT 12 392c

38 ROUSSEAU: *Inequality*, 337d-338a; 343d-345c / *Social Contract*, BK I, 393b-c; BK II, 400a-c

42 KANT: *Fund. Prin. Metaphysic of Morals*, 256b; 264d-265a; 271c-d; 279b; 282d-283b; 284d-285a / *Practical Reason*, 303b-304b; 314a-d; 315b-c; 341c-342a / *Intro. Metaphysic of Morals*, 385c-386d / *Judgement*, 483d-484b; 586a-587a

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52 DOSTOEVSKY: *Brothers Karamazov*, BK III, 50c-62a

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8 ARISTOTLE: *Soul*, BK I, CH 5 [410^{b}10–16] 640c

9 ARISTOTLE: *Ethics*, BK I, CH 7 [1097^{b}23–1098^{a}18] 343a-c; CH 13 [1102^{b}13–1103^{a}10] 348a-d; BK II, CH 6 [1106^{a}14–1107^{a}9] 351c-352c esp [1106^{b}35–1107^{a}3] 352c; BK III, CH 12 [1119^{a}35–^{b}19] 366a,c; BK VI, CH 2 387d-388b; CH 5 389a-c; BK IX, CH 4 [1166^{a}10–28] 419b-c; CH 8 [1168^{b}28–1169^{a}12] 422b-d; BK X, CH 7 [1177^{a}11–18] 431d; [1177^{b}26–1178^{a}8] 432c; CH 8 [1178^{a}16–24] 432d-433a / *Politics*, BK VII, CH 13 [1332^{a}39–^{b}10] 537a-b; CH 14 [1333^{a}17–29] 538a; CH 15 [1334^{b}8–28] 539b-d

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19 AQUINAS: *Summa Theologica*, PART I, Q 18, A 3, ANS 106b-107c; Q 21, A 2, REP 1 125c-d; Q 95, A 2 507c-508a; Q 98, A 2, ANS and REP 3-4 517d 519a; PART I-II, Q 24, A 1 727b-d; Q 45, A 4, ANS 812b-813a

20 AQUINAS: *Summa Theologica*, PART I-II, Q 56, A 3, ANS 31a-32b; A 4 32b-33c; Q 63, A 1 63a-64a; Q 74, AA 5-10 131d-137c; Q 90, A 1, REP 3 205b-206b; PART III, Q 5, A 4 739a-740b; Q 15, A 4 790d-791c; A 6, REP 2 792c-793c

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23 HOBBES: *Leviathan*, PART I, 91b-92d

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27 SHAKESPEARE: *Hamlet*, ACT III, SC II [68–79] 49c-d / *Troilus and Cressida*, ACT II, SC II [33–50] 113d-114a / *Othello*, ACT I, SC III [322–337] 212b-c

30 BACON: *Advancement of Learning*, 26a-27c

31 SPINOZA: *Ethics*, PART IV, PROP 14–17 428a-d; PROP 18, SCHOL 429a-d; PROP 23 24 430c-d; PROP 26–28 431a-c; PROP 59 442b-d; PROP 61 443a-b; PROP 63 443d-444a; APPENDIX, IV 447b-c; PART V, PREF 451a-452c; PROP 1–20 452d-458a

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36 SWIFT: *Gulliver*, PART IV, 159b-160a; 165a-b; 173b

38 ROUSSEAU: *Social Contract*, BK I, 393b-c

42 KANT: *Pure Reason*, 190c-d; 236d-237a / *Fund. Prin. Metaphysic of Morals* 253a-287d esp 255a, 256d-257d, 260a-261d, 265c-266d, 269c, 272a-b, 274a-277b, 279c-d, 283d-287b / *Practical Reason*, 297a-314d esp 307d-314d; 321b-329a / *Pref. Metaphysical Elements of Ethics*, 373d; 378d-379a / *Intro. Metaphysic of Morals*, 386b-d; 388b-c; 390b,d-391c; 392b-393a / *Judgement*, 571c-572a; 586a-587a; 596c-597d; 605d-606b [fn 2]

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51 TOLSTOY: *War and Peace*, EPILOGUE I, 646b-c

53 JAMES: *Psychology*, 13b-15a; 202a-b; 807a-808a; 816a-819a esp 817b, 819a

54 FREUD: *General Introduction*, 625a-d / *Ego and Id*, 702c-d / *New Introductory Lectures*, 840a

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7 PLATO: *Phaedo*, 230d-234c / *Republic*, BK IV, 347d-348d; BK IX, 425c-427b / *Theaetetus*, 528c-531a / *Laws*, BK IX, 754a-b

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19 AQUINAS: *Summa Theologica*, PART I, Q 59, A 3, ANS and REP 1 308b-309a; Q 83, A 1 436d-438a; A 3 438d-439c; PART I-II, Q 13, A 2, ANS 673c-674c; A 6, ANS 676c 677b; Q 17, A 1 esp REP 2 686d-687c

20 AQUINAS: *Summa Theologica*, PART I-II, Q 50, A 3 8b-9a; Q 77, A 8, REP 3 151c-152a

21 DANTE: *Divine Comedy*, PURGATORY, XVI [52–84] 77b-d; XVIII [40–75] 80b-c

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35 LOCKE: *Civil Government*, CH VI, SECT 57–63 36d-38c / *Human Understanding*, BK II, CH XXI, SECT 7–13 180a-181b esp SECT 13 181b; SECT 46–54 189d-192c; SECT 69 196d-197a

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42 KANT: *Pure Reason*, 237a-b / *Fund. Prin. Metaphysic of Morals*, 280b-c; 282b-285a / *Practical Reason*, 291a-b; 292a-c; 296a-d; 302a-d; 307d-311d / *Pref. Metaphysical Elements of Ethics*, 378b-c / *Intro. Metaphysic of Morals*, 390b; 393a / *Science of Right*, 400b,d-402a

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51 TOLSTOY: *War and Peace*, EPILOGUE II, 688a-690a

53 JAMES: *Psychology*, 706b

9e. Reason as formative of human society: the authority of government and law

7 PLATO: *Republic* 295a-441a,c esp BK IV, 350b-354b / *Laws* 640a-799a,c esp BK I, 650a-b, BK III, 669b-670c, BK IV, 681b-682c, BK IX, 754a-b

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31 SPINOZA: *Ethics*, PART IV, PROP 35-37 433b-436a; PROP 40 437a; PROP 73 446c-447a; APPENDIX, XII-XVI 448b-449c

35 LOCKE: *Civil Government*, CH II 25d-28c passim, esp SECT 6, 26b, SECT 9-10 27a-b

38 MONTESQUIEU: *Spirit of Laws*, BK I, 1d-2a; 2d; 3c

38 ROUSSEAU: *Social Contract*, BK I, 393b-c; BK II, 400a-c

42 KANT: *Intro. Metaphysic of Morals*, 389a-b / *Science of Right*, 397a 399a; 416b 417a

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46 HEGEL: *Philosophy of Right*, PREF, 6a-7a; PART III, par 187 65a-c; par 212 70d-71a; par 258, 81c-82d [fn 1]; par 272 89d-90c; ADDITIONS, 47 124a-b; 157 142b-c; 164 144c-145a; 184 149a / *Philosophy of History*, INTRO, 170c-178a; PART III, 311b-d; PART IV, 316d-317a; 350b-c; 353c-d; 364a-c

49 DARWIN: *Descent of Man*, 318c-d; 322a

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7 PLATO: *Phaedrus*, 124b-126c / *Symposium*, 167a-d / *Phaedo*, 224a-225c / *Republic*, BK VI, 380d-381a; BK VII 388a-401d / *Timaeus*, 475d-476b / *Theaetetus*, 528c-531a / *Philebus* 609a-639a,c esp 633a-639a,c / *Laws*, BK V, 690a-c / *Seventh Letter*, 808c-809a

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9 ARISTOTLE: *Ethics*, BK I, CH 5 [1095^b16-18] 340d; CH 7 [1097^b23-1098^a18] 343a-c; CH 8 [1098^b9-1099^a6] 344a-c; BK VI, CH 12 [1144^a 1-6] 393c; BK X, CH 7-8 431d-434a / *Politics*, BK VII, CH 3 [1325^b14-32] 529d-530a; CH 14 [1333^a17-29] 538a

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12 EPICTETUS: *Discourses*, BK I, CH 2, 106d; BK II, CH 11 150a-151b; CH 17 158d-161a; BK III, CH 10 185d-187a; CH 15 190a-191a; CH 19 192c-d; CH 22 195a-201a; BK IV, CH 4-6 225a-232c; CH 8 235b-237d

12 AURELIUS: *Meditations*, BK II, SECT 16-17 259a-d; BK III, SECT 4 260b-261a; SECT 6 261a-c; SECT 8-12 261d-262c; BK IV, SECT 3 263b-264a; SECT 16 264d; BK V, SECT 9 270b-c; SECT 16 271c-d; BK VI, SECT 12 274c; BK IX, SECT 41 295c; BK X, SECT 12 298c-d

17 PLOTINUS: *First Ennead*, TR IV, CH 2-4 12d-14c / *Third Ennead*, TR VIII, CH 4, 130d-131a; CH 6 131d-132b

18 AUGUSTINE: *City of God*, BK XIX, CH 19 523b-d

19 AQUINAS: *Summa Theologica*, PART I, Q 12, A 8, REP 4 57b-58b; Q 26, A 2, ANS and REP 2 150c-151a; Q 88, A 1, ANS 469a-471c; PART I-II, Q 1, A 1, REP 3 609b-610b; Q 3, AA 3-8 624b-629c; Q 21, A 2, REP 2 718a-d

20 AQUINAS: *Summa Theologica*, PART I-II, Q 66, A 5, REP 1-2 79b-80c

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25 MONTAIGNE: *Essays*, 231d-238a; 395d

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31 DESCARTES: *Rules*, I, 1d / *Discourse*, PART I, 41d-42a; PART III, 49d-50b

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36 SWIFT: *Gulliver*, PART III, 94b-99b

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42 KANT: *Fund. Prin. Metaphysic of Morals*, 256d-257d; 268c-270c esp 269c / *Practical Reason*, 337a-338c / *Judgement*, 508c-509a; 591b-592a; 596c-597d

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48 MELVILLE: *Moby Dick*, 255a
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10. The existence of mind apart from man

10*a*. The indwelling reason in the order of nature

12 AURELIUS: *Meditations* 253a-310d esp BK II, SECT 4 257b, BK III, SECT 13 262c, BK IV, SECT 10 264c, SECT 40 267a-b, SECT 45-46 267b-c, BK V, SECT 8 269d-270b, SECT 30 273a, BK VI, SECT 1 274a, SECT 9-10 274b-c, SECT 36 277c, SECT 38 277c-d, SECT 40 277d, SECT 42-44 278a-c, SECT 58 279d, BK VII, SECT 9-11 280b-c, SECT 75 285c, BK VIII, SECT 7 286a, SECT 34 288a-b, BK X, SECT 6-7 297a-c, BK XII, SECT 5 307d-308a, SECT 30 310a-b

10*b*. *Nous* or the intellectual principle: its relation to the One and to the world-soul

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17 PLOTINUS: *Second Ennead*, TR IX, CH 1, 66a-d / *Third Ennead*, TR VIII, CH 1-TR IX, CH 1 129a-136d / *Fourth Ennead*, TR IV, CH 16 165d-166b / *Fifth Ennead* 208a-251d esp TR I, CH 3-7 209b-212c, TR III, CH 1-12 215d-223c, CH 16 225b-226a, TR IV, CH 2-TR V, CH 3 227b-230a, TR V, CH 7 231d-232b, CH 12, 234c, TR VII 238a-239b, TR IX, CH 3-9 247b-250b / *Sixth Ennead*, TR II, CH 20-21 278d-280a; TR VII, CH 13-24 328b-334a; CH 36-42 339c-342d; TR VIII, CH 17-18 351c-352c
46 HEGEL: *Philosophy of History*, INTRO, 158a-c; PART IV, 364b-c
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8 ARISTOTLE: *Metaphysics*, BK XII, CH 8 603b-605a esp [1073^{a}36-39] 603d
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19 AQUINAS: *Summa Theologica*, PART I, Q 7, A 2, ANS and REP 2 31d-32c; Q 10, A 3, ANS 42c-43b; Q 12, A 4, REP 2 53b-54c; Q 50 269a-275a esp A 1, ANS 269b-270a, A 2, ANS 270a-272a, A 5, ANS 274b-275a; Q 54 284d-288d; Q 55, A 2, ANS 289d-290d; Q 56, A 2, ANS 292d-294a; Q 57, A 1, ANS 295a-d; A 3, ANS and REP 2 297b-298a; Q 58, A 1, ANS 300c-301a; A 3, ANS 301d-302d; Q 61, A 2, REP 3 315c-316a; Q 64, A 1, ANS 334a-335c; Q 65, A 4, ANS 342b-343c; Q 75, A 7, REP 2-3 384d-385c; Q 79, A 1, REP 3 414a-d; A 2, ANS 414d-416a; A 8, ANS 421c-422b; A 10, ANS 423d-424d; Q 84, A 2, ANS 442b-443c; A 3, REP 1 443d-444d; A 7, ANS 449b-450b; Q 85, A 1, ANS 451c-453c; A 5, ANS 457d-458d; Q 87, A 1, ANS and REP 2-3 465a-466c; A 3, ANS 467b-468a; Q 89, A 3, ANS and REP 1 475d-476c; A 4, ANS 476c-477a
20 AQUINAS: *Summa Theologica*, PART I-II, Q 50, A 6, ANS and REP 1 11a-12a; Q 51, A 1, REP 2 12b-13c
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32 MILTON: *Paradise Lost*, BK I [116-142] 96a-b; BK II [142-159] 114b; BK V [404-413] 184a; [469-505] 185b-186a
33 PASCAL: *Pensées*, 285 224a
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35 BERKELEY: *Human Knowledge*, SECT 81 428c-d

10*d*. The unity and separate existence of the active or the possible intellect

8 ARISTOTLE: *Soul*, BK III, CH 5 esp [430^{a}18-22] 662c-d
19 AQUINAS: *Summa Theologica*, PART I, Q 76, A 2 388c-391a; Q 79, AA 4-5 417a-419b; Q 84, A 4, ANS and REP 3 444d-446b; Q 88, A 1, ANS and REP 1 469a-471c; Q 117, A 1, ANS 595d-597c
20 AQUINAS: *Summa Theologica*, PART I-II, Q 50, A 4, ANS 9a-10b

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31 SPINOZA: *Ethics*, PART I, PROP 14, COROL 1-2 360a; PROP 21-23 364a-365a; PROP 29-31 366b-367a esp PROP 31, DEMONST 366d; PART II, PROP 1, SCHOL 374a; PROP 5-7 374c-375c; PROP 10-11 376c-377c

10*f*. Absolute mind: the moments of its manifestations

46 HEGEL: *Philosophy of Right*, INTRO, par 24 17d-18a; par 27 18d; par 29–30 19a-c; par 33 20b-d; PART I, par 35 21a-b; PART III, par 156–157 57d; par 259 82a; par 262 83d-84a; par 321 106c-d; par 340–360 110b-114a,c; ADDITIONS, 100 133a; 153 141d; 194 150c-d / *Philosophy of History*, INTRO, 156d-157b; 160b-162a; 163a; 169d-170b; 177d-178d; 179b-d; 182d-183a; 186c-188b; 189d-190b

10*f*(1) The unfolding of mind or spirit in world history

46 HEGEL: *Philosophy of Right*, PART III, par 340–360 110b-114a,c; ADDITIONS, 153 141d / *Philosophy of History* 153a-369a,c esp INTRO, 153a-190b, 203a-206a,c, PART IV, 368d-369a,c

10*f*(2) The concrete objectification of mind in the state

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I. Works by authors represented in this collection.
II. Works by authors not represented in this collection.

For the date, place, and other facts concerning the publication of the works cited, consult the Bibliography of Additional Readings which follows the last chapter of *The Great Ideas*.

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Chapter 59: MONARCHY

INTRODUCTION

OF all the traditionally recognized forms of government, monarchy is the easiest to define and to identify. As the word indicates, it is government by one man. It is indifferent whether that man is called king or prince, Caesar or Czar. Of all such titles, "king" is the most frequent; and in consequence monarchy is often called kingship or referred to as the royal form of government.

When monarchy is thus defined in terms of the principle of *unity*, other forms of government, such as aristocracy or oligarchy and democracy, tend to be characterized as government by the few or the many. But the numerical criterion by itself is obviously inadequate. To those who distinguish between aristocracy and oligarchy, it makes a difference whether the few who rule are selected for their pre-eminence in virtue or in wealth. A tyranny, like a monarchy, may be government by one man. Hence those who wish to use the word "monarch" or "king" eulogistically cannot be satisfied with a definition that fails to distinguish between king and tyrant.

It has been said—by Aristotle, for example—that the perversion of, or "deviation from, monarchy is tyranny; for both are forms of one-man rule. But," he adds, "there is the greatest difference between them; the tyrant looks to his own advantage, the king to that of his subjects." Both Aristotle and Plato also say that as tyranny is the worst form of government, so monarchy at the opposite extreme is the best. But though in their opinion tyranny is *always* the worst form of government, Aristotle at least does not seem to think that monarchy is always—*under all conditions*—best.

Further complications appear when other views are taken into consideration. The chapters on CITIZEN, CONSTITUTION, and GOVERNMENT discuss the basic opposition between absolute and limited government in the various terms in which that opposition is traditionally expressed: royal as opposed to political, despotic as opposed to constitutional government; or government by men as opposed to government by law. That opposition seems to be relevant to the theory of monarchy, certainly to any conception of monarchy which tends to identify it with absolute rule, or which sees some affinity between royal and despotic government.

The word "despotic" is, of course, sometimes used in a purely descriptive rather than a disparaging sense. Used descriptively, it designates the absolute rule exercised by the head of a household over children and slaves, neither of whom have any voice in their own government. Aristotle sometimes characterizes the royal government of a political community as despotic to signify its resemblance to the absolute rule of the father or master. He expresses the same comparison in reverse when he says that "the rule of a father over his children is royal."

The derogatory sense of "despotic" would seem to apply to those cases in which grown men are ruled as if they were children, or free men as if they were slaves. The great issue concerning monarchy, therefore, is whether royal government is despotic in this sense. Always, or only under certain conditions? And if despotic, is it also tyrannical? Is monarchy in principle the foe of human liberties? To all these questions there are opposite answers in the great books of political theory. Where Hegel says that "public freedom in general and an hereditary monarchy guarantee each other," others, like Rousseau and Mill, identify the freedom of citizenship with republican or representative government.

This central issue is complicated not only by

the various meanings of "despotism" (discussed in the chapter on TYRANNY), but also by variations in the meaning of the word "monarchy" as it is used by different writers. The word is even used by the same writer in a number of senses. Rousseau, for example, says in one place that "every legitimate government is republican," and in another that "monarchical always ranks below republican government." But he also treats monarchy or royal rule as one form of legitimate government. He describes the king, in whose hands all political power is concentrated, as only having "the right to dispose of it in accordance with the laws." He distinguishes not only between king and tyrant, but also between king and despot.

To avoid what may be only verbal difficulties here, Kant suggests the use of the word "autocrat" to signify "one who has *all* power" and who in his own person "*is* the Sovereign." In contra-distinction "monarch" should signify the king or chief magistrate (sometimes called "president") who "merely represents the sovereignty" or the people who "are themselves sovereign."

SOME POLITICAL theorists distinguish between absolute and limited (or constitutional) monarchy. This in turn raises new problems of definition and evaluation.

Is absolute government always monarchical in form, so that absolute government and absolute monarchy can be treated as identical? Hobbes, who seems to think that government by its very nature must be absolute, nevertheless treats aristocracy and democracy along with monarchy as forms of absolute government. Furthermore, as Rousseau points out, "the Roman Empire saw as many as eight emperors at once, without it being possible to say that the Empire was split up." The absolutism of the government was not diminished by the fact that two or more Caesars often held power at the same time. The triumvirates were also absolute dictatorships.

It would seem, therefore, that the principle of absolute government can be separated from the principle of monarchy. But can monarchy as a form of government be separated from absolute rule?

The question is not whether, in a republic, the monarchical principle is present in the sense that *one* man may hold the office of chief executive. On the issue of a single as opposed to a plural executive, Hamilton and Madison—and with them Jefferson—emphatically favor the principle of unity in the executive branch of the government. "Energy in government," according to *The Federalist*, "requires not only a certain duration of power, but the execution of it by a single hand." The qualities essential to a good executive, such as "decision, activity, secrecy, and dispatch," Hamilton says, "will generally characterize the proceedings of one man in a much more eminent degree than the proceedings of any greater number; and in proportion as the number is increased, these qualities will be diminished."

Yet the authors of *The Federalist*, and Jefferson too, are equally emphatic in insisting upon the difference in kind, not degree, between the power granted the President of the United States and that enjoyed by the King of Great Britain. For them, monarchies and republics are fundamentally opposed in the spirit of their institutions. Despotism is inherent in the nature of monarchy—not only absolute, but even limited monarchy.

If the Constitution of the United States does not set up a constitutional monarchy, even though it provides for one man as chief executive, then a constitutional monarchy must have some other principle in it which distinguishes it from a republic. That may be hereditary succession to the throne; or it may be a certain symbolic identification of the king with the state. But in a monarchy, no matter how attenuated, so long as it does not become purely and simply constitutional government, the king also seems to retain some degree of despotic power—the absolute power exercised by a sovereign person who is free from the supervision of law.

Aristotle takes a similar view. Enumerating five types of kingly rule, he sets one form apart from all the rest—the form in which one man "has the disposal of everything. . . . This form corresponds to the control of a household. For as household management is the kingly rule of a family, so kingly rule is the household management of a city or of a nation." The other forms are all, in one way or another, kingships accord-

ing to law. Of these, most clearly exemplified in the Spartan constitution, Aristotle says that "the so-called limited monarchy, or kingship according to law . . . is not a distinct form of government, for under all governments, as for example, in a democracy or aristocracy, there may be a general holding office for life, and one person is often made supreme over the administration of a state."

Whether or not there is a supreme commander or a chief magistrate, elected or hereditary, the government is not distinctively royal if the man called "king" is subject to the laws and if the other men in the state are not his subjects but his fellow citizens. For somewhat different reasons, Hobbes agrees with the view that only absolute monarchy is monarchy. When the king is limited in power, he says, the sovereignty is always "in that assembly which had the right to limit him; and by consequence the government is not monarchy, but either democracy or aristocracy; as of old time in Sparta, where the kings had a privilege to lead their armies, but the sovereignty was in the *Ephori*." Hobbes uses the government of one people over another people—the mother country over colonies, or the conqueror over a subjugated nation—to illustrate what he means by absolute monarchy. This suggests a significant parallelism between the problems of monarchy and the problems of empire.

IF THERE WERE universal agreement on the point that only absolute monarchy is truly monarchy, the issue concerning monarchy could be readily translated into the basic opposition between rule by men and rule by law. But such agreement seems to be wanting, and the problems of monarchy are, in consequence, further complicated.

Plato, for example, distinguishes in the *Statesman* between three forms of government according to established laws, of which one is monarchy. Monarchy is better than aristocracy and democracy, obviously not with respect to the principle of the supremacy of law, but simply because government by one seems to be more efficient than government by a few or many; just as tyranny is the worst form of government because, in violating or overthrowing the laws, one man can succeed in going further than a multitude, which is "unable to do either any great good or any great evil."

But all these forms of government, good and bad, better and worse, are compared by Plato with a form of government which he says "excels them all, and is among States what God is among men." It seems to be monarchical in type, but, though not lawless like tyranny, it is entirely above the need of written or customary rules of law. "The best thing of all," Plato writes, "is not that the law should rule, but that a man should rule, supposing him to have wisdom and royal power." Whether such government can ever exist apart from divine rule, or perhaps the advent of the "philosopher king," the point remains that Plato seems to conceive monarchy in two quite distinct ways—both as an absolute rule and also as one of the legally limited forms of government.

Montesquieu separates monarchy from absolute government entirely. At the same time, he distinguishes it from republics, whether aristocracies or democracies. According to him, monarchy is as much a government by law, as much opposed to despotism or absolute government, as are republics. Monarchies and republics are the two main kinds of constitutional government, just as aristocracies and democracies are the two main kinds of republic.

Where Aristotle holds that constitutional monarchy is not a distinct type of government, Montesquieu holds that absolute monarchy does not deserve the name of "monarchy," but should be called "despotism" instead. He criticizes Aristotle's fivefold classification of kingships, saying that "among the number of monarchies, he [Aristotle] ranks the Persian empire and the kingdom of Sparta. But is it not evident," he asks, "that the one was a despotic state and the other a republic?" Since Montesquieu's own view of monarchy involves, in addition to a king, a body of nobles in whom intermediate and subordinate powers are vested, he thinks no true notion of monarchy can be found in the ancient world.

Hegel agrees with Montesquieu that constitutional monarchy is the very opposite of despotism, but he goes much further than Montesquieu in the direction of identifying monarchy with constitutional government. For him constitutional monarchy is the ultimately true

form of government. "The development of the state to constitutional monarchy is the achievement of the modern world." He thinks Montesquieu was right in recognizing that the ancient world knew only the patriarchal type of monarchy, a kind of transference of familial government to larger communities still organized on the domestic pattern. But according to Hegel, Montesquieu himself, in stressing the role of the nobility, shows that he understands, not the type of monarchy which is "organized into an objective constitution" and in which "the monarch is the absolute apex of an organically developed state," but only "feudal monarchy, the type in which the relationships recognized in its constitutional law are crystallized into the rights of private property and the privileges of individuals and corporations."

It may be questioned, however, whether Hegel's theory of constitutional monarchy avoids the issue raised by republicans who think that monarchy is inseparable from some form of absolutism, or that monarchy, if entirely devoid of absolutism, has no special character as a form of government. In spite of his acceptance of the traditional distinction between constitutional government and despotism, Hegel seems to regard the sovereignty of the state as absolute in relation to its own subjects at home—no less absolute than is its sovereignty in external affairs *vis-à-vis* foreign states. The crown is the personification of the absolute sovereignty of the state at home. The absolute power of the state comes into existence only in the person of a monarch who has the final decision in all matters.

"The sovereignty of the people," writes Hegel, "is one of the confused notions based on the wild idea of the 'people.' Taken without its monarchy and the articulation of the whole which is the indispensable and direct concomitant of monarchy, the people is a formless mass and no longer a state." Hegel thus dismisses the notion of popular sovereignty (which to Rousseau, Kant, and the Federalists is of the essence of republican government) as inconsistent with "the Idea of the state in its full development." A profound opposition, therefore, exists between Hegel's theory of constitutional monarchy and republican theories of constitutional government. Even though the issue cannot be stated in terms of government by men *vs.* government by laws, a monarchy as opposed to a republic still seems to represent the principle of absolutism in government.

THERE IS STILL another conception of a type of government which is neither a pure republic nor an absolute monarchy. What the mediaeval writers call a "mixed regime" is not a constitutional monarchy in the Hegelian sense, nor is it what Aristotle means when he uses that term. The mediaeval mixed regime is a combination of two distinct principles of government—the *royal principle*, according to which absolute power is vested in the sovereign personality of an individual man; and the *political principle*, according to which the supremacy of law reflects the sovereignty of the people, who have the power of making laws either directly or through their representatives.

This conception of a mixed regime—of government which is *both royal and political*—appears at first to be self-contradictory. In Aristotle's terms, it would seem impossible to combine the supremacy of law, which is the essence of constitutional government, with the supremacy of a sovereign person, which is the essence of royal government. The mixed regime would also seem to be impossible in terms of Hobbes' theory of the indivisibility of sovereignty. Impossible in theory, the mixed regime nevertheless existed as a matter of historic fact in the typical mediaeval kingdom, which derived its character from the feudal conditions under which it developed.

Does not the fact of its historic existence refute the incompatibility of the principles which the mixed regime combines? The answer may be that, like a mixture of oil and water, royal and political government can only exist as a mixture in unstable equilibrium. Originating under feudal conditions, the mixed regime tends toward dissolution as these conditions disappear with the rise of the modern nation-state. It first tends to be supplanted by a movement toward absolute monarchy. Then, in the course of reaction and revolution, it tends toward constitutional monarchies or republics through added limitations on the power of the throne.

These historic developments seem to indicate that the principles of the mixed regime are ulti-

mately as irreconcilable in fact as they are in theory.

Montesquieu's remark that the ancients "had not a clear idea of monarchy" can be interpreted to mean that they did not have the conception of a mixed regime. Before the accidents of history brought it into existence, it is unlikely that anyone would have conceived of a government both royal and political. Montesquieu does not adopt the mediaeval description of a mixed regime, which, as stated by Aquinas, is "partly kingdom, since there is one at the head of all; partly aristocracy, in so far as a number of persons are set in authority; and partly democracy, *i.e.*, government by the people, in so far as the rulers can be chosen by the people, and the people have the right to choose their rulers." Yet Montesquieu's theory of monarchy seems to be determined by characteristics peculiar to the mediaeval kingdom.

This seems to be the point of Hegel's observation, already quoted, that Montesquieu's theory of monarchy identifies it with the feudal kingdom. The point is confirmed in another way by the fact that Montesquieu's ideal of monarchy is the government of England at the end of the 17th century, which, he says, "may be justly called a republic, disguised under the form of a monarchy." Locke's conception of the English government in his own day tends to clarify this point.

The form of a government, says Locke, "depends upon the placing of the supreme power, which is the legislative." When the power of making laws is placed in the hands of one man, then it is a monarchy. But, according to Locke, "the legislative and executive power are in distinct hands . . . in all moderated monarchies and well-framed governments."

What Locke here calls a "moderated monarchy" (intending to describe the government of England), seems to be the mixed regime, the form of government which Fortescue had earlier called a "political kingdom," and Bracton a *regimen regale et politicum*. The legislative power is in the hands of the people or their representatives. If it belonged exclusively to the king as a right vested in his sovereign person, and not merely as the people's representative —or, in the language of Aquinas, their vicegerent—the government would be in form an absolute monarchy. If, on the other hand, the king were merely a representative, the government would be a republic.

The sovereign character of the king in a mixed regime seems to stem from his unique relation to the laws of the land. In one way, he is above the laws, and has certain powers not limited by law; in another way, his whole power is limited by the fact that he does not have the power to make laws in his own right or authority. When a people are free and able to make their own laws, Aquinas writes, "the consent of the whole people expressed by custom counts far more in favor of a particular observance, than does the authority of the sovereign, who has not the power to frame laws, except as representing the people." But Aquinas also says that the sovereign is "*exempt from the law*, as to its coercive power; since, properly speaking, no man is coerced by himself, and law has no coercive power save from the authority of the sovereign."

The coercive power of the law belongs to the sovereign as executive, not legislator. Admitting the king to a share in legislative power, Locke conceives his essential function—that which belongs to him alone—as executive. The absoluteness of this executive power Locke defines in terms of the royal prerogative, that "being nothing but a power in the hands of the prince to provide for the public good in such cases which, depending upon unforeseen and uncertain occurrences, certain and unalterable laws could not safely direct." Prerogative, he then goes on to say, is the power "to act according to discretion for the public good without the prescription of law, and sometimes even against it."

Locke thus gives us a picture of the mixed regime in which the king's sovereign power is limited to the exercise of an absolute prerogative in performing the executive functions of government. In the executive sphere, the king's power is absolute, yet his sovereignty is not absolute; for in the legislative sphere, he either has no voice at all where ancient customs prevail, or, in the making of new laws, he can count himself merely as one representative of the people among others.

The extent of the prerogative permitted the king depends upon the extent to which mat-

ters are explicitly regulated by law. When in the infancy of governments the laws were few in number, "the government was almost all prerogative," as Locke sees it. He thinks that "they have a very wrong notion of government who say that the people have encroached upon the prerogative when they have got any part of it to be defined by positive laws. For in so doing they have not pulled from the prince anything that of right belonged to him, but only declared that that power which they indefinitely left in his or his ancestors' hands, to be exercised for their good, was not a thing they intended him, when he used it otherwise."

Here we see the seed of conflict between sovereign king and sovereign people in the combination of incompatible principles that constitute a mixed regime. As the king, jealous of his prerogative, tries to maintain or even extend his power, royal and political government tends toward absolute monarchy. As the people, jealous of their sovereignty, try to safeguard their legislative power from royal usurpations, the mixed regime tends to dissolve in the other direction. This happens as it moves toward republican government through various stages of limited or constitutional monarchy in which the sovereignty of the king becomes more and more attenuated.

When the king's prerogative includes the power of calling parliament into session, nothing short of revolution may resolve the issue; for, as Locke observes, "between an executive power in being, with such a prerogative, and a legislative that depends upon his will for their convening, there can be no judge on earth."

IN THE DISCUSSION of monarchy, as in the discussion of democracy or other forms of government, the fundamental terms and issues do not have the same meaning in the various epochs of western thought. The continuity of discussion in the tradition of the great books must be qualified, especially in the field of political theory, by reference to the differing historic institutions with which their authors are acquainted and concerned. Ancient and modern controversies over the merits of monarchy in relation to other forms of government seem to be comparing institutions of government as different as the ancient and modern forms of the democratic constitution.

In the ancient world, the choice between purely royal and purely political government underlies the meaning and evaluation of monarchy. In the modern world, with its heritage from the feudal institutions of the Middle Ages, either the mixed regime or constitutional monarchy is thought to offer a third alternative. The praise of monarchy may therefore be the corollary of a justification of absolute government or the absolute state, as with Hobbes and Hegel; it may be accompanied by an attack on absolute or despotic power, as with Locke and Montesquieu; or in defense of purely republican principles, monarchy may be attacked, as by Rousseau and the Federalists, without differentiation between its absolute and limited forms.

This does not mean that there is no continuity between ancient and modern discussion. It seems to exist with respect to both elements in the idea of monarchy—the unification of government through its having one head, and the rightness of absolute power. On the point of unity, Plato's argument that monarchy is the most efficient of the several forms of government which are otherwise equally just, seems to be paralleled by modern arguments for a unified executive in the constitution of a republic. It is also reflected in the reasoning of Montesquieu and Rousseau concerning the greater competence of monarchies to govern extensive territories. On the point of absolute power, there is some continuity between ancient and modern discussions of government by men versus government by law. But here there seems to be greater similarity between ancient and modern arguments against giving sovereignty to an individual human being than there is between the modern defense of monarchy and ancient speculations concerning royal government.

Taking different shape in Hobbes and Hegel, the argument for the *necessity* of absolute government seems to be peculiarly modern. It is not simply the point made by the ancients, that under certain circumstances it may be right for the man of superior wisdom to govern his inferiors in an absolute manner, as a father governs children, or a god men. The point is rather that the very nature of government and the

state requires a unified repository of absolute power. Hobbes does not ask whether the monarch in whose hands such power is placed deserves this by reason of personal superiority to his subjects. Hegel explicitly repudiates the relevance of any consideration of the monarch's particular character. Neither Hobbes nor Hegel argues for the divine right of kings, or their divine appointment; though Hegel does insist that the constitution itself, which establishes the supremacy of the crown, is not something made by man, but "divine and constant, and exalted above the sphere of things that are made."

That kings have absolute power by divine right is another peculiarly modern argument for absolute monarchy. "Not all the water from the rough rude sea," says Shakespeare's Richard II, "can wash the balm off from an anointed king. The breath of worldly men cannot depose the deputy elected by the Lord." According to the theory of divine right, the king is God's vicar, not, as Aquinas thinks, the vicegerent of the people. The theory of the divine right of kings does not seem to be a mediaeval doctrine. It appears later in such tracts as those by Barclay and Filmer, which Locke undertakes to answer.

The controversy involves its adversaries in dispute over the interpretation of Holy Writ. The anointing of Christian kings is supposed to draw its significance from the establishment of this practice among the ancient Hebrews. But the story of the origin of the Hebrew kingship can be given an opposite interpretation.

The people of Israel, after the leadership of Moses and Aaron, first submitted their affairs to the government of judges, and "there was no king in Israel, but every one did that which seemed right to himself." Later they went to Samuel, their judge, saying: "Make us a king to judge us like all the nations." This displeased Samuel. Samuel prayed unto the Lord, and the Lord said unto Samuel: "Hearken to the voice of the people in all that they say unto thee; for they have not rejected thee, but they have rejected me, that I should not reign over them." The Lord then describes the tribulations the people will suffer at the hands of an earthly ruler with absolute power, a punishment they deserve for wanting to be ruled by a king, instead of by God and God's law, administered for them by judges.

THE GREAT POEMS and histories of ancient Greece and Rome would seem to indicate that the divinity of kings is not a modern notion. The deification of emperors and kings certainly appears to be a common practice. But the assumption of divinity by kings is not supposed to signify divine appointment, or election by the gods; nor do the rulers of the ancient world justify their absolute power as a god-given right.

Furthermore, in the political theory of Plato and Aristotle, the analogy between royal rule and divine government works in the opposite direction. According to their view, the right to absolute government depends upon a radical inequality between ruler and ruled. If a god were to rule men on earth, as in the myth retold in Plato's *Statesman*, he would govern them absolutely, deciding everything by his wisdom and without recourse to written laws or established customs. If there were a god-like man, or if a true philosopher were to become king, he too would deserve to be an absolute monarch. It would be unjust, says Aristotle, to treat the god-like man merely as a citizen, and so to treat him as no more than "the equal of those who are so far inferior to him in virtue and in political capacity." It would also seem to be unjust for a man who does not have great superiority over his fellow men to rule them like a king, instead of being merely a citizen entitled to hold public office for a time.

Aristotle frequently refers to royal government as the divine sort of government, but he does not justify its existence except when one man stands to others as a god to men. Though some of the historic kingships which Aristotle classifies are absolute monarchies, none is royal government of the divine sort. That seems to remain for Aristotle, as for Plato, a purely hypothetical construction.

Actual royal government has a patriarchal rather than a divine origin. It is the kind of government which is appropriate to the village community rather than to the city-state. The kingly form of government prevails in the village because it is an outgrowth of the family. That is why, says Aristotle, "the Hellenic states were originally governed by kings; the Hellenes

were under royal rule before they came together, as the barbarians still are."

In thinking that absolute or despotic government befits the servile Asiatics, but not the free men of the Greek city-states, Aristotle takes a position which has a certain counterpart in the views of Montesquieu and Mill. These modern opponents of absolute monarchy do not assert that constitutional government is unconditionally better than despotism. For certain peoples, under certain conditions, self-government may not be possible or advantageous. "A rude people," Mill writes, "though in some degree alive to the benefits of civilized society, may be unable to practice the forbearance which it demands: their passions may be too violent, or their personal pride too exacting, to forego private conflict, and leave to the laws the avenging of their real or supposed wrongs. In such a case, a civilized government, to be really advantageous to them, will require to be in a considerable degree despotic; to be one over which they do not themselves exercise control, and which imposes a great amount of forcible restraint upon their actions." Montesquieu seems further to suppose that different races—largely as a result of the climate in which they live—are by nature inclined toward freedom or servitude. The Asiatics are for him a people whose spirit perpetually dooms them to live under despotism.

In contrast, Mill's conditional justification of absolute government demands that despotism serve only a temporary purpose. It must seek not merely to keep order, but by gradual steps to prepare the people it rules for self-government. "Leading-strings are only admissible," he says, "as a means of gradually training the people to walk alone." When they have reached that stage of development where they are able to govern themselves, the despotic ruler must either abdicate or be overthrown.

There is a deeper contrast between Mill on the one hand, and Aristotle and Plato on the other, one which goes to the very heart of the issue concerning royal and political government. Both Aristotle and Plato seem to be saying that if the superior or god-like man existed, then royal government would be better than the best republic, even for the civilized Greeks. In calling royal rule the divine form of government, they imply that it is the ideal, even if it can never be realized. This Mill most emphatically denies.

The notion that "if a good despot could be ensured, despotic monarchy would be the best form of government, I look upon," he writes, "as a radical and most pernicious conception of what good government is." The point at issue is not whether the good despot—the god-like ruler or philosopher king—can be found. Suppose him to exist. The point then to be made is that the people ruled by "one man of superhuman mental activity" would of necessity have to be entirely passive. "Their passivity is implied in the very idea of absolute power. . . . What sort of human beings," Mill asks, "can be formed under such a regimen?" Men must actually engage in self-government in order to pass from political infancy to maturity. Whenever it is possible, representative or constitutional government is therefore better than absolute monarchy.

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To find the passages cited, use the numbers in heavy type, which are the volume and page numbers of the passages referred to. For example, in **4** HOMER: *Iliad*, BK II [265–283] **12d**, the number **4** is the number of the volume in the set; the number **12d** indicates that the passage is in section d of page 12.

PAGE SECTIONS: When the text is printed in one column, the letters **a** and **b** refer to the upper and lower halves of the page. For example, in **53** JAMES: *Psychology*, **116a-119b**, the passage begins in the upper half of page 116 and ends in the lower half of page 119. When the text is printed in two columns, the letters **a** and **b** refer to the upper and lower halves of the left-hand side of the page, the letters **c** and **d** to the upper and lower halves of the right-hand side of the page. For example, in **7** PLATO: *Symposium*, **163b-164c**, the passage begins in the lower half of the left-hand side of page 163 and ends in the upper half of the right-hand side of page 164.

AUTHOR'S DIVISIONS: One or more of the main divisions of a work (such as PART, BK, CH, SECT) are sometimes included in the reference; line numbers, in brackets, are given in certain cases; *e.g.*, *Iliad*, BK II [265–283] **12d**.

BIBLE REFERENCES: The references are to book, chapter, and verse. When the King James and Douay versions differ in title of books or in the numbering of chapters or verses, the King James version is cited first and the Douay, indicated by a (*D*), follows; *e.g.*, OLD TESTAMENT: *Nehemiah*, 7:45—(*D*) *II Esdras*, 7:46.

SYMBOLS: The abbreviation "esp" calls the reader's attention to one or more especially relevant parts of a whole reference; "passim" signifies that the topic is discussed intermittently rather than continuously in the work or passage cited.

For additional information concerning the style of the references, see the Explanation of Reference Style; for general guidance in the use of *The Great Ideas*, consult the Preface.

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7 PLATO: *Republic*, BK IV, **356a** / *Statesman*, **598b-604b**
9 ARISTOTLE: *Politics*, BK III, CH 7 [1279^{a}33–34] **476d**; CH 14 **483a-484a**; BK IV, CH 10 [1295^{a}3–18] **495a** / *Rhetoric*, BK I, CH 8 [1365^{b}38–1366^{a}3] esp [1366^{a}1–3] **608b**
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1*a*. The distinction between royal and political government

1*a*(1) Absolute or personal rule contrasted with constitutional government or rule by law

5 AESCHYLUS: *Prometheus Bound* [322–326] **43c**
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1*a*(2) The theory of absolute government: the nature of absolute power; the rights and duties of the monarch; the radical inequality between ruler and ruled in absolute government

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7 PLATO: *Statesman*, 598b-604b / *Laws*, BK IV, 679c-680d
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1*b*. Modifications of absolute monarchy: other embodiments of the monarchical principle

1*b*(1) The combination of monarchy with other forms of government: the mixed regime

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1b(2) Constitutional or limited monarchy

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1b(3) The monarchical principle in the executive branch of republican government

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43 MILL: *Representative Government*, 350d-351a; 356b-357a; 409d-413d passim

1c. The principle of succession in monarchies

OLD TESTAMENT: *Judges*, 8:22; 9 / *I Kings*, 1—(*D*) *III Kings*, 1 / *I Chronicles*, 11:1-3; 23:1—(*D*) *I Paralipomenon*, 11:1-3; 23:1
APOCRYPHA: *I Maccabees*, 9:28-30—(*D*) OT, *I Machabees*, 9:28-30
6 HERODOTUS: *History*, BK V, 167b-168a; BK VI, 194d-195b; 196d-199a; BK VII, 214b-d; 252c-253a
9 ARISTOTLE: *Politics*, BK III, CH 15 [1286b22-28] 485a
14 PLUTARCH: *Numa Pompilius*, 49b-52c / *Pyrrhus*, 318a / *Lysander*, 363d-366a / *Agesilaus*, 480b,d-482a / *Agesilaus-Pompey*, 538b,d-539a
15 TACITUS: *Annals*, BK VI, 98b-d / *Histories*, BK I, 193c-194a
23 MACHIAVELLI: *Prince*, CH XIX, 29c-d
23 HOBBES: *Leviathan*, PART II, 106b-d; 107b; 108a-109a
26 SHAKESPEARE: *1st Henry VI*, ACT II, SC V [33-129] 13b-14a / *2nd Henry VI*, ACT II, SC II 43c-44c / *3rd Henry VI*, ACT I, SC I [50-188] 70b-71d / *Henry V*, ACT I, SC II 534a-537b
33 PASCAL: *Pensées*, 320 229b-230a
35 LOCKE: *Civil Government*, CH X, SECT 132 55a-b
38 MONTESQUIEU: *Spirit of Laws*, BK V, 28b-d; BK XXVI, 222b-d
38 ROUSSEAU: *Social Contract*, BK III, 413d-414a
39 SMITH: *Wealth of Nations*, BK III, 165c-166a
40 GIBBON: *Decline and Fall*, 30b-c; 61b-c 68b,d-69b; 161c; 430b-c
41 GIBBON: *Decline and Fall*, 194a-b; 204b-205a; 212d-213c; 223c-d; 445b; 508c-d
44 BOSWELL: *Johnson*, 347d-348c
46 HEGEL: *Philosophy of Right*, PART III, par 280-281 94d-95d; par 286 96c-97a / *Philosophy of History*, PART IV, 325a-b; 344c; 355c-d

2. The theory of royalty

2a. The divinity of kings

APOCRYPHA: *Judith*, 6:2—(*D*) OT, *Judith*, 6:2 / *Wisdom of Solomon*, 14:16-21—(*D*) OT, *Book of Wisdom*, 14:16-21
4 HOMER: *Iliad*, BK I [254-287] 5d-6a
5 AESCHYLUS: *Persians* [623-680] 21c-22a
13 VIRGIL: *Eclogues*, I [6-10] 3a; IV [15-17] 14b; V [20-80] 16b-18b; IX [46-49] 30b / *Georgics*, I [24-42] 37b-38a / *Aeneid*, BK I [286-296] 110b-111a; BK VI [791-805] 232a-b; BK VIII [126-142] 262b-263a
14 PLUTARCH: *Romulus*, 28a-29c / *Numa Pompilius*, 50b-52c / *Alexander*, 553b-554b
15 TACITUS: *Annals*, BK I, 4c-d; BK IV, 73b-d; 80c-d
23 HOBBES: *Leviathan*, PART I, 82b-c
26 SHAKESPEARE: *Richard II*, ACT IV, SC I [162-242] 343b-344a
27 SHAKESPEARE: *Hamlet*, ACT IV, SC V [123-125] 60d-61a / *Pericles*, ACT I, SC I [103-104] 422d
40 GIBBON: *Decline and Fall*, 28b-d; 154d esp 712c [n 100]

2b. The analogy between divine government and rule by the best man: the philosopher king

7 PLATO: *Republic*, BK II-VII 310c-401d esp BK V-VI, 368c-383a / *Statesman*, 586c-590a; 598b-604b / *Laws*, BK IV, 679c-681d / *Seventh Letter*, 801b; 806b-c
9 ARISTOTLE: *Politics*, BK I, CH 12 [1259b10-17] 454a; BK III, CH 13 [1284a3-18] 482a-b; [1284b 25-34] 482d-483a; CH 15 484a-485b; CH 17 [1288a7-34] 486d-487a; BK VII, CH 14 [1332b 16-26] 537b-c
14 PLUTARCH: *Lycurgus*, 47a-48c / *Numa Pompilius*, 50b-52c; 59c-60b / *Themistocles*, 99b-c / *Phocion*, 605b-d / *Dion*, 784d-785a
19 AQUINAS: *Summa Theologica*, PART I, Q 103, A 3 530a-c
23 HOBBES: *Leviathan*, PART II, 164c
30 BACON: *Advancement of Learning*, 20d-21a; 74d-75a

(2. The theory of royalty. 2b. The analogy between divine government and rule by the best man: the philosopher king.)

31 SPINOZA: *Ethics*, PART II, PROP 3, SCHOL 374b-c
35 LOCKE: *Civil Government*, CH XIV, SECT 165-166 63c-64a
36 SWIFT: *Gulliver*, PART I, 28b-29a
40 GIBBON: *Decline and Fall*, 338d-339a
43 FEDERALIST: NUMBER 49, 160a

2c. The divine institution of kings: the theory of the divine right of kings

OLD TESTAMENT: *Deuteronomy*, 17:14-20 esp 17:15 / *I Samuel*, 2:10; 9:15-10:13; 10:18-19,24; 12:12-14,17-19; 15:1,17; 16:1-13; 24:4-10; 26:7-12—(*D*) *I Kings*, 2:10; 9:15-10:13; 10:18-19,24; 12:12-14,17-19; 15:1,17; 16:1-13; 24:5-11; 26:7-12 / *II Samuel*, 1:13-14; 5:12; 7:8,11-16; 12:7; 23:1—(*D*) *II Kings*, 1:13-14; 5:12; 7:8,11-16; 12:7; 23:1 / *I Kings*, 16:2—(*D*) *III Kings*, 16:2 / *II Kings*, 9:1-7,12—(*D*) *IV Kings*, 9:1-7,12 / *I Chronicles*, 28:1-10—(*D*) *I Paralipomenon*, 28:1-10 / *II Chronicles*, 9:8—(*D*) *II Paralipomenon*, 9:8 / *Nehemiah*, 13:26—(*D*) *II Esdras*, 13:26 / *Isaiah*, 45:1-6—(*D*) *Isaias*, 45:1-6 / *Daniel*, 4:17,25,32—(*D*) *Daniel*, 4:14,22,29
APOCRYPHA: *Wisdom of Solomon*, 9:7—(*D*) OT, *Book of Wisdom*, 9:7 / *Ecclesiasticus*, 17:17; 47:11—(*D*) OT, *Ecclesiasticus*, 17:14-15; 47:13
NEW TESTAMENT: *Acts*, 13:21-22
14 PLUTARCH: *Numa Pompilius*, 50b-51c
23 HOBBES: *Leviathan*, PART II, 111b-112b; 123a-b; PART III, 225c-d
26 SHAKESPEARE: *Richard II*, ACT I, SC II [37-43] 323a; ACT III, SC II [54-62] 336a; SC III [72-100] 338c-d; ACT IV, SC I [102-242] 342c-344a
35 LOCKE: *Civil Government*, CH I, SECT 1 25a-c; CH VIII, SECT 112 51a-b; CH XIX, SECT 231-239 78c-81b
36 SWIFT: *Gulliver*, PART I, 29a; PART IV, 182b
37 FIELDING: *Tom Jones*, 268c-269a
38 ROUSSEAU: *Inequality*, 358d-359a
40 GIBBON: *Decline and Fall*, 33b-c; 292d-293b esp 759d [n 22]
41 GIBBON: *Decline and Fall*, 204d-205a; 209c
46 HEGEL: *Philosophy of Right*, PART III, par 279, 93d
51 TOLSTOY: *War and Peace*, EPILOGUE II, 680b-c

2d. The myth of the royal personage: the attributes of royalty and the burdens of monarchy

OLD TESTAMENT: *Judges*, 9:7-20 / *Job*, 34:18-20 / *Proverbs*, 14:28; 20:2; 21:1; 25:3
APOCRYPHA: *Wisdom of Solomon*, 7:1-6—(*D*) OT, *Book of Wisdom*, 7:1-6 / *Ecclesiasticus*, 10:10-18; 11:5; 40:1-4—(*D*) OT, *Ecclesiasticus*, 10:12-22; 11:5; 40:1-4
4 HOMER: *Iliad*, BK III [161-224] 20c-21b; BK IX [96-114] 58a-b
5 SOPHOCLES: *Oedipus the King* [572-602] 104c-d
5 EURIPIDES: *Medea* [115-130] 213b / *Iphigenia at Aulis* [12-33] 425b; [442-453] 428d-429a
6 HERODOTUS: *History*, BK I, 7b-8a; BK II, 85d-86b; BK III, 93c; BK VIII, 281d-282a
7 PLATO: *Laws*, BK III, 669b-674d
9 ARISTOTLE: *Ethics*, BK VIII, CH 7 [1158^{b}29-1159^{a}5] 410d-411a; CH 11 [1161^{a}11-23] 413b-c / *Politics*, BK III, CH 13 [1284^{a}3-18] 482a-b; [1284^{b}25-34] 482d-483a; BK V, CH 11 [1314^{a}37-1315^{b}11] 517b-518c
12 LUCRETIUS: *Nature of Things*, BK V [1136-1141] 76a
12 AURELIUS: *Meditations*, BK I 253a-256d; BK VII, SECT 36 282b
14 PLUTARCH: *Romulus*, 27c-28d / *Numa Pompilius*, 51b-c / *Pericles*, 121c-d / *Alexander* 540b,d-576d passim / *Cleomenes*, 661b-d / *Tiberius Gracchus*, 678b-d / *Demosthenes*, 697c / *Demetrius*, 727a-b; 732a-c; 742c-743b / *Aratus*, 835b-c / *Artaxerxes*, 847b-d
15 TACITUS: *Annals*, BK III, 52c; 58a-b; BK IV, 73b-74a; BK XI, 104a-c / *Histories*, BK I, 193a-c; BK II, 224c-d
23 MACHIAVELLI: *Prince*, 1a-b
24 RABELAIS: *Gargantua and Pantagruel*, BK I, 35a-36a; 58a-59d; BK III, 131b,d-133b
25 MONTAIGNE: *Essays*, 126b-131a; 311c; 327d-329d; 436c-439c; 443d-446a; 451d-452a
26 SHAKESPEARE: *3rd Henry VI*, ACT I, SC II [29-34] 73b; ACT II, SC V [1-54] 81d-82a; ACT III, SC I [61-65] 85b / *Richard II* 320a-351d esp ACT III, SC II [27-90] 335d-336b, [144-177] 337a-b, SC III [61-209] 338c-340a, ACT IV, SC I [162-334] 343b-345a / *King John*, ACT IV, SC II [208-214] 396d / *Merchant of Venice*, ACT IV, SC I [184-197] 427c / *1st Henry IV*, ACT III, SC II [29-91] 453b-d / *2nd Henry IV*, ACT III, SC I [1-31] 482d-483a; ACT IV, SC V [19-47] 494c-d; ACT V, SC II [122-145] 499b / *Henry V*, ACT IV, SC I [104-301] 552d-554c
27 SHAKESPEARE: *Hamlet*, ACT I, SC III [10-28] 34c; ACT III, SC III [1-23] 53b-c / *King Lear* 244a-283a,c / *Macbeth*, ACT I, SC VII [16-25] 289c / *Antony and Cleopatra* 311a-350d
28 HARVEY: *Motion of the Heart*, 267a-b
30 BACON: *Advancement of Learning*, 1a-2c; 20d-25c / *New Atlantis*, 205d-207b
32 MILTON: *Paradise Lost*, BK II [430-456] 120b-121a
33 PASCAL: *Pensées*, 139 196b-199a; 308 228b
35 LOCKE: *Civil Government*, CH XVIII, SECT 202 71d-72a passim; SECT 205-206 72a-c; CH XIX, SECT 224 76d-77a
38 MONTESQUIEU: *Spirit of Laws*, BK II, 8d-9a,c; BK III, 12a-13c; BK IV, 15a-b; BK V, 26c-29a; BK VI, 39d; 42a-b; 43c-d; BK XII, 93d-94a; 94d-95b

38 ROUSSEAU: *Inequality*, 358d-359c / *Social Contract*, BK III, 412d-413a; 414c-d
39 SMITH: *Wealth of Nations*, BK V, 356b,d
40 GIBBON: *Decline and Fall*, 28b; 154b-155b; 156b-157d; 329c; 547a-b; 572a-c
41 GIBBON: *Decline and Fall*, 39b-40a; 194a-d; 297c d; 307b-c; 317b-321b
43 FEDERALIST: NUMBER 67, 203b-c; NUMBER 69, 207c; 210a; NUMBER 70, 213b
43 MILL: *Liberty*, 275b-c / *Representative Government*, 341d-342b; 363b-d
44 BOSWELL: *Johnson*, 125c; 154c; 155a; 155d; 216b; 251b-d; 333b-c; 335c; 344a-b
46 HEGEL: *Philosophy of Right*, PART III, par 281-282 95b-96a; ADDITIONS, 173 146d
47 GOETHE: *Faust*, PART I [2211-2244] 52b-53b; PART II [4761-4875] 118b-121a; [10,242-259] 249b-250a; [10,455-500] 254b-255b
48 MELVILLE: *Moby Dick*, 81a-82b; 93b-94a; 107a-109b; 395a-b
51 TOLSTOY: *War and Peace*, BK I, 1d-2b; 49b; BK II, 87b-d; BK III, 135c-137c; 141b-142d; 147c-150a; 157a-161b; BK V, 230b-234a; BK VI, 257c-259a passim; BK VIII, 308d-309a; BK IX, 342a-346a; 348c-349c; 382a-388a,c; BK X, 405b-406c; 444a 450a; 456a-459d; 465c-468a,c; BK XI, 497c-499c; 518c-d; BK XII, 536a-537b; BK XIII, 573b-c; 574b

3. The use and abuse of monarchical power

3*a*. The good king and the benevolent despot in the service of their subjects: the education of the prince

OLD TESTAMENT: *Genesis*, 41:33,39-40 / *Exodus*, 18:21-26 / *Deuteronomy*, 1:13; 17:14-20 / *Judges*, 9:8-15 / *I Samuel*, 15:10-35—(*D*) *I Kings*, 15:10-35 / *II Samuel*, 23:3—(*D*) *II Kings*, 23:3 / *I Kings*, 4:29-34; 11:26-40; 14:1-20—(*D*) *III Kings*, 4:29-34; 11:26-40; 14:1-20 / *II Chronicles*, 1:7-12—(*D*) *II Paralipomenon*, 1:7-12 / *Psalms*, 2 esp 2:10-12; 72—(*D*) *Psalms*, 2 esp 2:10-13; 71 / *Proverbs*, 8:15-16; 14:28,35; 16:10-15; 17:7; 20:26,28; 25:2-5; 28:2,15-16; 29:2,4,12,14; 31:4-5 / *Ecclesiastes*, 10:4-7,16-17 / *Jeremiah*, 23:3-6—(*D*) *Jeremias*, 23:3-6 / *Ezekiel*, 45:9—(*D*) *Ezechiel*, 45:9
APOCRYPHA: *Wisdom of Solomon*, 1:1; 6; 9—(*D*) OT, *Book of Wisdom*, 1:1; 6; 9 / *Ecclesiasticus*, 10:1-4,14; 41:17-18—(*D*) OT, *Ecclesiasticus*, 10:1-4,17; 41:21-22 / *I Maccabees*, 14—(*D*) OT, *I Machabees*, 14
4 HOMER: *Iliad*, BK IX [1-172] 57a-58d
5 AESCHYLUS: *Suppliant Maidens* [359-422] 5b-6b / *Persians* [647-680] 21d-22a; [759-786] 23b-c
5 SOPHOCLES: *Oedipus the King* [1-77] 99a-d / *Antigone* [162-210] 132c-d; [658-745] 136d-137c
5 EURIPIDES: *Suppliants* [339-358] 261b-c / *Iphigenia at Aulis* [334-375] 427d-428b
6 HERODOTUS: *History*, BK III, 108b-c
7 PLATO: *Republic*, BK I, 303a-304c; BK II-IV, 316a-356a; BK VI-VII, 383c-401d / *Statesman*, 598b-608d / *Laws*, BK IV, 679c-680d / *Seventh Letter*, 801b; 806b-c; 814b-c
9 ARISTOTLE: *Ethics*, BK VIII, CH 10 [1160^{a}36-^{b}9] 412c-d; CH 11 [1161^{a}11-23] 413b-c / *Politics*, BK I, CH 13 454a-455a,c passim; BK III, CH 14 [1285^{b}3-19] 483d-484a; CH 15 484b-485b passim, esp [1286^{b}8-12] 484d-485a; CH 18 487a,c; BK V, CH 10 [1310^{b}33-1311^{a}8] 513b; CH 11 [1314^{a}37-1315^{b}11] 517b-518c
12 AURELIUS: *Meditations*, BK I 253a-256d
14 PLUTARCH: *Lycurgus* 32a-48d esp 47a-48c / *Solon* 64b,d-77a,c esp 68d-70d / *Poplicola*, 80d-81c / *Poplicola-Solon*, 86d-87a / *Pericles*, 129a-141a,c esp 129c-130a / *Agesilaus*, 480b,d-481a / *Alexander*, 542d-544a / *Phocion*, 605b-d / *Demetrius*, 742c-743b / *Dion*, 782c-788b
15 TACITUS: *Annals*, BK XIII, 125d-126a / *Histories*, BK I, 198b-c; BK II, 215c-d; BK IV, 290a-d
20 AQUINAS: *Summa Theologica*, PART I-II, Q 105, A 1, REP 2 307d-309d
21 DANTE: *Divine Comedy*, PURGATORY, VII [61-136] 63a-64a; X [70-96] 68a-b; PARADISE, XIII [88-111] 126b-c
23 HOBBES: *Leviathan*, INTRO, 47b-d; PART II, 143d; 153a-159c; 164a,c
24 RABELAIS: *Gargantua and Pantagruel*, BK I, 26d-30c
25 MONTAIGNE: *Essays*, 131b 132a; 314c-316a; 386b-388c; 436c-439c
26 SHAKESPEARE: *1st Henry IV* 434a 466d esp ACT I, SC II [218-240] 437c-d, ACT III, SC II [93-161] 453d-454c / *2nd Henry IV* 467a-502d esp ACT V, SC II [122-145] 499b / *Henry V*, ACT I, SC I 533a-d; ACT IV, SC I [104-321] 552d-554d
27 SHAKESPEARE: *King Lear*, ACT III, SC IV [27-36] 264c / *Macbeth*, ACT IV, SC III [1-139] 303b-304d
29 CERVANTES: *Don Quixote*, PART II, 340b-343a; 345a-348c; 352b-356d; 360d-364a; 366d-369b
30 BACON: *Advancement of Learning*, 1b-2c; 20d-25c; 74d-75a; 94b-c / *New Atlantis*, 205d 207b
35 LOCKE: *Civil Government*, CH VII, SECT 94 46a-c; CH VIII, SECT 105-112 48c-51b passim; CH XIV 62b-64c; CH XVIII, SECT 200 71a-c; SECT 202 71d-72a
36 SWIFT: *Gulliver*, PART III, 112a-113b
37 FIELDING: *Tom Jones*, 268c-269a
38 MONTESQUIEU: *Spirit of Laws*, BK IV, 14d; BK XII, 93c-95b
38 ROUSSEAU: *Inequality*, 357b-c / *Social Contract*, BK III, 412d-414d
40 GIBBON: *Decline and Fall*, 31b-32d; 50a-b; 85d-86a; 260a-b; 284a-c; 288b-289a; 338d-340c; 341d-342c; 343c-344a,c; 448c-449c; 577a-580d esp 577d-578a; 638a-646d passim

(3. *The use and abuse of monarchical power.* 3a. *The good king and the benevolent despot in the service of their subjects: the education of the prince.*)

41 GIBBON: *Decline and Fall*, 102b-104b; 176c-d; 504c-505c
43 MILL: *Representative Government*, 342a-344d; 351c-354b
46 HEGEL: *Philosophy of Right*, ADDITIONS, 171 146b-c / *Philosophy of History*, PART I, 212d-213a; 243b-c; PART IV, 361d-362a
51 TOLSTOY: *War and Peace*, BK I, 9c-10d

3b. The exploitation of absolute power for personal aggrandizement: the strategies of princes and tyrants

OLD TESTAMENT: *I Samuel*, 8:11-18—(*D*) *I Kings*, 8:11-18 / *II Samuel*, 11:6-12:13—(*D*) *II Kings*, 11:6-12:13 / *I Kings*, 12:1-15; 21—(*D*) *III Kings*, 12:1-15; 21 / *II Chronicles*, 10—(*D*) *II Paralipomenon*, 10 / *Isaiah*, 1:23; 3:14-15; 10:1-3; 14:4-6—(*D*) *Isaias*, 1:23; 3:14-15; 10:1-3; 14:4-6 / *Jeremiah*, 22:1-23:2—(*D*) *Jeremias*, 22:1-23:2 / *Ezekiel*, 22:27; 46:18—(*D*) *Ezechiel*, 22:27; 46:18 / *Daniel*, 3:1-12; 6:7-8 / *Micah*, 3:1-3; 7:3-4—(*D*) *Micheas*, 3:1-3; 7:3-4 / *Zephaniah*, 3:3—(*D*) *Sophonias*, 3:3
APOCRYPHA: *Judith*, 2:1-12—(*D*) OT, *Judith*, 2:1-6 / *Ecclesiasticus*, 8:2—(*D*) OT, *Ecclesiasticus*, 8:2-3 / *I Maccabees*, 1:41-64; 10:22-46—(*D*) OT, *I Machabees*, 1:43-67; 10:22-46
5 EURIPIDES: *Iphigenia at Aulis* [334-375] 427d-428b
6 HERODOTUS: *History*, BK I, 23b-24a; 35b-37a; BK III, 107c-d
7 PLATO: *Republic*, BK I, 301b-304c; BK II, 311b-313a / *Laws*, BK III, 672d-674d; BK IV, 681b-682c / *Seventh Letter*, 811b-813d
9 ARISTOTLE: *Ethics*, BK V, CH 6 [$1134^{a}30$-$^{b}8$] 382a-b; BK VIII, CH 10 [$1160^{a}36$-$^{b}11$] 412c-d; [$1160^{b}23$-33] 413a / *Politics*, BK IV, CH 10 [$1295^{a}18$-23] 495a-b; BK V, CH 10-11 512d-518c / *Rhetoric*, BK I, CH 8 [$1366^{a}3$-6] 608b
14 PLUTARCH: *Pyrrhus*, 319b-d / *Agesilaus*, 482a-484a; 489b-c; 495a-b / *Pompey*, 521a-b / *Demetrius*, 742c-743b
15 TACITUS: *Annals*, BK I, 1a-5a; BK III, 58d-59a / *Histories*, BK I, 195a; 197a-c
20 AQUINAS: *Summa Theologica*, PART I-II, Q 105, A 1, REP 2,5 307d-309d
21 DANTE: *Divine Comedy*, HELL, XXVII [55-136] 40a-41b; PURGATORY, VI [58-151] 61b-62c; XX [34-96] 83c-84a; PARADISE, XIX [115-148] 136b-c
23 MACHIAVELLI: *Prince* 1a-37d
23 HOBBES: *Leviathan*, PART I, 76d
25 MONTAIGNE: *Essays*, 51a-55d
26 SHAKESPEARE: *Ist Henry VI* 1a-32a,c / *2nd Henry VI* 33a-68d / *3rd Henry VI* 69a-104d esp ACT II, SC VI [1-30] 83b-c, ACT III, SC II [124-195] 87c-88a / *Richard III* 105a-148a,c / *Richard II* 320a-351d esp ACT III, SC IV [29-90] 340c-341a / *King John* 376a-405a,c / *Ist Henry IV*, ACT IV, SC III [52-105] 459d-460b / *2nd Henry IV*, ACT IV, SC V [178-225] 496b-d
27 SHAKESPEARE: *Macbeth* 284a-310d
35 LOCKE: *Civil Government*, CH VII, SECT 90-94 44d-46c passim; CH VIII, SECT 111 50d-51a; CH XI, SECT 138 57b-c; CH XIV, SECT 161-166 62d-64a; CH XVIII, SECT 199-202 71a-72a; SECT 210 73b-c
36 SWIFT: *Gulliver*, PART I, 37a-b
38 ROUSSEAU: *Inequality*, 357a-c; 359b-c / *Social Contract*, BK I, 391a; BK III, 412d-413a; 415d-416a
40 GIBBON: *Decline and Fall*, 25a-26d; 29b-c; 38a-c; 42b,d-43b; 60a-c; 70c-71b; 142c; 155a-b
41 GIBBON: *Decline and Fall*, 39b-40b; 113c-114a; 173b-174a
43 DECLARATION OF INDEPENDENCE: 1a-3b
43 FEDERALIST: NUMBER 4, 35b; NUMBER 22, 83c; NUMBER 75, 223c-d
43 MILL: *Representative Government*, 366a-c
46 HEGEL: *Philosophy of History*, PART III, 300c-302a
51 TOLSTOY: *War and Peace*, BK I, 9c-10d

4. Comparison of monarchy with other forms of government

6 HERODOTUS: *History*, BK III, 107c-108d
7 PLATO: *Republic*, BK IV, 356a; BK VIII 401d-416a esp 402a-d; BK IX, 416a-421a / *Statesman*, 598b-604b / *Laws*, BK III, 670d-676c
9 ARISTOTLE: *Ethics*, BK VIII, CH 10 412c-413b passim, esp [$1160^{a}31$-36] 412c / *Politics*, BK III, CH 7 476c-477a; CH 15 [$1286^{a}23$-$^{b}22$] 484c-485a; CH 17-18 486c-487a,c; BK IV, CH 2 [$1289^{a}26$-$^{b}4$] 488b-c; CH 4 [$1292^{a}4$-37] 491b-d passim; BK V, CH 10 [$1312^{a}40$-$^{b}9$] 514d-515a
20 AQUINAS: *Summa Theologica*, PART I-II, Q 95, A 4, ANS 229b-230c; Q 105, A 1, ANS 307d-309d
23 MACHIAVELLI: *Prince*, CH I, 3a
23 HOBBES: *Leviathan*, PART II, 104b-108b; 112b-c; 154b-c; PART III, 228b; PART IV, 273a-c
35 LOCKE: *Civil Government*, CH X, SECT 132 55a-b
38 MONTESQUIEU: *Spirit of Laws*, BK II-IV, 4a-16a; BK V, 25a-26d; BK V-VI, 30a-43d; BK VII, 47d-48a; BK IX 58b,d-61d; BK XII, 90b-c; BK XIII 96a-102a,c passim
38 ROUSSEAU: *Inequality*, 359a-b / *Social Contract*, BK III, 409a-410c; 412c-414d; 415d
42 KANT: *Science of Right*, 450a-d
43 FEDERALIST: NUMBER 9, 48b-d; NUMBER 17, 70a-d; NUMBER 22, 83b-d; NUMBER 39, 125b-d passim; NUMBER 69 207a-210c passim; NUMBER 70, 213b-c; NUMBER 84, 252b-253a
43 MILL: *Representative Government*, 338d-339a; 341d-355b passim, esp 346a-c; 363b-364d; 366a-367c

46 HEGEL: *Philosophy of Right*, PART III, par 273 90c-92a; par 279, 94b-d; ADDITIONS, 165 145a-b / *Philosophy of History*, INTRO, 174a-175c

4a. The patriarchical character of kingship: absolute rule in the family or tribe, and paternalism in the state

6 HERODOTUS: *History*, BK I, 35c-d
7 PLATO: *Statesman*, 581a-c / *Laws*, BK III, 664d-666c
9 ARISTOTLE: *Ethics*, BK V, CH 6 [1134^{b}8-17] 382b-c; CH 11 [1138^{b}5-14] 387a,c; BK VIII, CH 10 [1160^{b}23-32] 413a; CH 11 [1161^{a}11-23] 413b-c; BK X, CH 9 [1180^{b}3-7] 435b / *Politics*, BK I, CH 1 [1252^{a}6-16] 445a-b; CH 2 [1252^{b}16-24] 445d-446a; CH 7 [1255^{b}16-20] 449b; CH 12 [1259^{a}37]-CH 13 [1260^{a}14] 453d-454c; BK III, CH 6 [1278^{b}30-1279^{a}2] 476a-b; CH 14 [1285^{b}29-33] 484a; BK V, CH 10 [1310^{b}33-1311^{a}8] 513b
18 AUGUSTINE: *City of God*, BK XIX, CH 12, 517c-d; CH 13-17 519a-523a
23 HOBBES: *Leviathan*, PART I, 68a; PART II, 109b-111d; 121a; 155b
26 SHAKESPEARE: *Taming of the Shrew*, ACT V, SC II [136-179] 227d-228a,c
30 BACON: *Advancement of Learning*, 34a / *New Atlantis*, 207b-209d
35 LOCKE: *Civil Government*, CH I, SECT 1-2 25a-c; CH VI 36a-42a; CH VII, SECT 86 43d-44a; CH VIII, SECT 105-107 48c-49d; SECT 110-112 50c-51b; CH XIV, SECT 162 63a; CH XV 64c-65d
36 STERNE: *Tristram Shandy*, 216b
38 MONTESQUIEU: *Spirit of Laws*, BK I, 3b; BK XVI, 118a-c; BK XIX, 140a-c
38 ROUSSEAU: *Inequality*, 357a-b; 359b-c / *Political Economy*, 367a-368c / *Social Contract*, BK I, 388a; BK III, 414c
40 GIBBON: *Decline and Fall*, 412c-413b
46 HEGEL: *Philosophy of Right*, PART III, par 273, 91c-d; ADDITIONS, 111 134d-135a / *Philosophy of History*, INTRO, 172b-d; PART I, 211b-c; 212c-d
53 JAMES: *Psychology*, 731b
54 FREUD: *Group Psychology*, 686c-687d; 689a

4b. The line which divides monarchy from despotism and tyranny

6 HERODOTUS: *History*, BK III, 107c-d
6 THUCYDIDES: *Peloponnesian War*, BK I, 352c-d
7 PLATO: *Republic*, BK IX, 418d-419a / *Statesman*, 590c-d; 598b-604b / *Laws*, BK III, 672d-674d
9 ARISTOTLE: *Ethics*, BK V, CH 6 [1134^{a}30-^{b}8] 382a-b; BK VIII, CH 10 [1160^{a}36-^{b}11] 412c-d; [1160^{b}23-32] 413a / *Politics*, BK III, CH 7 476c-477a esp [1279^{b}4-10] 476d-477a; CH 8 [1279^{b}16-17] 477a; CH 14 [1285^{a}17-^{b}3] 483b-d; BK IV, CH 2 [1289^{a}26-^{b}4] 488b-c; CH 4 [1292^{a}15-19] 491c; CH 10 495a-b; BK V, CH 10 [1310^{a}39-1311^{a}8] 512d-513b; [1312^{a}40-^{b}9] 514d-515a; [1312^{b}37-1313^{a}16] 515c-d; CH 11 515d-518c passim, esp [1314^{a}37-1315^{b}11] 517b-518c / *Rhetoric*, BK I, CH 8 [1366^{a}1-3] 608b
14 PLUTARCH: *Romulus-Theseus*, 30c-d / *Lycurgus*, 34d / *Demetrius*, 742c-743b / *Dion*, 783b-d; 784d-785a
15 TACITUS: *Annals*, BK XII, 115d / *Histories*, BK I, 193c-194a
20 AQUINAS: *Summa Theologica*, PART I-II, Q 95, A 4, ANS 229b-230c; Q 105, A 1, REP 2,5 307d-309d
23 HOBBES: *Leviathan*, PART II, 105a; 150c-151a; PART IV, 273a-c; CONCLUSION, 280d
30 BACON: *Advancement of Learning*, 27a
33 PASCAL: *Pensées*, 15 174a
35 LOCKE: *Civil Government*, CH II, SECT 13 28a-b; CH VII, SECT 90-94 44d-46c passim; CH VIII, SECT 107 49b-d; CH XIV 62b-64c passim; CH XVIII, SECT 199-202 71a-72a; CH XIX 73d-81d
38 MONTESQUIEU: *Spirit of Laws*, BK II, 4a; 7c-9a,c; BK III, 12a-13c; BK V, 25d-29a; 30a-31b; BK VI, 33a-34d; 36a-37b; 37d-38c; BK VII, 46a; 47d; BK VIII, 53a-d; BK IX, 60a-61a; BK XI, 75a-b; BK XXV, 211c-d
38 ROUSSEAU: *Inequality*, 357b-c / *Social Contract*, BK III, 412d-413a; 419b-c
40 GIBBON: *Decline and Fall*, 24b; 32c-33a
44 BOSWELL: *Johnson*, 195c-d
46 HEGEL: *Philosophy of Right*, PART III, par 286 96c-97a; par 302, 101b / *Philosophy of History*, PART IV, 342b-d

4c. The differences between kingdoms and republics with respect to unity, wealth, and extent of territory

25 MONTAIGNE: *Essays*, 148a
38 MONTESQUIEU: *Spirit of Laws*, BK II, 4a; BK V, 25c-d; 31b-33a,c; BK VII, 44d-46a; 50a-b; BK VIII, 56b-57c; BK IX, 58b,d-61a passim; BK XI, 75b-76a; BK XIII, 99d; BK XV, 112d-113a; BK XVIII, 125a-c; BK XX, 147a-d
38 ROUSSEAU: *Social Contract*, BK II, 400a; BK III, 412c-414d; 415b-417c
43 FEDERALIST: NUMBER 9, 47d-48d; NUMBER 14, 60d-61b; NUMBER 39, 125b-d; NUMBER 48, 157b-c; NUMBER 75, 223c-d
43 MILL: *Representative Government*, 330a-c; 346a-c; 350b-355b passim; 363b-364d
44 BOSWELL: *Johnson*, 260b

4d. The defense of monarchy or royal rule

4d(1) The necessity for absolute government

4 HOMER: *Iliad*, BK II [198-206] 12a
5 EURIPIDES: *Suppliants* [399-456] 261d-262b
6 HERODOTUS: *History*, BK III, 108b-c
9 ARISTOTLE: *Politics*, BK III, CH 13 [1283^{b}17-23] 481d; [1284^{a}3-17] 482a-b
15 TACITUS: *Histories*, BK I, 193c-d
23 HOBBES: *Leviathan*, PART I-II, 97c-107c; PART II, 112b-d; 113c-115a; 130d-132b; 148c-153b; CONCLUSION, 280c-281a

(*4d. The defense of monarchy or royal rule.* 4*d* (1) *The necessity for absolute government.*)

33 PASCAL: *Pensées*, 330 231b-232a
35 LOCKE: *Civil Government*, CH VII, SECT 90–94 44d-46c passim
40 GIBBON: *Decline and Fall*, 68b,d-69b
42 KANT: *Science of Right*, 439c-440a
43 FEDERALIST: NUMBER 9, 47b-c; NUMBER 55, 174c-d
52 DOSTOEVSKY: *Brothers Karamazov*, BK V, 130d-131b

4*d*(2) Monarchy as the best or most efficient of the several good forms of government

6 HERODOTUS: *History*, BK III, 108b-c
7 PLATO: *Republic*, BK IX, 419a / *Statesman*, 602d-604b / *Laws*, BK IV, 679c-680d
9 ARISTOTLE: *Politics*, BK III, CH 13 [1284^a3-$^b34$] 482a-483a; CH 15 484a-485b; CH 17 [1288^a7-34] 486d-487a; BK IV, CH 2 [1289^a30-33] 488b
19 AQUINAS: *Summa Theologica*, PART I, Q 103, A 3 530a-c
20 AQUINAS: *Summa Theologica*, PART I-II, Q 105, A 1, REP 2 307d-309d
23 HOBBES: *Leviathan*, PART II, 105c-106d; 119a-b; 129b-130a; 158b-c
37 FIELDING: *Tom Jones*, 268c-269a
38 MONTESQUIEU: *Spirit of Laws*, BK V, 25c-d
38 ROUSSEAU: *Social Contract*, BK III, 409a-410a; 412c-414d
40 GIBBON: *Decline and Fall*, 622d-623a
41 GIBBON: *Decline and Fall*, 74d-75a; 81c-d
42 KANT: *Science of Right*, 450b-d
43 MILL: *Representative Government*, 341d-344d; 352b-353d passim; 363b-364d
44 BOSWELL: *Johnson*, 120a-c; 255a-d
46 HEGEL: *Philosophy of Right*, PART III, par 281 95b d; par 283 96a-b; par 292-293 98a-b; par 300 100b; ADDITIONS, 170 145d-146a / *Philosophy of History*, INTRO, 174a-175c; PART IV, 368c-d

4*d*(3) The preference for the mixed regime: defense of royal prerogatives as absolute in their sphere

7 PLATO: *Laws*, BK III, 671c-672c
15 TACITUS: *Annals*, BK IV, 72a-b
20 AQUINAS: *Summa Theologica*, PART I-II, Q 95, A 4, ANS 229b-230c; Q 105, A 1, ANS 307d-309d
23 HOBBES: *Leviathan*, PART III, 228a-b
35 LOCKE: *Civil Government*, CH XIII, SECT 151-152 59d-60b; CH XIV 62b-64c; CH XVII, SECT 200 71a-c passim; CH XIX, SECT 223 76c-d
36 STERNE: *Tristram Shandy*, 216b
38 MONTESQUIEU: *Spirit of Laws*, BK XI, 69c-75a; BK XIX, 142a-146a,c
38 ROUSSEAU: *Social Contract*, BK III, 414d-415b
43 MILL: *Representative Government*, 353d-354b
44 BOSWELL: *Johnson*, 178a-c

4*e*. The attack on monarchy or absolute government

4*e*(1) The paternalistic or despotic character of monarchy: the rejection of benevolent despotism; the advantages of constitutional safeguards

5 EURIPIDES: *Suppliants* [399-456] 261d-262b
6 HERODOTUS: *History*, BK III, 107c-d
7 PLATO: *Laws*, BK III, 671c-674c; BK IV, 681d-682c; BK IX, 754a-b
9 ARISTOTLE: *Ethics*, BK V, CH 6 [1134^a24-$^b17$] 382a-c / *Politics*, BK I, CH 7 [1255^b16-20] 449b; BK III, CH 15-16 484b-486c
35 LOCKE: *Civil Government*, CH II, SECT 13 28a-b; CH VII, SECT 90-94 44d-46c; CH XII, SECT 143 58c-d; CH XIV, SECT 162-163 63a-b
38 MONTESQUIEU: *Spirit of Laws*, BK XI, 69c-84d esp 70a-71a
38 ROUSSEAU: *Inequality*, 357a-b / *Political Economy*, 367a-368c passim / *Social Contract*, BK III, 408b-c; 412c-414d
40 GIBBON: *Decline and Fall*, 24b; 32c-34a; 68b,d-69b; 522a-523a,c; 523d-524a
42 KANT: *Science of Right*, 450a-d
43 FEDERALIST: NUMBER 47 153c-156d; NUMBER 48, 157c
43 MILL: *Liberty*, 267d-269a / *Representative Government*, 341d-344d passim; 348c-349a
46 HEGEL: *Philosophy of Right*, PART III, par 286, 96d-97a; ADDITIONS, 180 148b / *Philosophy of History*, INTRO, 173c; 174c-d

4*e*(2) The justification of absolute rule or benevolent despotism for peoples incapable of self-government

15 TACITUS: *Histories*, BK I, 191d-192a; 193c-194a; BK IV, 290a-d
35 LOCKE: *Civil Government*, CH VIII, SECT 105-110 48c-50d
38 MONTESQUIEU: *Spirit of Laws*, BK XV, 110a-111c; BK XVII, 122a-123b; 124c-d
38 ROUSSEAU: *Inequality*, 324a-b / *Social Contract*, BK II, 402d-403a
40 GIBBON: *Decline and Fall*, 513b-c
43 FEDERALIST: NUMBER 9, 47b-c
43 MILL: *Liberty*, 272a / *Representative Government*, 329c; 338d-341d; 344c; 351c-353d; 363b-d; 436b-442d passim, esp 436b-437a
46 HEGEL: *Philosophy of History*, INTRO, 174a-b; 198b-199c; PART III, 300c-301c

4*e*(3) The illegitimacy of absolute monarchy: the violation of the principle of popular sovereignty

35 LOCKE: *Civil Government*, CH VII, SECT 90-94 44d-46c passim, esp SECT 90-93 44d-46a; CH VIII, SECT 105-112 48c-51b passim; CH XI 55b-58b passim; CH XV, SECT 172-174 65b-d; CH XVIII, SECT 199-202 71a-72a
38 MONTESQUIEU: *Spirit of Laws*, BK VIII, 54a

38 ROUSSEAU: *Inequality*, 356b-359a / *Social Contract*, BK I, 387b,d-391b; BK II, 395d-396a
42 KANT: *Science of Right*, 436c; 437c-d; 439a-441d; 450d-452a
43 DECLARATION OF INDEPENDENCE: 1a-3b esp [1-28] 1a-b, [109-121] 3a-b
46 HEGEL: *Philosophy of Right*, PART III, par 279, 93d-94d

4e(4) The illegality of royal usurpations of power in a mixed regime: the limitations of royal prerogative in a constitutional monarchy

9 ARISTOTLE: *Politics*, BK V, CH 10 [1312^{b}37-1313^{a}16] 515c-d
14 PLUTARCH: *Tiberius Gracchus*, 678b-d
20 AQUINAS: *Summa Theologica*, PART I-II, Q 105, A 1, REP 2,5 307d-309d
35 LOCKE: *Civil Government*, CH VIII, SECT 111-112 50d-51b passim; CH XI 55b-58b passim; CH XIV 62b-64c; CH XVII 70c-71a
38 MONTESQUIEU: *Spirit of Laws*, BK II, 7c-9a,c; BK V, 29a-c
38 ROUSSEAU: *Social Contract*, BK II, 395d-396a; BK III, 418a-419c; 424a-c
40 GIBBON: *Decline and Fall*, 24b,d-28b esp 27b-d
41 GIBBON: *Decline and Fall*, 74c-d
42 KANT: *Science of Right*, 445a-c
43 DECLARATION OF INDEPENDENCE: 1a-3b
43 FEDERALIST: NUMBER 48, 157b-c; NUMBER 84, 252b-253a
43 MILL: *Liberty*, 267d-268b
44 BOSWELL: *Johnson*, 120a-c
46 HEGEL: *Philosophy of Right*, PART III, par 286 96c-97a

5. The absolute government of colonies, dependencies, or conquered peoples

OLD TESTAMENT: *Joshua*, 9 esp 9:18-27—(*D*) *Josue*, 9 esp 9:18-27 / *Judges*, 6:1-6 / *I Kings*, 9:20-23—(*D*) *III Kings*, 9:20-23 / *II Kings*, 23:30-35; 24:12-16; 25:5-30—(*D*) *IV Kings*, 23:30-35; 24:12-16; 25:5-30
APOCRYPHA: *I Maccabees*, 1:41-64; 8:1-13; 10:23-46—(*D*) OT, *I Machabees*, 1:43-67; 8:1-13; 10:23-46 / *II Maccabees*, 5:11-7:42—(*D*) OT, *II Machabees*, 5:11-7:42
6 HERODOTUS: *History*, BK I, 16b-20b; 30b-31a; 31d-32a; 35c-36a; 37b-40b; BK III, 109d-111b; BK VI, 186a-191c
6 THUCYDIDES: *Peloponnesian War*, BK I, 353d; BK II, 403c-404a; BK III, 425a-428d; BK V, 504c-507c; BK VIII, 579d-580b
7 PLATO: *Laws*, BK VI, 698c-d
9 ARISTOTLE: *Politics*, BK III, CH 13 [1284^{a}36-^{b}2] 482c; BK VII, CH 2 [1324^{a}35-1325^{a}15] 528b-529a; CH 14 [1333^{b}10-1334^{a}10] 538c-d
14 PLUTARCH: *Lycurgus*, 47d-48c
15 TACITUS: *Annals*, BK IV, 76a; BK XI, 104a-c; 106a-d; BK XII, 117c-d; 122a-c; BK XIII, 139c-140d; BK XIV, 149a-b; BK XV, 162c-163a / *Histories*, BK I, 191d-192a; BK IV, 290a-d
18 AUGUSTINE: *City of God*, BK IV, CH 14-15 196b-197a; BK V, CH 12, 216d-218a
23 MACHIAVELLI: *Prince*, CH III-VIII 3c-14c; CH XVIII, 25d-26a; CH XX 30a-31c
23 HOBBES: *Leviathan*, PART II, 107a; 107c; 108d-109a; 110b-111a; 119a-c; 126d-127a; 131c
24 RABELAIS: *Gargantua and Pantagruel*, BK III, 131b,d-133b
35 LOCKE: *Civil Government*, CH XVI 65d-70c passim
36 SWIFT: *Gulliver*, PART I, 24b-25a; PART III, 102b-103a; PART IV, 182b-183a
38 MONTESQUIEU: *Spirit of Laws*, BK X 61b,d-68d; BK XI, 83c-84c; BK XXI, 170c-171d
38 ROUSSEAU: *Political Economy*, 380a-b
39 SMITH: *Wealth of Nations*, BK IV, 239a-279b esp 239a-240b, 267c-272a; 288b-c
40 GIBBON: *Decline and Fall*, 14d-15a; 26a-c; 147a-b; 245d-246c; 518b-519a; 632d-633a
41 GIBBON: *Decline and Fall*, 216c-d
42 KANT: *Science of Right*, 413d; 454a-455a
43 DECLARATION OF INDEPENDENCE: [7-98] 1a-3a
43 MILL: *Representative Government*, 436b-442d passim
44 BOSWELL: *Johnson*, 511c-d
46 HEGEL: *Philosophy of History*, PART III, 299a-c

5a. The justification of imperial rule: the rights of the conqueror; the unifying and civilizing achievements of empire

5 AESCHYLUS: *Persians* [852-908] 24b-d
6 THUCYDIDES: *Peloponnesian War*, BK I, 358d-360c; 367a-369a; BK II, 402b-404a; BK V, 504c-507c; BK VI, 514b-d; 530d-532b
13 VIRGIL: *Eclogues*, IV 14a-15b / *Aeneid*, BK I [254-296] 110a-111a; BK VI [845-853] 233b-234a; BK VIII [714-731] 278a-b
14 PLUTARCH: *Lycurgus*, 47d-48c / *Flamininus* 302b,d-313a,c / *Alexander*, 566a-b
15 TACITUS: *Annals*, BK XI, 106a-d; BK XIII, 139c-140d / *Histories*, BK I, 191d-192a; BK IV, 286c-287a; 290a-d; BK V, 301c-d
18 AUGUSTINE: *City of God*, BK IV, CH 14-15 196b-197a; BK V, CH 12, 216d-218a
21 DANTE: *Divine Comedy*, HELL, II [13-27] 2d; PARADISE, VI [1-111] 113c-114d
23 HOBBES: *Leviathan*, PART II, 110b-111a; CONCLUSION, 279d-281a
35 LOCKE: *Civil Government*, CH IV, SECT 22-23 30a-b; CH VII, SECT 85 43c-d; CH XV, SECT 172 65b-c; CH XVI 65d-70c
38 MONTESQUIEU: *Spirit of Laws*, BK X, 61b,d-63d; BK XV, 110a-d
38 ROUSSEAU: *Inequality*, 355c-d / *Social Contract*, BK I, 389d-390d
40 GIBBON: *Decline and Fall*, 12a-24a,c esp 12a-b, 14c-16c, 18a, 21c-22c; 255c-d; 608b,d-609a; 620a; 638a-639a
41 GIBBON: *Decline and Fall*, 285a-b

(*5. The absolute government of colonies, dependencies, or conquered peoples. 5a. The justification of imperial rule: the rights of the conqueror; the unifying and civilizing achievements of empire.*)

43 MILL: *Representative Government*, 353c-354b; 436b-442d passim
46 HEGEL: *Philosophy of Right*, PART III, par 351 112a-b / *Philosophy of History*, PART I, 208b-d; 241d-250a; PART II, 281d-282a; PART III, 302b-d
51 TOLSTOY: *War and Peace*, BK X, 466b-d; BK XI, 498c-499a

5b. The injustice of imperialism: exploitation and despotism

6 HERODOTUS: *History*, BK VI, 189d
6 THUCYDIDES: *Peloponnesian War*, BK III, 424d-429b; BK V, 504c-507c; BK VI, 529b-533a
9 ARISTOTLE: *Politics*, BK VII, CH 2 [1324^{b}23-41] 528d-529a; CH 14 [1333^{a}16-1334^{a}11] 538a-d
14 PLUTARCH: *Lucullus*, 409b-410d / *Agesilaus* 480b,d-499a,c
15 TACITUS: *Annals*, BK I, 17c-d; BK II, 39d-40c; BK IV, 76a; 82d-83a; BK XII, 122a-c; BK XIV, 149a-b
18 AUGUSTINE: *City of God*, BK I, PREF 129a-d; BK IV, CH 14-15 196b-197a
25 MONTAIGNE: *Essays*, 440b-443d
35 LOCKE: *Toleration*, 13c-d / *Civil Government*, CH XVI 65d-70c
36 SWIFT: *Gulliver*, PART IV, 182b-183a
38 MONTESQUIEU: *Spirit of Laws*, BK VIII, 56d-57c; BK X, 62b-63a; BK XV, 109b-c; 110a-d
38 ROUSSEAU: *Inequality*, 355c-d / *Social Contract*, BK I, 389d-390d
39 SMITH: *Wealth of Nations*, BK IV, 253a-255a
40 GIBBON: *Decline and Fall*, 23c-d; 33d-34a,c; 551a-b; 631a-633a
41 GIBBON: *Decline and Fall*, 420c; 505b-c
42 KANT: *Science of Right*, 413d; 454a-455a
43 DECLARATION OF INDEPENDENCE: 1a-3b
43 MILL: *Representative Government*, 436b-442d passim
44 BOSWELL: *Johnson*, 179c
46 HEGEL: *Philosophy of Right*, ADDITIONS, 172 146c-d
50 MARX: *Capital*, 372c-374a; 379a-383d passim

6. The history of monarchy: its origin and developments

OLD TESTAMENT: *Deuteronomy*, 17:14-20 / *I Samuel*, 8-31 esp 8, 10:17-19—(*D*) *I Kings*, 8-31 esp 8, 10:17-19 / *II Samuel*—(*D*) *II Kings* / *I Kings*—(*D*) *III Kings* / *II Kings*—(*D*) *IV Kings*
6 HERODOTUS: *History*, BK I, 23b-24b; BK III, 92b-c; 93c; 108b-109b; BK IV, 152d-153b; BK VI, 195d-196c
6 THUCYDIDES: *Peloponnesian War*, BK II, 391c-d
7 PLATO: *Laws*, BK III, 672c-674d
9 ARISTOTLE: *Politics*, BK I, CH 2 [1252^{b}15-27] 445d-446a; BK II, CH 6 [1265^{b}34-39] 461b; CH 9 [1270^{b}7]-CH 10 [1271^{b}26] 466d-468a; CH 11 469a-470b; BK III, CH 14 483a-484a; CH 15 [1286^{b}8-22] 484d-485a; BK V, CH 10 512d-515d / *Athenian Constitution*, CH 3 553c-554b; CH 14-16 558d-560a
14 PLUTARCH: *Theseus*, 9a-d / *Romulus*, 20c-28a / *Lycurgus* 32a-48d / *Poplicola* 77a-86a,c / *Agesilaus* 480b,d-499a,c / *Caesar*, 600a-603c / *Cleomenes*, 657a-663c / *Demetrius*, 731c-732c
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For: Discussions relevant to the distinction between royal and political government, *see* CITIZEN 2b; CONSTITUTION 1; GOVERNMENT 1b; LAW 7a; SLAVERY 6b; TYRANNY 5.

Other considerations of the mixed regime and its distinction from the mixed constitution, *see* CONSTITUTION 3a, 5b; DEMOCRACY 3b; GOVERNMENT 2b.

Monarchy in relation to other forms of government, *see* ARISTOCRACY 2a; DEMOCRACY 3c; GOVERNMENT 2–2c; OLIGARCHY 2; STATE 6a; TYRANNY 2a, 4a; and for the comparison of monarchy with domestic or despotic government, *see* FAMILY 2b; GOVERNMENT 1b; TYRANNY 4b.

Another discussion of government in relation to the wealth and territorial extent of the state, *see* STATE 4a–4c; WEALTH 9f.

Matters relevant to the theory of the royal prerogative, *see* GOVERNMENT 3e; LAW 7e.

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Matters relevant to the justification of absolute rule when it takes the form of a benevolent despotism, *see* DEMOCRACY 4d; GOVERNMENT 2c; PROGRESS 4b; SLAVERY 6b–6c; TYRANNY 4b.

The issues concerning imperialism as a form of absolute rule, *see* GOVERNMENT 5b; LIBERTY 6c; REVOLUTION 7; SLAVERY 6d; STATE 10b; TYRANNY 6.

ADDITIONAL READINGS

Listed below are works not included in *Great Books of the Western World*, but relevant to the idea and topics with which this chapter deals. These works are divided into two groups:

I. Works by authors represented in this collection.
II. Works by authors not represented in this collection.

For the date, place, and other facts concerning the publication of the works cited, consult the Bibliography of Additional Readings which follows the last chapter of *The Great Ideas.*

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BERKELEY. *Passive Obedience*

II.

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MARSILIUS OF PADUA. *Defensor Pacis*

WYCLIFFE. *Tractatus de Officio Regis*

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Chapter 60: NATURE

INTRODUCTION

NATURE is a term which draws its meaning from the other terms with which it is associated by implication or contrast. Yet it is not one of a fixed pair of terms, like necessity and contingency, one and many, universal and particular, war and peace. When things are divided into the natural and the artificial, or into the natural and the conventional, the opposite of the natural does not represent a loss or violation of nature, but rather a transformation of nature through the addition of a new factor. The unnatural, on the other hand, seems to be merely a deviation, a falling away from, or sometimes a transgression of nature.

Most of the terms which stand in opposition to nature represent the activity or being of man or God. As appears in the chapter on MEDICINE, Galen thinks of nature as an artist. Harvey later develops this notion. But with these two exceptions, the traditional theory of art conceives it not as the work of nature, but of man. Despite other differences in the great books on the theory of art, especially with regard to art's imitation of nature, there seems to be a common understanding that works of art are distinguished from productions of nature by the fact that man has added something to nature. A world which man left exactly as he found it would be a world without art or any trace of the artificial in it.

The ancient authors who contrast the natural and the conventional and the modern authors who distinguish man's life in a state of nature from his life in civil society seem to imply that without something done by man there would be nothing conventional or political. Locke appears to be an exception here. He thinks that there is a natural as well as a civil, or political, society. Natural society is the society of "men living together according to reason without a common superior on earth, with authority to judge between them." Unlike Hobbes or Kant or Hegel, Locke does not think that the state of nature is necessarily a state of war. But this difference between Locke and others does not affect the point that the political institutions of civil society are things of man's own devising.

There may be, among the social insects, natural organizations such as the bee-hive and the ant-mound. It may even be, as Locke supposes, that in a state of nature, "men living together according to reason" would constitute a society. But in neither case does the society we call "a state" result. States differ from one another in many features of their political organization. In this sense the state or political community is conventional rather than natural; its institutions are humanly contrived.

The social contract theory of the origin of the state is not necessarily involved in the recognition that the state is partly conventional. Aristotle, for example, who regards the state as natural—he speaks of it as "a creation of nature"—does not think of the political community as natural in the sense in which a bee-hive is natural. That men should form political communities is, in his view, the result of a natural desire, a tendency inherent in the nature of man as a political animal. But what form the political community will take is at least partly determined by the particular arrangements men voluntarily institute. Man-made laws are conventional, but so also are other institutions which vary from state to state or change from time to time.

THE ISSUES IN political theory raised by any consideration of what is and is not natural about society or the state are discussed in other chapters, *e.g.*, FAMILY and STATE. What is true in this connection is likely to be true of each of the other fundamental oppositions in which

the notion of nature is involved. The issues raised by the relation of art to nature are, for example, considered in the chapter on ART; those raised by the distinction between nature and nurture are considered in the chapter on HABIT, and so on. Here we are concerned not with the theoretical consequences of different conceptions of nature, but with the various meanings of the term itself as it is used in different contexts.

Common to all meanings is the notion that the natural is that which man's doing or making has not altered or enlarged. The distinction between nature and nurture confirms this. Man's activities are the source of modifications in his own nature as well as in the nature of other things. The human nature man is born with undergoes transformations in the course of life: the acquirement of knowledge, the formation of habits (which are often called "second nature"), the modification of instincts. The sum of these changes represents what nurture adds to nature.

When changes of this sort are looked at collectively they give rise to the notions of culture or civilization—two more terms which present a contrast to nature. In Rousseau and others we meet the feeling that man may have lost, not gained, by exchanging the natural for the civilized life. The ideal of a return to nature involves more than a return to the soil, or an exodus from the city to the country. In its most radical form, this ideal calls upon man to divest himself of all the artifices and conceits with which he has thought to improve on nature—"by renouncing its advances," Rousseau says, "in order to renounce its vices."

But why, it may be asked, is the whole world which man creates not as natural as the materials which man finds to work with—the resources of physical nature and the native equipment which is man's nature at birth? If man himself is a natural entity, and if all human activities are somehow determined by human nature, then why are not the works of art and science, the development of political institutions, the cultivation of human beings by education and experience, and all other features of civilization—why are not all these just as natural as the falling stone, the flourishing forest, or the bee-hive? Why, in short, should there by any contrast between the works of nature and the works of man?

THIS QUESTION points to one of the fundamental issues in the traditional discussion of nature. Those who uphold the validity of the contrast defend its significance in terms of something quite special about human nature. If man were entirely a creature of instinct—if everything man did were determined by his nature so that no choices were open to him and no deviation from the course of nature possible—then the human world would seem to fade into the rest of nature. Only on the supposition that man is by nature rational and free do those human works which are the products of reason or the consequences of free choice seem to stand in sharp contrast to all other natural existences or effects of natural causes.

Of these two factors—rationality and freedom—the element of freedom is usually the one most emphasized. The line is drawn between that which natural causes determine and that which man determines by his own free choice. The laws of nature are often conceived as expressing an inherent rationality in nature itself, but they also state the uniformity of nature's operations. Such maxims of nature as 'nature does nothing in vain,' 'nature abhors a vacuum,' or 'nature does nothing by jumps' are usually interpreted as describing nature's invariable way of doing things. Aristotle's distinction between things which happen naturally and those which happen by chance turns on the regularity of the events which result from causes in the very nature of things. The natural is that which happens either always or for the most part.

Hence, even if there is rationality of some sort in the structure of nature, that supposition does not seem to affect the position of those who connect human reason with human freedom and who, in consequence, divide the things which happen as a result of man's free choice from everything else which happens in the course of nature. This may be exemplified by the Greek understanding of the difference between nature and convention. The laws of Persia vary from the laws of Greece, the political institutions of the city-states vary from those of the Homeric age, customs and consti-

tutions differ from city to city. Unlike such conventions, "that which is by nature," Aristotle writes, "is unchangeable and has everywhere the same force, as fire burns both here and in Persia." The conventional is the variable, the natural the uniform. The variability of conventions, moreover, seems to suggest that they are products of freedom or choice.

The difference between the bee-hive and the human city is that one is *entirely* a creation of nature, a social organization entirely determined by the instincts of the bees, so that wherever bees form a hive, it is formed in the same way; whereas the human city involves something more than a natural desire of men, since when these political animals associate in different places, they set up different forms of government and different kinds of law. The same comparison can be made between the spider's web or the beaver's dam and such products of human art as cloth and houses. The variability of the works of reason, as opposed to the uniformity of instinctive productions of all sorts, implies the factor of choice in reason's work.

THE CONCEPTION OF nature which tries to separate the natural from what man contributes thus seems to depend upon the conception of man. Controversies concerning man's difference from other animals, especially the dispute about human freedom (considered in such chapters as MAN and WILL), bear directly on the issue of the naturalness of the things which result from man's doing and making.

Spinoza, for example, in holding that human actions constitute no exception to the reign of necessity throughout nature, removes any ground for distinguishing the effects of human operation from other effects. Man exercises no freedom of choice; nor does man in any other way introduce a new principle into the order or process of nature. Hobbes and Locke concur in the denial of free will, but they separate the inventions of man's mind or his social institutions from what happens without human contrivance in the realm of thought or action. The difference between simple and complex ideas for Locke seems to parallel the ancient distinction between nature and art.

At the other extreme from Spinoza, Kant separates the order of nature and the order of freedom into worlds as radically asunder as the Cartesian realms of matter and mind. The world of nature is the system or order of the objects of sense—"the sum total of phenomena insofar as they . . . are connected with each other throughout." For Kant this means two things which are strictly correlative. Nature is the object of the theoretic sciences and it is also the realm of time, space, and causality. Like Spinoza, Kant identifies the order of nature with the order of causal necessity. But, unlike Spinoza, Kant places the moral and political life of man in an order unconditioned by time, space, and causality. This realm of freedom is the sphere of the moral or practical sciences. The natural or theoretic sciences do not extend to what Kant calls the "supersensible" or the "noumenal" order—the world of things lying outside the range of sense-experience.

There is an alternative to Spinoza's location of all events within the order of nature and to Kant's separation of the realm of nature from the domain of freedom. It takes the form of Aristotle's or Aquinas' distinction between the natural and the voluntary. The voluntary is in one sense natural, in another not. It is natural in the sense that what happens voluntarily in the realm of animal and human motions proceeds from causes as natural as those responsible for the motions of inert bodies. A voluntary act, according to Aquinas, comes from "an intrinsic principle," just as the falling of a stone proceeds from "a principle of movement in the stone." But among the factors responsible for voluntary acts is "knowledge of the end"—knowledge of the object being sought. The sphere of the voluntary can therefore be equated with the sphere of conscious desire, *i.e.*, with desire aroused by an object known, whether known by sense or reason. The natural in the sense in which it is distinguished from the voluntary is the sphere of motions in line with natural desire, *i.e.*, with tendencies founded in the very nature of a body or organism and unaccompanied by any awareness of the goal toward which it is thus inclined to move.

Aristotle's distinction between natural and violent motion (which Galileo and other physicists adopt) seems to throw light on a double

use of the term 'natural' here. Galileo treats the motion of a freely falling body as natural, in contrast to the motion of a projectile. In the former case, it is the nature of heavy bodies to gravitate toward the earth; whereas in the latter case, in addition to the motion of gravitation, another motion is imparted to the body when it is shot from a gun—a motion which does not proceed from the body's own nature but is caused by the motions of other bodies. In terms of this distinction, voluntary motions are natural rather than violent. In fact, the violent is sometimes thought to be even more opposed to the voluntary than to the natural, in the sense that a man acting contrary to his will under external coercion suffers violence. When he does what he wishes, his conduct is not only voluntary but natural, *i.e.*, free from the violence of external forces.

It is necessary to consider the additional distinction between the voluntary and the free. Animals acting from desires caused by the perception of certain objects act voluntarily, but, in the theory of Aristotle and Aquinas, only men freely choose among alternative objects of desire or between means for accomplishing an end. The effects of voluntary action differ from other natural events only because knowledge enters into their determination. But that which happens as the result of man's free choice is determined neither by his nature nor by his knowledge. Hence whatever comes into existence through man's choice stands apart from all that is naturally determined to exist.

One other matter bears on this consideration of the natural in relation to the voluntary and the free. Spinoza excludes the operation of final causes, as well as free choice, from the order of nature. Purposes or ends are not principles of nature. Aristotle, on the other hand, thinks that final causes are operative in every part of nature. He finds them in the sphere of inert bodies which naturally tend toward certain results. He finds them in the sphere of animal and human motions, where the final cause or end may be an object of conscious desire.

So far as the search for causes is concerned, nature presents the same kind of problems to the physicist as to the biologist or psychologist. In only one sense are final causes peculiarly present in human conduct; that is the sense in which the change effected is not the ultimate end, but only a means to some further end desired. Here there is an extrinsic final cause as well as a final cause intrinsic to the change itself. It may be with regard to this special sense that Bacon says of final causes that they are "more allied to man's own nature than to the system of the universe." Yet Bacon, far from denying their presence in the scheme of things, assigns the investigation of final causes to metaphysics (as a branch of natural philosophy) rather than to physics. For him the ascertainment of final causes does not discover a purpose in the nature of things. Rather it looks to God's plan and providence.

WE HAVE SO FAR dealt with that consideration of nature which opposes the natural to the works of man. The discussion of nature also moves on a theological plane. Here, on one traditional view, the natural is not opposed to, but rather identified with the work of God. "Things which are said to be made by nature," Plato writes, "are the work of divine art." Those who conceive the universe as God's creation, and think of God alone as uncreated being, tend to use the word "nature" collectively for the whole world of creatures and distributively for each type of thing which has its being from God.

The distinction between the supernatural and the natural has many interpretations in Christian theology, but none more basic than that which divides all being into the uncreated and the created. On this view, the order of nature includes more than the world of physical, sensible things. It includes the spiritual creation—angels and souls—as well. Immaterial beings are no more supernatural than bodies. They, too, are created natures. Only God is uncreated being.

Those who do not have or who deny a doctrine of creation use the word "nature" in a *less* and in a *more* comprehensive sense. The Greek philosophers, for example, seem to restrict the natural to the physical, *i.e.*, to the realm of material, sensible, changing things. Change is an element in the connotation of the Greek word *phüsis*, of which *natura* is the Latin equivalent. As Greek scientists conceive the

study of nature, it is the business of physics to investigate the principles, causes, and elements of change.

Things which are thought to be untouched by change, such as the objects of mathematics, self-subsistent ideas, or separate forms; or things which are thought to be eternal and immutable, such as immaterial substances or intelligences, do not belong to the realm of physics or *natural* science. In Aristotle's classification of the sciences such beings are the objects of mathematics and metaphysics, or theology. Since, for him, whatever is both sensible and mutable is also material, the realm of nature includes no more than the whole material universe, celestial as well as terrestrial.

The *more* comprehensive sense of nature appears in Spinoza's identification of nature with the infinite and eternal substance of God. "Besides God," says Spinoza, "no substance can be nor be conceived. . . . Whatever is, is in God, and nothing can either be or be conceived without God." All finite things are modes of the divine substance or, more precisely, of the attributes of God, such as extension and thought. Nature, therefore, is the totality of finite things, both material and immaterial. But nature exceeds even this totality, for the infinite substance of God is greater than the sum of its parts.

To make this clear, Spinoza employs the distinction between *natura naturans* and *natura naturata*. "By *natura naturans* we are to understand that which is in itself and is conceived through itself, or those attributes of substance which express eternal and infinite essence; that is to say, God in so far as He is considered as a free cause. But by *natura naturata* I understand everything which follows from the necessity of the nature of God, or of any one of God's attributes in so far as they are considered as things which are in God, and which without God can neither be nor be conceived."

Viewed under the aspect of time rather than eternity, the order of nature (*i.e., natura naturata*) is as much an order of ideas as it is an order of things. "The order and connection of ideas is the same as the order and connection of things," Spinoza writes. "Whether we think of nature under the attribute of extension or under the attribute of thought, or under any other attribute whatever, we shall discover one and the same order, or one and the same connection of causes."

Except perhaps for the Stoics, like Marcus Aurelius and Epictetus, Spinoza seems to stand alone in this conception of nature as all-embracing. The Stoics too regard nature as the system of the universe, with man a part of its cosmic structure, and with God or divinity inherent in nature as the rational principle governing all things. But with or without reference to God and creation, thinkers like Descartes and Hume tend to identify nature not with the totality of finite things, but with the world of bodies in motion or changing sensible things.

For Descartes, nature does not include the realm of thought or thinking substances, though these, like bodies, are finite and dependent creatures of God. For Hume, nature seems to be that which lies outside experience—in a way, the reality which underlies appearances. Where Spinoza thinks that the system of ideas is as much a part of nature as the system of bodies in motion, Hume speaks of "a kind of pre-established harmony between the course of nature and the succession of our ideas."

Hume's distinction between knowledge of the relation between our own ideas and knowledge of matters of fact or real existence seems furthermore to imply that nature is the reality known (however inadequately) when we assert certain things to be matters of fact. Here we perceive another meaning of nature, defined by another basic opposition, this time between the real and the ideal or the imaginary. It is in this sense that mediaeval writers oppose *entia naturae, i.e.*, natural or real beings, to *entia rationis*, or things which have their being in the mind.

THIS DISTINCTION, like most of the others in which nature is concerned, does not have universal acceptance. Kant, as we have seen, far from making nature the reality which exists independently of our experience or knowledge, conceives the realm of nature as identical with all possible experience. "We possess two expressions," Kant writes, "*world* and *nature*, which are generally interchanged. The first denotes the mathematical total of all phenomena and the totality of their synthesis. . . . And

the world is termed nature, when it is regarded as a dynamical whole—when our attention is not directed to the aggregation in space and time . . . but to the unity in the *existence* of phenomena."

On quite different principles of analysis, Berkeley also treats as natural things the ideas or sensations which "are not produced by, or dependent on, the wills of men." Natural beings do not exist apart from the mind, but unlike imaginary ones, natural beings are those ideas which are not subject to our will or the human mind's own constructive activities. Such ideas are produced in our minds immediately by God.

To the question whether "Nature hath no share in the production of natural things," Berkeley answers: "If by *Nature* is meant the visible series of effects or sensations imprinted on our minds, according to certain fixed and general laws, then it is plain that Nature, taken in this sense, cannot produce anything at all. But, if by *Nature* is meant some being distinct from God, as well as from the laws of nature, and things perceived by sense, I must confess that word is to me an empty sound without any intelligible meaning annexed to it. Nature, in this acceptation, is a vain chimera, introduced by those heathens who had not just notions of the omnipresence and infinite perfection of God."

Berkeley's view represents one extreme position on a theological issue of the utmost difficulty. According to him God is not only the creator or first cause, but the sole cause of everything which happens in the course of nature. There are no natural causes. Nature has no productive power. Everything is the work of God or the work of man—nothing the work of nature.

Within the limits of this issue, the other extreme consists in denying not the creativity of God, but the role of divine causality in the production of natural effects. It relegates them entirely to the efficacy of natural causes. Lucretius, of course, denies both the creation of the world and the intervention of the gods in the processes of nature. But others, like Descartes, seem to say that once God has created the physical world, once He has formed matter into bodies and given them their initial impetus, their motions henceforward need only the laws of nature which God laid down for them to follow. For everything that happens in the course of nature, natural causes, operating under these laws, suffice.

There is a third position which distinguishes between the work of God in the creation of nature, and the work of nature in the production of effects of all sorts, such as the natural motions of bodies or the propagation of animals. But though it ascribes efficacy to natural agents or second causes in the production of natural effects, it also regards natural causes as instrumental to the hand of God, the first or principal cause of everything which happens as well as of everything which is. Aquinas seems to hold that God acts alone only in the original creation of things; whereas in the preservation of created natures and in their causal interaction, God works through secondary, or natural, causes.

"Some have understood God to work in every agent," Aquinas writes, "in such a way that no created power has any effect in things, but that God alone is the immediate cause of everything wrought; for instance, that it is not fire that gives heat, but God in the fire, and so forth. But this is impossible. First, because the order of cause and effect would be taken away from created things, and this would imply a lack of power in the Creator. . . . Secondly, because the operative powers which are seen to exist in things would be bestowed on things to no purpose, if things produced nothing through them. . . . We must therefore understand that God works in things in such a manner that things have also their proper operation."

In other words, according to Aquinas, "God is the cause of action in every agent." Furthermore, "God not only moves things to operate . . . but He also gives created agents their forms and preserves them in being." With regard to the being of things, Aquinas holds that God "established an order among things, so that some depend on others, by which they are conserved in being, though He remains the principal cause of their conservation."

WITH REGARD TO NATURE itself this theological doctrine raises two sorts of problems. The first concerns the efficacy of natural causes,

which are sufficient for the scientist to appeal to in explaining natural phenomena, yet are insufficient by themselves for the production of natural effects. The second concerns the distinction between the natural and the supernatural, now not in terms of the created and the uncreated, but in terms of what happens naturally (or even by chance) as opposed to what happens as a result of God's intervention in the course of nature.

Miracles, for example, are supernatural rather than natural events. They are not produced by natural causes; nor do they happen by accident. They are attributed by the theologian to divine causality, yet not in such a way that violence is done to nature. "The term *miracle*," Aquinas explains, "is derived from admiration, which arises when an effect is manifest, whereas its cause is hidden. . . . A miracle is so called as being full of wonder; in other words, as having a cause absolutely hidden from all. This cause is God. Therefore those things which God does outside the causes which we know are called miracles."

The miraculous is that which is beyond the power of nature to accomplish. "A thing is said to be above the ability of nature," Aquinas writes, "not only by reason of the substance of the thing done, but also because of the manner and the order in which it is done"; and "the more the power of nature is surpassed, the greater the miracle." Aquinas distinguishes three grades of miracles.

The first, he says, surpasses nature "in the substance of the deed; as, for example, if two bodies occupy the same place, or if the sun goes backwards, or if a human body is glorified. Such things nature is absolutely unable to do; and these hold the highest rank among miracles. Secondly, a thing surpasses the power of nature, not in the deed, but in that wherein it is done; as the raising of the dead, and giving sight to the blind, and the like. For nature can give life, but not to the dead, and it can give sight, but not to the blind. Such hold the second rank in miracles. Thirdly, a thing surpasses nature's power in the measure and order in which it is done; as when a man is cured of a fever suddenly by God, without treatment or the usual process of nature. . . . These hold the lowest place in miracles."

Though "each of these kinds has various degrees, according to the different ways in which the power of nature is surpassed," no miracle, according to Aquinas, transgresses the order of nature in the sense of accomplishing the impossible. Unlike the impossible, which would destroy nature, the improbable can be elicited by God's power within the general framework of nature.

Hume, on the other hand, thinks that "a miracle is a violation of the laws of nature." And since, in his view, a firm and unalterable experience has established these laws, the proof against a miracle, from the nature of the fact, is as entire as any argument from experience can be. "Why is it more than probable," he asks, "that all men must die; that lead cannot, of itself remain suspended in the air; that fire consumes wood, and is extinguished by water; unless it be, that these events are found agreeable to the laws of nature, and there is required a violation of these laws, or in other words, a miracle to prevent them?

"Nothing is esteemed a miracle," Hume continues, "if it ever happens in the common course of nature. . . . There must, therefore, be a uniform experience against every miraculous event, otherwise the event would not merit that appellation. And as a uniform experience amounts to proof, there is here a direct and full *proof*, from the nature of the fact, against the existence of any miracle; nor can such a proof be destroyed, or the miracle rendered credible, but by an opposite proof which is superior."

Hume does not think that miracles can be proved against our uniform experience of the order of nature. But he also thinks that they are "dangerous friends or disguised enemies to the *Christian religion*" who would try to defend its beliefs "by the principles of human reason. . . . The *Christian religion* not only was at first attended with miracles," he declares, "but even at this day cannot be believed by any reasonable person without one. Mere reason is insufficient to convince us of its veracity: and whoever is moved by *Faith* to assent to it, is conscious of a continued miracle in his own person . . . which gives him a determination to believe what is most contrary to custom and experience."

ONE OTHER TRADITIONAL conception of nature, implicit in much of the foregoing, should be noted. The various senses of the term so far explicitly considered are alike in this: that they justify the use of the word "Nature" with a capital N and in the singular. This other sense of the term appears when we speak of each thing as having a nature of its own, and of the world as containing a vast plurality and radical diversity of natures.

In this sense we attribute a nature even to things which are contrasted with Nature and the natural. We speak of the nature of God and the nature of freedom, the nature of art, the nature of reason, the nature of ideas, the nature of the state, the nature of customs and habits. This could, of course, imply a theory that things which are not completely natural, nevertheless have a natural basis, as art, the state, or habit. Another meaning, however, seems to be involved.

The phrase "nature of" appears almost as frequently in the great books as the word "is," and frequently it is unaccompanied by any explicit theory of Nature or the natural. The discussion of the *nature of* anything seems, for the most part, to be a discussion of *what* it is. To state the nature of anything is to give its definition; or if for any reason definition in a strict sense cannot be given, then the attempt to state the nature of the thing consists in trying to say what characterizes this thing or kind of thing, in distinction from everything else or all other kinds.

Enumerating the senses of the term 'nature,' Aristotle gives this as the fifth meaning. The first four comprise senses which distinguish the natural from the artificial or the immutable, and which indicate that the natural or the physical has an immanent principle of movement in itself and involves matter or potency. The fifth sense is that in which 'nature' means "the *essence* of natural objects"; and, as he goes on to say, this implies the presence in them of form as well as matter. "By an extension of meaning from this sense of 'nature' every essence in general has come to be called a 'nature,' because the nature of a thing is one kind of essence." This is the sixth and most general sense, according to which the nature or essence of anything is the object of definition.

Does each individual thing have a nature peculiarly its own, even if it cannot be defined? Or is a nature or essence always something common to a number of individuals, according to which they can be classified into kinds, and the kinds ordered as species and genera? Do John and James, for example, have individual natures in addition to the common nature which they share through belonging to the human species; and does their human nature entail certain properties which are generic rather than specific, *i.e.*, which seem to be determined by their having the generic nature common to all animals as well as the specific nature common to all men?

Such questions about individual, specific, and generic natures raise problems of definition and classification which are discussed in the chapter on EVOLUTION. They also raise problems about the existence or reality of the *kinds* which men define and classify. Are they merely what Locke calls "nominal essences," or do our definitions signify real essences, *i.e.*, the natures of things as they really are? Is the real world one which, as William James says, "plays right into logic's hands"? Does Nature consist of a *hierarchy* of natures or distinct kinds; or is it a *continuum* of things all having the same nature and differing from each other only individually or accidentally, but not essentially? These problems are discussed elsewhere, in such chapters as ANIMAL, DEFINITION, EVOLUTION, LIFE AND DEATH, and SAME AND OTHER.

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PAGE SECTIONS: When the text is printed in one column, the letters **a** and **b** refer to the upper and lower halves of the page. For example, in **53** JAMES: *Psychology*, **116a-119b**, the passage begins in the upper half of page 116 and ends in the lower half of page 119. When the text is printed in two columns, the letters **a** and **b** refer to the upper and lower halves of the left-hand side of the page, the letters **c** and **d** to the upper and lower halves of the right-hand side of the page. For example, in **7** PLATO: *Symposium*, **163b-164c**, the passage begins in the lower half of the left-hand side of page 163 and ends in the upper half of the right-hand side of page 164.

AUTHOR'S DIVISIONS: One or more of the main divisions of a work (such as PART, BK, CH, SECT) are sometimes included in the reference; line numbers, in brackets, are given in certain cases; *e.g.*, *Iliad*, BK II [265–283] **12d**.

BIBLE REFERENCES: The references are to book, chapter, and verse. When the King James and Douay versions differ in title of books or in the numbering of chapters or verses, the King James version is cited first and the Douay, indicated by a (*D*), follows; *e.g.*, OLD TESTAMENT: *Nehemiah*, 7:45—(*D*) *II Esdras*, 7:46.

SYMBOLS: The abbreviation "esp" calls the reader's attention to one or more especially relevant parts of a whole reference; "passim" signifies that the topic is discussed intermittently rather than continuously in the work or passage cited.

For additional information concerning the style of the references, see the Explanation of Reference Style; for general guidance in the use of *The Great Ideas*, consult the Preface.

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49 DARWIN: *Origin of Species*, 28b-29a

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46 HEGEL: *Philosophy of Right*, PART I, par 56 26b / *Philosophy of History*, INTRO, 165b-c; PART I, 244b-c; PART II, 263d-265c; 267b-268b
47 GOETHE: *Faust*, PRELUDE [134–157] 4a-b
49 DARWIN: *Origin of Species*, 41c-d; 87a-c; 233c-d
50 MARX: *Capital*, 16d-17a; 85a-88d
53 JAMES: *Psychology*, 186b
54 FREUD: *Origin and Development of Psycho-Analysis*, 2a / *Civilization and Its Discontents*, 778b-779d / *New Introductory Lectures*, 877a-b

2b. Nature and convention: the state of nature and the state of society

7 PLATO: *Protagoras*, 52b / *Cratylus* 85a-114a,c esp 85a-87b, 110c-111c / *Gorgias*, 271b-272b; 273d-274c / *Republic*, BK II, 311b-313a / *Theaetetus*, 528b-c / *Laws*, BK X, 760a-c

8 ARISTOTLE: *Topics*, BK VI, CH 2 [140^{a}6–18] 193a; CH 3 [141^{a}15–22] 194b-c / *Sophistical Refutations*, CH 12 [173^{a}7–18] 238b-c; [173^{a}27–30] 238c

9 ARISTOTLE: *Ethics*, BK V, CH 7 382c-383a / *Politics*, BK I, CH 2 [1253^{a}29–37] 446d; CH 6 448c-449b / *Rhetoric*, BK I, CH 15 [1375^{a}25–^{b}25] 619d-620b

12 LUCRETIUS: *Nature of Things*, BK II [14–37] 15a-c; BK IV [823–857] 55a-b; BK V [925–1027] 73b-74c

18 AUGUSTINE: *City of God*, BK XIX, CH 12, 517d-518c / *Christian Doctrine*, BK II, CH 24–26 648d-650a

20 AQUINAS: *Summa Theologica*, PART I–II, Q 95, A 2 227c-228c; A 4, ANS 229b-230c; Q 97, A 3, REP 1 237b-238b

21 DANTE: *Divine Comedy*, PARADISE, XXVI [124–138] 147a-b

23 HOBBES: *Leviathan*, PART I, 56d; 84c-96b; PART II, 99a-101a; 131a-c; 136d-137a; 138c; 159d; PART IV, 272c

25 MONTAIGNE: *Essays*, 63d-64b; 93b-94a; 102a-103a; 424d-426b; 430b-d; 509a-b

26 SHAKESPEARE: *As You Like It* 597a-626a,c esp ACT II, SC I [1–20] 603c-d, SC V 606b-607a, ACT III, SC II [11–90] 609d-610c

27 SHAKESPEARE: *All's Well That Ends Well*, ACT II, SC III [112–151] 152c-153a / *King Lear*, ACT I, SC II [1–22] 247d-248a / *Timon of Athens* 393a-420d esp ACT IV, SC I–ACT V, SC I 409c-419b / *Cymbeline*, ACT III, SC III [12–78] 465c-466b

30 BACON: *Advancement of Learning*, 20c-d; 62c-63a; 94d-95b

31 SPINOZA: *Ethics*, PART IV, PROP 37, SCHOL 2 435b-436a

33 PASCAL: *Pensées*, 89–98 189b-190b

35 LOCKE: *Toleration*, 16a-c / *Civil Government*, CH II–IX 25d-54d passim; CH XI, SECT 135–137 55d-57b / *Human Understanding*, BK II, CH XXVIII, SECT 2–3 228c-229b

38 MONTESQUIEU: *Spirit of Laws*, BK I 1a-3d; BK VIII, 52a; BK XVI, 119d-120a; BK XXVI, 215b-217b; 219d-221c

38 ROUSSEAU: *Inequality*, 329a-366d / *Political Economy*, 369a-b / *Social Contract*, BK I 387b,d-394d; BK II, 399b-c; 405d-406a

39 SMITH: *Wealth of Nations*, BK V, 397a-c

41 GIBBON: *Decline and Fall*, 86d-87a

42 KANT: *Pure Reason*, 222b-c / *Science of Right*, 402c; 405d-406a; 433c-434d esp 434a; 435c-436b esp 435c-d; 437c-d; 450d-451a; 452a-d

43 FEDERALIST: NUMBER 51, 164c-d

43 MILL: *Liberty*, 269c-d; 293b-302c passim / *Representative Government*, 327b,d-332d passim / *Utilitarianism*, 459b-461c passim

44 BOSWELL: *Johnson*, 194a; 311b; 363c-364a

46 HEGEL: *Philosophy of Right*, PART I, par 57 26b-27a; par 93 36a-b; PART III, par 187 65a-c; par 194 66c-d; ADDITIONS, 36 122b-c; 149 140d-141a; 152 141c-d; 164 144c-145a / *Philosophy of History*, INTRO, 171b-172b; 196d-197a; PART II, 260b-c

51 TOLSTOY: *War and Peace*, BK XI, 514c-d

54 FREUD: *Origin and Development of Psycho-Analysis*, 20c-d / *General Introduction*, 452c-d; 573c / *War and Death*, 757d-759d / *Civilization and Its Discontents*, 776b-802a,c esp 776b-777a, 780b-781d, 783c-784b, 787a-c, 788d-789b, 791b-792a, 799b-802a,c / *New Introductory Lectures*, 853a-b

2c. Nature and nurture: the innate or native and the acquired; habit as second nature

7 PLATO: *Republic*, BK II–III, 319c-339a; BK V–VII, 368c-401d / *Statesman*, 605d-608d

8 ARISTOTLE: *Categories*, CH 8 [8^{b}26–9^{a}27] 13d-14b / *Prior Analytics*, BK II, CH 27 [70^{b}6–39] 92c-93a,c / *Metaphysics*, BK I, CH 1 [981^{a}31–^{b}7] 499d; BK IX, CH 5 [1047^{b}31–34] 573a

9 ARISTOTLE: *History of Animals*, BK IV, CH 9 [536^{b}14–20] 63b / *Ethics*, BK II, CH 1 348b,d 349b; BK III, CH 5 [1114^{a}32–^{b}25] 360c-d; BK VI, CH 11 [1143^{b}7–13] 393a; CH 13 394b-d; BK VII, CH 10 [1152^{a}28–33] 403b / *Politics*, BK VII, CH 13 [1332^{a}39–^{b}10] 537a-b; CH 14 [1333^{a}16–23] 538a; CH 17 [1336^{a}3–22] 541a-b / *Rhetoric*, BK I, CH 11 [1370^{a}5–14] 613b; BK III, CH 1 [1404^{a}15–19] 654b; CH 2 [1405^{a}7–9] 655b / *Poetics*, CH 22 [1459^{a}5–7] 694d

10 HIPPOCRATES: *Airs, Waters, Places*, par 14 15a-b

12 LUCRETIUS: *Nature of Things*, BK III [288–322] 33d-34b

14 PLUTARCH: *Coriolanus*, 174b,d-175a

19 AQUINAS: *Summa Theologica*, PART I, Q 18, A 3, ANS 106b-107c; Q 76, A 5, REP 4 394c-396a; Q 83, A 1, REP 5 436d-438a; PART I–II, Q 32, A 2, REP 3 759d-760d; A 8, REP 3 764c-765b

20 AQUINAS: *Summa Theologica*, PART I–II, Q 49, AA 2–4 2b-6a; Q 51, A 1 12b-13c; Q 63, A 1 63a-64a; Q 82, A 1 168a-d

21 DANTE: *Divine Comedy*, PARADISE, VIII [115–148] 118b-c

23 HOBBES: *Leviathan*, PART I, 54a; 60a-b; 61c-d; 66c-d; 68b

25 MONTAIGNE: *Essays*, 60a-c; 63d-64b; 216c-219a; 489b-490c

27 SHAKESPEARE: *Hamlet*, ACT III, SC IV [157–170] 56b / *Cymbeline*, ACT III, SC III [79–107] 466b-c

28 HARVEY: *Motion of the Heart*, 285b-c / *On Animal Generation*, 428a-c

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30 BACON: *Advancement of Learning*, 79a
31 DESCARTES: *Discourse*, PART V, 60b / *Meditations*, VI, 99c-100d
35 LOCKE: *Human Understanding*, BK I 95b,d-121a,c passim
35 HUME: *Human Understanding*, SECT IX, DIV 83-85 487c-488c esp DIV 85 488c
38 ROUSSEAU: *Inequality*, 329a-366d
39 SMITH: *Wealth of Nations*, BK I, 7d-8a
43 MILL: *Liberty*, 293b-302c passim / *Utilitarianism*, 459b-461c passim
46 HEGEL: *Philosophy of Right*, PART III, par 187 65a-c / *Philosophy of History*, PART II, 281d
49 DARWIN: *Origin of Species*, 9b-10d; 65a-69c; 98c; 119a-d; 131c-134c esp 134c / *Descent of Man*, 287d-288c; 304b,d [fn 5]
53 JAMES: *Psychology*, 49b-50a; 68a; 78b-79a; 691a-b; 704a-737a passim, esp 704a-705a, 707b-712b, 732b-735b, 737a; 890b-897a
54 FREUD: *General Introduction*, 530d-531c; 573c-d; 588c-589a; 591d-592b; 594d-595b / *War and Death*, 757d-759d / *Civilization and Its Discontents*, 781a-c

2*d*. Natural and violent motion

7 PLATO: *Timaeus*, 463d-464b
8 ARISTOTLE: *Physics*, BK IV, CH 1 [208^{b}9-22] 287b; CH 8 [215^{a}1-13] 294c-d; BK V, CH 6 [230^{a}18-231^{a}19] 311c-312d; BK VIII, CH 4 338d-340d / *Heavens*, BK I, CH 2 [268^{b}12]-CH 3 [270^{a}13] 359d-361b; CH 7 [274^{b}30-33] 366a; [275^{b}12-29] 366d-367a; CH 7 [276^{a}8]-CH 8 [277^{b}25] 367b-369a; CH 9 [278^{b}22-279^{a}8] 370a-b; BK II, CH 13 [294^{b}31-295^{a}29] 386b-d; BK III, CH 2 391c-393b; CH 5 [304^{b}11-23] 395d-396a; CH 6 [305^{a}22-28] 396c / *Generation and Corruption*, BK II, CH 6 [333^{b}22-334^{a}9] 434c-435a / *Metaphysics*, BK V, CH 5 [1015^{b}9-16] 536a; BK IX, CH 1 [1046^{a}34-36] 571b; BK XII, CH 6 [1071^{b}33-37] 601d / *Soul*, BK I, CH 3 [406^{a}22-27] 635c
12 LUCRETIUS: *Nature of Things*, BK I [1052-1094] 14a-c; BK II [184-215] 17b-d
16 PTOLEMY: *Almagest*, BK I, 11a-b; BK III, 86b; BK IX, 270b
16 COPERNICUS: *Revolutions of the Heavenly Spheres*, BK I, 517b-520b
16 KEPLER: *Epitome*, BK IV, 929b-930b
17 PLOTINUS: *Second Ennead*, TR I, CH 8, 39d / *Sixth Ennead*, TR III, CH 26 296a-b
19 AQUINAS: *Summa Theologica*, PART I, Q 18, A 1, REP 2 104c-105c; Q 97, A 2, ANS 514c-515a; Q 105, A 4, REP 1 541c-542a; A 6, REP 1 543b-544a; PART I-II, Q 6, A 1, ANS 644d-646a; A 4, ANS and REP 2-3 647b-648a; A 5, ANS and REP 2-3 648b-649a; Q 9, A 4, REP 2 660a-d; Q 41, A 3 799c-800b
20 AQUINAS: *Summa Theologica*, PART III SUPPL, Q 75, A 3, ANS and REP 3-5 938a-939d; Q 91, A 2, ANS and REP 6 1017c-1020c
21 DANTE: *Divine Comedy*, PARADISE, I [94-142] 107b-d
23 HOBBES: *Leviathan*, PART I, 50a; PART IV, 271d
28 GILBERT: *Loadstone*, BK VI, 109a-b; 110b-d
28 GALILEO: *Two New Sciences*, FIRST DAY, 157d-158a; THIRD DAY, 200a-d; 203d; FOURTH DAY, 238a-b
30 BACON: *Novum Organum*, BK I, APH 66, 115b-c; BK II, APH 36 164a-168d; APH 48 179d-188b

2*e*. The natural and the unnatural or monstrous: the normal and the abnormal

OLD TESTAMENT: *Genesis*, 18:16-19:38 esp 19:4-9, 19:30-38 / *Exodus*, 22:19 / *Leviticus*, 18 esp 18:22-23; 20:10-24 / *Deuteronomy*, 27:21 / *Judges*, 19:22
APOCRYPHA: *Wisdom of Solomon*, 14:22-27—(*D*) OT, *Book of Wisdom*, 14:22-27
NEW TESTAMENT: *Romans*, 1:24-27 / *I Corinthians*, 5:1-5
5 SOPHOCLES: *Oedipus the King* [1298 1421] 111b-112b
6 HERODOTUS: *History*, BK III, 102d-103a; 114a-b; 122a; BK VIII, 281c
7 PLATO: *Cratylus*, 90a-91a / *Laws*, BK I, 645d-646a; BK VIII, 735c-738b
8 ARISTOTLE: *Physics*, BK II, CH 8 [199^{a}33-^{b}13] 276c-d
9 ARISTOTLE: *History of Animals*, BK III, CH 20 [522^{a}13-21] 47a-b; BK VI, CH 2 [559^{b}16-20] 86b; CH 22 [576^{a}1-2] 101c / *Generation of Animals*, BK IV, CH 3-4 308d-315b esp CH 4 [770^{b}10-24] 312b-c; CH 8 [777^{a}14-22] 319b
12 LUCRETIUS: *Nature of Things*, BK II [700-710] 23d-24a; BK V [837-854] 72a-b; [878-924] 72c-73a
18 AUGUSTINE: *Confessions*, BK III, par 15 17a-b / *City of God*, BK XXII, CH 22 606d-607a / *Christian Doctrine*, BK IV, CH 21, 692d-693c
19 AQUINAS: *Summa Theologica*, PART I-II, Q 21, A 1, REP 1-2 717a-d
23 HOBBES: *Leviathan*, PART II, 151d-152a
24 RABELAIS: *Gargantua and Pantagruel*, BK I, 5c-6b; 8c-9c; BK III, 191c-193c; BK IV, 273c-274b
25 MONTAIGNE: *Essays*, 80b-81b; 343c-344a
26 SHAKESPEARE: *3rd Henry VI*, ACT II, SC V [55-122] 82b-d; ACT V, SC VI [35-83] 103c-104a / *Richard III*, ACT I, SC I [1-31] 105b,d; SC II [1-67] 107c-108b / *Richard II*, ACT II, SC IV [7-24] 334c-d / *Julius Caesar*, ACT II, SC II 578a-579c
27 SHAKESPEARE: *Hamlet*, ACT III, SC II [406-417] 53b; SC IV [39-101] 55a-c / *Troilus and Cressida*, ACT I, SC III [75-137] 108d-109c / *Othello*, ACT I, SC II [59-81] 208b-c; SC III [58-119] 209c-210b; ACT III, SC III [228-238]

224c-d / *King Lear* 244a-283a,c esp ACT I, SC I [211–226] 246d, SC IV [283–311] 252d-253b, ACT IV, SC II [29–68] 270d-271b / *Macbeth*, ACT II, SC IV 294a-c / *Pericles*, ACT I, PROLOGUE [1]–SC I [142] 421b-423b

28 HARVEY: *Circulation of the Blood*, 305a-d

30 BACON: *Advancement of Learning*, 33b-d / *Novum Organum*, BK II, APH 29 159b-c

35 LOCKE: *Human Understanding*, BK III, CH III, SECT 17 258d-259b; CH VI, SECT 22–27 273d-276a; BK IV, CH IV, SECT 13–16 326d-328d

36 SWIFT: *Gulliver*, PART IV, 155b-157a

38 MONTESQUIEU: *Spirit of Laws*, BK XII, 87d-88a

38 ROUSSEAU: *Inequality*, 363a-366d

41 GIBBON: *Decline and Fall*, 93d-94a

46 HEGEL: *Philosophy of History*, INTRO, 183c-d

49 DARWIN: *Origin of Species*, 24a-c

51 TOLSTOY: *War and Peace*, BK XI, 525c

53 JAMES: *Psychology*, 241b-258b

54 FREUD: *Unconscious*, 433c / *General Introduction*, 530d; 570a-572d / *New Introductory Lectures*, 830d-831a

2f. The order of nature and the order of freedom: the phenomenal and the noumenal worlds; the antithesis of nature and spirit

12 LUCRETIUS: *Nature of Things*, BK II [251–293] 18b-d

31 SPINOZA: *Ethics*, PART I, PROP 26–29 365b-366c; PROP 32–33 367a-369a; PROP 36 369b; APPENDIX 369b-372d passim; PART III, 395a-d; PART IV, PROP 57, SCHOL 441a-c

42 KANT: *Pure Reason*, 93c-99a; 101b-107b; 133a-c; 164a-170d esp 164a-165c, 169c-170a / *Fund. Prin. Metaphysic of Morals*, 253a-c; 271a-c; 275b; 281c-282d; 283d-287d / *Practical Reason*, 292a-293b; 296a-d; 301d-302d; 307d-314d; 327d-329a; 331c-337a,c / *Intro. Metaphysic of Morals*, 383c-d; 386b-387a,c; 388a-d; 390b / *Judgement*, 463a-467a esp 465a c; 570b-572b esp 571c-572a; 587a-588a; 603a-b; 607c; 609b-610a

46 HEGEL: *Philosophy of Right*, PREF, 6a-7a; PART I, par 39 21d; PART III, par 187 65a-c; par 280 94d-95a; par 352 112b; ADDITIONS, 1 115a-d; 152 141c-d; 164 144c-145a; 167 145c / *Philosophy of History*, INTRO, 164b-c; 170c-172b; 178a-179c; 186b-c; 203b-206a,c; PART I, 207a-209a; 222a-224a; 236a-c; 245d-246c; 247c-d; 252a-255a; 257c-d; PART II, 268b-271c

51 TOLSTOY: *War and Peace*, EPILOGUE II, 689c-690a; 693d-694d

3. The order of nature

3a. The rationality of nature: the maxims and laws of nature

7 PLATO: *Meno*, 180a / *Phaedo*, 240d-242b / *Timaeus*, 447b-455d esp 455a-d / *Sophist*, 567a-569a / *Philebus*, 618b-619d

8 ARISTOTLE: *Physics*, BK I, CH 4 [188^a5–12] 263b; BK II, CH 8 [199^a8–$^b33$] 276b-277a / *Heavens*, BK I, CH 4 [271^a34] 362c / *Generation and Corruption*, BK II, CH 10 [336^b25–34] 438d / *Metaphysics*, BK I, CH 3 [984^b8–22] 502d; BK II, CH 2 [994^b8–16] 512d-513a / *Prophesying*, CH 2 [463^b11–15] 708a

9 ARISTOTLE: *Parts of Animals*, BK I, CH 1 [639^b12–640^a12] 161d-162b; BK III, CH 4 [665^b19–22] 193c; BK IV, CH 6 [683^a20–25] 214b / *Gait of Animals*, CH 2 [704^b12–18] 243c; CH 12 [711^a15–20] 249b / *Generation of Animals*, BK I, CH 1 [715^a25–$^b17$] 255b-d; CH 4 [717^a13–18] 257a; BK II, CH 4 [739^b19–21] 280c; CH 5 [741^b2–4] 282c; CH 6 [744^a36–745^b1] 285c-286d / *Politics*, BK I, CH 8 [1256^b8–26] 450b-c

10 GALEN: *Natural Faculties*, BK I, CH 6, 170b-c; CH 12 172d-173c esp 173c; CH 13, 175c; BK II, CH 4, 187c

12 LUCRETIUS: *Nature of Things*, BK I [146–264] 2d-4b; BK II [294–307] 18d-19a; [1077–1089] 28d; BK V [306–310] 65a

12 AURELIUS: *Meditations*, BK II, SECT 4 257b; BK IV, SECT 40 267a-b; SECT 45–46 267b-c; BK V, SECT 30 273a; BK VI, SECT 1 274a; SECT 36 277c; SECT 40 277d; BK VII, SECT 25 281c; SECT 75 285c; BK X, SECT 6–7 297a-c

16 COPERNICUS: *Revolutions of the Heavenly Spheres*, BK I, 526a-529a

16 KEPLER: *Harmonies of the World*, 1023b-1080b

17 PLOTINUS: *Third Ennead*, TR VIII 129a-136a esp CH 2–4 129b-131a / *Fourth Ennead*, TR IV, CH 13 164d-165b

18 AUGUSTINE: *Christian Doctrine*, BK II, CH 32 652b-c

19 AQUINAS: *Summa Theologica*, PART I, Q 2, A 3, ANS and REP 2 12c-14a; Q 19, A 4, ANS 111c-112c; Q 71, A 1, REP 4 367a-368b; Q 76, A 5, ANS 394c-396a; PART I-II, Q 1, A 2 610b-611b; Q 5, A 5, REP 1 640b-641a

20 AQUINAS: *Summa Theologica*, PART III, Q 9, A 4, ANS 766b-767b

21 DANTE: *Divine Comedy*, PARADISE, VIII [91–148] 117d-118c

23 HOBBES: *Leviathan*, PART I, 56d

24 RABELAIS: *Gargantua and Pantagruel*, BK III, 192b

25 MONTAIGNE: *Essays*, 80b-81b; 216c-219a esp 218c-219a; 516b-c

28 GILBERT: *Loadstone*, BK I, 12a-b; BK VI, 110d

28 GALILEO: *Two New Sciences*, FIRST DAY, 131d-132a; 135b-136b; THIRD DAY, 200a-d

28 HARVEY: *Motion of the Heart*, 285c; 302c-304a,c / *On Animal Generation*, 390b-c; 402c; 426b-429b; 447b-d; 453c-454b; 489d

29 CERVANTES: *Don Quixote*, PART I, xia

30 BACON: *Advancement of Learning*, 92c-d / *Novum Organum*, BK I, APH 10,13 107d; APH 24 108c; BK II, APH 6 139b-c; APH 43 175a-c

31 DESCARTES: *Discourse*, PART V, 54c; 55a-56a esp 55b; 59a / *Objections and Replies*, 214d-215b

(3. *The order of nature.* 3a. *The rationality of nature: the maxims and laws of nature.*)

31 SPINOZA: *Ethics*, PART I, PROP 29, SCHOL 366b-c; PROP 33, SCHOL 1-2 367c-369a; APPENDIX 369b-372d; PART III, 395a-d; PART IV, PREF 422b,d-424a

33 PASCAL: *Pensées*, 72, 184b; 75 185b-186a / *Vacuum*, 359a-365b / *Great Experiment* 382a-389b esp 388b-389a / *Weight of Air*, 405b-415b; 425a-429a

34 NEWTON: *Principles*, BK III, RULE I-III 270a 271a esp RULE I 270a / *Optics*, BK I, 409b; BK III, 528b-529a; 540a; 542a-543a

35 LOCKE: *Human Understanding*, BK IV, CH III, SECT 28-29 322a-323a

35 BERKELEY: *Human Knowledge*, SECT 29-33 418c-419a passim; SECT 62-66 425a-426a; SECT 103-109 433a-434b passim; SECT 150-151 442d-443c

35 HUME: *Human Understanding*, SECT V, DIV 44 468d-469c; SECT VI, DIV 47 470b-d; SECT VIII, DIV 64-70 478d-482c passim

38 ROUSSEAU: *Social Contract*, BK II, 397a

42 KANT: *Pure Reason*, 127a-128a; 220a-b / *Fund. Prin. Metaphysic of Morals*, 256d-257a; 264d-265a / *Judgement*, 467d-468c; 550b-551a,c; 558b-c; 559c-d; 583d-584c

45 LAVOISIER: *Elements of Chemistry*, PART I, 41b-c

45 FOURIER: *Theory of Heat*, 169a-b; 173b; 175b; 177a; 183a-b; 184a

45 FARADAY: *Researches in Electricity*, 582b-584a passim; 839b-c

46 HEGEL: *Philosophy of Right*, PREF, 6a-7a; PART III, par 146 55c-d; ADDITIONS, I 115a-d / *Philosophy of History*, INTRO, 156d-160b; 183c-d; 186d; PART IV, 361a-c

47 GOETHE: *Faust*, PART I [447-453] 13a

48 MELVILLE: *Moby Dick*, 231a

49 DARWIN: *Origin of Species*, 71a-c; 91b-92d esp 92c-d; 97a-98a,c; 243c-d

51 TOLSTOY: *War and Peace*, BK XI, 469a-470c; BK XIII, 563a-b; EPILOGUE II, 687d-688a; 693d-696d

53 JAMES: *Psychology*, 5a; 503b; 672a; 862a-866a; 870b; 873a-b; 882a-886b esp 884b-885a; 889a-890a

3b. Continuity and hierarchy in the order of nature

7 PLATO: *Timaeus*, 447b-458a / *Philebus*, 618b-619d

8 ARISTOTLE: *Categories*, CH 13 20b-d / *Topics*, BK VI, CH 10 [148^a23-38] 202b-c; *Physics*, BK VIII, CH 1 [250^b11-14] 334a / *Heavens*, BK I, CH 2 359d-360d; BK II, CH 12 383b-384c / *Generation and Corruption*, BK II, CH 10 [336^b25-34] 438d / *Metaphysics*, BK I, CH 6 505b-506b; CH 7 [988^a34-$^b5$] 506c; CH 9 508c-511c; BK XIV, CH 3 [1090^b14-21] 623b / *Soul*, BK I, CH 5 [411^a7-23] 641a-b; BK II, CH 2 [413^a20-$^b4$] 643b-c; BK III, CH 11 [433^b31-434^a9] 666d / *Sleep*, CH 1 696a-697c

9 ARISTOTLE: *History of Animals*, BK VIII, CH 1 114b,d-115b / *Parts of Animals*, BK I, CH 5 [644^b23-645^a26] 168c-169a; BK IV, CH 5 [681^a12-15] 211d; CH 10 [686^b23-35] 218b-c / *Generation of Animals*, BK II, CH 1 [731^b24-733^b17] 272a-274a

12 LUCRETIUS: *Nature of Things*, BK I [418-448] 6b-c; BK II [865-930] 26a-d; BK V [783-836] 71b-72a

12 EPICTETUS: *Discourses*, BK II, CH 8, 146a-b

12 AURELIUS: *Meditations*, BK V, SECT 8 269d-270b; SECT 16 271c-d; BK IX, SECT 9 292b-d; BK XI, SECT 18, 304b-c

17 PLOTINUS: *Second Ennead*, TR III, CH 13 46c-47b / *Third Ennead*, TR III, CH 3 93d-94c

18 AUGUSTINE: *Confessions*, BK VII, par 16-23 48c-50c / *City of God*, BK XI, CH 22 333d-334c; BK XII, CH 2-5 343c-345b; BK XIX, CH 12-17, 518c-523a

19 AQUINAS: *Summa Theologica*, PART I, Q 18, A 3 106b-107c; Q 23, A 5, REP 3 135d-137d; Q 47, A 2 257b-258c; Q 48, A 2, ANS and REP 3 260c-261b; Q 50, A 1, ANS and REP 1 269b-270a; A 4 273b-274b; Q 57, A 1, ANS 295a-d; Q 71, A 1, REP 4 367a-368b; Q 75, A 7 384d-385c; Q 76, A 3, ANS 391a-393a; A 5, REP 3-4 394c-396a; Q 77, A 2 401a-d; A 4, REP 1 403a-d; Q 108 552c-562a esp A 4 555b-d; Q 110, A 3, ANS 566d-567b; PART I-II, Q 1, A 4, REP 1 612a-613a; Q 5, A 1, REP 3 636d-637c

20 AQUINAS: *Summa Theologica*, PART III, Q 7, A 9, ANS 751d-752c

21 DANTE: *Divine Comedy*, PARADISE, I [94-142] 107b-d; XIII [52-87] 126a-b

25 MONTAIGNE: *Essays*, 218c-219a

27 SHAKESPEARE: *Troilus and Cressida*, ACT I, SC III [75-139] 108d-109c

28 HARVEY: *Motion of the Heart*, 277b-278d esp 278b-c / *On Animal Generation*, 336b-d; 400d-401a

30 BACON: *Novum Organum*, BK II, APH 30 159c-d; APH 35 162a-164a; APH 37 168d-169c; APH 41 173d-174b

32 MILTON: *Paradise Lost*, BK V [469-505] 185b-186a

33 PASCAL: *Pensées*, 119-121 195a

35 LOCKE: *Human Understanding*, BK II, CH IX, SECT 12 140c; BK III, CH VI, SECT 11-12 271b-272b; BK IV, CH XVI, SECT 12, 370c-371a

42 KANT: *Pure Reason*, 193a-200c esp 199c-200c / *Judgement*, 578d-580a esp 579b-c; 582b-c

43 FEDERALIST: NUMBER 37, 119b-d

46 HEGEL: *Philosophy of History*, INTRO, 183c-d

49 DARWIN: *Origin of Species*, 55b-62a; 63d-64d; 179b-180d; 228c-229a,c; 238b-243d esp 241b-c, 243b-d / *Descent of Man*, 340d-341d

53 JAMES: *Psychology*, 51a-52a; 95b-98a; 686b

54 FREUD: *Beyond the Pleasure Principle*, 651d-654b esp 652b-c, 653b, 654a

3c. Nature and causality

7 PLATO. *Timaeus*, 455a-b / *Philebus*, 615c-619d esp 618b-c / *Laws*, BK X, 764a-765a
8 ARISTOTLE: *Physics*, BK II 268b,d-278a,c; BK VIII, CH I 334a-336b esp [252a5-b7] 335d-336b / *Generation and Corruption*, BK I, CH 3 413c-416c; BK II, CH 9-10 436d-439c / *Soul*, BK II, CH 4 [415b8-416a18] 645d-646c
9 ARISTOTLE: *Parts of Animals*, BK I, CH I [639b 11-642b4] 161d-165d esp [642a1-b4] 165a-d
12 AURELIUS: *Meditations*, BK VI, SECT 10 274b-c; BK VII, SECT 19 281a; SECT 25 281c; SECT 75 285c
17 PLOTINUS: *Third Ennead*, TR I, CH I 78a-c / *Fourth Ennead*, TR IV, CH 32-39 175c-180a
19 AQUINAS: *Summa Theologica*, PART I, Q 2, A 3, ANS and REP 2 12c-14a; Q 18, A 3, ANS 106b-107c; PART I-II, Q 12, A 5, ANS 672a-c
21 DANTE: *Divine Comedy*, PARADISE, VIII [94-148] 118a-c; XIII [52-87] 126a-b
23 HOBBES: *Leviathan*, PART II, 113b
25 MONTAIGNE: *Essays*, 80b-81b
30 BACON: *Advancement of Learning*, 43d-46a / *Novum Organum*, BK II, APH 3-5 137c-139a; APH 17 149b-d; APH 27 157b-158d
31 DESCARTES: *Meditations*, IV, 90a-b / *Objections and Replies*, 214d-215b
31 SPINOZA: *Ethics*, PART I, PROP 29 366b-c; PROP 33 367b-369a; PROP 36 369b; APPENDIX 369b-372d; PART II, PROP 7 375a-c; PART III, 395a-d; PART IV, PREF 422b,d-424a; PROP 57, SCHOL 441a-c
33 PASCAL: *Pensées*, 119-121 195a
34 NEWTON: *Principles*, BK III, RULE I-II 270a
35 HUME: *Human Understanding*, SECT VI, DIV 47 470b-d; SECT VIII, DIV 67 480c-481a
36 STERNE: *Tristram Shandy*, 502b-503a
38 MONTESQUIEU: *Spirit of Laws*, BK I, 1a-b
38 ROUSSEAU: *Social Contract*, BK II, 397a
42 KANT: *Pure Reason*, 140b,d-143a; 187c-189a / *Practical Reason*, 339a / *Judgement*, 467a-470c; 557c-558b; 562d-564c; 568c-d; 581a-582c
45 FARADAY: *Researches in Electricity*, 582b-584a passim
49 DARWIN: *Descent of Man*, 284c-285c esp 285b-c
51 TOLSTOY: *War and Peace*, BK IX, 344a-b; BK XI, 469a-470c; BK XIII, 563a-b; EPILOGUE I, 646c-647b; 650b-c; EPILOGUE II, 678b-c; 679b-c; 687d-688a; 691d; 693b; 694d-696d
53 JAMES: *Psychology*, 824a-825a; 856b-858a

3c(1) The distinction between the regular and the chance event: the uniformity of nature

7 PLATO: *Timaeus*, 455a-b
8 ARISTOTLE: *Prior Analytics*, BK I, CH 13 [32b 4-23] 48b-d / *Posterior Analytics*, BK I, CH 4 [73b10-16] 100c-d; CH 30 119d; BK II, CH 11 [94b39-95a9] 129c-d / *Physics*, BK II, CH 4-6 272c-275a; CH 8 [198b16-199a8] 275d-276b; [199a33-b26] 276c-277a / *Heavens*, BK II, CH 8 [289b22-28] 381b / *Generation and Corruption*, BK II, CH 6 [333a35-b20] 434b-c / *Metaphysics*, BK V, CH 30 [1025a13-29] 547a-c; BK VI, CH 2 [1026b27-1027a18] 549a-b; CH 3 549c-d; BK XI, CH 8 593a-d
9 ARISTOTLE: *Parts of Animals*, BK I, CH I [640a 18-33] 162c-d; [641b13-31] 164c-d / *Generation of Animals*, BK IV, CH 4 [770b10-24] 312b-c / *Rhetoric*, BK I, CH 10 [1369a31-b5] 612c-d
12 LUCRETIUS: *Nature of Things*, BK II [251-293] 18b-d
12 AURELIUS: *Meditations*, BK VI, SECT 46 278c-d; BK VII, SECT 1 279b; SECT 49 282d; BK IX, SECT 9 292b-d; SECT 28 293d-294a; BK X, SECT 27 299d; BK XI, SECT 27 306b
17 PLOTINUS: *Fourth Ennead*, TR IV, CH 32-39 175c-180a
19 AQUINAS: *Summa Theologica*, PART I, Q 2, A 3, ANS 12c-14a; Q 22, A 2, REP 1 128d-130d; Q 57, A 3, ANS 297b-298a; Q 103, A 1, ANS 528b-529a; A 5, REP 1 531b-532b; A 7, REP 2 533b-d; Q 116, A 1 592d-593d; A 3 594c-595a
20 AQUINAS: *Summa Theologica*, PART I-II, Q 84, A 1, REP 3 174b-175a
28 HARVEY: *On Animal Generation*, 412c-413a
30 BACON: *Novum Organum*, BK II, APH 33 161b-d; APH 36-37 164a-169c
31 SPINOZA: *Ethics*, PART I, PROP 29 366b-c; APPENDIX 369b-372d; PART III, 395a-d; PART IV, PREF 422b,d-424a
34 NEWTON: *Principles*, BK III, RULE I-II 270a
35 LOCKE: *Human Understanding*, BK III, CH VI, SECT 36-37 279a-b; BK IV, CH III, SECT 28-29 322a-323a passim
35 BERKELEY: *Human Knowledge*, SECT 29-33 418c-419a passim; SECT 57 423d-424a; SECT 60-66 424b-426a passim; SECT 103-109 433a-434b passim; SECT 146 442a-b; SECT 150-151 442d-443c
35 HUME: *Human Understanding*, SECT VI, DIV 47 470b-d; SECT VIII, DIV 64-70 478d-482c passim, esp DIV 67 480c-481a; SECT X, DIV 90, 491a-b
42 KANT: *Fund. Prin. Metaphysic of Morals*, 264d-265a / *Judgement*, 558b-c; 566a-b
46 HEGEL: *Philosophy of History*, INTRO, 183c-d
47 GOETHE: *Faust*, PART II [10,198-233] 248b-249b
49 DARWIN: *Origin of Species*, 65a / *Descent of Man*, 593d
51 TOLSTOY: *War and Peace*, EPILOGUE I, 646c-647b
53 JAMES: *Psychology*, 864a
54 FREUD: *General Introduction*, 454b-c

3c(2) The determinations of nature distinguished from the voluntary or free

7 PLATO: *Phaedo*, 240d-242b
8 ARISTOTLE: *Physics*, BK VIII, CH I [251a28-b1] 334d-335a / *Metaphysics*, BK IX, CH 2 571c-572a; CH 5 573a-c; CH 7 [1048b35-1049a18] 574c-d

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9 ARISTOTLE: *Rhetoric*, BK I, CH 10 [1368^{b}28–1369^{b}27] 612a-613a

12 LUCRETIUS: *Nature of Things*, BK II [251–293] 18b-d

19 AQUINAS: *Summa Theologica*, PART I, Q 2, A 3, REP 2 12c-14a; Q 6, A 1, REP 2 28b-d; Q 18, A 3, ANS 106b-107c; Q 19, A 3, REP 3 110b-111c; A 4 111c-112c; Q 22, A 2, REP 4 128d-130d; Q 41, A 2, ANS 218c-219d; A 6, ANS 223b-224a; Q 46, A 1, REP 9–10 250a-252d; Q 47, A 1, REP 1 256a-257b; Q 59, A 1, ANS 306c-307b; Q 70, A 3, ANS and REP 4–5 365b-367a; Q 78, A 1, REP 3 407b-409a; Q 83, A 1, REP 3 436d-438a; Q 103, A 1, REP 1,3 528b-529a; Q 105, A 1, REP 2 538d-539c; PART I–II, Q 1, A 2 610b-611b; A 3, ANS and REP 3 611b-612a; A 5, ANS 613a-614a; Q 6, A 1 644d-646a; Q 8, A 1, ANS 655b-656a; Q 9, A 4, REP 1 660a-d; Q 10, A 1 662d-663d; Q 11, A 2, ANS 667b-d; Q 12, A 5, ANS 672a-c; Q 13, A 6 676c-677b; Q 17, AA 8–9 692a-693d; Q 21, A 1, ANS and REP 1–2 717a-d

20 AQUINAS: *Summa Theologica*, PART I–II, Q 49, A 4, ANS and REP 1–2 5a-6a; Q 50, A 1, ANS and REP 1 6a-7b; A 2, ANS 7c-8a; A 3 8b-9a; A 5, REP 1,3 10b-d; Q 51, A 1 12b-13c; Q 55, A 1, ANS and REP 5 26b-27a; Q 72, A 3, ANS and REP 1–2 113b-114a

21 DANTE: *Divine Comedy*, PURGATORY, XVII [82]-XVIII [75] 79b-80c; PARADISE, I [94–142] 107b-d; XXVI [124–138] 147a-b

23 HOBBES: *Leviathan*, PART I, 61a-b

25 MONTAIGNE: *Essays*, 218c-219a

28 HARVEY: *On Animal Generation*, 456c-458a passim

31 DESCARTES: *Discourse*, PART V, 60b

31 SPINOZA: *Ethics*, PART I, APPENDIX 369b-372d; PART III, 395a-d; PART IV, PROP 57, SCHOL 441a-c

35 HUME: *Human Understanding*, SECT VIII, DIV 64–72 478d-483c passim

38 ROUSSEAU: *Inequality*, 337d-338a

42 KANT: *Pure Reason*, 140b,d-143a; 164a-171a esp 164a-165c / *Fund. Prin. Metaphysic of Morals*, 264d-265a; 275b; 276a-277a; 279b,d-287d esp 282b-283d, 285c-286a / *Practical Reason*, 296a-d; 319c-321b; 331c-337a,c / *Intro. Metaphysic of Morals*, 386d-387a,c / *Judgement*, 463a-467a; 571c-572a

46 HEGEL: *Philosophy of Right*, PART III, par 194 66c-d; ADDITIONS, 1 115a-d; 152 141c-d / *Philosophy of History*, INTRO, 171b-c; 178a-179c; 186b-c; PART I, 207b-c; 236a-c; 247c-d

49 DARWIN: *Descent of Man*, 288b

51 TOLSTOY: *War and Peace*, EPILOGUE II, 688a-694d

53 JAMES: *Psychology*, 84a-94b esp 90b-93a; 291a-295b esp 291a-b; 387b-388a; 704b-706b esp 706b; 820b-825a

54 FREUD: *Origin and Development of Psycho-Analysis*, 13c / *General Introduction*, 453b-467b esp 454b-c, 462d; 486c-488c esp 486d

3c(3) Teleology in nature: the operation of final causes

7 PLATO: *Phaedo*, 241b-242b / *Timaeus*, 447d-448a; 455a-b; 465d-466a

8 ARISTOTLE: *Posterior Analytics*, BK II, CH 11 [94^{b}26–95^{a}9] 129c-d / *Physics*, BK I, CH 9 [192^{a}16–24] 268b-c; BK II, CH 1 [193^{b}12–19] 269d-270a; CH 2 [194^{a}27–^{b}13] 270d-271a; CH 8–9 275d-278a,c / *Heavens*, BK II, CH 12 383b-384c / *Generation and Corruption*, BK II, CH 6 [333^{a}35–^{b}20] 434b-c / *Meteorology*, BK IV, CH 12 493d-494d / *Metaphysics*, BK I, CH 2 [982^{a}4–11] 500d; CH 7 [988^{b}6–15] 506c-d; CH 9 [992^{a}29–34] 510c; BK II, CH 2 [994^{b}8–16] 512d-513a; BK III, CH 2 [996^{a}22–36] 514d-515a; BK V, CH 4 [1014^{b}34–1015^{a}10] 535b; BK XII, CH 7 [1072^{b}1–4] 602c; CH 10 [1075^{a}12–^{b}16] 605d-606c / *Soul*, BK II, CH 4 [415^{b}15–22] 645d-646a; CH 8 [420^{b}16–23] 652a; BK III, CH 9 [432^{b}21–26] 665b-c; CH 12–13 667a-668d passim / *Sleep*, CH 2 [455^{b}13–28] 698b-c / *Prophesying*, CH 2 [463^{b}11–15] 708a

9 ARISTOTLE: *Parts of Animals*, BK I, CH 1 [639^{b}12–640^{a}12] 161d-162b; [641^{b}11–642^{b}4] 164c-165d; CH 5 [645^{a}23–26] 169a; BK II–IV 170a-229d passim, esp BK II, CH 1 [646^{a}25–^{b}27] 170b-d, BK III, CH 2 [663^{b}22–23] 191b, BK IV, CH 2 [677^{a}15–19] 206d-207a / *Gait of Animals*, CH 2 [704^{b}12–18] 243c; CH 8 [708^{a}9–21] 246c-d; CH 12 249b-d / *Generation of Animals*, BK I, CH 1 [715^{a}1–18] 255a-b; CH 4–13 257a-260b passim; BK II, CH 5 [741^{b}2–4] 282c; CH 6 [742^{a}16–^{b}17] 283b-d; [744^{a}37–745^{b}5] 285c-286d; BK III, CH 4 296b-c; BK IV, CH 3 [767^{b}6–16] 309a; BK V, CH 1 [778^{a}16–^{b}19] 320a-321a; CH 8 [788^{b}22–789^{b}15] 330c-331a,c / *Politics*, BK I, CH 2 [1252^{b}30–1253^{a}1] 446a-b; CH 8 [1256^{b}8–26] 450b-c

10 GALEN: *Natural Faculties* 167a-215d esp BK I, CH 6, 170b-c, CH 10 171b-172b, CH 12 172d-173c, CH 13, 174d-175c, BK II, CH 3 185a-186d, CH 4, 187c, BK III, CH 1 199a-c, CH 3 200a-201a

12 LUCRETIUS: *Nature of Things*, BK I [1022–1037] 13c-d; BK II [1052–1063] 28b-c; BK IV [823–857] 55a-b; BK V [76–90] 62a-b; [156–234] 63a-64a

12 AURELIUS: *Meditations*, BK V, SECT 8 269d-270b; BK VI, SECT 40 277d

16 COPERNICUS: *Revolutions of the Heavenly Spheres*, BK I, 511b

16 KEPLER: *Epitome*, BK IV, 846b-847a; 857b-860b; 863b-887a passim; 913a-b; 915b-916a; 925b-928a; 932a-933a / *Harmonies of the World*, 1023b-1080b esp 1049b-1050a

17 PLOTINUS: *Second Ennead*, TR II, CH 1 40a-41a / *Fifth Ennead*, TR VIII, CH 7 242d-243c

18 AUGUSTINE: *City of God*, BK XI, CH 22 333d-334c; BK XII, CH 4-5 344b-345b; BK XIX, CH 12-13, 518c-520a; BK XXII, CH 24, 610c-611c
19 AQUINAS: *Summa Theologica*, PART I, Q 2, A 3, ANS and REP 2 12c-14a; Q 5, A 4, ANS 25d-26c; Q 6, A 1, REP 2 28b-d; Q 18, A 3, ANS 106b-107c; Q 19, A 1, ANS 108d-109c; A 4, ANS 111c-112c; Q 22 127c-132b; Q 23, A 1, ANS and REP 1-2 132c-133b; Q 44, A 4, REP 3 241a-d; Q 59, A 1, ANS 306c-307b; Q 60, A 5 313b-314c; Q 65, A 2, ANS 340b-341b; Q 70, A 3, ANS 365b-367a; Q 76, A 5, ANS 394c-396a; Q 78, A 1, REP 3 407b-409a; Q 82, A 4, ANS 434c-435c; Q 85, A 3, REP 1 455b-457a; Q 91, A 3 486b-487d; Q 92, A 1, REP 1 488d-489d; Q 98, A 1, ANS 516d-517c; Q 103 528a-534b; PART I-II, Q 1, A 2 610b-611b; A 3, ANS and REP 3 611b-612a; A 6, ANS 614a-c; A 8 615a-c; Q 2, A 5, REP 3 618d-619c; Q 8, A 1, ANS 655b-656a; Q 12, A 5, ANS 672a-c; Q 21, A 1, ANS and REP 1-2 717a-d
20 AQUINAS: *Summa Theologica*, PART III SUPPL, Q 75, A 3, ANS and REP 4 938a-939d
21 DANTE: *Divine Comedy*, PURGATORY, XVIII [19-39] 80a-b; PARADISE, I [94-142] 107b-d
23 HOBBES: *Leviathan*, PART I, 50a; PART IV, 271d
28 HARVEY: *Motion of the Heart*, 271b-273a; 285c; 302c-304a,c / *Circulation of the Blood*, 309b-d / *On Animal Generation*, 349a-b; 355c-d; 390b-c; 401b; 402c; 418b-c; 426b-429b passim; 439c-440a; 442d-443c; 447a-b; 453c; 454b-c; 461a-c; 462c-d
30 BACON: *Advancement of Learning*, 43a-d; 45a-46a / *Novum Organum*, BK I, APH 48 110d-111a
31 DESCARTES: *Meditations*, IV, 90a-b / *Objections and Replies*, 214d-215b
31 SPINOZA: *Ethics*, PART I, APPENDIX 369b-372d; PART IV, PREF 422b,d-424a
32 MILTON: *Paradise Lost*, BK V [469-505] 185b-186a
33 PASCAL: *Pensées*, 72, 184b; 75 185b-186a
34 NEWTON: *Principles*, BK III, GENERAL SCHOL, 371a / *Optics*, BK III, 528b-529a
35 LOCKE: *Human Understanding*, BK II, CH I, SECT 15 124d-125b esp 125b
35 BERKELEY: *Human Knowledge*, SECT 60-66 424b-426a passim; SECT 107 433d-434a
35 HUME: *Human Understanding*, SECT V, DIV 44, 469b-c; SECT XI, DIV III 501b-c
36 STERNE: *Tristram Shandy*, 229b-230a
42 KANT: *Pure Reason*, 127a-128a; 187a-190a; 205b-209b; 220a-b; 239a-240b / *Fund. Prin. Metaphysic of Morals*, 256d-257a / *Judgement*, 467d-470b; 473a-474b; 523c-d; 550a-613a,c esp 550a-562a,c, 568c-570b, 575b-578a, 587a-588a
46 HEGEL: *Philosophy of History*, INTRO, 157b-c; 161d-162a
49 DARWIN: *Origin of Species*, 40c-42a esp 41c-d; 60b-61d; 95d-97a; 217d-218a; 243b-d / *Descent of Man*, 474a-b; 593d
51 TOLSTOY: *War and Peace*, EPILOGUE I, 646c-647b; 650b-c
53 JAMES: *Psychology*, 4a-6b; 671b [fn 1]
54 FREUD: *Narcissism*, 401b / *Instincts*, 415b / *Beyond the Pleasure Principle*, 651d-654c

3c(4) Divine causality in relation to the course of nature: the preservation of nature; providence; miracles

OLD TESTAMENT: *Genesis*, 1-2; 7-8; 11:1-9; 17:15-21; 18:9-15; 21:1-8 / *Exodus*, 3-4; 7-12; 13:20-22; 14:19-31; 15:22-25; 16:1-17:7 / *Numbers*, 12; 16-17; 20:1-13; 21:4-9; 22:21-34 / *Joshua*, 3; 6:1-20; 10:12-14—(*D*) *Josue*, 3; 6:1-20; 10:12-14 / *I Samuel*, 12:14-20—(*D*) *I Kings*, 12:14-20 / *I Kings*, 17-19—(*D*) *III Kings*, 17-19 / *Nehemiah*, 9—(*D*) *II Esdras*, 9 / *Job*, 12:7-10; 36:24-42:2 / *Psalms*, 8; 18:6-17; 19:1-6; 65; 78; 89:8-12; 104; 106-107; 136; 147:7-20—(*D*) *Psalms*, 8; 17:7-18; 18:1-7; 64; 77; 88:9-13; 103; 105-106; 135; 146:7-147:20 / *Jeremiah*, 10:12-13; 31:35—(*D*) *Jeremias*, 10:12-13; 31:35 / *Amos*, 5:8; 8:8-12 / *Jonah*—(*D*) *Jonas*
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7 PLATO: *Timaeus*, 465d-466a / *Sophist*, 577d-578b / *Laws*, BK X 757d-771b passim
8 ARISTOTLE: *Physics*, BK I, CH 9 [192^{a}16-24] 268b-c; BK II, CH 4 [196^{b}5-7] 273a; CH 7 [198^{a}22-29] 275b-c; [198^{a}35-^{b}3] 275c / *Heavens*, BK I, CH 4 [271^{a}34] 362c; BK II, CH 12 383b-384c / *Generation and Corruption*, BK II, CH 10 [336^{b}25-34] 438d; [337^{a}15-23] 439a-b / *Metaphysics*, BK XII, CH 10 [1075^{a}12-24] 605d-606a / *Soul*, BK II, CH 4 [415^{a}22-^{b}8] 645c-d / *Prophesying*, CH 2 [463^{b}11-15] 708a
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12 EPICTETUS: *Discourses*, BK I, CH 6 110c-112b; CH 16 121d-122d; BK III, CH 17 191d-192a; CH 22 195a-201a; BK IV, CH 3 224b-d
12 AURELIUS: *Meditations*, BK II, SECT 4 257b; BK VII, SECT 75 285c; BK IX, SECT 28 293d-294a; BK XII, SECT 14 308c
14 PLUTARCH: *Nicias*, 435b-d
16 KEPLER: *Harmonies of the World*, 1049b-1050a; 1061a

(*3c. Nature and causality.* 3c(4) *Divine causality in relation to the course of nature: the preservation of nature; providence; miracles.*)

18 AUGUSTINE: *City of God*, BK XI, CH 22 333d-334c; BK XII, CH 4-5 344b-345b; BK XIX, CH 12-14, 518c-520c; BK XXI, CH 4-8 562a-568d

19 AQUINAS: *Summa Theologica*, PART I, Q 2, A 3, ANS and REP 2 12c-14a; Q 3, A 1, ANS 14b-15b; A 2, ANS 15c-16a; A 8, ANS and REP 1-2 19d-20c; Q 8 34c-38c; Q 14, A 8 82c-83b; Q 18, A 3, ANS 106b-107c; Q 19, A 4 111c-112c; A 5, REP 2-3 112d-113c; Q 22 127c-132b; Q 23, A 1, ANS and REP 1-2 132c-133b; QQ 44-46 238a-255d esp Q 45, A 8 249b-250a; Q 51, A 3, REP 3 277a-278c; Q 52, A 2 279b-280a; Q 56, A 2, ANS 292d-294a; Q 60, A 1, REP 2-3 310b-311a; A 5 313b-314c; Q 75, A 1, REP 1 378b-379c; Q 76, A 5, REP 1 394c-396a; Q 83, A 1, REP 3 436d-438a; Q 84, A 4, REP 1 444d-446b; A 5 446c-447c; Q 89, A 1, REP 3 473b-475a; A 8, REP 2 479c-480c; QQ 90-92 480c-491d; Q 94, A 3, ANS 504a-505a; QQ 103-119 528a-608d esp QQ 103-105 528a-545b, Q 116 592d-595c; PART I-II, Q 1, A 2 610b-611b; A 4, ANS and REP 1 612a-613a; A 8 615a-c; Q 2, A 5, REP 3 618d-619c; Q 6, A 1, REP 3 644d-646a; Q 10, A 4, ANS and REP 1-2 665d-666a,c; Q 12, A 5, ANS 672a-c; Q 17, A 8, REP 2 692a-c

20 AQUINAS: *Summa Theologica*, PART I-II, Q 85, A 6 182d-184a; Q 113, A 10 369c-370b; PART III SUPPL, Q 83, A 3 978c-980d; Q 91 1016a-1025b

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22 CHAUCER: *Knights Tale* [2987-3040] 209a-210a / *Tale of Man of Law* [4883-4924] 242b-243b / *Prioress's Tale* [13,572-599] 394b-395a / *Second Nun's Tale* [16,001-021] 471a-b

23 HOBBES: *Leviathan*, PART I, 51d-52a; PART II, 149c-d; 160b-c; PART III, 183d-187a passim; 188a-191a; 241c-242a

25 MONTAIGNE: *Essays*, 344a

26 SHAKESPEARE: *1st Henry IV*, ACT III, SC I [1-63] 450a-d

28 HARVEY: *On Animal Generation*, 390d-391a; 406b-407b; 416b-c; 426a-429b; 443a-c; 490d-493a

30 BACON: *Advancement of Learning*, 2c-d; 4b-c / *Novum Organum*, BK I, APH 23 108c; APH 124 133c-d

31 DESCARTES: *Discourse*, PART V, 55d-56a / *Meditations*, IV, 90a-b / *Objections and Replies*, 214d-215b

31 SPINOZA: *Ethics*, PART I, PROP 16-18 362a-363c; PROP 24-29 365a-366c; PROP 33 367b-369a; APPENDIX 369b-372d; PART II, PROP 7 375a-c; PART IV, PREF 422b,d-424a

32 MILTON: *Samson Agonistes* [667-709] 354a-355a

33 PASCAL: *Pensées*, 77 186a; 619-641 284b-290a; 643-644 290b-291b; 803-856 328b-341b passim, esp 804 329a; 876 345a

34 NEWTON: *Principles*, BK III, GENERAL SCHOL, 369b-371a / *Optics*, BK III, 542a-543a

35 LOCKE: *Human Understanding*, BK IV, CH III, SECT 28-29 322a-323a; CH XVI, SECT 13 371a-b

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35 HUME: *Human Understanding*, SECT VII, DIV 54-57 474b-475d; SECT X-XI 488d-503c passim

40 GIBBON: *Decline and Fall*, 189b-191a esp 190c-191a; 206b-d; 292d-296b esp 295c-d; 409a-b; 465d-467b

41 GIBBON: *Decline and Fall*, 227d-228a

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44 BOSWELL: *Johnson*, 126b-c

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49 DARWIN: *Origin of Species*, 239c-d; 243b-d

51 TOLSTOY: *War and Peace*, BK V, 219b-d; EPILOGUE II, 675a-677b; 680b-c; 684b-d

52 DOSTOEVSKY: *Brothers Karamazov*, BK II, 21d-22b; BK VI, 168a-c; BK VII, 171a-177b passim

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7 PLATO: *Cratylus*, 104d-105b / *Meno*, 174a-179b / *Euthyphro*, 196a-b / *Gorgias*, 252d-253b / *Theaetetus*, 514b-515a / *Sophist*, 577c-d / *Laws*, BK X, 763c-d / *Seventh Letter*, 809c-810b

8 ARISTOTLE: *Posterior Analytics*, BK II, CH 1-10 122b,d-128d; CH 13 131b-133c / *Physics*, BK II, CH 1 [193^{a}30-^{b}7] 269c-d; CH 2 [194^{a}11-14] 270c; CH 9 [200^{a}30-^{b}10] 277d-278a,c / *Meteorology*, BK IV, CH 12 493d-494d / *Metaphysics*, BK II, CH 2 [994^{b}16-27] 513a-b; BK III, CH 2 [996^{a}18-^{b}26] 514d-515b; BK VI, CH 1 [1025^{b}28-1026^{a}6] 547d-548a; BK VII, CH 4-6 552b-555a; CH 10-12 558a-562a; CH 15 563c-564c; BK VIII, CH 2-3 566d-568d; CH 6 569d-570d; BK XI, CH 7 [1064^{a}19-28] 592c / *Soul*, BK I, CH 1 631a-632d; BK II, CH 1-3 642a-645b passim; BK III, CH 4 [429^{b}10-23] 661d-662a; CH 6 [430^{b}26-31] 663b-c

9 ARISTOTLE: *Parts of Animals*, BK I, CH 1 [641^{a}14-33] 163d-164b; CH 2-3 165d-167d

19 AQUINAS: *Summa Theologica*, PART I, Q 2, A 2, REP 2 11d-12c; Q 3, A 3, ANS 16a-d; A 5, ANS 17c-18b; Q 14, A 11, REP 1 84c-85c; Q 17, A 3 102d-103c; Q 29, A 1, REP 4 162a-163b; A 2, REP 3 163b-164b; Q 44, A 1, REP 1 238b-239a; Q 86, A 1 461c-462a; PART I-II, Q 1, A 3, ANS and REP 3 611b-612a; A 5, ANS 613a-614a
20 AQUINAS: *Summa Theologica*, PART II-II, Q 4, A 1, ANS 402a-403d; PART III, Q 2, A 1, ANS 710a-711c; A 2, ANS 711d-712d
23 HOBBES: *Leviathan*, PART I, 59d; PART IV, 270d-271a
31 DESCARTES: *Rules*, VIII, 14b-c / *Objections and Replies*, 126b-127c; 160d
31 SPINOZA: *Ethics*, PART I, DEF 4 355b; PROP 8, SCHOL 2 356d-357d; PROP 10 358a-b; PART II, DEF 2 373b
35 LOCKE: *Human Understanding*, BK II, CH XXIII, SECT 3-10 204c-206d esp SECT 6 205b-c; CH XXXI, SECT 6-13 240d-243b; CH XXXII, SECT 18 246c-247a; SECT 24 247c-d; BK III, CH III, SECT 12-20 257b-260a; CH VI 268b-283a; CH IX, SECT 11-17 287d-290a; CH X, SECT 17-21 295d-297b; BK IV, CH VI, SECT 4-16 331d-336d passim; CH XII, SECT 9 360d-361b
35 BERKELEY: *Human Knowledge*, SECT 101-102 432c-433a
38 ROUSSEAU: *Inequality*, 341c-342b
53 JAMES: *Psychology*, 185a-b; 669a-671a

4b. Nature in relation to diverse types of science: the theoretic and the practical sciences; natural philosophy or science, mathematics, and metaphysics

7 PLATO: *Timaeus*, 447a-477a,c
8 ARISTOTLE: *Prior Analytics*, BK I, CH 13 [32^b 4-23] 48b-d / *Topics*, BK I, CH 14 [105^b19-29] 149c / *Physics*, BK I, CH 2 [184^b25-185^a19] 259c-260a; CH 7 [191^a8-11] 266d; CH 9 [192^a 33-$^b2$] 268c-d; BK II, CH 2 270a-271a; CH 9 [200^a30-$^b9$] 277d-278a,c; BK III, CH 1 [200^b 11-24] 278a; CH 5 [204^a34-$^b3$] 282b-c; BK IV, CH 1 [208^a27-33] 287a; BK VIII, CH 1 [250^b11-251^a8] 334a-c; CH 3 [253^a32-$^b6$] 337c / *Heavens*, BK I, CH 1 [268^a1-7] 359a; CH 5 [271^b1-18] 362c-d; BK III, CH 1 [298^a24-299^a17] 389b,d-390c; CH 7 [306^a1-18] 397b-c / *Metaphysics*, BK I, CH 8 [989^b21-990^a8] 507d-508a; CH 9 [992^a29-$^b9$] 510c-d; BK II, CH 3 [995^a15-20] 513d; BK VI, CH 1 547b,d-548c; BK VII, CH 11 [1037^a10-21] 560d; BK XI, CH 3 [1061^a29-$^b12$] 589c-d; CH 4 589d-590a; CH 7 592b-593a / *Soul*, BK I, CH 1 [403^a25-$^b19$] 632b-d / *Sense and the Sensible*, CH 1 [436^a16-$^b2$] 673b / *Youth, Life, and Breathing*, CH 27 [480^b21-31] 726d
9 ARISTOTLE: *Parts of Animals*, BK I, CH 1 161a-165d esp [639^b34-640^a10] 162b; BK I, CH 5 [644^b21]-BK II, CH 1 [646^a13] 168c-170a
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18 AUGUSTINE: *City of God*, BK VIII, CH 2 265b-266a; CH 4 266d-267c; CH 5-6, 268b-269c; BK XI, CH 25 336b-d / *Christian Doctrine*, BK II, CH 29 650d-651c
19 AQUINAS: *Summa Theologica*, PART I, Q 1, A 1, REP 2 3b-4a; Q 7, A 3, ANS 32c-33c; Q 14, A 16, ANS 90b-91b; Q 84, A 8, ANS 450b-451b; Q 85, A 1, REP 2 451c-453c
20 AQUINAS: *Summa Theologica*, PART I-II, Q 84, A 1, REP 3 174b-175a
23 HOBBES: *Leviathan*, PART I, 71c-d; 72a-d; PART II, 163a; PART IV, 268c-d
28 HARVEY: *On Animal Generation*, 331c-332a
30 BACON: *Advancement of Learning*, 33b-34b; 40a-c; 42a-c; 43a-d / *Novum Organum*, BK I, APH 3 107b; APH 66 114d-115c
31 DESCARTES: *Discourse*, PART V, 54c; 55b; PART VI, 61b-62c; 66d-67a / *Meditations*, IV, 90a-b / *Objections and Replies*, 215a-b
31 SPINOZA: *Ethics*, PART I, APPENDIX 369b-372d; PART II, PROP 7, SCHOL 375b-c; PART III, 395a-d; PART IV, PREF 422b,d-424a
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35 LOCKE: *Human Understanding*, BK III, CH VI 268b-283a passim, esp SECT 9 270d-271a; BK IV, CH VI, SECT 4-16 331d-336d passim; CH XII, SECT 7-13 360b-362d; CH XXI 394d-395a,c esp SECT 1-2 394d
35 BERKELEY: *Human Knowledge*, SECT 30-32 418c-419a; SECT 58-66 424a-426a passim, esp SECT 59 424b, SECT 66 426a; SECT 101-109 432c-434b
35 HUME: *Human Understanding*, SECT VIII, DIV 64, 478d-479a; DIV 65 479b-480a esp 479c
38 ROUSSEAU: *Inequality*, 341c-342b passim
39 SMITH: *Wealth of Nations*, BK V, 335b-337a
42 KANT: *Pure Reason*, 5a-13d esp 5d-9a; 15c-16c; 190c-191a / *Fund. Prin. Metaphysic of Morals*, 253a-d; 271a-c; 283d-284d / *Practical Reason*, 291a-292c; 297a-c; 300d [fn 1]; 307d-314d esp 310a-b; 329a-337a,c esp 329b-d / *Intro. Metaphysic of Morals*, 388a-d / *Judgement*, 461a-475d esp 463a-467a, 474b-475d; 578a-b; 596c-598b
43 MILL: *Representative Government*, 327b,d-328b
46 HEGEL: *Philosophy of Right*, ADDITIONS, 1 115a-d / *Philosophy of History*, PART II, 263d-265c; PART IV, 361a-c
50 MARX: *Capital*, 190d [fn 2]
51 TOLSTOY: *War and Peace*, EPILOGUE II, 694c-d
53 JAMES: *Psychology*, 862a-866a; 882a-886a

4c. Nature as an object of history

9 ARISTOTLE: *History of Animals*, BK I, CH 6 [491^a5-26] 12c-13a
18 AUGUSTINE: *Christian Doctrine*, BK II, CH 29 650d-651c
23 HOBBES: *Leviathan*, PART I, 71c-d; 72a-d
28 HARVEY: *On Animal Generation*, 338a-c; 383d; 473a-b
30 BACON: *Advancement of Learning*, 32d-34b

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38 ROUSSEAU: *Inequality*, 333a-334a,c
43 MILL: *Representative Government*, 328a-b
44 BOSWELL: *Johnson*, 20b-c
46 HEGEL: *Philosophy of History*, INTRO, 156b-164d; 178a-179b; 190b-201a,c; PART I, 246b-c
48 MELVILLE: *Moby Dick*, ixa-xxa; 221b-224b; 243b-249a; 267a-271a; 335a-341
49 DARWIN: *Origin of Species*, 152a-166a,c esp 165d-166a,c; 241d-243a
50 MARX: *Capital*, 181d [fn 3]
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5. Nature or the natural as the standard of the right and the good

5a. Human nature in relation to the good for man

5 SOPHOCLES: *Philoctetes* [895-903] 190a
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7 PLATO: *Symposium*, 155d-157a / *Gorgias*, 282b-284b / *Republic*, BK I, 309b-310b; BK IV, 350a-355c; BK VIII, 410a-c; BK IX, 421a-425b; BK X, 439b-441a,c / *Timaeus*, 474b-476b / *Sophist*, 557b-d / *Philebus*, 619d-620b
8 ARISTOTLE: *Physics*, BK VII, CH 3 [246^{a}10-248^{a}8] 329c-330d / *Metaphysics*, BK I, CH 1-2 499a-501c passim
9 ARISTOTLE: *Ethics*, BK I, CH 7 [1097^{b}23-1098^{a}17] 343a-c; CH 9 [1099^{b}18-24] 345a-b; BK II, CH 1 348b,d-349b; BK III, CH 5 [1114^{a}32-^{b}25] 360c-d; BK V, CH 7 [1134^{b}18-1135^{a}4] 382c-d; BK VI, CH 13 394b-d; BK X, CH 7 431d-432c passim / *Politics*, BK I, CH 2 [1253^{a}2-38] 446b-d; CH 5-6 447d-449b; BK III, CH 6 [1278^{b}15-29] 475d-476a; BK VII, CH 3 [1325^{b}2-13] 529c-d; CH 13 [1332^{a}39-^{b}10] 537a-b; CH 14 [1333^{a}16-23] 538a
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12 EPICTETUS: *Discourses*, BK I, CH 6 110c-112b; CH 11 116d-118d; CH 15 121c-d; BK III, CH 1-3 175a-180a; CH 10 185d-187a; BK IV, CH 6-7 230b-235a
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18 AUGUSTINE: *Confessions*, BK III, par 15 17a-b / *City of God*, BK XII, CH 3 343d-344b; BK XIII, CH 3 361a-c; BK XIV, CH 11-13 385d-388c; BK XIX, CH 1-4 507a-513c
19 AQUINAS: *Summa Theologica*, PART I, Q 63, A 9, REP 1-2 333b-d; Q 118, A 2, REP 5 601c-603b; PART I-II, QQ 1-5 609a-643d; Q 10, A 1 662d-663d
20 AQUINAS: *Summa Theologica*, PART I-II, Q 49, A 2, ANS and REP 1 2b-4a; Q 51, A 1, ANS 12b-13c; Q 54, A 3 24c-25b; Q 63, A 1 63a-64a; Q 71, A 2 106d-107c; Q 85 178b-184a; Q 91, A 2 208d-209d; Q 94 220d-226b; PART II-II, Q 182, A 1, ANS 620b-621d; Q 183, A 1 625a-626a
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38 ROUSSEAU: *Inequality*, 329a-366d / *Political Economy* 367a-385a,c passim / *Social Contract*, BK II, 399b-c
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43 MILL: *Liberty*, 293b-302c passim / *Utilitarianism*, 448a-455a; 459b-464d passim; 464d-465c
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7 PLATO: *Republic*, BK II, 316c-319a; BK VIII, 409d-410c

8 ARISTOTLE: *Topics*, BK III, CH 2 [118a6–16] 164d-165a
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20 AQUINAS: *Summa Theologica*, PART I–II, Q 94, A 5, REP 3 224d-225d
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46 HEGEL: *Philosophy of Right*, ADDITIONS, 128 137b-c / *Philosophy of History*, PART II, 267a-b
50 MARX: *Capital*, 16d-17a; 71d-72c; 81b-c; 147d-148a; 251a-255a esp 253a-255a; 377b [fn 3]
54 FREUD: *Civilization and Its Discontents*, 787d-788a

5c. The naturalness of the state and political obligation

7 PLATO: *Republic*, BK II, 316c-319c
9 ARISTOTLE: *Ethics*, BK V, CH 7 [1134b18–1135a 4] 382c-d / *Politics*, BK I, CH 2 445b-446d; CH 5–6 447d-449b; CH 8 [1256b20–26] 450c; BK III, CH 6 [1278b15–29] 475d-476a; CH 17 [1287b37–39] 486c; BK V, CH 9 [1309b14–1310a2] 511d-512b; BK VII, CH 3 [1325b2–13] 529c-d; CH 4 [1326a29–b2] 530b-c; CH 14 [1332b13–41] 537b-d
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31 SPINOZA: *Ethics*, PART IV, PROP 35–37 433b-436a; APPENDIX, IX 448a; XII 448b
32 MILTON: *Paradise Lost*, BK VI [171–188] 200a
35 LOCKE: *Civil Government*, CH II–IX 25d-54d passim, esp CH VII–VIII 42b-53c
38 MONTESQUIEU: *Spirit of Laws*, BK I, 1c-2d; 3b-c; BK VI, 39b
38 ROUSSEAU: *Inequality*, 329a-366d / *Political Economy*, 368d-369b / *Social Contract*, BK I–II, 387b,d-400c; BK III, 419c-d; 423a-c passim; 424d
42 KANT: *Science of Right*, 402c; 433c-434c; 435c-436b; 437c-d / *Judgement*, 586b-d
43 DECLARATION OF INDEPENDENCE: [1–15] 1a-b
43 FEDERALIST: NUMBER 51, 163b-c
43 MILL: *Representative Government*, 327b,d-328d / *Utilitarianism*, 459b-461c passim
46 HEGEL: *Philosophy of Right*, PART III, par 280 94d-95a / *Philosophy of History*, INTRO, 164b-c
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5d. The natural as providing a canon of beauty for production or judgment

7 PLATO: *Republic*, BK X, 427c-431b / *Laws*, BK II, 660a-661a
8 ARISTOTLE: *Physics*, BK VII, CH 3 [246a10–b19] 329c-330a
9 ARISTOTLE: *Parts of Animals*, BK I, CH 5 [645a 4–26] 168d-169a / *Politics*, BK III, CH 11 [1281b10–15] 479b-c; BK V, CH 9 [1309b23–30] 512a; BK VIII, CH 5 [1340a23–28] 545d / *Rhetoric*, BK III, CH 2 [1404b2–26] 654c-655a / *Poetics*, CH 4 [1449a19–27] 683b; CH 7 685b-c; CH 24 [1459b31–1460a4] 695d-696a
12 AURELIUS: *Meditations*, BK III, SECT 2 259d-260a
20 AQUINAS: *Summa Theologica*, PART I–II, Q 49, A 2, REP 1 2b-4a
21 DANTE: *Divine Comedy*, PURGATORY, X [22–96] 67c-68b esp [28–33] 67d; XII [10–72] 70b-71a
22 CHAUCER: *Physician's Tale* [11,941–972] 366b-367a
25 MONTAIGNE: *Essays*, 93b-d; 151b
27 SHAKESPEARE: *Hamlet*, ACT III, SC II [1–40] 49a-b
29 CERVANTES: *Don Quixote*, PART I, 184a-187c; 189d-193a; PART II, 212d-215b
33 PASCAL: *Pensées*, 29 176a; 32 176a-b; 134 196a
40 GIBBON: *Decline and Fall*, 494d-495a,c
42 KANT: *Judgement*, 476a-479d esp 479a-d; 494c-495a,c; 495c-d; 502d-503b; 521b-524b esp 523c-d; 525a-527b; 546b-c; 557a-558b
46 HEGEL: *Philosophy of History*, PART II, 263d-265c
48 MELVILLE: *Moby Dick*, 277a-b; 335b
49 DARWIN: *Descent of Man*, 576b-577d
53 JAMES: *Psychology*, 186b

6. Nature in religion and theology

6*a*. The personification and worship of nature

OLD TESTAMENT: *Deuteronomy*, 4:16–19; 17:3 / *II Kings*, 23:4–5,11—(*D*) *IV Kings*, 23:4–5,11 / *Jeremiah*, 8:1–2; 10:2—(*D*) *Jeremias*, 8:1–2; 10:2 / *Ezekiel*, 8:16—(*D*) *Ezechiel*, 8:16 / *Zephaniah*, 1:4–5—(*D*) *Sophonias*, 1:4–5

APOCRYPHA: *Wisdom of Solomon*, 13:1–9; 15:18–19—(*D*) OT, *Book of Wisdom*, 13:1–9; 15:18–19

NEW TESTAMENT: *Romans*, 1:23–25

6 HERODOTUS: *History*, BK I, 31a-b; 48c

7 PLATO: *Phaedrus*, 116b-d

8 ARISTOTLE: *Metaphysics*, BK XII, CH 8 [1074^b 1–14] 604d-605a

12 LUCRETIUS: *Nature of Things*, BK I [1–43] 1a-d; BK II [581–660] 22b-23b; BK V [783–836] 71b-72a

18 AUGUSTINE: *City of God*, BK IV, CH 8 192c-193b

27 SHAKESPEARE: *King Lear*, ACT I, SC II [1–22] 247d-248a; SC IV [297–311] 253a-b; ACT III, SC II [1–25] 262d-263a

34 NEWTON: *Optics*, BK III, 543b-544a

40 GIBBON: *Decline and Fall*, 81d; 93b-c

42 KANT: *Judgement*, 504b-505a

46 HEGEL: *Philosophy of History*, INTRO, 196d-197c; PART I, 220c-221a; 228a-c; 244c-245a; 252a-255a; PART II, 263d-265c; 268b-271c; PART III, 291d-292a

47 GOETHE: *Faust*, PART I [430–521] 12b-15a; [1063–1121] 26b-28a; [3217–3239] 79a-b; PART II [4679–4727] 116b-117b

48 MELVILLE: *Moby Dick*, 367a-372a

50 MARX: *Capital*, 35b-c

54 FREUD: *New Introductory Lectures*, 876d-877b

6*b*. Nature and grace in human life

NEW TESTAMENT: *John*, 1:12–13; 3; 6:22–27 / *Romans* esp 8:1–17 / *I Corinthians*, 2–3; 12; 15:42–50 / *II Corinthians*, 4:15–16; 5:14–17; 7:1; 10:2–4; 12:7–9 / *Galatians*, 5:3–4,19–26 / *Ephesians* passim, esp 2:1–6, 4:17–24 / *Colossians* passim, esp 3:9–10 / *James*, 4:1–10 / *II Peter*, 1:3–4 / *I John* passim, esp 2:15–16, 3:1, 5:4–5

18 AUGUSTINE: *Confessions*, BK V, par 16 31c-d; BK VII, par 27 51d-52c / *City of God*, BK XV, CH 1–3 397b,d-399c; CH 22 416a-c; BK XVI, CH 26 438c-439a; CH 37 444b-445a; BK XVIII, CH 11 477c-d; BK XXI, CH 15 572c-573b

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22 CHAUCER: *Parson's Tale*, par 13 504b-505a; par 19, 508a

23 HOBBES: *Leviathan*, PART III, 192c-193c; PART IV, 250c-251b; 253b-254a

25 MONTAIGNE: *Essays*, 212a-215a; 267c-268a; 294a-b

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33 PASCAL: *Provincial Letters*, 29b; 147b; 155b / *Pensées*, 434 248a-250a; 520–525 263b-264a; 643–646 290b-291b; 670 295a-b; 675 296b-297a

37 FIELDING: *Tom Jones*, 38d

42 KANT: *Pure Reason*, 238b

46 HEGEL: *Philosophy of History*, PART IV, 354a

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Terms or discussions relevant to the conception of nature as the totality of things or as the whole of sensible reality, *see* EXPERIENCE 1; GOD 11; ONE AND MANY 1b; WORLD 3–3b.

Other considerations of the distinction between nature and art, *see* ART 2a–2c, 9a; and for the distinction between the natural and the conventional in language, law, and justice, *see* CUSTOM AND CONVENTION 1; JUSTICE 6b, 10a; LANGUAGE 2a–2b; LAW 2, 4f; SIGN AND SYMBOL 1a–1f; SLAVERY 2, 3.

For: The distinction between the state of nature and the state of civil society, and for the problem of the naturalness of the family and the state, *see* FAMILY 1; LAW 4b; LIBERTY 1b; NECESSITY AND CONTINGENCY 5b–5d; STATE 1–1a, 3b–3c; WAR AND PEACE 1.

Another consideration of the distinction between nature and nurture, *see* HABIT 1, 3d.

Other treatments of natural and violent motion, *see* CHANGE 7b; MECHANICS 5e(2)–5f.

The distinction between the natural, the voluntary, and the free, *see* CAUSE 3; LIBERTY 4b; WILL 3a(1)–3a(2), 6c.

The distinction between the natural and the supernatural, *see* GOD 6b–6c(4), 10; HABIT 5e(1)–5e(3); HAPPINESS 7c; KNOWLEDGE 6c(5); RELIGION 6f; THEOLOGY 2; VIRTUE AND VICE 2b, 8d–8e; WISDOM 1a, 1c.

Discussions bearing on the rationality or order of nature, *see* MIND 10a; RELATION 5b; WORLD 6c; and for the special problem of continuity or hierarchy in the order of nature, *see* ANIMAL 1b–1c; EVOLUTION 4a, 4c; LIFE AND DEATH 2, 3a; MAN 1a, 1c; WORLD 6b.

The reign of causality and the uniformity of nature, *see* CHANCE 2a; FATE 5; NECESSITY AND CONTINGENCY 3c; WILL 5c; and for the problem of final causes in nature, *see* CAUSE 6.

Other considerations of divine causality in relation to the order of nature, *see* CAUSE 7b–7d; GOD 7e.

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The nature of man as a standard in ethics, economics, and politics, *see* CITIZEN 8; DEMOCRACY 4b; DESIRE 3a; GOOD AND EVIL 3a; NECESSITY AND CONTINGENCY 5c; SLAVERY 2d, 3d; STATE 3b(1); WEALTH 10b.

The theological discussion of nature and grace in human life, *see* GOD 7d; HABIT 5e(1); HAPPINESS 7a; MAN 9b(1)–9b(2); SIN 3a, 3c, 7; VIRTUE AND VICE 8b.

ADDITIONAL READINGS

Listed below are works not included in *Great Books of the Western World*, but relevant to the idea and topics with which this chapter deals. These works are divided into two groups:

I. Works by authors represented in this collection.
II. Works by authors not represented in this collection.

For the date, place, and other facts concerning the publication of the works cited, consult the Bibliography of Additional Readings which follows the last chapter of *The Great Ideas.*

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Chapter 61: NECESSITY AND CONTINGENCY

INTRODUCTION

THE basic meaning of the words *necessity* and *contingency* is made known to us by the fact that we can substitute for them the familiar words *must* and *may*. "Is there any being which *must* exist?" asks the same question as, "Does anything exist of *necessity*?" "Are all things of the sort which *may* or *may not* exist, or are they divided into those which *must* exist and those which *may* or *may not* exist?" means the same as, "Is everything *contingent* in being or do some things exist *necessarily* and some *contingently*?"

The great issues which involve the opposition between necessity and contingency are concerned with more than questions about being or existence. They also deal with cause and effect, judgment and reasoning, happenings or events, the actions and decisions of men, human history and social institutions. In each case, the problem is formulated by such questions as: Does everything which happens in nature or history happen necessarily? Is everything contingent? Or are some events necessary and others contingent? Is the relation between cause and effect a necessary connection, or do some causes produce their effects contingently?

Are there some propositions which the mind *must* affirm because their truth is necessary? Or are all propositions such that they *may* or *may not* be true, our affirmation or denial of them being contingent upon factors which lie outside the propositions themselves? In reasoning, does the conclusion always follow by necessity from the premises if it follows at all? And are all conclusions which follow necessarily from their premises necessarily true, or may some be necessary truths and some contingent?

Are men necessitated in all their acts, or are certain actions contingent upon the exercise of their will and in this sense free? Does human liberty consist merely in the freedom of a man's action from the external necessity of coercion or constraint; or does it consist in a man's being able to choose whatever he chooses, freely rather than necessarily? Is every act of the will necessarily determined, or are some acts of the will acts of free choice?

Are certain human institutions, such as the family and the state, necessary? Are men compelled to live socially or can they choose the solitary life? If domestic and political society are necessary, are the ways in which they are organized also necessary, or are such things as monogamy in the family and monarchy in the state contingent? Are such things as war, slavery, poverty, and crime necessary features of human society, or are they the result of circumstances which are contingent and which can therefore be remedied?

These questions indicate the range of subject matters in which issues are raised concerning the necessary and the contingent. They also indicate that the other ideas to which necessity and contingency have relevance are too manifold to permit an enumeration of all the other chapters in which some aspect of necessity and contingency is discussed. This chapter stands to the others as a kind of summary of the theme of necessity and contingency. It assembles in one place the various topics, problems, or subject matters which traditionally engage the human mind with that theme.

Two chapters alone demand specific mention as, in a sense, being concerned with ideas that seem to be inseparable from the notions of necessity and contingency. They are FATE and CHANCE. Though they stand opposed to one another as the necessary to the contingent, they do not cover every application of this opposition. They are largely concerned with necessity and contingency in the realm of change, in the causation of the events of na-

ture or the happenings of history. They do not deal, at least not directly, with necessity and contingency in being or existence, in thought or knowledge, in human acts and social institutions.

THE NECESSARY AND the contingent do not seem to be opposed in exactly the same way in each of the four areas—namely, being, change, thought, and action—in which they raise basic issues.

In the sphere of human action, for example, writers like Hobbes, Locke, and Hume substitute the notion of liberty for contingency as the opposite of necessity. The meaning of necessity alters in consequence. Liberty, according to these authors, implies the absence not of all necessity, but only of external necessity in the form of compulsion. An internal necessity, they think, is quite compatible with complete freedom.

Hume therefore dismisses the supposed conflict between liberty and necessity as groundless. "By liberty," he writes, "we can only mean *a power of acting or not acting, according to the determinations of the will*; that is, if we choose to remain at rest, we may; if we choose to move, we also may. Now this hypothetical liberty is universally allowed to belong to everyone who is not a prisoner and in chains.... Liberty, when opposed to necessity, not to constraint, is the same thing with chance; which is universally allowed to have no existence."

Similarly, Locke defines liberty as a man's power "to do or forbear doing any particular action, according as its doing or forbearance has the actual preference in the mind, which is the same thing as to say, according as he himself wills it." Liberty in this sense, he adds, belongs not to the will, the acts of which are necessitated by their causes, but to the man who is under no external necessity, in the form of compulsion, to do what is contrary to his will or to refrain from doing what he wills.

Hobbes seems to go even further along the same line of thought. Holding that liberty is destroyed only by external impediments to action, he uses "necessity" in a sense which makes it consistent with liberty, or inseparable from it. "The actions which men voluntarily do," he says, "because they proceed from their will, proceed from *liberty*; and yet, because every act of man's will, and every desire, and inclination, proceeds from some cause, and that from another cause, in a continual chain (whose first link is in the hand of God, the first of all causes), they proceed from *necessity*."

Yet if what Hobbes means by "external impediments" represents the same nullification of liberty which others call "compulsion" or "restraint," then there is at least one meaning of "necessity" which stands opposed to liberty. Enumerating the meanings of "necessary," Aristotle lists as one sense "the compulsory or compulsion, *i.e.*, that which impedes or tends to hinder, that which is contrary to impulse or purpose . . . or to the movement which accords with purpose and with reasoning." It is in a related sense that Plato opposes necessity to intelligence. Necessity represents for him those resistant factors in nature which the mind of man or God must overcome, or persuade to give way, if reason or purpose is to prevail in the coming to be of anything. In this sense, necessity like chance is opposed to purpose. Blind necessity and blind chance both exclude the operation of final causes; both exclude the possibility that the events of nature are directed toward an end.

WE SEEM TO HAVE found almost universal agreement on the point that there is one sense in which necessity conflicts with liberty. But this agreement does not affect the issue whether liberty is more than freedom from external coercion. There are those, like Aquinas, who think that man's will is free in its acts of choice with regard to "particular contingent means." Aquinas agrees that what is called "necessity of coercion" is "altogether repugnant to the will." The same act cannot be absolutely coerced and voluntary. But the question is whether the will's acts are necessarily determined by causes operating within the sphere of the will itself.

Aquinas names two modes of necessity which operate *within* the sphere of the will and restrict its freedom. One is the natural necessity that the will should desire an ultimate end, such as the complete good or happiness. If a man wills any object at all as the ultimate goal of his life, he cannot will anything other or less than that which can satisfy all his natural desires. The

other necessity is that which concerns the use of those means which are absolutely indispensable conditions for reaching the end being sought. This may be an absolute or a conditional necessity. When the end is itself necessary (*e.g.*, happiness), whatever means are necessary thereto necessitate the will absolutely. When a certain end is not necessary, but has been freely adopted (*e.g.*, a certain destination), and when *only one* means is available (*e.g.*, one mode of transportation), then it becomes necessary to choose that means. But this necessity is conditional since it remains in force only on the condition that we continue to have a certain end in view—an end we can relinquish at any time as freely as we adopted it.

According to Aquinas, this leaves a great many acts of the will which are in no way necessitated: those in which there is no necessary connection between the means and a given end, and those in which a given means is necessary only on the condition that a certain end is sought. If the end need not be sought, then the will is free not to choose the means of achieving it; and if, when the end is necessarily sought, alternative means are available, then the will is free to choose one rather than another.

According to this theory, liberty consists in the absence of internal as well as external necessity. Furthermore, liberty seems to be related positively to contingency, insofar as freedom of choice depends on a contingent connection between means and ends, or upon the contingent, *i.e.*, the conditional, character of the end. On the other hand, those who hold that the will is never free from internal necessity insist that the act of choice, even with respect to contingent means, is always caused. If being caused is equivalent to being determined—which seems to be the view of Hobbes, Locke, and Hume—then whether or not we know what causes a particular choice, our wills are so determined that we could not have chosen otherwise.

THE PROBLEM OF the freedom of the will in relation to the causes which determine its acts is considered in the chapter on WILL. The foregoing discussion suffices here for the purpose of throwing light on the meaning of necessity. If now we shift from human action to the realm of becoming, change, or motion, we face the question of the relation between necessity and causation in its most general form.

In the realm of nature the alternatives to necessity are referred to as "chance" and as "contingency." The significance of these alternatives depends on the theory of causation. According to one opinion, every effect is necessarily determined by its causes, and every cause necessarily produces certain effects. Given the causal chain of past events leading up to the present, every future event is necessarily determined. Nothing that ever happens could happen otherwise. Nothing happens contingently or by chance. This theory of causation is accordingly a doctrine of universal necessity or absolute determinism in the realm of change.

"In nature," writes Spinoza, "there is nothing contingent, but all things are determined from the necessity of the divine nature to exist and act in a certain manner." Though nothing which exists or happens is contingent, "God alone exists from the necessity of His own nature and acts alone from the necessity of His own nature." The divine necessity is therefore different from the necessity of everything else which follows from the divine nature. One is the necessity of freedom or self-determination, the other the necessity of compulsion, or determination by another. "That thing is called free," says Spinoza, "which exists from the necessity of its own nature alone, and is determined to action by itself alone. That thing, on the other hand, is called necessary, or rather compelled, which by another is determined to existence and action in a fixed and prescribed manner."

Hume's statement that there is "no such thing as *Chance* in the world," would appear to agree with Spinoza's denial of contingency. But Hume also seems to deny the perception of any necessary connection between cause and effect. This is not to say that events happen without cause, but only that "our ignorance of the real cause of any event has the same influence on the understanding" as if nothing were necessarily determined by its causes.

"We are never able," Hume thinks, "to discover any power or necessary connexion, any quality, which binds the effect to the cause,

and renders the one an infallible consequence of the other. . . . One event follows another; but we never can observe any tie between them. They seem *conjoined*, but never *connected*. . . . Our idea, therefore, of necessity and causation arises entirely from the uniformity observable in the operations of nature, where similar objects are constantly conjoined together, and the mind is determined by custom to infer the one from the appearance of the other. These two circumstances form the whole of that necessity, which we ascribe to matter. Beyond the constant *conjunction* of similar objects, and the consequent *inference* from one to the other, we have no notion of any necessity or connexion."

But the question remains whether in the order of nature itself particular events are necessarily determined or happen contingently. The fact that we may be ignorant of real necessities does not, as Hume seems to admit, imply their non-existence. Our saying it is only probable that the sun will rise tomorrow may reflect our inadequate knowledge of causes rather than a real indeterminacy in the order of nature. On the other hand, to say as Hume does that chance has no place in nature, may mean only that "nothing exists without a cause of its existence," rather than that whatever happens is necessarily determined by its causes.

As INDICATED IN the chapter on CHANCE, two things must be distinguished here: the absolutely uncaused—the spontaneous or fortuitous—and the contingently caused, or that which depends upon the coincidence of a number of independent causes. A given condition may be necessary to produce a certain result, as, for example, oxygen may be necessary for combustion. But by itself it may not be sufficient for the production of that effect. If the maxim, "nothing exists without a cause of its existence," requires a cause or causes adequate to produce the effect, then the maxim is equivalent to the principle of sufficient reason. Whenever two or more causes, each of which may be necessary, are not sufficient in separation, the existence of the effect depends upon their combination; and the effect is contingent if the required combination of causes is itself not necessarily caused.

The issue concerning contingency in nature thus seems to be more sharply stated when there is no reference to our knowledge or ignorance of causes. On this issue, Aristotle and Spinoza appear to be more clearly opposed to one another than Hume is to either.

If things do not take place of necessity, "an event," according to Aristotle, "might just as easily not happen as happen; for the meaning of the word 'fortuitous' with regard to present or future events is that reality is so constituted that it may issue in either of two opposite directions." For example, "a sea-fight must either take place tomorrow or not, but it is not necessary that it should take place tomorrow, neither is it necessary that it should not take place, yet it is necessary that it either should or should not take place tomorrow." Though Aristotle holds that "one of the two propositions in such instances must be true and the other false," he also insists that "we cannot say determinately that this or that is false, but must leave the alternative undecided."

Aristotle's view with regard to propositions about future particular events is that our judgments cannot be either true or false, not because of insufficient knowledge on our part, but because future particulars are in themselves always contingent. Nothing in the nature of things or causes—existent in the past or present—necessarily determines them to happen. They will occur only if independent causes happen to coincide. Since these causes are independent—not determined to combination by their natures—the coincidence will be a matter of chance, not of necessity.

This theory of contingency in the realm of change—involving an affirmation of the real existence of contingent events—raises problems for the theologian concerning God's knowledge and will. Does the fact that nothing happens contrary to God's will imply that whatever happens happens necessarily? Aquinas answers that "God wills some things to be done necessarily, some contingently. . . . Therefore, to some effects, He has attached necessary causes that cannot fail; but to others defectible and contingent causes, from which arise contingent effects . . . it being His will that they should happen contingently."

Similarly, the fact that God knows all things

infallibly does not seem to Aquinas to be inconsistent with the real contingency of some things. He explains that "whoever knows a contingent effect in its causes only, has merely a conjectural knowledge of it." But "God knows all contingent things not only as they are in their causes, but also as each one of them is actually in itself. . . . Hence it is manifest that contingent things are infallibly known by God, inasmuch as they are subject to the divine sight in their presentiality; yet they are future contingent things in relation to their own causes."

This has a bearing on the difference between human and divine apprehension of future contingent things. "Things reduced to actuality in time," Aquinas declares, "are known by us successively in time, but by God they are known in eternity, which is above time. Whence to us they cannot be certain, since we know future contingent things only as contingent futures; but they are certain to God alone, Whose understanding is in eternity above time. Just as he who goes along the road does not see those who come after him; whereas he who sees the whole road from a height sees at once all those travelling on it. Hence," Aquinas continues, "what is known by us must be necessary, even as it is in itself; for what is in itself a future contingent cannot be known by us. But what is known by God must be necessary according to the mode in which it is subject to the divine knowledge . . . but not absolutely as considered in its proper causes." It does not follow, therefore, that *everything known by God must necessarily be*; for that statement, according to Aquinas, "may refer to the thing or to the saying. If it refers to the thing, it is divided and false; for the sense is, *Everything which God knows is necessary.* If understood of the saying, it is composite and true, for the sense is, *This proposition, 'that which is known by God is,' is necessary.*"

With regard to human knowledge, Aquinas makes another distinction in answering the question whether man can have scientific or certain knowledge of contingent things. If, as Aristotle seems to hold, the objects of knowledge are necessary, not contingent things, then the realm of contingency belongs to opinion, conjecture, or probability. Insofar as the particular events of nature are contingent, they cannot be objects of scientific knowledge. But, according to Aquinas, "contingent things can be considered in two ways: either as contingent or as containing some element of necessity, since every contingent thing has in it something necessary; for example, that Socrates runs is in itself contingent; but the relation of running to motion is necessary, for it is necessary that Socrates moves if he runs."

The contingency that Socrates *may* or *may not* run does not alter the hypothetical necessity that *if* he runs, he *must* move. In its concern with contingent things, natural science is concerned only with such hypothetical necessities. Unlike physics, other sciences may deal with absolutely necessary things. That the objects of mathematics are of this sort seems to be an opinion shared by James and Kant, Hume and Descartes, Plato and Aristotle. But they do not agree on whether the necessities of mathematics belong to reality or have only ideal existence, *i.e.*, whether they exist apart from or only in the human mind. This issue is connected with another major issue concerning necessity and contingency, namely, whether any reality has necessary existence.

AS WE HAVE SEEN, those who discuss necessity and contingency in the domain of human acts and natural events seem to construe these alternatives differently, according as they conceive liberty and chance in terms of different theories of causation. With regard to being or real existence, however, there seems to be a common understanding of the alternatives, even among those who do not agree that God alone is a necessary being because they think that this world is also determined to exist as a necessary consequence of God's existence.

In the preceding discussions, one meaning of contingency has repeatedly appeared. The contingent is that which can be otherwise. "That which cannot be otherwise is necessarily as it is," writes Aristotle, "and from this sense of 'necessary' all its other meanings are somehow derived." This insight is sometimes expressed by the statement that the opposite of the necessary is the impossible, whereas the contingent—which is neither necessary nor impossible—includes contrary possibilities.

In logical analysis what is called the "modal-

ity of necessity" is attributed to judgments the contradictories of which are self-contradictory; *e.g.*, if the proposition 'the whole is *not* greater than any of its parts' represents an impossible judgment, then the contradictory proposition 'the whole *is* greater than any of its parts' represents a necessary judgment. In contrast, as Hume points out, "*that the sun will not rise tomorrow* is no less intelligible a proposition, and implies no more contradiction than the affirmation *that it will rise.*" These two propositions represent contrary possibilities. No matter which turns out to be true, the event could have been otherwise.

In logical analysis some complication seems to arise from the fact that the necessary has two opposites: the impossible on the one hand, and the possible or contingent on the other. This is usually clarified by the recognition that the possible is the opposite of the impossible as well as of the necessary. In that sense of "possible" which excludes only the impossible, the necessary is, of course, possible, for what is necessary cannot be impossible. But in that sense of "possible" which implies contrary possibilities, the possible excludes the necessary as well as the impossible.

"From the proposition 'it may be' it follows," according to Aristotle, "that it is not impossible, and from that it follows that it is not necessary; it comes about therefore that the thing which must necessarily be need not be; which is absurd. But again, the proposition 'it is necessary that it should be' does not follow from the proposition 'it may be,' nor does the proposition 'it is necessary that it should not be.' For the proposition 'it may be' implies a two-fold possibility, while, if either of the two former propositions is true, the twofold possibility vanishes. For if a thing may be, it may also not be, but if it is necessary that it should be or that it should not be, one of the two alternatives will be excluded. It remains, therefore, that the proposition 'it is not necessary that it should not be' follows from the proposition 'it may be.' For this is true also of that which must necessarily be."

Of the same thing we can say that it *may* be and that it *may not* be; but we cannot say of the same thing both that it *may* be and that it *must* be, or that it *may not* be and that it *cannot* be. As Aristotle traces the implications of these modes of 'to be,' we see that *may-be* implies *may-not-be*, which contradicts *must-be*; and similarly that *may-not-be* implies *may-be*, which contradicts *cannot-be.*

When we pass from the analysis of propositions or judgments to the consideration of being or existence, the situation is simpler. Since the impossible is that which cannot exist, whatever does exist must either be necessary or possible. Here the necessary and the possible are generally understood to exclude one another. The necessary is that which *cannot* not be, the possible that which *can* not be.

IN SPITE OF THIS common understanding of the alternatives, there are basic differences among the authors of the great books in regard to the analysis or demonstration of necessary being.

Aristotle, for example, tends to identify the possible with the perishable—with that which both comes into being and passes away. Those substances are necessary, in contrast, which are not subject to generation and corruption. Holding that the matter of the celestial bodies differs from that of terrestrial bodies with respect to the potentiality for substantial change, Aristotle seems to regard the heavenly bodies as necessary beings, eternal in the sense of always existing, even though changeable in regard to place, *i.e.*, subject to local motion. The changing things of this earth are all contingent in being, for the mutability to which their matter inclines them includes coming to be and passing away.

This analysis of necessity and contingency in terms of matter's potentialities leads to another conception of necessary being—that of a totally immutable being which has necessary existence because it lacks matter entirely and, since it consists of form alone, is purely actual. Whether or not there are for Aristotle substances other than the prime mover which are necessary because they are immaterial beings, he attributes pure actuality only to that one necessary being which is an *unmoved* mover.

Aquinas seems to adopt both of Aristotle's senses of "necessary being." He treats the celestial bodies and the angels as having necessity to the extent that they are immutable. But their immutability is limited in his opinion to the

fact that they are by nature imperishable—the celestial bodies because of their matter; the angels because they are simple substances, not composed of matter and form. Since they are creatures they cannot be altogether immutable. "All creatures," Aquinas writes, "before they existed, were possible"—and in this sense contingent as regards their being, not necessary. "As it was in the Creator's power to produce them before they existed in themselves," he continues, "so likewise is it in the Creator's power when they exist in themselves to bring them to nothing." Furthermore, at every moment of their existence, their contingent being depends upon God's power. God preserves them in being, Aquinas says, "by ever giving them existence," for "if He took away His action from them, all things would be reduced to nothing."

In the strict sense then of "necessary being," no creature, but only God, the uncreated being, is truly a necessary being—because in God alone existence is identical with essence. Only a being whose very essence it is to exist is incapable of not existing; only such a being is necessary in the sense of being purely actual. All created things must be contingent, for if in their case to exist belonged to their very natures, God could not have created them by causing their natures to exist, nor when they did exist would His power be necessary to sustain them in being.

Where Aquinas defines God's necessity in terms of the *identity* of essence and existence, Descartes and Spinoza tend to conceive God as necessary because his essence is such that his existence *follows from* it. The difference may affect the meaning with which it is said that God is uncaused or that God is self-caused. "If its existence is caused," Aquinas writes, "nothing can be the sufficient cause of its own existence." According to Descartes, to say that God is "cause of His own existence . . . merely means that the inexhaustible power of God is the cause or reason why he needs no cause."

Descartes' position seems to be that that which is self-caused in the sense of having its existence determined by its own nature or essence, is also uncaused in the sense that its existence is not caused by anything outside itself. "Existence," he writes, "is involved in the essence of an infinite being, no less than the equality of its angles to two right angles is involved in that of a triangle." But though this suggests the notion of God's existence following from His essence, Descartes also says that "in God existence is not distinguished from essence."

For Descartes as for Aquinas the basic point remains that that which does not depend for its being upon any external cause, exists necessarily. Descartes, furthermore, associates the necessary existence of an independent being with that being's infinity or perfection of nature. That which is conceived as infinite or perfect cannot be conceived as lacking existence. "The notion of possible or contingent existence," he says, "belongs only to the concept of a limited thing."

Like Descartes, Spinoza conceives God as the only infinite and immutable being which exists necessarily in the sense of being "that whose essence involves existence." But unlike him Spinoza also attributes necessity in another sense to every finite and mutable thing which God causes to exist; for in his view, God not only exists necessarily but, acting from the necessity of His own nature, God also necessitates whatever follows as a consequence of His action. No other world than this is possible. "Things could be produced by God," Spinoza writes, "in no other manner and in no other order than that in which they have been produced." Furthermore, since whatever is in God's power "necessarily follows from it, and consequently exists necessarily," it is impossible for this world not to have existed. The existence of this particular world is as inseparable from God's existence as God's own existence is inseparable from His essence or nature.

In the tradition of western thought, there is, perhaps, no deeper theological issue than that which opposes the freedom of God's will to the necessity of God's acting according to His nature; and which, in consequence, sets the possibility of other worlds (or even of no world at all) against the necessity that, if God exists, this particular world inevitably follows.

Taking the other side on both points, Aquinas, for example, argues that "since the goodness of God is perfect, and can exist without other things inasmuch as no perfection can

accrue to Him from them, it follows that His willing things apart from Himself is not absolutely necessary." As for the particular features of this world, Aquinas says that "since God does not act from natural necessity" nor from a will that is "naturally or from necessity determined" to the things which exist, it follows that "in no way at all is the present course of events produced by God from any necessity, so that other things could not happen. . . . Wherefore, we must simply say that God can do other things than those He has done." Other, and even better, worlds than this are possible, for "God could make other things, or add something to the present creation; and then there would be another and a better universe."

Nor does the Christian theologian admit that the divine nature is subject to any necessity. "We do not put the life of God or the foreknowledge of God under necessity," writes Augustine, "if we should say that it is necessary that God should live forever, and foreknow all things; as neither is His power diminished when we say that He cannot die or fall into error—for this is in such a way impossible to Him, that if it were possible for Him, He would be of less power. But assuredly He is rightly called omnipotent, though He can neither die nor fall into error. For He is called omnipotent on account of His doing what He wills, not on account of His suffering what He wills not; for if that should befall him, He would by no means be omnipotent. Wherefore, He cannot do some things for the very reason that He is omnipotent."

ONE OTHER TRADITIONAL issue is raised by the conception of God as a necessary being; or, more strictly, as the only necessary being in the sense of having a nature which involves existence. It is formed by opposite views of the validity of the so-called "ontological" or *a priori* argument for God's existence.

Both Descartes and Spinoza argue, like Anselm and others before them, that since God cannot be conceived as not existing, it is impossible in fact for God not to exist. Those who reject such reasoning do not deny that it is unintelligible or self-contradictory to think of God as merely possible rather than necessary, *i.e.*, as requiring a cause outside Himself in order to exist. Kant, for example, admits that existence must be included in the conception of God as *ens realissimum*—the most real and perfect being. But he denies that the real existence of the object so conceived is implied by the logical necessity of the conception itself.

This amounts to saying that it is possible for a being we cannot conceive except as existing, not to exist. Aquinas seems to make the same critical point when he says that even if everyone understood by the word "God" something than which nothing greater can be conceived, and therefore a being necessarily existing, still it would not follow that "he understands that what the word signifies actually exists, but only mentally."

Stated in its most general form, the problem is whether that which is inconceivable by the human mind is impossible in reality; or whether that which is logically necessary, or necessary in thought, is also necessary in fact or existence. However that issue is resolved, it must be noted that among the so-called *a posteriori* demonstrations of God's existence, or arguments from the existence of certain effects to the existence of their cause, one mode of reasoning turns upon the distinction between contingent and necessary being.

If contingent beings exist (as it is evident they do, from the mutability and perishability of physical things), *and if* each contingent being is by definition incapable of causing its own existence, *and if* one contingent being cannot cause the existence of another, *and if* everything which exists must have a cause for its existence, either in itself or in another; *then* from all these premises it would seem to follow that a necessary being exists.

Here the conclusion may follow with logical necessity from the premises, but whether it is necessarily true depends upon the truth of the premises. That in turn seems to depend upon the understanding of what it means for anything to be contingent or necessary in being. It may also depend on whether or not the reasoning escapes Kant's criticism of all *a posteriori* arguments for the existence of a necessary being, namely, that such reasoning always implicitly contains the ontological argument, and is thereby invalidated.

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PAGE SECTIONS: When the text is printed in one column, the letters **a** and **b** refer to the upper and lower halves of the page. For example, in **53** JAMES: *Psychology*, **116a-119b**, the passage begins in the upper half of page 116 and ends in the lower half of page 119. When the text is printed in two columns, the letters **a** and **b** refer to the upper and lower halves of the left-hand side of the page, the letters **c** and **d** to the upper and lower halves of the right-hand side of the page. For example, in **7** PLATO: *Symposium*, **163b-164c**, the passage begins in the lower half of the left-hand side of page 163 and ends in the upper half of the right hand side of page 164.

AUTHOR'S DIVISIONS: One or more of the main divisions of a work (such as PART, BK, CH, SECT) are sometimes included in the reference; line numbers, in brackets, are given in certain cases; *e.g.*, *Iliad*, BK II [265–283] **12d**.

BIBLE REFERENCES: The references are to book, chapter, and verse. When the King James and Douay versions differ in title of books or in the numbering of chapters or verses, the King James version is cited first and the Douay, indicated by a *(D)*, follows; *e.g.*, OLD TESTAMENT: *Nehemiah*, 7:45—*(D) II Esdras*, 7:46.

SYMBOLS: The abbreviation "esp" calls the reader's attention to one or more especially relevant parts of a whole reference; "passim" signifies that the topic is discussed intermittently rather than continuously in the work or passage cited.

For additional information concerning the style of the references, see the Explanation of Reference Style; for general guidance in the use of *The Great Ideas*, consult the Preface.

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8 ARISTOTLE: *Interpretation*, CH 9 28a-29d; CH 13 33d-35c / *Prior Analytics*, BK I, CH 13 48a-49a / *Posterior Analytics*, BK II, CH 11 [94^b26–95^a9] 129c-d / *Topics*, BK II, CH 6 [112^b1–21] 157d-158a / *Physics*, BK II, CH 4–6 272c-275a; BK III, CH 4 [203^b25–29] 281d / *Heavens*, BK I, CH 11 [281^a2]–CH 12 [283^b22] 372c-375d; BK II, CH 5 [287^b22–26] 379b; CH 8 [289^b22–28] 381b / *Metaphysics*, BK V, CH 5 535c-536a; CH 12 [1019^b23–33] 541a; BK IX, CH 3 [1047^a 24–29] 572c; CH 4 572d-573a; CH 8 [1049^b13–18] 575b; BK XI, CH 8 [1065^a6–$^b4$] 593b-d; BK XII, CH 7 [1072^b4–14] 602c-d

9 ARISTOTLE: *Motion of Animals*, CH 4 [699^b 12–700^a5] 234d-235a / *Rhetoric*, BK II, CH 19 [1392^a8–1393^a9] 639c-640c

17 PLOTINUS: *Fourth Ennead*, TR VIII, CH 4–5, 203a-c / *Sixth Ennead*, TR VIII, CH 9, 347a-b

18 AUGUSTINE: *Christian Doctrine*, BK II, CH 35 653b-c

19 AQUINAS: *Summa Theologica*, PART I, Q 2, A 3, ANS 12c-14a; Q 14, A 8, REP 2 82c-83b; A 9, ANS and REP 3 83b-d; A 13 86d-88c; Q 19, A 3 esp REP 4 110b-111c; A 8 116a-d; Q 22, A 2 esp REP 4–5 128d-130d; A 4 131c-132b; Q 23, A 6 137d-138c; Q 25, A 3, ANS and REP 4 145b-147a; Q 41, A 2, REP 5 218c-219d; A 4, REP 2 221c-222b; Q 46, A 1, REP 1–2 250a-252d; Q 79, A 9, REP 3 422b-423d; Q 82, A 1, ANS 431d-432c; Q 86, A 3, ANS 463b-d; PART I–II, Q 4, A 1, ANS 629d-630b; Q 10, A 4, REP 3 665d-666a,c; Q 13, A 6, ANS 676c-677b; Q 40, A 3, REP 2 794c-795a

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42 KANT: *Pure Reason*, 85d-88a; 90c-91a; 95a-d; 107b-c; 129c-145c esp 130b-133c, 140b,d-143a; 175c-d; 176d-177a; 179c-180c; 186a-b / *Judgement*, 550a-578a esp 550c-d, 552c-d, 555a-b, 564a-565b, 568a-c, 569a, 570c-575b 603b-c

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53 JAMES: *Psychology*, 301b-302a; 851a

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33 PASCAL: *Pensées*, 469 256a
42 KANT: *Pure Reason*, 97b-c; 140b,d-145c; 153a; 164a-167a; 170d-171a; 177b-182b esp 179c-182b; 186a-b; 205a / *Practical Reason*, 291a-292a / *Judgement*, 587a-c
46 HEGEL: *Philosophy of Right*, PREF, 6a-7a; PART I, par 66, 29a / *Philosophy of History*, INTRO, 156d-157b; 160c-d; 161c-162a

2b. The argument for the existence of a necessary being: the problem of logical and ontological necessity

7 PLATO: *Laws*, BK X, 758b-765d esp 762b-765d
8 ARISTOTLE: *Physics*, BK VIII, CH 1-6 334a-346b / *Metaphysics*, BK IX, CH 8 575b-577a; BK XII, CH 6-7 601b-603b
18 AUGUSTINE: *Confessions*, BK I, par 10 3b-c; BK VII, par 1-7 43b-45d; par 16-23 48c-50c / *City of God*, BK VIII, CH 6 268d-269c / *Christian Doctrine*, BK I, CH 8 626c-627a
19 AQUINAS: *Summa Theologica*, PART I, Q 2 10c-14a; Q 8, A 1 34d-35c; Q 19, A 5, REP 3 112d-113c; Q 44, A 1 238b-239a; Q 65 339a-343c; Q 104, AA 1-2 534c-537b
22 CHAUCER: *Knight's Tale* [3001-3016] 209a-b
31 DESCARTES: *Discourse*, PART IV, 51d-53a / *Meditations*, 71d-72a; 73d; III 81d-89a esp 84a-87a; V 93a-96a esp 93b-95b / *Objections and Replies*, 108a-114c; 126b-127c; DEF VIII 130d; POSTULATE V 131b-c; AXIOM I 131d; AXIOM X 132b; PROP I-II 132b-c; 158b-162a
31 SPINOZA: *Ethics*, PART I, DEF I 355a; DEF 3 355b; DEF 7-8 355b-c; PROP 5-11 356b-359b; PROP 19-20 363c-364a; PROP 34 369a
33 PASCAL: *Pensées*, 469 256a
35 LOCKE: *Human Understanding*, BK II, CH XVII, SECT 17 172b-c; SECT 20, 173a; BK IV, CH X, SECT 1-12 349c-352b esp SECT 7 350d-351a
35 BERKELEY: *Human Knowledge*, SECT 25-33 417d-419a esp SECT 28-33 418b-419a; SECT 146-149 442a-d
35 HUME: *Human Understanding*, SECT XI 497b-503c passim, esp DIV 115 503b-c
42 KANT: *Pure Reason*, 85d-93c esp 87d-88c; 143a-145c; 152a-153c esp 153a; 177b-192d esp 177b-179c, 182c-185c, 190a-c; 205a-b / *Practical Reason*, 310d-311d; 334b-337a,c / *Judgement*, 568c-570a; 570c-571c; 600d-603d esp 601d-602a; 606d-609b esp 608a-609b

2c. Mutability in relation to necessity in being

8 ARISTOTLE: *Interpretation*, CH 13 [23^a18-26] 35b-c / *Physics*, BK VIII, CH 1-6 334a-346b / *Heavens*, BK I, CH 3 360d-362a; BK II, CH 1 375b,d-376a; CH 5 [287^b22-26] 379b / *Generation and Corruption*, BK II, CH 11 439c-441a,c / *Metaphysics*, BK V, CH 5 [1015^b9-16] 536a; BK IX, CH 8 [1049^b11-18] 575b; [1050^b 6-34] 576b-d; BK X, CH 10 586c-d; BK XI, CH 6 [1063^a13-16] 591b; BK XII, CH 6-7 601b-603b; CH 8 [1073^a24-39] 603c
17 PLOTINUS: *Sixth Ennead*, TR VIII, CH 9-10 347a-348a
18 AUGUSTINE: *Confessions*, BK IV, par 15-19 23a-24b; BK VII, par 1-7 43b-45d; par 16-23 48c-50c; BK XII, par 9 101b-c; par 18-20 103a-d / *City of God*, BK VIII, CH 6 268d-269c; BK XII, CH 15 351b-352d / *Christian Doctrine*, BK I, CH 32 633c-d

(2. Necessary and contingent being or existence. 2c. Mutability in relation to necessity in being.)

19 AQUINAS: *Summa Theologica*, PART I, Q 2, A 3 12c-14a; Q 10, A 5 44b-45c; Q 14, A 13, ANS and REP 1 86d-88c; Q 19, A 3, REP 4–5 110b-111c; A 8 116a-d; Q 44, A 1, REP 2 238b-239a; Q 50, A 5 esp REP 3 274b-275a; Q 63, A 1, REP 2 325c-326c; Q 66, A 2 345d-347b; Q 86, A 3 463b-d

20 AQUINAS: *Summa Theologica*, PART III SUPPL, Q 91, A 2 1017c-1020c

21 DANTE: *Divine Comedy*, PARADISE, XIII [52-87] 126a-b

31 DESCARTES: *Discourse*, PART IV, 52a-d / *Meditations*, III, 86b; 87b-88c; IV, 89b / *Objections and Replies*, 113c-114a; AXIOM X 132b; PROP III, 133a; 158b-162a

31 SPINOZA: *Ethics*, PART I, DEF 1-2 355a; DEF 6-8 355b-c; PROP 6-8 356b-357d; PROP 11-13 358b-359d; PROP 17 362b-363c; PROP 20, COROL 2 364a; PROP 24-29 365a-366c; PROP 33 367b-369a; PART II, AXIOM 1 373c

42 KANT: *Pure Reason*, 74b-76c

46 HEGEL: *Philosophy of History*, INTRO, 156d-157c

2d. The necessary and contingent with respect to properties, accidents, and modes

7 PLATO: *Phaedo*, 244b-246c

8 ARISTOTLE: *Prior Analytics*, BK I, CH 13 [32^{b} 4-14] 48b-c / *Posterior Analytics*, BK I, CH 4 100a-101b / *Topics*, BK V, CH 1 178b,d-179b; CH 3 [131^{b}19-37] 182b-c; BK VI, CH 14 [151^{a} 32-^{b}2] 206b-c / *Physics*, BK I, CH 3 [186^{b}19-30] 261d; CH 4 [188^{a}5-13] 263b; BK II, CH 1 [192^{b}35-39] 269a; BK VII, CH 3 [246^{b}3 9] 329c-d / *Metaphysics*, BK V, CH 30 547a-d; BK VI, CH 2-3 548c-549d; BK VII, CH 12 561b-562a; BK X, CH 9 586a-c; BK XI, CH 8 593a-d; BK XIV, CH 6 625d-626d esp [1093^{b} 7-22] 626c-d

12 LUCRETIUS: *Nature of Things*, BK I [449-482] 6c-7a

19 AQUINAS: *Summa Theologica*, PART I, Q 3, A 4, ANS 16d-17c; A 6 18c-19a; Q 9, A 2, ANS 39c-40d; Q 54, A 3, REP 2 286c-287b; Q 77, A 1, REP 5 399c-401b; A 6, ANS 404c-405c; Q 86, A 3 463b-d; Q 101, A 1, REP 1 522c-523a; PART I-II, Q 2, A 6, ANS 619d-620d; Q 7 651d-655a passim; Q 10, A 1, REP 2 662d-663d; Q 18, A 3, REP 2 695d-696b

20 AQUINAS: *Summa Theologica*, PART I-II, Q 72, A 5, ANS 115a-116b; PART III, Q 2, A 2, ANS 711d-712d

30 BACON: *Novum Organum*, BK II, APH 33 161b-d; APH 36-37 164a-169c

31 DESCARTES: *Objections and Replies*, 152d; 231a-b

31 SPINOZA: *Ethics*, PART I, DEF 4-5 355b; PROP 10, SCHOL 358a-b; PROP 15, DEMONST 360a; PROP 16, DEMONST 362a; PROP 19, DEMONST 363c-d; PROP 20-29 363d-366c; PROP 33 367b-369a

35 LOCKE: *Human Understanding*, BK III, CH VI 268b-283a passim, esp SECT 5 269b-d; BK IV, CH III, SECT 9-16 315c-317c; CH VI, SECT 5-16 332b-336d passim; CH XII, SECT 9 360d-361b

42 KANT: *Pure Reason*, 75d-76a; 131c-d / *Judgement*, 566a-d; 580c-d

53 JAMES: *Psychology*, 668a-671a

3. Necessity and contingency in the realm of change: chance and determinism

5 AESCHYLUS: *Prometheus Bound* [507-520] 45a-b

7 PLATO: *Republic*, BK X, 438c-439a / *Timaeus*, 455c-456a; 465d-466a / *Statesman*, 587a-589c / *Laws*, BK X, 759d-765d

8 ARISTOTLE: *Interpretation*, CH 9 28a-29d / *Posterior Analytics*, BK II, CH 11 [94^{b}26-95^{a}9] 129c-d / *Topics*, BK II, CH 6 [112^{b}1-21] 157d-158a / *Physics*, BK II, CH 6 [198^{a}5-13] 275a; CH 8 [199^{a}34-^{b}12] 276c-d; CH 9 277b-278a,c / *Heavens*, BK II, CH 5 [287^{b}22-26] 379b; CH 8 [289^{b}22-28] 381b; BK IV, CH 3 [310^{a}23-32] 401d / *Generation and Corruption*, BK II, CH 6 [333^{a}35-334^{a}9] 434b-435a; CH 11 439c-441a,c / *Metaphysics*, BK VII, CH 7 [1032^{a}15-22] 555a-b; BK IX, CH 5 573a-c; BK XI, CH 8 593a-d; BK XII, CH 3 [1070^{a}4-9] 599b

9 ARISTOTLE: *Parts of Animals*, BK I, CH 1 [640^{a}10-^{b}5] 162b-163a / *Ethics*, BK III, CH 3 [1112^{a}18-32] 358a-b; BK X, CH 3 [1173^{b}4-7] 427d / *Rhetoric*, BK I, CH 10 [1369^{a}31-^{b}4] 612c-d

12 LUCRETIUS: *Nature of Things*, BK I [1022-1034] 13c-d; BK II [184-307] 17b-19a; [1052-1063] 28b-c; BK V [55-58] 61d; [306-310] 65a; [416-431] 66c-d

12 AURELIUS: *Meditations*, BK IX, SECT 28 293d-294a; SECT 39 295a

17 PLOTINUS: *Third Ennead*, TR I 78a-82b; TR II, CH 1, 82c / *Fourth Ennead*, TR III, CH 16 150c-d; TR IV, CH 33 176b-d

19 AQUINAS: *Summa Theologica*, PART I, Q 14, A 13 86d-88c; Q 19, A 3 110b-111c; A 8 116a-d; Q 22, A 2 128d-130d; A 4 131c-132b; Q 23, A 6 137d-138c; Q 25, A 3, REP 4 145b-147a; A 4 147a-d; Q 86, A 3 463b-d; Q 103, A 1, REP 3 528b-529a; AA 7-8 533b-534b; Q 115, A 6, ANS 591d-592d

30 BACON: *Advancement of Learning*, 45b-c

31 DESCARTES: *Discourse*, PART V, 55a-56a

31 SPINOZA: *Ethics*, PART I, DEF 7 355b; AXIOM 3 355d; PROP 17, COROL 2 362b; PROP 26-29 365b-366c; PROP 32-33 367a-369a; PROP 35-36 369a-b; PART II, PROP 13 377d-378c; LEMMA 3, COROL 378d-379a; PROP 48 391a-c; PART III, 395a-d; PART IV, PROP 2-4 425a-d; APPENDIX, I-II 447a-b

35 BERKELEY: *Human Knowledge*, SECT 93 431b; SECT 106 433c-d
35 HUME: *Human Understanding*, SECT VI 469d-470d; SECT VIII 478b-487a
38 MONTESQUIEU: *Spirit of Laws*, BK I, 1a-b
42 KANT: *Pure Reason*, 45b-c; 72c-85d esp 74b-76c, 82a-83b; 140b,d-143a; 144a-145c; 153a; 171b-172c / *Practical Reason*, 331c-333a / *Judgement*, 566a-b
46 HEGEL: *Philosophy of History*, INTRO, 160c-190b
51 TOLSTOY: *War and Peace*, EPILOGUE II 675a-696d passim
53 JAMES: *Psychology*, 823a-825a passim
54 FREUD: *General Introduction*, 454b-c; 592a-b

3a. The distinction between the essential and the accidental cause: the contingent effect; contingency and chance

7 PLATO: *Timaeus*, 455a-456a; 465d-466a
8 ARISTOTLE: *Physics*, BK I, CH 5 [188a32-b26] 263d-264a; BK II, CH 3 6 271a-275a; CH 8 [199a34-b12] 276c-d / *Metaphysics*, BK V, CH 2 [1013b34-1014a7] 534a; CH 5 535c-536a; CH 30 547a-d; BK XI, CH 8 593a-d
12 AURELIUS: *Meditations*, BK II, SECT 3 257a-b
19 AQUINAS: *Summa Theologica*, PART I, Q 11, A 3, ANS 49a-c; Q 14, A 13 86d-88c; Q 19, A 3 110b-111c; A 8 116a-d; Q 22, A 2, REP 1 128d-130d; A 4 131c-132b; Q 57, A 3, ANS 297b-298a; Q 103, A 5, REP 1 531b-532b; A 7, REP 2 533b-d; Q 115, A 6 591d-592d; Q 116, A 1 592d-593d; A 3 594c-595a; PART I-II, Q 10, A 4 665d-666a,c
23 HOBBES: *Leviathan*, PART IV, 272b
31 SPINOZA: *Ethics*, PART I, PROP 16, COROL 2 362a; PROP 33, SCHOL 1 367c-d; PART IV, DEF 3 424a
35 HUME: *Human Understanding*, SECT VIII, DIV 67 480c-481a; DIV 74 484a-c
42 KANT: *Pure Reason*, 144a-145c; 153a / *Practical Reason*, 311d-314d / *Judgement*, 550a-551a,c; 553c-555a; 584c-d
46 HEGEL: *Philosophy of Right*, INTRO, par 3, 10a-11b

3b. The necessity of contingent events: absolute and hypothetical or conditional necessity; necessitation by efficient or material and final or formal causes

8 ARISTOTLE: *Physics*, BK II, CH 9 277b-278a,c / *Generation and Corruption*, BK II, CH 11 439c-441a,c / *Metaphysics*, BK IV, CH 5 [1010a 6-25] 529c-d; BK V, CH 5 [1015a20-26] 535c; [1015b3-6] 535d; BK VII, CH 8 [1033a24-b19] 556b-d; CH 9 [1034b8-19] 557d-558a; BK IX, CH 8 [1049b35-1050a3] 575c-d; BK X, CH 10 586c-d; BK XI, CH 6 [1063a17-28] 591b-c / *Soul*, BK II, CH 8 [420b16-23] 652a; BK III, CH 12-13 667a-668d / *Sleep*, CH 2 [455b13-28] 698b-c
9 ARISTOTLE: *Parts of Animals*, BK I, CH 1 [639b8-642b4] 161d-165d esp [639b24-640a10] 162a-b, [642a1-15] 165a-b, [642a30-b4] 165c-d; BK II, CH 1 [646b28-647b10] 170d-171d; BK III, CH 2 [663b21-664a12] 191b-d; CH 9 [672a1-24] 200d-201a; BK IV, CH 5 [680b3-681a4] 210d-211c / *Generation of Animals*, BK IV, CH 3 [767b5-15] 309a; BK V, CH 1 [778a15-b20] 320a-321a; CH 8 [789b1-21] 331a,c / *Politics*, BK I, CH 2 [1252b30-36] 446a-b
18 AUGUSTINE: *City of God*, BK XXII, CH 24, 610c-611b
19 AQUINAS: *Summa Theologica*, PART I, Q 19, A 3, ANS and REP 1 110b-111c; A 7, REP 4 114d-115d; A 8, REP 1-2 116a-d; Q 23, A 6, REP 3 137d-138c; Q 86, A 3 463b-d
21 DANTE: *Divine Comedy*, PARADISE, XVII [13-45] 132b-c
30 BACON: *Advancement of Learning*, 45a-46a esp 45c
31 SPINOZA: *Ethics*, PART I, PROP 16-17 362a-363c; PROP 21-23 364a-365a; PROP 26-29 365b-366c; PROP 33-36 367b-369b; PART II, DEF 5 373b-c; PART IV, DEF 3 424a
42 KANT: *Pure Reason*, 140b,d-143a; 164a-171a; 179c-180c / *Fund. Prin. Metaphysic of Morals*, 262a-279d esp 263a-264d, 265c-267a; 285c-286a / *Judgement*, 491c-492b; 550a-551a,c; 553c-555a; 557c-558b; 564a-c; 581a-582c; 584c-d
46 HEGEL: *Philosophy of History*, INTRO, 158a-c
51 TOLSTOY: *War and Peace*, BK XIII, 563a-b; EPILOGUE I, 650b-c; EPILOGUE II, 679b-c

3c. The grounds of contingency in the phenomenal order: real indeterminacy or ignorance of causes

8 ARISTOTLE: *Interpretation*, CH 9 28a-29d / *Physics*, BK II, CH 4-6 272c-275a / *Memory and Reminiscence*, CH 2 [452a30-b1] 694b
19 AQUINAS: *Summa Theologica*, PART I, Q 14, A 13 86d-88c; Q 19, A 8 116a-d; Q 22, A 4 131c-132b; Q 86, A 3 463b-d
23 HOBBES: *Leviathan*, PART IV, 272b
31 SPINOZA: *Ethics*, PART I, PROP 33, SCHOL 1 367c-d; PART II, PROP 27-31 384b-385c esp PROP 31, COROL 385c; PROP 44 389b-390a; PART III, 395a-d; DEF 1-2 395d; PROP 1-3 396a-398c; PART IV, DEF 3-4 424a
35 HUME: *Human Understanding*, SECT VI 469d-470d; SECT VIII, DIV 67 480c-481a; DIV 74 484a-c
42 KANT: *Pure Reason*, 164a-172c / *Intro. Metaphysic of Morals*, 387a-d / *Judgement*, 555a-d; 564a-c
46 HEGEL: *Philosophy of Right*, PART II, par 118, 43a; PART III, par 324, 107b
49 DARWIN: *Origin of Species*, 37c-d; 65a / *Descent of Man*, 593d
51 TOLSTOY: *War and Peace*, EPILOGUE I, 646c-647b
53 JAMES: *Psychology*, 377b; 851b esp [fn 1]
54 FREUD: *General Introduction*, 454b-c

4. Necessity and contingency in the realm of thought

4*a*. The necessary as the domain of knowledge, the contingent as the object of opinion: certainty, doubt, and probability; necessary truths

7 PLATO: *Republic*, BK VI, 384b-388a
8 ARISTOTLE: *Categories*, CH 5 [4^{a}10–^{b}19] 8b-9a / *Prior Analytics*, BK I, CH 13 [32^{b}4–23] 48b-d / *Posterior Analytics*, BK I, CH 2 [71^{b}8–16] 97d-98a; [72^{a}25–^{b}4] 98d-99a; CH 4–8 100a-104b; CH 30 119d; CH 33 121b-122a,c / *Metaphysics*, BK VI, CH 2 548c-549c; BK VII, CH 15 [1039^{b}31–1040^{a}8] 563d-564a; BK IX, CH 10 577c-578a,c; BK XI, CH 8 [1064^{b}15–1065^{a}6] 593a-b
9 ARISTOTLE: *Ethics*, BK I, CH 3 [1094^{b}23–27] 339d-340a; BK III, CH 3 [1112^{a}19–^{b}12] 358a-c; BK VI, CH 3 [1139^{b}18–24] 388b-c; CH 5 [1140^{a}30–^{b}1] 389a-b; [1140^{b}24–28] 389c / *Rhetoric*, BK I, CH 2 [1357^{a}14–^{b}21] 596d-597c
19 AQUINAS: *Summa Theologica*, PART I, Q 14, A 13, ANS and REP 3 86d-88c; Q 19, A 3, REP 6 110b-111c; Q 47, A 1, REP 3 256a-257b; Q 79, A 9, REP 3 422b-423d; Q 82, A 2, ANS 432d-433c; Q 86, A 3 463b-d
20 AQUINAS: *Summa Theologica*, PART I-II, Q 84, A 1, REP 3 174b-175a; Q 94, A 4, ANS 223d-224d
31 DESCARTES: *Rules*, II 2a-3b; XII, 21d-22b / *Discourse*, PART II, 47a; PART IV, 52a / *Meditations*, I 75a-77c; V, 95b-96a / *Objections and Replies*, 124d-125a
31 SPINOZA: *Ethics*, PART II, PROP 44 389b-390a
35 LOCKE: *Human Understanding*, BK IV, CH III, SECT 9–16 315c-317c esp SECT 14 316b-d; SECT 28–29 322a-323a; CH VI, SECT 5–16 332b-336d passim; CH IX, SECT 1 349a; CH XII, SECT 9 360d-361b; CH XV, SECT 1–3 365a-d; CH XVII, SECT 2 371d-372b; SECT 15–17 378d-379c
35 HUME: *Human Understanding*, SECT IV, DIV 20–21 458a-c; DIV 30, 462a; SECT XII, DIV 131–132 508d-509d passim
42 KANT: *Pure Reason*, 1a-4a,c; 194b-c; 228c-d; 240b-243c / *Intro. Metaphysic of Morals*, 387a-d / *Judgement*, 601d; 603a-b; 603d-604b
51 TOLSTOY: *War and Peace*, BK IX, 365a-b; BK X, 441b-442a
53 JAMES: *Psychology*, 851a-890a esp 851a, 867a-868b, 879b, 889a-890a

4*b*. Practical necessity as a cause of belief

31 DESCARTES: *Discourse*, PART III, 48b-50b / *Objections and Replies*, 126a-b
33 PASCAL: *Pensées*, 184-241 205a-217b
35 HUME: *Human Understanding*, SECT XII, DIV 126–128 507a-508a
42 KANT: *Pure Reason*, 124d-128a; 236b-243c esp 239a-240b, 241d-242c / *Fund. Prin. Metaphysic of Morals*, 279b,d-287d / *Practical Reason*, 291a-292a; 314d-321b; 344a-349b; 351b-352c / *Intro. Metaphysic of Morals*, 390b,d-391a / *Judgement*, 588a-607c esp 593d-596c, 599d-600d, 601d-602a, 603a-b, 604d-606d; 608c-611d
53 JAMES: *Psychology*, 223a-225a esp 224a-225a; 653a; 820b-823b esp 822b-823b

4*c*. The truth of judgments concerning future contingents

8 ARISTOTLE: *Interpretation*, CH 9 28a-29d
18 AUGUSTINE: *City of God*, BK V, CH 10 215c-216c
19 AQUINAS: *Summa Theologica*, PART I, Q 14, A 13 86d-88c; Q 57, A 3 297b-298a; Q 86, A 4 463d-464d
21 DANTE: *Divine Comedy*, PARADISE, XVII [13–45] 132b-c
22 CHAUCER: *Troilus and Cressida*, BK IV, STANZA 145–146 107b
32 MILTON: *Paradise Lost*, BK III [80–134] 137a-138a
51 TOLSTOY: *War and Peace*, BK IX, 365a-b; BK X, 441b-442a; BK XIII, 584c-585c; EPILOGUE II, 685a

4*d*. Mathematical necessity: necessity in the objects of mathematics and in mathematical reasoning

7 PLATO: *Republic*, BK V, 361b-c
8 ARISTOTLE: *Physics*, BK II, CH 9 [200^{a}15–29] 277c-d
31 DESCARTES: *Rules*, II, 3a-b / *Discourse*, PART II, 47b-c; PART IV, 52d-53a / *Meditations*, V, 93b-c / *Objections and Replies*, 113c-114a
35 LOCKE: *Human Understanding*, BK IV, CH III, SECT 18–20 317d-319c; SECT 29, 322c; CH IV, SECT 6 325a-b; CH VII, SECT 6 338b-c; CH XIII, SECT 3 364a
35 HUME: *Human Understanding*, SECT IV, DIV 20 458a-b; SECT XII, DIV 131 508d-509a
42 KANT: *Pure Reason*, 15c-16c; 17d-18d; 68a-69c; 211c-218d esp 211c-212a, 215d-217a; 228c-d / *Practical Reason*, 295b-d; 330d-331a / *Pref. Metaphysical Elements of Ethics*, 376c-d / *Science of Right*, 398c-399c esp 399a-b / *Judgement*, 551a-553c
46 HEGEL: *Philosophy of Right*, INTRO, par 2 9b-10a
53 JAMES: *Psychology*, 874a-878a

4*e*. Necessity and contingency in logical analysis

4*e*(1) The modality of propositions or judgments: modal opposition

8 ARISTOTLE: *Interpretation*, CH 12–13 32d-35c / *Prior Analytics*, BK I, CH 3 40a-c
19 AQUINAS: *Summa Theologica*, PART I, Q 14, A 13, REP 2 86d-88c

42 KANT: *Pure Reason*, 14c-15c; 39c-41c esp 40d-41c / *Judgement*, 603a-b
53 JAMES: *Psychology*, 851a

4e(2) Modality in reasoning: the logical necessity of inference; the necessity and contingency of premises and conclusions

8 ARISTOTLE: *Prior Analytics*, BK I, CH I [24^{b}18-26] 39c; CH 8-22 45b-57b / *Posterior Analytics*, BK I, CH 6 [75^{a}21-28] 103b / *Metaphysics*, BK V, CH 5 [1015^{b}6-9] 535d-536a
9 ARISTOTLE: *Rhetoric*, BK I, CH 2 [1357^{a}14-30] 596d-597a
12 EPICTETUS: *Discourses*, BK I, CH 7, 112d-113d; CH 26, 131b
18 AUGUSTINE: *Christian Doctrine*, BK II, CH 31-34 651d-653b
19 AQUINAS: *Summa Theologica*, PART I, Q 19, A 8, REP 3 116a-d; Q 44, A 1, REP 2 238b-239a; Q 82, A 2, ANS 432d-433c; PART I-II, Q 13, A 5, ANS 675c-676b; A 6, REP 1-2 676c-677b
23 HOBBES: *Leviathan*, PART I, 65c-d; 71c
42 KANT: *Pure Reason*, 14d; 17d-18a; 110d-111a; 194b-d

5. Necessity and contingency in human life and society

5a. Liberty and necessity in human conduct: the voluntary and the compulsory

4 HOMER: *Iliad* 3a-179d esp BK XXIV [513-551] 176d-177a
5 AESCHYLUS: *Agamemnon* [160-226] 53d-54c
5 EURIPIDES: *Hecuba* [864-867] 360b
6 THUCYDIDES: *Peloponnesian War*, BK IV, 461d-462a; BK V, 506b-c
7 PLATO: *Protagoras*, 56b; 59c-64a / *Cratylus*, 95b-c / *Republic*, BK V, 361b-c; BK X, 439b-441a,c
8 ARISTOTLE: *Metaphysics*, BK IX, CH 5 573a-c
9 ARISTOTLE: *Ethics*, BK III, CH 1-3 355b,d-359a / *Rhetoric*, BK I, CH 2 [1357^{a}14-^{b}21] 596d-597c; CH 10 [1368^{b}1-1369^{b}27] 611c-613a; CH 11 [1370^{a}8-17] 613b-c
12 LUCRETIUS: *Nature of Things*, BK II [251-293] 18b-d
12 AURELIUS: *Meditations* 253a-310d esp BK V, SECT 8 269d-270b, SECT 19-20 272a, BK VI, SECT 8 274b, SECT 11 274c, SECT 39 277d, SECT 50 279a-b, SECT 58 279d, BK VII, SECT 54 283b, SECT 58 283c-d, SECT 68 284c-d, BK VIII, SECT 17 286d, SECT 32 287d-288a, SECT 35 288b, SECT 45-47 289a-c, BK IX, SECT 41 295c, BK X, SECT 3 296d, SECT 6 297a-b, SECT 25 299c, SECT 33 300c-301a, SECT 35 301b, BK XII, SECT 3 307b-d, SECT 11-13 308b-c
15 TACITUS: *Annals*, BK IV, 68d-69b; BK VI, 91b-d
17 PLOTINUS: *Third Ennead*, TR I, CH 8-10 81d-82b
18 AUGUSTINE: *Confessions*, BK VIII, par 10-11 55c-56b; BK X, par 65, 88a / *City of God*, BK V, CH 1-10 207d-216c; BK XIX, CH 5-6 513d-515a; CH 15 521a-c / *Christian Doctrine*, BK II, CH 25-26 649b-650a; CH 39-40 654c-656a
19 AQUINAS: *Summa Theologica*, PART I, Q 23 132b-141b; Q 83, A 1 436d-438a; PART I-II, QQ 6-10 644a-666a,c
21 DANTE: *Divine Comedy*, PURGATORY, XVI [52-114] 77b-78a; PARADISE, I [94-142] 107b-d; VIII [91-148] 117d-118c
22 CHAUCER: *Troilus and Cressida*, BK IV, STANZA 137-154 106b-108b / *Knight's Tale* [1312-1324] 181b; [2987-3046] 209a-210a / *Nun's Priest's Tale* [15,236-256] 456b-457a
23 HOBBES: *Leviathan*, PART I, 59b; 86c; PART II, 112d-113c; 163d-164a
25 MONTAIGNE: *Essays*, 52c-53c; 216c-219a; 528c-529b
26 SHAKESPEARE: *Julius Caesar*, ACT I, SC II [135-141] 570d
27 SHAKESPEARE: *King Lear*, ACT I, SC II [128-164] 249a-b; ACT IV, SC III [34-37] 272a
31 SPINOZA: *Ethics*, PART III, 395a-d; PART IV, PROP 2-4 425a-d; APPENDIX, I-II 447a-b
32 MILTON: *Paradise Lost*, BK III [80-134] 137a-138a
33 PASCAL: *Pensées*, 821 331b-332a
35 LOCKE: *Human Understanding*, BK II, CH XXI, SECT 7-27 180a-184c; SECT 57 193b-c; SECT 73 198c-199c; CH XXIII, SECT 18 209a
35 BERKELEY: *Human Knowledge*, SECT 144 441d
35 HUME: *Human Understanding*, SECT VIII 478b-487a
38 ROUSSEAU: *Inequality*, 337d-338a
42 KANT: *Pure Reason*, 133a; 190c-d; 234c-235a / *Fund. Prin. Metaphysic of Morals*, 279b,d-287d esp 279b,d, 282c, 286a-c / *Practical Reason*, 292a-293b; 307d-314d / *Science of Right*, 400b,d-402a / *Judgement*, 571c-572a; 587a-588a
44 BOSWELL: *Johnson*, 392d-393a; 549c
46 HEGEL: *Philosophy of Right*, INTRO, par 15 16a-b; PART I, par 91-92 35d-36a; PART II, par 118 42d-43b; ADDITIONS, 12 118a-c; 75 128a / *Philosophy of History*, INTRO, 158c-159b; 160c-190b passim, esp 162a-165b, 168a-d, 186b-c
48 MELVILLE: *Moby Dick* esp 121a, 159a, 395a-397a
51 TOLSTOY: *War and Peace*, BK V, 221b-d; BK VII, 275a-276b; BK VIII, 303d-304b; BK IX, 343b-d; EPILOGUE II, 688a-694d
53 JAMES: *Psychology*, 84a-94b esp 89b-93a; 291a-295b; 387b-388a; 796a-798b passim; 820b-827a esp 821b-823b
54 FREUD: *Origin and Development of Psycho-Analysis*, 13a-c / *General Introduction*, 453b-476a,c passim, esp 454b-c, 462d; 486b-488c esp 486d-487a

(*5a. Liberty and necessity in human conduct: the voluntary and the compulsory.*)

5a(1) The necessitation of the will: the range of its freedom

9 ARISTOTLE: *Ethics*, BK III, CH 4–5 359a-361a
12 EPICTETUS: *Discourses* 105a-245a,c esp BK I, CH 1 105a-106c, CH 18 124a-125a, CH 29 134d-138a, BK II, CH 5 142c-144a, CH 10 148c-150a, CH 23 170a-172d, BK III, CH 2 177c-178d, CH 10 185d-187a, CH 14 189c-190a, CH 18 192a-c, BK IV, CH 1 213a-223d
12 AURELIUS: *Meditations* 253a-310d esp BK II, SECT 16 259a, BK V, SECT 19 272a, BK VI, SECT 16 275b-d, SECT 22 276a, BK VII, SECT 16 280d, BK VIII, SECT 16–17 286d, SECT 28 287c, SECT 48 289c, BK X, SECT 34–35 301a-b, BK XII, SECT 3 307b-d
18 AUGUSTINE: *City of God*, BK V, CH 1–10 207d-216c esp CH 10 215c-216c; BK XII, CH 6, 346a
19 AQUINAS: *Summa Theologica*, PART I, Q 18, A 3, ANS 106b-107c; Q 19, A 3, ANS 110b-111c; A 10, ANS and REP 2 117d-118b; Q 60, AA 2–3 311a-312b; Q 62, A 8 323c-324a; Q 82, AA 1–2 431d-433c; Q 83, A 1 436d-438a; A 2, ANS 438a-d; PART I–II, Q 1, A 5 613a-614a; Q 5, A 4, ANS and REP 2 639a-640b; A 8, REP 2 642d-643d; Q 10 662d-666a,c; Q 13, AA 3–6 674c-677b; Q 17, A 5, REP 3 689c-690b; A 6, ANS 690b-d
21 DANTE: *Divine Comedy*, PURGATORY, XVIII [1–75] 79d-80c; XXI [40–72] 85b-d
23 HOBBES: *Leviathan*, PART III, 165c
31 DESCARTES: *Discourse*, PART III, 50b / *Objections and Replies*, AXIOM VII 132a; 141d; 215d-216a; 228c
31 SPINOZA: *Ethics*, PART I, PROP 17 362b-363c esp SCHOL, 363a-c; PROP 32 367a-b; PART II, PROP 48–49 391a-394d
35 LOCKE: *Human Understanding*, BK II, CH XXI, SECT 12 180d-181a; SECT 59 193d-194a
42 KANT: *Pure Reason*, 164a-165c esp 164b-c; 234c-236a esp 235c-d; 236d-237a / *Fund. Prin. Metaphysic of Morals*, 256a-b; 259c-260c; 264d-265b; 265c-267d esp 266c-267d; 268b; 286a-287d / *Practical Reason*, 296a-d; 325d-326b / *Judgement*, 595a-d
46 HEGEL: *Philosophy of Right*, INTRO, par 8–21 14c-17c; PART II, par 118 42d-43b; ADDITIONS, 90 130b-d
53 JAMES: *Psychology*, 291a-295a esp 291a-b, 293a; 388a; 821b-822b

5a(2) Categorical and hypothetical imperatives as expressing necessary and contingent obligations

42 KANT: *Pure Reason*, 190c-d; 236d-237a / *Fund. Prin. Metaphysic of Morals* 253a-287d esp 253d-254d, 260a-261d, 263a-c, 264d-268d, 272a-b, 276b-277a, 277d-279d, 281c-282d / *Practical Reason*, 297a-314d esp 297a-298a, 307d-314d / *Pref. Metaphysical Elements of Ethics*, 373d / *Intro. Metaphysic of Morals*, 386b-387a,c; 388b-c; 390b,d-391c; 392b-393a / *Science of Right*, 397c-398a; 416b-417b / *Judgement*, 571c-572a; 595a-d; 605d-606b [fn 2]
46 HEGEL: *Philosophy of Right*, PART II, par 132–135 46b-47d; ADDITIONS, 84 129b

5a(3) Human freedom as knowledge or acceptance of necessity

12 EPICTETUS: *Discourses*, BK I, CH 12 118d-120b; BK IV, CH 1 213a-223d; CH 4 225a-228a
31 SPINOZA: *Ethics*, PART V, PROP 6 453d-454a
46 HEGEL: *Philosophy of Right*, INTRO, par 8–21 14c-17c esp par 15 16a-b, par 21 17a-c; PART III, par 144–145 55b-c; ADDITIONS, 12 118a-c; 93–94 132a-b; 159 142d / *Philosophy of History*, INTRO, 170c-171c

5b. The necessity of family and state: the contingency of their forms and institutions

7 PLATO: *Republic*, BK II, 311b-312b; 316c-319a; BK V, 361b-c
9 ARISTOTLE: *Politics*, BK I, CH 2 445b-446d; BK III, CH 6 [1278^{b}15–29] 475d-476a
12 LUCRETIUS: *Nature of Things*, BK V [1011–1027] 74b-c
18 AUGUSTINE: *City of God*, BK XIX, CH 14–17 520a-523a
19 AQUINAS: *Summa Theologica*, PART I, Q 92, A 1 488d-489d; Q 96, A 4 512d-513c; Q 98, A 1 516d-517c
20 AQUINAS: *Summa Theologica*, PART I–II, Q 95, A 4, ANS 229b-230c; Q 105, A 4, ANS 318b-321a
23 HOBBES: *Leviathan*, PART I, 84c-86b; 86d-87a; 91a-b; 96a-b; PART II, 99a-101a; PART IV, 273a-b
25 MONTAIGNE: *Essays*, 462d-463a
31 SPINOZA: *Ethics*, PART IV, PROP 18, SCHOL 429a-d; PROP 35, COROL 1–2 433c-d; PROP 37, SCHOL 2 435b-436a; APPENDIX 447a-450d
32 MILTON: *Paradise Lost*, BK VIII [364–436] 240a-241b
33 PASCAL: *Pensées*, 304 227b-228a; 306 228a
35 LOCKE: *Toleration*, 16a-c / *Civil Government*, CH II, SECT 13–15 28a-c; CH VI 36a-42a passim; CH VII, SECT 77–83 42b-43c; CH IX 53c-54d
36 SWIFT: *Gulliver*, PART I, 29b-30a
36 STERNE: *Tristram Shandy*, 216b; 261b-262a; 410a-411a
38 MONTESQUIEU: *Spirit of Laws*, BK I, 2a-3b; BK XXIII, 187d-188a
38 ROUSSEAU: *Political Economy*, 367b / *Social Contract*, BK I, 387b,d-392a
39 SMITH: *Wealth of Nations*, BK V, 309a-c
42 KANT: *Science of Right*, 418d; 433c-434a
43 DECLARATION OF INDEPENDENCE: [1–23] 1a-b
43 MILL: *Representative Government*, 327b,d-332d passim / *Utilitarianism*, 460a-461c

44 BOSWELL: *Johnson*, 102a-b; 120a-c; 125c-d
46 HEGEL: *Philosophy of Right*, PART III, par 182 64a; par 264-267 84a-b; par 270 84d-89c; ADDITIONS, 116 135c-d; 162 143b-144c / *Philosophy of History*, INTRO, 170c-171c; 173a-175c; PART II, 262a-c
49 DARWIN: *Descent of Man*, 579b-581c
50 MARX: *Capital*, 241c-d
50 MARX-ENGELS: *Communist Manifesto*, 421c-d; 427b-428a
54 FREUD: *Civilization and Its Discontents*, 781d-782d

5c. Necessity and contingency in relation to the natural and conventional in law

9 ARISTOTLE: *Ethics*, BK V, CH 7 [$1134^{b}18$-$1135^{a}4$] 382c-d
18 AUGUSTINE: *Confessions*, BK III, par 15 17a-b; par 17 17d-18a
20 AQUINAS: *Summa Theologica*, PART I-II, Q 94, AA 5-6 224d-226b; Q 95, A 2, ANS and REP 3 227c-228c; A 4 229b-230c; Q 96, A 1 230c-231c; Q 97, A 1, REP 1 236a-d; A 4, REP 3 238b-239b; Q 99, AA 3-4 247a-248d
23 HOBBES: *Leviathan*, PART I, 95d-96a; PART II, 115b-c; 131a-c; 134c; 136d-137a; 138a-b; 142a-c; 163d-164a
31 SPINOZA: *Ethics*, PART IV, PROP 37, SCHOL 2 435b-436a
35 LOCKE: *Civil Government*, CH II, SECT 10-12 27b-28a; CH XI, SECT 135 55d-56b
38 MONTESQUIEU: *Spirit of Laws*, BK I, 1c-d; BK XV, 109b-110a; BK XXVI, 219d-221c
38 ROUSSEAU: *Social Contract*, BK II, 399b-c
42 KANT: *Science of Right*, 426b-429a esp 426b-c
43 FEDERALIST: NUMBER 25, 91b-d; NUMBER 41, 133a-b; NUMBER 43, 143b-c
43 MILL: *Utilitarianism*, 470d-471b
46 HEGEL: *Philosophy of Right*, PART III, par 145 55b-c; par 214 71a-c; ADDITIONS, 94 132b; 134 138b-c

5d. The necessity or inevitability of slavery, poverty, war, or crime

5 ARISTOPHANES: *Peace* [1061-1114] 538a-539a / *Plutus* [415-619] 633d-636d
6 THUCYDIDES: *Peloponnesian War*, BK III, 427d-428a; 436d-437d
7 PLATO: *Republic*, BK II, 316c-319a / *Laws*, BK I, 640d-641a
9 ARISTOTLE: *Politics*, BK I, CH 5-6 447d-449b
12 EPICTETUS: *Discourses*, BK I, CH 19, 125c-d
18 AUGUSTINE: *City of God*, BK III, CH 10 172d-173c; BK XIX, CH 5, 514a-b; CH 7 515a-c; CH 15 521a-c
19 AQUINAS: *Summa Theologica*, PART I, Q 92, A 1, REP 2 488d-489d; Q 96, A 4 512d-513c
20 AQUINAS: *Summa Theologica*, PART I-II, Q 94, A 5, REP 3 224d-225d
23 MACHIAVELLI: *Prince*, CH III, 5c; CH XIV, 21b; CH XXI, 32a-d
23 HOBBES: *Leviathan*, PART I, 76d; 94b-c; PART II, 141a-b; 157a
24 RABELAIS: *Gargantua and Pantagruel*, BK I, 30d-41a
32 MILTON: *Paradise Lost*, BK XI [384-897] 307b-318b
35 LOCKE: *Civil Government*, CH II 25d-28c; CH III, SECT 17 28d-29a; CH IV 29d-30b; CH XV, SECT 172 65b-c
36 SWIFT: *Gulliver*, PART IV, 154b-155b
38 MONTESQUIEU: *Spirit of Laws*, BK X, 61b,d-62b; BK XV, 109b-110a; 110d-111c
38 ROUSSEAU: *Inequality*, 356c-357a; 357c-358b / *Social Contract*, BK I, 388b-c; 389a-390d
39 SMITH: *Wealth of Nations*, BK V, 309a-c
42 KANT: *Science of Right*, 457a-458a,c / *Judgement*, 586a-587a
43 FEDERALIST: NUMBER 3-7 33b-44c passim, esp NUMBER 6, 39a; NUMBER 23-24 85a-89c; NUMBER 28, 96c; NUMBER 34, 110a-d; NUMBER 41, 132c-135a; NUMBER 43, 141d
43 MILL: *Representative Government*, 339c-340c / *Utilitarianism*, 452a-b
44 BOSWELL: *Johnson*, 301d; 304c
46 HEGEL: *Philosophy of Right*, PART III, par 333-334 109b-c / *Philosophy of History*, PART II, 273c
50 MARX: *Capital*, 283b-c; 303b-307c esp 303d-305a, 307a-c; 315c-321b esp 319a-321b
50 MARX-ENGELS: *Communist Manifesto*, 419b,d-420c; 425a; 428a-b
54 FREUD: *War and Death*, 755b-757a passim, esp 755b-c; 766c-d / *Civilization and Its Discontents*, 787a-788d

5e. Economic necessities or luxuries

APOCRYPHA: *Ecclesiasticus*, 29:21—(*D*) OT, *Ecclesiasticus*, 29:27
5 EURIPIDES: *Phoenician Maidens* [550-554] 382d
7 PLATO: *Republic*, BK II, 316c-319a; BK VIII, 409d-410c / *Critias*, 479d
8 ARISTOTLE: *Topics*, BK III, CH 2 [$118^{a}6$-16] 164d-165a
9 ARISTOTLE: *Politics*, BK I, CH 8 [$1256^{b}27$-39] 450c-d; CH 9 [$1257^{b}30$-$1258^{a}18$] 451d-452b; BK VII, CH 5 [$1326^{b}26$-38] 530d-531a; CH 13 [$1331^{b}39$-$1332^{a}2$] 536c
14 PLUTARCH: *Lycurgus*, 36a-37b / *Marcus Cato*, 285c-d / *Aristides-Marcus Cato*, 291b-292b
15 TACITUS: *Annals*, BK II, 31a-b
19 AQUINAS: *Summa Theologica*, PART I-II, Q 2, A 1, ANS and REP 3 615d-616c
20 AQUINAS: *Summa Theologica*, PART II-II, Q 32, A 6 545b-546b
25 MONTAIGNE: *Essays*, 110b-c; 131b-132a; 216c-218a passim; 489b-490c
27 SHAKESPEARE: *King Lear*, ACT II, SC IV [263-274] 261c; ACT III, SC IV [27-36] 264c
31 SPINOZA: *Ethics*, PART IV, APPENDIX, XXVIII-XXIX 450a
33 PASCAL: *Provincial Letters*, 91a-94a

(5. Necessity and contingency in human life and society. 5e. Economic necessities or luxuries.)

35 LOCKE: *Civil Government*, CH V 30b-36a passim
38 MONTESQUIEU: *Spirit of Laws*, BK VII, 44a; BK XIII, 96a
38 ROUSSEAU: *Inequality*, 327c-328a; 337b; 350a-c; 352a-353c; 364a-b; 365c-366b / *Social Contract*, BK I, 393d-394b
39 SMITH: *Wealth of Nations*, BK I, 27b-37b passim; 63a-b; 70a-71d; 74d-75b; BK III, 163c-164c; BK V, 383c-d
40 GIBBON: *Decline and Fall*, 22c
41 GIBBON: *Decline and Fall*, 451d-452a
42 KANT: *Judgement*, 586b
43 FEDERALIST: NUMBER 30, 102a-b
43 MILL: *Utilitarianism*, 470d-471b
44 BOSWELL: *Johnson*, 124d-125a; 389d-390a
46 HEGEL: *Philosophy of Right*, PART III, par 190-191 66a-b; par 195 66d-67a; par 203 68a-c; ADDITIONS, 120 136b-c / *Philosophy of History*, INTRO, 193b-c; PART II, 267a-b
50 MARX: *Capital*, 16c-17a; 81a-d; 88c; 112a-b; 218d-219a; 253b-254b; 261c-262a; 280d-283c esp 282d-283b; 292c-296a esp 293c-294a

5f. Necessity and contingency in history

6 HERODOTUS: *History*, BK I, 21d-22a; BK IX, 291b-c
6 THUCYDIDES: *Peloponnesian War*, BK IV, 462a-b
7 PLATO: *Laws*, BK IV, 679a-c
8 ARISTOTLE: *Metaphysics*, BK XII, CH 8 [1074^b 11-13] 605a
14 PLUTARCH: *Romulus*, 18d; 20b-c / *Timoleon* 195a-213d esp 201a-203b / *Philopoemen*, 300b-c / *Demosthenes*, 698a-699a / *Marcus Brutus*, 814d-815c
15 TACITUS: *Annals*, BK III, 49c; BK VI, 91b-d / *Histories*, BK II, 232d-233a
18 AUGUSTINE: *City of God*, BK I, PREF 129a-d; CH 36 149c-d; BK II, CH 2-3 150c-151c; BK IV, CH 33 206c-d; BK V, CH 1 207d-208c; CH 11-26 216c-230a,c; BK XV, CH 1 397b,d-398c; CH 21-22 415b-416c; BK XVIII, CH 1-2 472b,d-473d
21 DANTE: *Divine Comedy*, HELL, VII [61-96] 10b-c; PURGATORY, XVI [52-129] 77b-78a
23 MACHIAVELLI: *Prince*, CH VI, 9a-b; CH XXV 35a-36b
26 SHAKESPEARE: *Julius Caesar*, ACT IV, SC III [215-224] 590d
40 GIBBON: *Decline and Fall*, 609b-c; 630b
41 GIBBON: *Decline and Fall*, 590a-b
46 HEGEL: *Philosophy of Right*, PART III, par 340-360 110b-114a,c / *Philosophy of History*, INTRO, 156c-190b esp 156d-170b; 190b-201a,c; PART I, 241d-242b; PART II, 274a-275a; 281d 282d; 283d-284a,c; PART III, 285a-b; 300c 301c; PART IV, 368d-369a,c
50 MARX: *Capital*, 6d; 7b-c; 10b-11d; 174a-c 378b-d
50 MARX-ENGELS: *Communist Manifesto*, 421d-422c passim; 425a-b
51 TOLSTOY: *War and Peace*, BK III, 143a-c; BK IX, 342a-344b; BK X, 389a-391c; BK XI, 469a-472b; BK XIII 563a-587d; BK XIV, 588a-590c; 609a-613d; BK XV, 618b-621b; 626d-630a; EPILOGUE I, 645a-650c; EPILOGUE II 675a-696d
54 FREUD: *Civilization and Its Discontents*, 801d-802a / *New Introductory Lectures*, 882b-884c passim, esp 882c-d

CROSS-REFERENCES

For: Matters relevant to the distinction between necessary and contingent being, *see* BEING 7a, 7b(3); CHANGE 15c; ETERNITY 3, 4b; GOD 2b, 4a; and for the application of this distinction to properties, accidents, and modes, *see* BEING 7b(5)-7b(6), 8c-8e; NATURE 1a(1).

Matters relevant to the distinction between necessity and contingency in the realm of change, *see* CAUSE 1-1a; CHANCE 1a, 2a; FATE 3; NATURE 3c(1).

Other discussions of the distinction between knowledge and opinion, and of the difference between certainty and probability, *see* CHANCE 4; JUDGMENT 3, 9; KNOWLEDGE 4b, 6d(1)-6d(2); OPINION 1, 3b; TRUTH 2e; WILL 3b(1).

The moral certainty of the things in which it is practically necessary to believe, *see* GOD 2d; IMMORTALITY 3a; METAPHYSICS 2d; WILL 5b(4).

Other discussions of the truth of propositions about future contingents, *see* TIME 6f; TRUTH 3b(2).

Necessity and contingency in logical analysis and in mathematical reasoning, *see* JUDGMENT 6c; MATHEMATICS 1c; OPPOSITION 1d(2); PRINCIPLE 2b(2), 5; REASONING 3d; TRUTH 3b(3)-3c, 7a.

For: The opposition between necessity and liberty in the sphere of human life and history, *see* CAUSE 3; FATE 2–3, 5–6; HISTORY 4a(1); LIBERTY 1c, 4a; NATURE 2f, 3c(2); PRUDENCE 4a; WEALTH 11; WILL 5a(1)–5a(4), 5c, 6a, 7b; and for the related problem of divine providence in relation to human freedom, *see* FATE 4; GOD 7b; HISTORY 5a; LIBERTY 5a–5b; WILL 7c.

The necessary and contingent, or the natural and the conventional, with respect to the family and the state, and also in language and law, *see* CUSTOM AND CONVENTION 1; FAMILY 1; JUSTICE 10a; LAW 4f, 5e; NATURE 2b, 5c; PUNISHMENT 4c; STATE 3b–3c.

The consideration of the inevitability or necessity of certain social institutions or phenomena, such as slavery, poverty, or war, *see* LAW 4h; NATURE 5b; OPPOSITION 5c; SLAVERY 2, 3; WAR AND PEACE 7; WEALTH 9g, 10b.

Another discussion of the distinction of the necessary, the possible, and the probable in poetry, *see* POETRY 8a(2).

ADDITIONAL READINGS

Listed below are works not included in *Great Books of the Western World*, but relevant to the idea and topics with which this chapter deals. These works are divided into two groups:

I. Works by authors represented in this collection.
II. Works by authors not represented in this collection.

For the date, place, and other facts concerning the publication of the works cited, consult the Bibliography of Additional Readings which follows the last chapter of *The Great Ideas.*

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AQUINAS. *Summa Contra Gentiles*, BK II, CH 29–31; BK III, CH 64–83

HUME. *A Treatise of Human Nature*, BK I, PART III, SECT XIV; BK II, PART III, SECT I

KANT. *Introduction to Logic*, IX

HEGEL. *Science of Logic*, VOL I, BK II, SECT III, CH 2

J. S. MILL. *A System of Logic*, BK III, CH 17; BK VI, CH 2

W. JAMES. "The Dilemma of Determinism," in *The Will to Believe*

II.

EPICURUS. *Letter to Menoeceus*

CICERO. *De Fato* (*On Fate*)

ANSELM OF CANTERBURY. *De Potestate et Impotentia; Possibilitate et Impossibilitate; Necessitate et Libertate*

MAIMONIDES. *The Guide for the Perplexed*, PART II, CH 21

SUÁREZ. *Disputationes Metaphysicae*, XIX, XXVIII–XXIX, XXXI (14)

LEIBNITZ. *Philosophical Works*, CH 28 (*Letter on Necessity and Contingency*), 34 (*The Principles of Nature and of Grace*)

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J. BUTLER. *The Analogy of Religion*, PART I, CH 6

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Chapter 62: OLIGARCHY

INTRODUCTION

IN the great books of political theory the word "oligarchy" is usually listed along with "monarchy" and "democracy" among the traditional names for the forms of government. According to the meaning of their Greek roots, "oligarchy" signifies the rule of the few as "monarchy" signifies the rule of one and "democracy" the rule of the people—or the many. These verbal meanings are somewhat altered, however, when we consider the actual conflict between oligarchy and democracy in Greek political life. It involved an opposition, not simply between the few and the many, but between the wealthy and the working classes. The contest between these factions for political power dominated more than a century of Greek history around the Periclean age; and that fact justifies Aristotle's remark that oligarchy and democracy are the two principal conflicting forms of government.

We would not so describe the political struggle of our time. We would not speak of oligarchy as one of the principal forms of government in the world today. Instead we tend to think in terms of the conflict between democracy and dictatorship or despotism. Even when we look to the background of present issues, it is the age-old struggle between absolute and constitutional government—or between monarchies and republics—which seems to supply the obvious historical parallels for the contemporary conflict between the principles of arbitrary and legal government. The traditional terms of political theory, with the exception of oligarchy, thus appear to have a certain liveliness in the consideration of current problems. But though it does not have such frequency in our speech or familiarity in our thought, oligarchy may be much more relevant to the real issues of our day than appears on the surface.

Certainly within the framework of constitutional government oligarchical and democratic principles are the opposed sources of policy and legislation. In modern as in ancient republics the division of men into political parties tends to follow the lines of the division of men into economic factions. The ancient meanings of oligarchy and democracy, especially for those observers like Thucydides and Aristotle who see the rich and the poor as the major rivals for constitutional power, indicate the fusion of political and economic issues.

The difference between oligarchy and democracy, says Aristotle, is not well-defined by reference to the few and the many, unless it is understood that the few are also the rich and the many the poor. The issue is not whether the few are wiser than the many, or whether it is more efficient to have the government in the hands of the few rather than the many. Such issues have been debated in the history of political thought, but they are more appropriate to the alternatives of aristocracy and democracy than to the conflict between oligarchy and democracy.

The historic struggle between oligarchs and democrats—whether described as a struggle between rich and poor, nobility and bourgeoisie, landed gentry and agrarian peons, owners and workers, classes and masses—is a struggle over the political privileges of wealth, the rights of property, the protection of special interests. In the tradition of the great books, Marx and Engels may be the first to call this struggle "the class war," but they are only the most recent in a long line of political and economic writers to recognize that the economic antagonism of rich and poor generates the basic political conflict in any state. "Any city, however small," says Socrates, "is in fact divided into two, one the city of the poor, the other of the rich: these are at war with one another."

OLIGARCHY IS NOT always defined as the rule of the wealthy, nor is it always conceived as the opponent of democracy on constitutional questions. In the *Statesman*, for example, Plato first divides the forms of government into "monarchy, the rule of the few, and the rule of the many," and then divides "the rule of the few into aristocracy, which has an auspicious name, and oligarchy." Here aristocracy and oligarchy seem to be regarded as opposites, the one a government in which the few rule according to the laws, the other lawless government by the few. In both, the few are the wealthy; hence wealth is no more characteristic of oligarchy than of aristocracy.

Some political theorists make no reference to wealth at all in the discussion of oligarchy. Hobbes divides the forms of government according to whether the sovereign power is in the hands of one or more; and if in the hands of more than one, then whether it is held by some or all. He calls the several forms of government monarchy (one), aristocracy (some), and democracy (all). There are "other names of government in the histories and books of policy," he adds, such as "*tyranny* and *oligarchy*. But they are not the names of other forms of government, but of the same forms misliked. For they that are discontented under *monarchy* call it *tyranny*, and they that are displeased with *aristocracy* call it *oligarchy*." Like Hobbes, both Locke and Rousseau use no criterion except numbers to distinguish the forms of government, Locke calling government by the few "oligarchy" and Rousseau calling it "aristocracy."

Barely outlined in this way, the alternatives of monarchy, aristocracy *or* oligarchy, and democracy seem to raise issues only of expediency or efficiency rather than of justice. Whether oligarchy is intrinsically a good or bad form of government tends to become a question only when other factors are considered; when, for example, the distinction between aristocracy and oligarchy is made to turn on whether the few are men of virtue or men of property, or when, in the comparison of oligarchy with democracy, the emphasis is not upon numbers but on the principles of wealth and liberty.

Nevertheless, the numerical criterion does not seem to be totally irrelevant to the comparison. "Oligarchy and democracy," Aristotle writes, "are not sufficiently distinguished merely by these two characteristics of wealth and freedom." Though the "real difference between democracy and oligarchy is poverty and wealth," and though "wherever men rule by reason of their wealth, whether they be few or many, that is an oligarchy," Aristotle does not seem to think we can neglect the political significance of what he calls the "accidental fact that the rich everywhere are few, and the poor numerous."

With regard to aristocracy and oligarchy, the chief question does not seem to be one of principle, but of fact. Plato in the *Republic* and Aristotle in the *Politics* define aristocracy as government by the few best men, or the most virtuous. They also place it next to what is for them the ideal government by the supremely wise man—the rule of the philosopher king, or what Aristotle calls "the divine sort of government." In this context, oligarchy represents a perversion of aristocracy, as tyranny represents a corruption of monarchy.

Plato describes oligarchy as arising when "riches and rich men are honored in the State" and when the law "fixes a sum of money as the qualification for citizenship" and allows "no one whose property falls below the amount fixed to have any share in the government." But according to Socrates, wealth does not qualify men to rule, as virtue and wisdom do. "Just think what would happen," he says, "if pilots were to be chosen according to their property, and a poor man were refused permission to steer, even though he were a better pilot." To which Adeimantus agrees that in government, as in navigation, the probable result would be shipwreck.

But though there may be no question of the superiority of aristocracy over oligarchy in principle, the critics of aristocracy question whether any historic state in which the few hold political power is not in fact an oligarchy. It may not always be the case that the power of the few rests directly on wealth. The privileged class may be a military clique or an hereditary nobility. Yet these distinctions are seldom unaccompanied by the control of land or other forms of wealth, so that indirectly at least the oligarchical factor is thought to be operative.

THE CRITICISM OF aristocracies as masked oligarchies is discussed in the chapter on ARISTOCRACY. The critical point seems to be that nothing except superior virtue or talent justifies a political inequality between the few and the many. The meaning of oligarchy is generalized in consequence to include any government in which the special privileges or powers held by the few cannot be justified, whether it is wealth or some other title to pre-eminence that is substituted for superiority in virtue or talent. When it is so understood, the word "oligarchical" tends to become like "tyrannical," a term of reproach.

In describing different forms of democracy, Aristotle observes that their common principle is to give a share in the government to all who meet whatever minimum qualification is set by law. "The absolute exclusion of any class," he says, "would be a step towards oligarchy." To the same effect is Mill's comment on the steps away from oligarchy accomplished by English constitutional reforms in the 19th century.

"In times not long gone by," Mill writes, "the higher and richer classes were in complete possession of the government. . . . A vote given in opposition to those influences . . . was almost sure to be a good vote, for it was a vote against the monster evil, the over-ruling influence of oligarchy." But now that the higher classes are no longer masters of the country, now that the franchise has been extended to the middle classes, a diminished form of oligarchy still remains. "The electors themselves are becoming the oligarchy"—in a population where many are still disfranchised. "The present electors," Mill continues, "and the bulk of those whom any probable Reform Bill would add to the number, are the middle class; and have as much a class interest, distinct from the working classes, as landlords or great manufacturers. Were the suffrage extended to all skilled laborers, even those would, or might, still have a class interest distinct from the unskilled."

Oligarchy remains, according to Mill, so long as there is any unjustifiable discrimination among classes in the population. It is not in his view limited to discrimination based on the extremes of wealth and poverty, as he plainly indicates by his remarks on the special interests of different parts of the working class, or their relation as a whole to the lower middle classes. He makes this even plainer by what he has to say on political discrimination as between the sexes. Suppose the suffrage to be extended to all men, he writes, "suppose that what was formerly called by the misapplied name of universal suffrage, and now by the silly title of manhood suffrage, became the law; the voters would still have a class interest, as distinguished from women."

The oligarchical defect in representative government which Mill is here criticizing seems to have little or no basis in economic class divisions. The exclusion of any class in the population from a voice in government renders that government oligarchical with respect to them. The excluded class may even be a minority. So conceived, oligarchy no longer means the rule of either the rich or the few.

When the meaning of oligarchy is generalized in this way, the discussion of oligarchy seems to presuppose the typically modern conception of democracy. As indicated in the chapter on DEMOCRACY, the distinguishing feature of the modern democratic constitution is universal suffrage. By this criterion, the conflict between the democrats and the oligarchs of the ancient world appears to be a conflict between two forms of the oligarchical constitution—one in which the wealthier few and one in which the poorer many have political rights, but in neither of which membership in the political community includes all normal adult human beings in the population.

Where ancient political theory could conceive of a mixed constitution—somehow combining oligarchical and democratic principles—the modern conception of democracy seems to make any compromise with oligarchy impossible. Certain modern writers, notably Mosca, Michels, and Pareto, seem to insist, on the contrary, that oligarchy is present in all forms of government, and is especially prevalent in representative democracies where the actual conduct of government—the effective power—is in the hands of a bureaucracy or an elite, whether popularly chosen or self-appointed. But the contradiction may be more verbal than real if on one side the word "oligarchy" means some degree of restriction in the franchise or citizenship, and, on the other, it applies to any situa-

tion in which the whole people are not directly active in all the affairs of government and, consequently, a small number of men administers the state. Understood in the latter sense, the oligarchical principle does not seem to be incompatible with representative democracy. Those who use the word in this sense merely call attention to an inevitable characteristic of representative government. A representative democracy may also have an aristocratic aspect when it follows the principle that the men best qualified by virtue or talent for public office should be chosen by the suffrage of all their fellow-citizens.

FULLER DISCUSSION of these aspects of oligarchy is found in the chapters on ARISTOCRACY and DEMOCRACY. Here we are primarily concerned with political issues which have their source in the opposition of economic classes in the state, primarily that extreme division of men into those who live by their labor and those who live on their property and the labor of others. It is in terms of this extreme division between men of leisure and working men that the conflict between oligarchy and democracy takes place in the ancient world.

At a time when citizenship meant a much more active and frequent participation in government than it does under the modern institutions of the ballot box and the representative assembly, the ancient defenders of oligarchy could argue that only men of wealth had the leisure requisite for citizenship. Oligarchy could be further defended on the ground that, in many of the Greek city-states, public officials were either not compensated at all or at least not substantially. Only men of sizeable property could afford to hold public office.

Aristotle weighs the arguments for and against oligarchy. On the point of leisure, for example, he holds that "nothing is more absolutely necessary than to provide that the highest class, not only when in office, but when out of office, should have leisure." Yet "even if you must have regard to wealth in order to secure leisure," it is "surely a bad thing," he thinks, "that the greatest offices, such as those of kings and generals, should be bought. The law which allows this abuse makes wealth of more account than virtue."

Aristotle seems to regard democratic and oligarchical claims as complementary half-truths. "Both parties to the argument," he says, "are speaking of a limited and partial justice, but imagine themselves to be speaking of absolute justice." According to an adequate conception of political justice, it is as unjust to treat equals unequally as it is to treat unequals equally. The oligarch violates the first of these principles, the democrat the second. "Democracy arises out of the notion that those who are equal in any respect are equal in all respects; because men are equally free, they claim to be absolutely equal. Oligarchy is based on the notion that those who are unequal in one respect are in all respects unequal; being unequal, that is, in property, they suppose themselves to be unequal absolutely."

Both forms of government have "a kind of justice, but, tried by an absolute standard, they are faulty; and, therefore, both parties, whenever their share in the government does not accord with their preconceived ideas, stir up revolution. . . . . In oligarchies the masses make revolution under the idea that they are unjustly treated, because . . . they are equals and have not an equal share; and in democracies, the notables revolt, because they are not equal, and yet have only an equal share."

What can cure this situation in which perpetual revolution seems to be inevitable, as democracy succeeds oligarchy, or oligarchy democracy, in the government of the Greek cities? Aristotle describes many forms of oligarchy and democracy, but none seems to remove the cause of revolution. When, in an attempt to preserve their position, the wealthier families turn to the more extreme forms of oligarchical constitution, that tendency eventually leads to a kind of despotic government which Aristotle calls "dynasty," or the lawless rule of powerful families.

To establish a stable government which shall be less subject to revolution in favor of a contrary principle of government, and which shall resist the tendency toward lawless rule, by either the masses or the powerful few, Aristotle proposes the mixed constitution, which shall combine the elements of both democratic and oligarchical justice. But this will not work in actual practice, he thinks, unless the middle class

"is large, and stronger if possible than both the other classes. . . . . Great then is the good fortune of a state in which the citizens have a moderate and sufficient property; for where some possess much, and the others nothing, there may arise an extreme democracy, or a pure oligarchy; or a tyranny may grow out of either extreme. . . . . These considerations will help us to understand why most governments are either democratical or oligarchical. The reason is that the middle class is seldom numerous in them, and whichever party, whether the rich or the common people, transgresses the mean and predominates, draws the constitution its own way, and thus arises either oligarchy or democracy."

From the point of view which sees no justice in granting any special privileges to property, Aristotle's position on oligarchy seems open to question. For one thing, in admitting a partial justice in the principle that those who are unequal in wealth should be treated unequally in the distribution of political power, Aristotle appears to affirm that the possessors of wealth *deserve* a special political status. For another thing, in his own formulation of an ideal polity, Aristotle advocates the exclusion of the working classes from citizenship. "The citizens must not lead the life of mechanics or tradesmen, for such a life is ignoble and inimical to virtue. Neither must they be husbandmen, since leisure is necessary both for the development of virtue and the performance of political duties." All these classes of men are necessary for the existence of the state, but they are to be no part of it in the sense of political membership. "The best form of state will not admit them to citizenship," though it will include as necessary "the slaves who minister to the wants of individuals, or mechanics and laborers who are the servants of the community."

Some of the great speeches in Thucydides' *History*, which deal with domestic issues as well as the issues of war and peace, eloquently argue the opposite side of the case. Debating with Hermocrates before the Syracusan assembly, Athenagoras answers those who say that "democracy is neither wise nor equitable, but that the holders of property are the best fitted to rule. I say, on the contrary, first, that the word *demos*, or people, includes the whole state, oligarchy only a part; next, that if the best guardians of property are the rich, and the best counsellors the wise, none can hear and decide so well as the many, and that all these talents, severally and collectively, have their just place in a democracy. But an oligarchy gives the many their share of the danger, and not content with the largest part, takes and keeps the whole of the profit."

IN MODERN POLITICAL thought, the discussion of oligarchy seems to occur on two levels. There is a controversy on the level of constitutional principles with regard to suffrage and representation and the qualifications for public office. Here the issues concern the justice of the fundamental laws of republican or popular government. There is also a consideration of the way in which men of property or corporate concentrations of wealth are able to exert influence upon the actual course of government. Here the problem becomes, not so much the justice of the constitution or of the laws, but the weight which wealth seems able to throw onto the scales of justice.

The great modern defense of the oligarchical constitution does not seem to be as plainly or forcefully made in any of the great books as in the speeches of Edmund Burke, especially those in opposition to the suffrage reform measures proposed by Charles James Fox, wherein Burke argues for the principle of *virtual* representation. It is unnecessary, he claims, for the franchise to be extended to the working classes if their economic betters—who also happen to be their superiors in talent and education—deliberate on what is for the common good of all.

The Federalists seem to take an opposite view. Reflecting on the system of British representation in their day, they observe that, for the eight millions of people in the kingdoms of England and Scotland, "the representatives . . . in the House of Commons amount to five hundred and fifty-eight." But, they go on, "of this number one ninth are elected by three hundred and sixty-four persons and one half by five thousand seven hundred and twenty-three persons. It cannot be supposed," they argue, "that the half thus elected and who do not even reside among the people at large, can add anything either to the security of the people

against the government, or to the knowledge of their circumstances and interests in the legislative councils. On the contrary, it is notorious that they are more frequently the representatives and instruments of the executive magistrate than the guardians and advocates of the popular rights." Nevertheless, they do not condemn such an oligarchical system of representation as entirely inimical to the virtues of parliamentary government. "It is very certain," they declare, "not only that a valuable portion of freedom has been preserved under all these circumstances, but that the defects in the British code are chargeable, in a very small proportion, on the ignorance of the legislature concerning the circumstances of the people."

Some of the American constitutionalists may be influenced by Burke's defense of oligarchy in terms of the virtues of an aristocracy, but they state their own position in terms which are more plainly oligarchical. They argue for poll tax clauses and property qualifications for public office on the ground that the country should be run by the people who own it. Furthermore, those who are not economically independent are not in a position to exercise political liberty. "Power over a man's subsistence," Hamilton declares, "amounts to power over his will."

Facing the issue which had been raised on the floor of the constitutional convention, Madison remarks that "the most common and durable source of factions has been the various and unequal distribution of property. Those who hold and those who are without property have ever formed distinct interests in society." He proposes a representative—or what he calls a "republican"—system of government to avoid the excessive factionalism of the pure or direct democracies of Greek city-states.

"Theoretic politicians, who have patronized this species of government," Madison writes, "have erroneously supposed that by reducing mankind to perfect equality in their political rights, they would, at the same time, be perfectly equalized and assimilated in their possessions, their opinions, and their passions." By a weighted system of representation, the power of sheer numbers may be counter-balanced by the power given to other factors, thus preventing the "accomplishment of the secret wishes of an unjust and interested majority. . . . A rage for paper money, for an abolition of debts, for an equal division of property, or for any other improper or wicked project, will be less apt to pervade the whole body of the Union than a particular member of it."

In another paper, the Federalists answer the charge that the constitution is oligarchical, because "the House of Representatives . . . . . will be taken from that class of citizens which will have least sympathy with the mass of the people and be most likely to aim at an ambitious sacrifice of the many to the aggrandizement of the few." This objection, they say, while "leveled against a pretended oligarchy," in principle "strikes at the very root of republican government."

The method of election provided for by the Constitution aims "to obtain for rulers men who possess most wisdom to discern, and most virtue to pursue, the common good of the society. . . . . Who are to be the electors of the federal representatives? Not the rich, more than the poor; not the learned, more than the ignorant; not the haughty heirs of distinguished names, more than the humble sons of obscurity and unpropitious fortune. . . . . Who are to be the objects of popular choice? Every citizen whose merit may recommend him to the esteem and confidence of the country. No qualification of wealth, of birth, of religious faith, or of civil profession, is permitted to fetter the judgment or disappoint the inclination of the people."

WHETHER THE AMERICAN Constitution in its original formulation is an oligarchical document has long been a matter of dispute. Whether the Federalists favor devices for protecting the rights of property or repudiate oligarchical restrictions in favor of the rights of man has also been the subject of controversy. That this is so may indicate at least a certain ambiguity in their position. But on the question of the oligarchical influences on government—the political pressures exerted by propertied classes to serve their special interests—the opinion of the modern authors of the great books seems much clearer.

The most extreme statement of this opinion is, of course, to be found in the *Communist Manifesto*. There government, in fact the state it-

self, is regarded as an instrument which the economic oppressors wield against the oppressed. The final step in the bourgeois revolution, according to Marx and Engels, occurred when the bourgeoisie "conquered for itself, in the modern representative State, exclusive political sway." In the bourgeois state, legislation is nothing but the will of this one class made into a law for all. One aim of the communist revolution, beyond the temporary dictatorship of the proletariat, is the withering away of that historic formation of the state in which "political power . . . is merely the organized power of one class for oppressing another."

Though much less radical in intention than Marx, Smith and Mill make statements which seem to be no less radical in their criticism of the oligarchical influences on modern parliamentary government. It has been said, Smith observes, that "we rarely hear . . . of combinations of masters, though frequently of those of workmen. But whoever imagines, upon this account, that masters rarely combine, is as ignorant of the world as of the subject. Masters are always and everywhere in a sort of tacit, but constant and uniform combination, not to raise the wages of labor above their actual rate . . . . Masters too sometimes enter into particular combinations to sink the wages of labor even below this rate." Furthermore, the parties to the conflict do not have equal access to legislative protection. "Whenever the legislature attempts to regulate the differences between masters and their workmen, its counsellors are always the masters."

Almost a century later, Mill writes in a similar vein concerning "the persevering attempts so long made to keep down wages by law . . . . Does Parliament," he asks, "ever for an instant look at any question with the eyes of a working man? . . . . On the question of strikes, for instance, it is doubtful if there is so much as one among the leading members of either House who is not firmly convinced that the reason of the matter is unqualifiedly on the side of the masters, and that the men's view of it is simply absurd." The remedy for this inequity, according to Mill, is not communism, but constitutional reforms in the direction of universal suffrage which will no longer leave the working classes "excluded from all direct participation in the government."

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REFERENCES

To find the passages cited, use the numbers in heavy type, which are the volume and page numbers of the passages referred to. For example, in **4** HOMER: *Iliad*, BK II [265-283] **12d**, the number **4** is the number of the volume in the set; the number **12d** indicates that the passage is in section d of page 12.

PAGE SECTIONS: When the text is printed in one column, the letters a and b refer to the upper and lower halves of the page. For example, in **53** JAMES: *Psychology*, **116a-119b**, the passage begins in the upper half of page 116 and ends in the lower half of page 119. When the text is printed in two columns, the letters a and b refer to the upper and lower halves of the left-hand side of the page, the letters c and d to the upper and lower halves of the right-hand side of the page. For example, in **7** PLATO: *Symposium*, **163b-164c**, the passage begins in the lower half of the left-hand side of page 163 and ends in the upper half of the right-hand side of page 164.

AUTHOR'S DIVISIONS: One or more of the main divisions of a work (such as PART, BK, CH, SECT) are sometimes included in the reference; line numbers, in brackets, are given in certain cases; *e.g.*, *Iliad*, BK II [265-283] **12d**.

BIBLE REFERENCES: The references are to book, chapter, and verse. When the King James and Douay versions differ in title of books or in the numbering of chapters or verses, the King James version is cited first and the Douay, indicated by a *(D)*, follows; *e.g.*, OLD TESTAMENT: *Nehemiah*, 7:45—*(D) II Esdras*, 7:46.

SYMBOLS: The abbreviation "esp" calls the reader's attention to one or more especially relevant parts of a whole reference; "passim" signifies that the topic is discussed intermittently rather than continuously in the work or passage cited.

For additional information concerning the style of the references, see the Explanation of Reference Style; for general guidance in the use of *The Great Ideas*, consult the Preface.

1. The oligarchical constitution: the principles and types of oligarchy

6 HERODOTUS: *History*, BK III, **107d-108b**
6 THUCYDIDES: *Peloponnesian War*, BK I, **353d**; BK V, **502d**; **503d-504b**; BK VIII, **579d-581c**
7 PLATO: *Republic*, BK VIII, **405c-408a** / *Statesman*, **598b-604b** / *Laws*, BK IV, **680a-b**
9 ARISTOTLE: *Ethics*, BK VIII, CH 10 [1160^{b}11-16] **412d** / *Politics*, BK II, CH 6 [1266^{a}5-24] **461c-d**; CH 10 [1272^{a}27-^{b}10] **468c-469a**; CH 11 [1273^{a}2-^{b}7] **469c-470a**; BK III, CH 6 [1278^{b}9-14] **475d**; CH 7-13 **476c-483a**; BK IV, CH 2-9 **488b-494d** passim, esp CH 3 [1290^{a}13]-CH 4 [1290^{b}20] **489b-d**, CH 5 [1292^{a}39-^{b}10] **491d-492a**, CH 6 [1293^{a}11-34] **492d-493a**; CH 12 [1296^{b}17-34] **496d-497a**; CH 14-16 **498b-502a,c** passim; BK V, CH 1 [1301^{a}30-35] **502b**; CH 12 [1316^{a}39-^{b}15] **519c**; BK VI, CH 6-8 **524b-526d** / *Athenian Constitution*, CH 2-6 **553a-555c**; CH 29 **566b-d**; CH 33-34 **568b-569a** / *Rhetoric*, BK I, CH 8 [1365^{b}32-1366^{a}5] **608a-b**
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23 MACHIAVELLI: *Prince*, CH V, **8a-b**; CH IX, **14c-15a**
23 HOBBES: *Leviathan*, PART II, **104d-105a**; PART IV, **273a-b**
35 LOCKE: *Civil Government*, CH X, SECT 132 **55a-b**
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2. The relation of oligarchy to monarchy, aristocracy, and democracy

6 HERODOTUS: *History*, BK III, **107c-108c**
6 THUCYDIDES: *Peloponnesian War*, BK VI, **520a-d**; BK VIII, **575d-576b**; **577b-c**; **579d-580c**; **587a-b**
7 PLATO: *Republic*, BK VIII, **402b-d**; **405c-406a** / *Statesman*, **598b-604b** / *Laws*, BK IV, **680a-b**
9 ARISTOTLE: *Ethics*, BK V, CH 3 [1131^{a}24-29] **378d**; BK VIII, CH 10 [1160^{b}11-16] **412d**; [1160^{b}32-1161^{a}3] **413a-b** / *Politics*, BK II, CH 6 [1265^{b}27-39] **461b**; CH 10 [1272^{a}27-^{b}10] **468c-469a**; CH 11 [1273^{a}2-^{b}7] **469c-470a**; BK III, CH 5 [1278^{a}15-34] **475b-c**; CH 6 [1278^{b}9-14] **475d**; CH 7-13 **476c-483a**; CH 15 [1286^{b}9-21] **484d-485a**; BK IV, CH 2-9 **488b-494d** passim, esp

(2. The relation of oligarchy to monarchy, aristocracy, and democracy.)

CH 3 [1290a13]-CH 4 [1290b20] 489b-d, CH 5 491d-492a, CH 6 [1293a11-34] 492d-493a; CH 11 [1295b35]-CH 12 [1297a12] 496a-497b; CH 14-16 498b-502a,c; BK V, CH 7 [1306b22-26] 508c-d; CH 8-9 509d-512d; CH 12 [1316a1-b28] 518d-519d; BK VI, CH 6-8 524b-526d / *Rhetoric*, BK I, CH 8 608a-c

14 PLUTARCH: *Lycurgus*, 36a-37b; 47a-48a
15 TACITUS: *Annals*, BK VI, 97b c
20 AQUINAS: *Summa Theologica*, PART I-II, Q 95, A 4, ANS 229b-230c
23 HOBBES: *Leviathan*, PART II, 104d-105a; PART IV, 273a-b
35 LOCKE: *Civil Government*, CH X, SECT 132 55a-b
38 MONTESQUIEU: *Spirit of Laws*, BK VIII, 52c-d; BK XX, 151c-152a
38 ROUSSEAU: *Social Contract*, BK III, 419b
39 SMITH: *Wealth of Nations*, BK III, 165c-166c; BK V, 309c-310d
42 KANT: *Science of Right*, 450a-c
43 FEDERALIST: NUMBER 57 176d-179b; NUMBER 58, 181b-c; NUMBER 60, 185a-187a passim; NUMBER 63, 194b-195b; NUMBER 77, 228d-229a
43 MILL: *Representative Government*, 363b-364d; 393c-395a
46 HEGEL: *Philosophy of History*, PART II, 277c-d; PART III, 292d-293b

3. The instability of oligarchical government

3*a*. The revolutionary changes to which oligarchy is subject: the change to despotism or democracy

6 HERODOTUS: *History*, BK III, 108b-c
6 THUCYDIDES: *Peloponnesian War*, BK III, 436d-438b; BK VIII, 568d-569a; 569c-585a esp 582a-c; 587a-590c
7 PLATO: *Republic*, BK VIII, 408b-409a / *Laws*, BK IV, 680a-b / *Seventh Letter*, 801c
9 ARISTOTLE: *Politics*, BK II, CH 12 [1273b36-1274a22] 470c-d; BK III, CH 15 [1286b9-21] 484d-485a; BK IV, CH 5 [1292b11-22] 492a; CH 11 [1295b35-1296a21] 496a-b; BK V, CH 1 502a-503b passim, esp [1302a8-16] 503b; CH 3 [1302b25-28] 504a; [1303b4-7] 505a; CH 6 507b-508c; CH 12 [1316a1-b28] 518d-519d / *Athenian Constitution*, CH 2-6 553a-555c; CH 32-41 568a-572a
14 PLUTARCH: *Solon*, 68d-71c; 75c-76d / *Themistocles*, 96b-c / *Camillus*, 117c-121a,c / *Coriolanus*, 176b-184c / *Crassus*, 444d-445d / *Pompey*, 521c-d / *Caesar*, 581d-582a / *Phocion* 604b,d-619d / *Agis* 648b,d-656d / *Cleomenes*, 657a-663c / *Tiberius Gracchus*, 674c-681a,c / *Caius Gracchus* 681b,d-689a,c / *Cicero*, 708a-b
15 TACITUS: *Annals*, BK VI, 97b-c / *Histories*, BK II, 224d-225a
23 HOBBES: *Leviathan*, PART II, 149a-b; 152c
35 LOCKE: *Civil Government*, CH XVIII, SECT 201 71c
38 MONTESQUIEU: *Spirit of Laws*, BK VIII, 51d-52a; 52c-53a
43 MILL: *Representative Government*, 394a-d
46 HEGEL: *Philosophy of History*, PART II, 275b-276a; 278d-279b; PART III, 300a-301c
50 MARX: *Capital*, 377c-378d
50 MARX-ENGELS: *Communist Manifesto*, 421c-425b esp 423d-424b, 425b; 429b-c

3*b*. The preservation of oligarchies against revolution

6 HERODOTUS: *History*, BK VI, 202c-203b
6 THUCYDIDES: *Peloponnesian War*, BK IV, 463a-465c; BK V, 482d-483a; 502d-504b; BK VIII, 580b-c; 582a; 582d-583d; 587b-589d
9 ARISTOTLE: *Politics*, BK II, CH 11 [1273b17-26] 470b; BK IV, CH 12-13 496d-498b; BK V, CH 6 [1306a9-12] 507d-508a; CH 8-9 509d-512d; BK VI, CH 6-7 524b-525b
14 PLUTARCH: *Lycurgus*, 35c-d / *Camillus*, 117c-121a,c / *Coriolanus*, 176b-184c / *Agis* 648b,d-656d / *Tiberius Gracchus*, 674c-681a,c esp 680b-d / *Caius Gracchus* 681b,d-689a,c
39 SMITH: *Wealth of Nations*, BK III, 165b-166c; BK IV, 239c-240b
50 MARX: *Capital*, 305a [fn 2]
50 MARX-ENGELS: *Communist Manifesto*, 432b-d

4. The defense of oligarchy: the political rights and privileges of property

6 HERODOTUS: *History*, BK III, 107d-108a
6 THUCYDIDES: *Peloponnesian War*, BK VIII, 575d-576b; 590a-b
7 PLATO: *Laws*, BK V, 695a-c; BK VI, 699d-700b / *Seventh Letter*, 807a-b
9 ARISTOTLE: *Politics*, BK II, CH 6 [1265b26-1266a30] 461b-d; CH 11 [1273a22-24] 469d; BK III, CH 5 [1277b33-1278a25] 475a-c; CH 10 478d-479a; CH 12-13 480c-483a; BK IV, CH 8-9 493c-494d; CH 11-12 495b-497b; BK V, CH 1 502a-503b; BK VI, CH 3 521c-522a
14 PLUTARCH: *Lycurgus*, 34d-35d / *Solon*, 70d-71c / *Coriolanus*, 176b-184c / *Dion*, 800c
15 TACITUS: *Annals*, BK II, 32b-d; 35d
23 MACHIAVELLI: *Prince*, CH V, 8a-b
23 HOBBES: *Leviathan*, PART II, 140d
35 LOCKE: *Toleration*, 16a-c / *Civil Government*, CH VII, SECT 87 44a-b; SECT 94 46a-c; CH IX 53c-54d; CH XI, SECT 137-140 56d-58a
38 MONTESQUIEU: *Spirit of Laws*, BK II, 5b-c; 7b-c; BK V, 25a-c; 32b-c; BK VII, 45c-46a; BK XI, 71d-72b; BK XXVI, 221c-d
38 ROUSSEAU: *Inequality*, 354b-355b / *Political Economy*, 377c-d / *Social Contract*, BK III, 412b-c
39 SMITH: *Wealth of Nations*, BK V, 309a-311c
41 GIBBON: *Decline and Fall*, 81c-82a; 94d
42 KANT: *Science of Right*, 436d-437c

43 ARTICLES OF CONFEDERATION: IV [17–36] 5b-c
43 FEDERALIST: NUMBER 10, 50b-d; NUMBER 35, 113b-114c; NUMBER 54 170a-172b passim; NUMBER 57 176d-179b passim; NUMBER 60, 186a-c; NUMBER 63, 194d-195b; NUMBER 79, 233c
43 MILL: *Representative Government*, 366c-d; 383b-387d; 418d-419a
44 BOSWELL: *Johnson*, 251a
46 HEGEL: *Philosophy of Right*, PART I, par 45 23c-d; PART III, par 208 69c; par 305–307 102b-c; ADDITIONS, 181 148b-c / *Philosophy of History*, PART II, 275b-276a; 277c-d

5. The attack on oligarchy and on the political power of wealth

6 HERODOTUS: *History*, BK III, 108b-c
6 THUCYDIDES: *Peloponnesian War*, BK VI, 519c-520d; BK VIII, 575d-576b
7 PLATO: *Republic*, BK IV, 342d-344a; BK VIII, 405c-408a / *Laws*, BK IV, 680a-b; BK V, 695a-c; BK VIII, 733b-734a / *Seventh Letter*, 800b-d
9 ARISTOTLE: *Politics*, BK II, CH 10 [1272^{a}27–^{b}10] 468c-469a; BK III, CH 7 476c-477a passim; CH 13 [1283^{b}27–33] 481d; BK IV, CH 11 [1295^{b}2–1296^{b}2] 495c-496c; CH 12 [1296^{b}35–1297^{a}13] 497a-b; BK V, CH 1 [1301^{a}25–39] 502b-c; [1301^{b}26–1302^{a}8] 503a-b; CH 6 [1305^{a}36–^{b}21] 507b-c; CH 9 [1309^{b}14–1310^{a}13] 511d-512b / *Rhetoric*, BK II, CH 16 638b-c
14 PLUTARCH: *Lycurgus*, 34b-37c; 47a-48a / *Coriolanus*, 180b-d / *Lysander*, 361a-d / *Agis* 648b,d-656d / *Cleomenes*, 657a-663c
23 HOBBES: *Leviathan*, PART II, 140d
27 SHAKESPEARE: *Coriolanus*, ACT I, SC I [1–89] 351a-352b
38 MONTESQUIEU: *Spirit of Laws*, BK II, 7c; BK V, 23a-25a
38 ROUSSEAU: *Inequality*, 353a-358c passim
40 GIBBON: *Decline and Fall*, 501c-d
42 KANT: *Science of Right*, 441d-443b; 450c
43 FEDERALIST: NUMBER 57 176d-179b
46 HEGEL: *Philosophy of History*, PART III, 293c-294a
50 MARX-ENGELS: *Communist Manifesto* 415a-434d esp 420c-422b, 424d-425a, 425d-428a

5*a*. The objection to property as a basis for privilege with regard to citizenship or public office

6 THUCYDIDES: *Peloponnesian War*, BK VI, 520b-c; BK VIII, 576d
7 PLATO: *Republic*, BK VIII, 405c-407a / *Laws*, BK IV, 682c
9 ARISTOTLE: *Politics*, BK II, CH 11 [1273^{a}22–^{b}7] 469d-470a; BK III, CH 9-12 477c-481b passim
14 PLUTARCH: *Lycurgus*, 36a
38 ROUSSEAU: *Social Contract*, BK III, 412b-c; 421c-d
41 GIBBON: *Decline and Fall*, 73b
42 KANT: *Science of Right*, 445a-c
43 FEDERALIST: NUMBER 39, 125c-126b; NUMBER 52, 165b-c; NUMBER 57 176d-179b; NUMBER 60, 186c
43 MILL: *Representative Government*, 345c-346c; 369b-370a; 384a-387d; 394a-395a; 398a-d; 419a-c
46 HEGEL: *Philosophy of Right*, PART III, par 310 103b-c / *Philosophy of History*, PART II, 263b-d; PART IV, 356d; 364a-c
50 MARX: *Capital*, 137b-141b esp 138b, 140a-b; 364a-368b esp 367c-368b
50 MARX-ENGELS: *Communist Manifesto*, 416c-d; 425b-d; 428d-429c

5*b*. The character of the oligarch: the man of property; the capitalist

5 EURIPIDES: *Suppliants* [229–245] 260b-c / *Hecuba* [1206–1232] 363b
5 ARISTOPHANES: *Wasps* [653–724] 515c-516d / *Plutus* [144–197] 630d-631b
6 HERODOTUS: *History*, BK VII, 221c-222a
6 THUCYDIDES: *Peloponnesian War*, BK VI, 512c-d; BK VIII, 587a-b
7 PLATO: *Republic*, BK IV, 343a-b; BK VIII, 407a-408a / *Laws*, BK VIII, 733b-734a; BK IX, 751c-d
9 ARISTOTLE: *Politics*, BK II, CH 7 [1267^{a}36–^{b}9] 463b; BK IV, CH 6 [1293^{a}12–34] 492d-493a; BK VI, CH 7 [1321^{a}35–^{b}2] 525a / *Rhetoric*, BK II, CH 16 638b-c
14 PLUTARCH: *Aemilius Paulus*, 218a-d; 223c-224a / *Marcus Cato*, 287c-d / *Aristides-Marcus Cato*, 292b / *Lysander*, 361a-d / *Lucullus*, 419a-420b / *Crassus*, 439a-c / *Agis* 648b,d-656d
15 TACITUS: *Annals*, BK III, 57b-58d; BK VI, 97b-c
21 DANTE: *Divine Comedy*, HELL, VII [1–96] 9c-10c
36 SWIFT: *Gulliver*, PART IV, 158a-b
37 FIELDING: *Tom Jones*, 377d-378a
38 MONTESQUIEU: *Spirit of Laws*, BK III, 10a; BK VII, 45a-b; BK XX, 146b-c
39 SMITH: *Wealth of Nations*, BK I, 109d-110d; BK III, 177c-d
40 GIBBON: *Decline and Fall*, 497c-501b passim
43 MILL: *Representative Government*, 345c-346a
44 BOSWELL: *Johnson*, 194c-195a
46 HEGEL: *Philosophy of History*, PART III, 292d-293b
50 MARX: *Capital*, 72a-c; 112c; 292d-295d esp 292d-293c
50 MARX-ENGELS: *Communist Manifesto*, 420c-d

5*c*. Economic status and power as a political instrument: oligarchy in relation to the class war

APOCRYPHA: *Ecclesiasticus*, 13:18–24—(*D*) OT *Ecclesiasticus*, 13:24–30
5 ARISTOPHANES: *Plutus* [122–226] 630c-631c
6 HERODOTUS: *History*, BK VI, 202c-203b

(5. *The attack on oligarchy and on the political power of wealth.* 5c. *Economic status and power as a political instrument: oligarchy in relation to the class war.*)

6 THUCYDIDES: *Peloponnesian War*, BK III, 428c-d; 434c-438c; BK IV, 463a-465c; 467a-b; BK V, 482d-483a; 502d-504b; BK VIII, 575c-576c; 577b-d; 579c-583c; 587a-590c

7 PLATO: *Republic*, BK IV, 342d; BK VIII, 405c-406b / *Laws*, BK IV, 682b-c; BK VIII, 733b-734a

9 ARISTOTLE: *Politics*, BK II, CH 7 [1266^{b}24-1267^{a}17] 462b-d; BK III, CH 10 [1281^{a}11-29] 478d-479a; CH 15 [1286^{b}8-22] 484d-485a; BK IV, CH 3 [1289^{b}26-1290^{a}13] 488d-489a; CH 4 [1290^{a}30-^{b}20] 489b-d; [1291^{b}5-13] 490d; CH 6 [1293^{a}12-34] 492d-493a; CH 11-12 495b-497b passim; BK V, CH 5-6 506b-508c; CH 7 [1307^{a}5-39] 509a-c; CH 9 [1310^{a}22-25] 512c; BK VI, CH 3 521c-522a / *Athenian Constitution*, CH 2-6 553a-555c; CH 32-41 568a-572a

14 PLUTARCH: *Solon*, 68d-71c / *Poplicola-Solon*, 87a / *Agis* 648b,d-656d / *Tiberius Gracchus*, 674c-681a,c / *Caius Gracchus* 681b,d-689a,c

15 TACITUS: *Annals*, BK VI, 97b / *Histories*, BK II, 224d-225a

26 SHAKESPEARE: *2nd Henry VI*, ACT IV 56a-64d

27 SHAKESPEARE: *Coriolanus*, ACT I, SC I [1-167] 351a-353a

38 MONTESQUIEU: *Spirit of Laws*, BK XI, 77b-83c

38 ROUSSEAU: *Inequality*, 352a-358c passim / *Social Contract*, BK IV, 429c-430a

39 SMITH: *Wealth of Nations*, BK I, 28a-d; 53b-56a; 61c-d; 109d-110d; BK IV, 239c-240a; 287d-288c; BK V, 309a-311c; 346c-347d

40 GIBBON: *Decline and Fall*, 127a-c; 144a-c

43 FEDERALIST: NUMBER 10, 49c-51b; NUMBER 54, 171b-172a

43 MILL: *Representative Government*, 345b-346c passim; 366d-367a; 368b-370a passim; 393c-395a; 398a-d

44 BOSWELL: *Johnson*, 251a; 255d

46 HEGEL: *Philosophy of History*, PART II, 263b-d; 275b-276a; PART III, 287d-288b; 295b-297a; 300a-301c; PART IV, 364a-c

50 MARX: *Capital*, 63b-c; 137b-143a passim, esp 138b-c, 140a-b; 241a-244b esp 243d-244a; 283d-285c; 317b-c; 364a-368b esp 367c-368b; 372c-383d esp 382c-383d

50 MARX-ENGELS: *Communist Manifesto* 415a-434d esp 415b-417a,c, 420b-c, 421c-422a, 425b-c, 428d-429c, 434a-d

6. Historical observations of oligarchy: the rise and fall of oligarchies

6 HERODOTUS: *History*, BK VI, 202c-203b; BK VII, 243b-c

6 THUCYDIDES: *Peloponnesian War*, BK I, 353d; BK III, 434c-438b; BK IV, 458d-459c; 463a-465c; BK V, 502d; 503d-504b; BK VI, 520a-d; BK VIII 564a-593a,c esp 568d-569a, 575c-576c, 577b-d, 579c-583c, 584b-585a, 585d-586b, 587a-590c

7 PLATO: *Seventh Letter*, 800b-d

9 ARISTOTLE: *Politics*, BK II, CH 10 [1272^{a}27-^{b}10] 468c-469a; CH 11 [1273^{a}3-30] 469c-d; [1273^{b}17-26] 470b; BK III, CH 15 [1286^{b}9-21] 484d-485a; BK V, CH 4 [1304^{a}18-39] 505d-506a; CH 5-6 506b-508c; CH 12 [1316^{a}1-^{b}28] 518d-519d / *Athenian Constitution*, CH 2-6 553a-555c; CH 32-41 568a-572a passim

14 PLUTARCH: *Lycurgus*, 34b-37c; 47a-48a / *Solon*, 68d-71c; 75c-76d / *Camillus* 102b,d-121a,c passim, esp 117c-121a,c / *Alcibiades*, 166a-174d / *Coriolanus*, 176b-184c / *Lysander* 354b,d-368a,c / *Phocion* 604b,d-619d / *Agis* 648b,d-656d / *Cleomenes*, 657a-663c / *Tiberius Gracchus*, 674c-681a,c / *Caius Gracchus* 681b,d-689a,c

15 TACITUS: *Annals*, BK VI, 97b-c

38 MONTESQUIEU: *Spirit of Laws*, BK VIII, 51d-52a; BK XI, 77b-83c

38 ROUSSEAU: *Social Contract*, BK IV, 429c-431a

39 SMITH: *Wealth of Nations*, BK III, 165b-181a,c passim; BK IV, 239c-240b

40 GIBBON: *Decline and Fall*, 501c-d

41 GIBBON: *Decline and Fall*, 73b; 81c-82a; 570d-572d; 574b-582b esp 576a-577b, 579c-581a

43 MILL: *Representative Government*, 346a-c; 353b; 363d-364d; 367a; 393c-395a

46 HEGEL: *Philosophy of Right*, PART III, par 244 77c / *Philosophy of History*, PART II, 275b-276a; 278d-279b; PART III, 293c-294a; 295d-297a; 300a-301c

50 MARX: *Capital*, 354a-377a esp 355d-359c, 368c-369a, 371c-372c

50 MARX-ENGELS: *Communist Manifesto*, 415b-416b; 419b,d-422c esp 420b-c; 429c-433d passim

CROSS-REFERENCES

For: The general discussion of constitutional government, *see* CONSTITUTION 1-3b; LAW 7a; MONARCHY 1a-1a(1).

Other considerations of the relation of oligarchy to aristocracy and democracy, *see* ARISTOCRACY 2d; DEMOCRACY 2b, 3a-3b; GOVERNMENT 2a, 2c; and for the theory of the mixed constitution as a compromise between democracy and oligarchy, *see* ARISTOCRACY 2b; CONSTITUTION 5b; DEMOCRACY 3a; GOVERNMENT 2b.

For: The tyrannical and despotic extremes to which oligarchy can go, *see* TYRANNY 2b.

The revolutions generated by oligarchy, *see* ARISTOCRACY 3; REVOLUTION 3c(2).

Other discussions of property rights, *see* DEMOCRACY 4a(2); JUSTICE 8a; LABOR 7b; WEALTH 7a.

The general issues of economic and political justice in the conflict between democracy and oligarchy concerning the qualifications for citizenship and the extension of the suffrage, *see* CITIZEN 2c–3; CONSTITUTION 5a; DEMOCRACY 4a(1); JUSTICE 9e; LABOR 7d, 7f; LIBERTY 2d; SLAVERY 5a–5b; WEALTH 9h.

Other discussions of capitalism, and of the class war, *see* DEMOCRACY 4a(2); LABOR 7c–7c(3); OPPOSITION 5b; REVOLUTION 4a, 5a–5c; WAR AND PEACE 2c; WEALTH 6a, 9h.

ADDITIONAL READINGS

Listed below are works not included in *Great Books of the Western World*, but relevant to the idea and topics with which this chapter deals. These works are divided into two groups:

I. Works by authors represented in this collection.
II. Works by authors not represented in this collection.

For the date, place, and other facts concerning the publication of the works cited, consult the Bibliography of Additional Readings which follows the last chapter of *The Great Ideas.*

I.

PLUTARCH. "Of the Three Sorts of Government—Monarchy, Democracy and Oligarchy," in *Moralia*

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II.

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——. *On the Reform of the Representation in the House of Commons*

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T. VEBLEN. *The Theory of Business Enterprise*

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Chapter 63: ONE AND MANY

INTRODUCTION

IN *Pragmatism* and in his unfinished last work, *Some Problems of Philosophy*, William James uses the problem of the one and the many as one of the crucial tests of the philosophical mind. In his famous table of doctrines or "isms" he aligns monism with rationalism and idealism in the column headed "tender-minded," and in the other column, headed "tough-minded," he places their opposites—pluralism, empiricism, and materialism. But as his own theories show, "isms" like monism and pluralism tend to oversimplify the issues.

Whoever emphasizes the oneness of the world, for example, may also acknowledge its manyness and recognize that it is somehow a pluriverse as well as a universe. Some, like Bradley, may qualify this view by regarding the unity as ultimate reality, the plurality as appearance or illusion. Whoever finds the multiplicity of things the primary fact may, nevertheless, find some unity in the order and connection of things. Some, like James himself, may insist that the connection is a loose concatenation of relatively independent parts of reality, rather than an interpenetration of each part with every other in the solid whole which James calls the "block universe."

There may be another oversimplification in James' consideration of the problem of the one and the many. He seems to be concerned largely, if not exclusively, with the alternatives of the block and the concatenated universe as conceptions of the structure of reality. But, as some of the great books of antiquity make evident, that is only one of the problems of the one and the many. Perhaps it should be said, not that there are many problems of the one and the many, but that there is one problem having many aspects or applications, for in every statement of the problem there is at least this singleness of theme; that the one and the many are opposed, that the one is *not* a many and the many *not* a one. Yet even that does not seem to be quite accurate for, as Socrates tells Protarchus in the *Philebus*, it may also be said that the one is a many and the many a one. These are "wonderful propositions," he says, wonderful because "whoever affirms either is very open to attack."

At this early moment in the recorded tradition of western thought, the dialogues of Plato, so thorough in their exploration of the problems of the one and many, make no claim to having discovered or invented them. They were ancient even then. They seem to hang in the very atmosphere of thought, usually befogging those who try to see the truth about anything else without first clearing away their obscurities.

Socrates refers to "the common and acknowledged paradoxes of the one and the many . . . that everybody has by this time agreed to dismiss as childish and obvious and detrimental to the true course of thought." These aside, some genuine perplexities remain. Protarchus asks Socrates to instruct him about "those other marvels connected with this subject which," as Socrates seems to have implied, "have not yet become common and acknowledged."

Socrates begins by calling his attention, not to the unity of *this* man or *this* ox, but to the sense in which it is said that "man is one, or ox is one, or beauty one, or the good one." It is necessary to ask, he says, first, whether such unities exist; then, such unities being always the same, and admitting neither generation nor destruction, how each is itself alone, is not only one but *this* one; finally, how these unities can be conceived as dispersed and multiplied in the world of things which come to be and pass away. This last question seems to be the most difficult because it asks about the *being* of the same and one as it *becomes* in the one and many.

Protarchus is impatient to begin clearing up these problems. Willing to undertake what he calls "this great and multifarious battle, in which such various points are at issue," Socrates is also anxious to let Protarchus and the other youths know the intellectual perils which lie ahead for novices who enter upon this inquiry. "The one and many," he tells them, "become identified by thought . . . They run about together, in and out of every word which is uttered . . . This union of them will never cease, and is not now beginning, but is . . . an everlasting quality of thought itself, which never grows old."

That is why, he explains, "any young man, when he first tastes these subtleties, is delighted, and fancies that he has found a treasure of wisdom; in the first enthusiasm of his joy, he leaves no stone, or rather no thought, unturned, now rolling up the many into the one, and kneading them together, now unfolding and dividing them; he puzzles himself first and above all, and then he proceeds to puzzle his neighbors, whether they are older or younger or of his own age—that makes no difference; neither father nor mother does he spare; no human being who has ears is safe from him, hardly even his dog; and a barbarian would have no chance of escaping him, if an interpreter could only be found."

WHETHER IT IS full of exasperating subtleties or is a treasure of true wisdom, the discussion of the one and the many—in itself and in relation to being and becoming, the intelligible and the sensible, the definite and the infinite, the same and other, universals and particulars, wholes and parts, the simple and the complex, the indivisible and the continuous—is a discussion which seems unavoidable to the ancients. In the dialogues of Plato and in Aristotle's treatises, especially his *Metaphysics*, the one and the many are connected with the basic terms of philosophical thought.

For Plato, the distinction between the one and the many enters into the analysis of almost any object—such as pleasure or virtue or knowledge. Anything, viewed under the aspect of its being or its becoming, its definite sameness or its indefinite otherness and variety, must be discussed both as a one and as a many. The motion of Plato's dialectic may be from the one to the many or from the many to the one; or it may be on the level of the many as an intermediate stage through which analysis must go in proceeding from the infinite to the one. Those who pass at once from unity to infinity, says Socrates, do not recognize "the difference between the mere art of disputation and true dialectic."

For Aristotle, first philosophy or metaphysics, concerned as it is with "being *qua* being and the attributes which belong to anything *qua* being," also investigates unity. Unity is the first property of being. The meanings of one or unity are as various as the meanings of 'to be.' If there is a difference between essential and accidental being, there is a parallel difference between essential and accidental unity. If natural and artificial things differ in substance or being, so too must they differ in unity. "Being and unity are the same," Aristotle says, "and are one thing in the sense that they are implied in one another as are principle and cause." Unity is nothing apart from being, and nothing can be without being one in some sense of unity which is determined by the way in which the thing exists. Aristotle's analysis of any subject matter, proceeding as it does by reference to contraries, always appeals to the one and the many. "All contraries," he says, "are reducible to being and non-being and to unity and plurality, as for instance, rest belongs to unity and movement to plurality . . . And everything else is evidently reducible to unity and plurality. . . . For all things are either contraries or composed of contraries, and unity and plurality are the principles of all contrariety."

THE PROBLEMS IN whose analysis one and many seem to be involved recur in every period of western thought. The question, for example, whether there is an irreducible duality in the relation of knower and known, or whether, in the act of knowledge, knower and known are one, is discussed by Hobbes and William James as well as Plotinus and Aristotle. The question whether the state—which is a multitude somehow united for a common life—has, or should have, the same degree of unity as the family, is discussed by Locke and Hegel as well as Plato and Aristotle.

The earlier controversy over the indivisibility of sovereignty becomes at a later stage the central issue of federal union, to which *e pluribus unum* is the solution offered by the Federalists. Questions concerning the simple and the complex, or wholes and parts, as objects of knowledge, or questions concerning the unity and divisibility of time, space, or matter, engage the attention of inquirers and analysts no less in modern than in ancient times.

But there are certain problems which are treated with unusual speculative vigor by the ancients alone. Unlike the problems just mentioned, which deal with applications of the contrast between unity and multiplicity, these are questions about the One itself—what it is, whether it exists, whether it is identical with Being, whether it is itself a substance or the substance of all things.

The sustained inquiry into such matters in antiquity seems to testify to the extraordinary power exerted upon ancient thought by Parmenides of Elea. The person called "the Eleatic Stranger" represents his theories in such dialogues of Plato as the *Sophist* and the *Statesman*. Parmenides, or his disciple Zeno, is probably the source of many of the paradoxes and riddles which Socrates, in the *Philebus*, dismisses as no longer worthy of serious attention. One whole dialogue, named *Parmenides* because of his part in the discussion, exhibits the Eleatic demonstration that 'all is one.' It abounds in the subtleties of the various arguments which try to defend the reality of the many or try to reduce that position to absurdity.

Questioned by Socrates concerning his paradoxes, Zeno says that his writings "were meant to protect the arguments of Parmenides against those who make fun of him and seek to show the many ridiculous and contradictory results which they suppose to follow from the affirmation of the one." When he addresses himself to the partisans of the many, Zeno says that he returns "their attack with interest by retorting upon them that their hypothesis of the being of many, if carried out, appears to be still more ridiculous than the hypothesis of the being of one."

Aristotle also deals with the Eleatic arguments. In the *Physics*, he says first that inquiring about whether being is one, cannot contribute to the study of nature. He then adds that such inquiry anyway would be "like arguing against any other position maintained for the sake of argument . . . or like refuting a merely contentious argument." This description, he says, "applies to the arguments both of Melissus and Parmenides: their premises are false and their conclusions do not follow . . . Accept one ridiculous proposition and the rest follows—a simple enough proceeding." Aristotle's treatment of Parmenides and Zeno in the *Metaphysics* seems to be no more sympathetic, though it tacitly admits the relevance of the Eleatic speculations to the study of being, if not to the study of change and the principles of nature. Nevertheless, many of the questions concerning the one and the many which both Plato and Aristotle deem worthy of discussion appear to have some connection with the perplexities propounded by Parmenides and his school.

THOSE WHO DO NOT deny either the unity of being or its multiplicity tend to make the primary fact about reality either its oneness or its manyness. This may seem at first to be of slight significance, but if the two views of the world which result from this difference are examined, it may be found that the disagreement on this single point changes the perspective on everything else. The philosophers who magnify either the one or the many behold universes more radically dissimilar than the same object looked at from opposite ends of a telescope. But that is not all. Almost every other fundamental conception—of God and man, of the mind and knowledge, of matter and motion, of cause and necessity—seems also to be altered.

Spinoza, for example, criticizes those who attribute to finite things, of which there are necessarily many, the properties which belong to the infinite being, of which there can be only one. This man, this stone, or any comparable individual thing, is not a substance, having the power to exist in and of itself; it consists merely "of certain modifications of the attributes of God," the one infinite substance in which everything else "both is and is conceived." According to Spinoza, those who suppose that the finite many are substances "have not observed a proper order of philosophic study."

They begin with the objects of sense which have the least reality and come last to the di-

vine nature, the infinite one, which "ought to be studied first because it is first in the order of knowledge and in the order of things . . . Hence it has come to pass," Spinoza continues, "that there was nothing of which men thought less than the divine nature while they have been studying natural objects, and when they afterwards applied themselves to think about God, there was nothing of which they could think less than those prior fictions upon which they had built their knowledge of natural things, for these fictions could in no way help to the knowledge of the divine nature."

Starting with the definition of substance as that which exists in itself and is conceived through itself, and with the definition of God as absolutely infinite being, "that is to say, substance consisting of infinite attributes," Spinoza undertakes to prove that there cannot be two or more substances having the same nature or attributes, that substance is necessarily infinite, and hence that it is impossible for more than one substance to exist. Since he regards it as axiomatic that "everything which is, is either in itself or in another," it follows for Spinoza that if anything at all exists, God (or substance) must necessarily exist—as that which alone exists in itself and as that in which everything else has its finite being as a mode or affection of the attributes of God.

Certain other consequences seem to follow. The one infinite substance is indivisible: it is not a whole made up of parts which can have independent existence, as the parts of a quantitative whole seem able to exist when the quantity is divided. Furthermore, God, according to Spinoza, "is the immanent, and not the transitive, cause of all things." God causes them not as one thing acting on another when both are independent in existence, but rather as the being *in which* all things are. God is not present in the world, as other theologians seem to think, in the manner in which a cause exists in an effect that depends upon it. Rather the whole world is in God as an effect which can in no way be separated from the existence of the cause, any more than an aspect can be separated from that of which it is an aspect.

For Spinoza, the unity and totality of being can be called "nature," as well as "infinite substance" or "God." His distinction between *natura naturans* and *natura naturata*, discussed in the chapter on NATURE, seems to permit him to distinguish between the infinite or eternal and the finite or temporal—the one and the many—without implying a real separation between God and the world. Since God is immanent in the world, and since God not only exists necessarily but also acts from the necessity of His own nature, it follows (as is indicated in the chapter on NECESSITY AND CONTINGENCY) that every finite and temporal aspect of nature is necessarily determined. Nothing is contingent. Nothing could be otherwise than it is.

THIS EXAMINATION of a doctrine in which the primacy of the one absorbs as well as subordinates the many, serves to exemplify the point that making the one primary is more than a matter of emphasis. It also shows that almost every fundamental question is affected. It presents a picture of what William James appears to mean when he speaks of the block universe, though he himself usually seems to have in mind Hegel's Absolute rather than Spinoza's God.

Aristotle advances a contrary doctrine. Like Spinoza he uses the term 'substance.' Like Spinoza he defines substance as that which exists in itself, not as an accident (a quality, for example) which exists in another, *e.g.*, the redness in the rose. But for him substance is not necessarily infinite, nor is it indivisible. A rose or a man is a substance. Every physical thing which has a natural unity is a substance.

Each is a finite whole, or rather each is a whole in a number of different senses. Insofar as it has essential unity, it is a whole composed of matter and form which, according to Aristotle, are represented in the formulation of a definition by the genus and the differentia. Insofar as it is composed of matter, it also has the unity of a quantitative whole in virtue of which it moves as one thing or uniquely occupies a place. Since quantitative unity involves continuity, and continuity entails divisibility, a substance remains one only so long as it is not divided into its quantitative parts, just as it remains one essentially only so long as its matter and form are not separated.

A substance is individual not because it is absolutely indivisible—as for Lucretius the atom

is because it is simple rather than composite. Its individuality rather consists, first, in its being divided from other substances in such a way that it can perish without necessarily destroying them, or they can perish without destroying it; and, second, in the fact that, though divisible into parts, it is one whole when these parts remain undivided. Yet as one substance it has more unity than a mere collection of things.

The difference between a man and a machine, according to Aristotle's differentiation between the unity of natural substances and of artificial things, is that a man is not composed of substances (though the parts of a living organism may come to exist as substances when it is decomposed or they are separated from it), whereas a machine, made up of separate pieces of metal, is nothing but a number of individual substances arranged in a certain way. The unity of man does not appear to be the same, therefore, when soul and body are conceived by Descartes as two substances and by Aristotle not as distinct substances but as form and matter which through their union constitute a single substance.

Unity, in short, belongs essentially to the individual natural substance. Because each individual substance is necessarily a one among a many, Aristotle, unlike Spinoza, cannot affirm the unity of substance without also affirming a plurality of substances. Not itself a substance, but only an aggregation of substances, the world is primarily a many rather than a one. The unity it possesses derives from the order and connection of the substances which are its component parts; and that in turn largely derives from the way in which distinct substances causally interact.

Since, according to Aristotle, causality includes contingency and chance, the causal interdependence of substances, with respect to their generation and their motions, does not lock them together into a solid block. To use James' imagery again, a vast plurality of individual substances, causally yet also contingently related, constitutes a loosely-knit world, a concatenated universe.

THE RELATION OF the world as a whole to God does give it greater unity, if the supposition of a plurality of finite individual substances remains the fundamental feature of the world God creates. The Christian doctrine of creation may attribute to the world a greater unity than that possessed by any work of human art, in proportion as the infinitely greater wisdom of the divine plan orders the separate things of nature with an infinitely greater perfection than man can achieve in putting things together or in ordering them to his purpose. But if, according to the theologian, God in creating the world creates not one substance, but many substances, forming a single whole through the pattern of their connection with one another, then in a sense the world has less unity than each of its component substances.

For Aquinas, one kind of substance may have greater unity than another. The immaterial has more than the material; and God more than any finite substance, since each of these is composed of matter and form, or essence and accidents, or at least of essence and existence, whereas the infinite being of God is absolutely simple. The divine nature is without matter, without accidents; its attributes are identical with its essence, and its essence with its existence.

This cardinal point about the divine nature is crucial to the conception of God, and of the world's relation to God. In the formation of Christian theology, God's absolute simplicity seems to exclude all but one resolution of the issue concerning the Trinity. According to the position Augustine takes in criticizing the Arian heresy, the position which is expressed in the Nicene Creed, God is not a trinity of substances, but a trinity of persons—aspects of, or relations within, one substance. The plurality of things which constitutes the world puts the world entirely outside the divine substance. Immanent only as a cause, the simple being of God transcends the complex whole of the created world.

This transcendence seems, furthermore, to imply for theologians like Augustine and Aquinas a fundamental duality in the realm of existence. God and the world are two, not one. Infinite being is absolutely prior to and independent of finite beings. The one can exist without the many. Though the many are said to participate in being, when they do exist, they do not enter into the being of the one, or share it in any way.

The being they have is not only separate from the being of God, but even their mode of being is only analogical to the divine being.

The doctrine that each thing has its own being, and that, as Aquinas says, "being is common to all things only in an analogical sense," seems to put diversity above unity in the structure of reality, and to leave the ultimate plurality of this world unaffected either by the fact that it was created as one or by the fact of its relation to a transcendent One.

IN THE TRADITION of the great books, the problem of the one and the many is often stated without using the notion of substance as the pivotal term.

It appears in Plato's consideration of being and becoming. It is sometimes present in his treatment of the relation between intelligible forms and sensible things—between the universal ideas and the particulars which resemble them through some manner of imitation or participation. It even runs through the discussion of the realm of ideas itself; for the idea of the one is one idea among many, and yet each of the many ideas is in some way one.

The problem of the one and the many appears in Hume's consideration of the absolute distinctness of each unit of experience from every other, accompanied as it is by his skepticism concerning our ability to discover any connections which might tie these units together into a real unity. It appears in Kant's theory of the transcendental unity of apperception, which reduces the sensory manifold to a unity of order; and in Hegel's theory of the one Absolute Idea which contains within itself all the variety that becomes manifest as the Idea unfolds in the processes of nature or history.

The substitution of one set of terms for another does not seem to alter the fundamental issue. Nor does it enable the mind to escape taking sides with those who give primacy to the one or to the many, except perhaps by trying to balance them as correlatives. Among the great books, however, the *Enneads* of Plotinus develops a theory of the One which, putting it above being and beyond knowing, seems to transfigure all the traditional terms of analysis.

The One of Parmenides is, after all, Being; and this identification of Being with One raises a question of the reality of the many. But, according to Plotinus, "there exists a Principle which transcends Being; this is The One, whose nature we have sought to establish so far as such matters lend themselves to proof. Upon The One follows immediately the Principle, which is at once Being and the Intellectual-Principle. Third comes the Principle, Soul." These are what Plotinus calls the three hypotases. He finds some analogy for his trinity in a doctrine he ascribes to Plato's *Parmenides*, in which he finds a threefold distinction "between the Primal One, a strictly pure Unity, and a secondary One which is a One-Many, and a third which is a One-and-Many."

The One, according to Plotinus, not only transcends being; it also transcends intelligence. Knowing or thinking requires an object. The relation of knower and known entails a duality which would fracture the utter simplicity of The One. Even the complete reflexivity of The One knowing only itself is excluded. The supereessential is for Plotinus also the supra-cogitative. "What stands above Being stands above intellection," he says; "it is no weakness in it not to know itself, since as pure unity it contains nothing which it needs to explore." Multiplicity begins with the effort of the Intellectual-Principle to know the Transcendent. "It knows the Transcendent in its very essence but, with all its efforts to grasp that prior as pure unity, it goes forth amassing successive impressions, so that, to it, the object becomes multiple . . . The Intellectual-Principle is established in multiplicity."

What is the All of which The One is not all, since the Intellectual-Principle and the Soul also belong to it? Plotinus answers that "The One is all things and no one of them. The source of all things is not all things . . . It is precisely because there is nothing within the One that all things are from it." Everything else in the totality of which the Transcendent is the source emanates from it.

"Seeking nothing, possessing nothing, lacking nothing," Plotinus declares, "The One is perfect and, in our metaphor, has overflowed, and its exuberance has produced the new: this product has turned again to its begetter and has filled and has become its contemplator and so an Intellectual-Principle . . . It is simulta-

neously Intellectual-Principle and Being; and, attaining resemblance in virtue of this vision, it repeats the act of the One in pouring forth a vast power. This second outflow is a Form or Idea representing the Divine Intellect as the Divine Intellect represented its own prior, The One. This active power sprung from essences (from the Intellectual-Principle considered as Being) is Soul. Soul arises as the idea and act of the motionless Intellectual-Principle. . . . It takes fullness by looking toward its source; but it generates its image by adopting another, a downward, movement. This image of Soul is Sense and Nature, the vegetal principle."

Nothing, writes Plotinus, "is completely severed from its prior. Thus the human Soul appears to reach as far down as to the vegetal order." In these successive emanations "all that is not One is conserved by virtue of the One, and from the One derives its characteristic nature." Everything except the One is a one-many. "If it had not attained such unity as is consistent with being made up of multiplicity, we could not affirm its existence." The Transcendent alone is "a really existent One, wholly and truly One, while its sequent, poured down in some way from the One, is all, a total which has participation in unity and whose every member is similarly all and one."

If reason cannot fully grasp the Transcendent One, that may be because discursive reason is itself a thing of multiplicity. The unity of an all-embracing vision may be required to apprehend the ineffable unity of the Transcendent. But the mysteriousness of unity is not confined to the Transcendent One. It confronts the mathematician as well as the philosopher. It challenges Nicomachus and Euclid as well as Plotinus.

"Unity," writes Nicomachus, "occupying the place and character of a point, will be the beginning of intervals and numbers, but is not itself an interval or a number." What, then, is unity or a unit in itself? Euclid answers with this definition: "A unit is that by virtue of which each of the things that exist is called one." Unity is not only the measure of existence, but also of numbers; for, according to Euclid, "a number is a multitude composed of units." In mathematics no less than in metaphysics or in theology the relation of unity to number seems to be the heart of the problem of the one and the many.

"Number," according to Locke, "applies itself to men, angels, actions, thoughts; everything that either does exist, or can be imagined." Unity or *one* is, in his view, not only the simplest of all our ideas, but the most omnipresent. "Every object our senses are employed about; every idea in our understandings; every thought of our minds, brings this idea along with it. And therefore it is . . . in its agreement to all other things, *the most universal idea we have.*"

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PAGE SECTIONS: When the text is printed in one column, the letters **a** and **b** refer to the upper and lower halves of the page. For example, in **53** JAMES: *Psychology*, **116a-119b**, the passage begins in the upper half of page 116 and ends in the lower half of page 119. When the text is printed in two columns, the letters **a** and **b** refer to the upper and lower halves of the left-hand side of the page, the letters **c** and **d** to the upper and lower halves of the right-hand side of the page. For example, in **7** PLATO: *Symposium*, **163b-164c**, the passage begins in the lower half of the left-hand side of page 163 and ends in the upper half of the right-hand side of page 164.

AUTHOR'S DIVISIONS: One or more of the main divisions of a work (such as PART, BK, CH, SECT) are sometimes included in the reference; line numbers, in brackets, are given in certain cases; *e.g.*, *Iliad*, BK II [265–283] **12d**.

BIBLE REFERENCES: The references are to book, chapter, and verse. When the King James and Douay versions differ in title of books or in the numbering of chapters or verses, the King James version is cited first and the Douay, indicated by a (*D*), follows; *e.g.*, OLD TESTAMENT: *Nehemiah*, 7:45—(*D*) *II Esdras*, 7:46.

SYMBOLS: The abbreviation "esp" calls the reader's attention to one or more especially relevant parts of a whole reference; "passim" signifies that the topic is discussed intermittently rather than continuously in the work or passage cited.

For additional information concerning the style of the references, see the Explanation of Reference Style; for general guidance in the use of *The Great Ideas*, consult the Preface.

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7 PLATO: *Parmenides*, **491d-511d** / *Theaetetus*, **532c-533a** / *Sophist*, **566a-567a**

8 ARISTOTLE: *Topics*, BK IV, CH 1 [121^a14–19] **169a**; [121^b4–8] **169c**; CH 6 [127^a26–40] **176d-177a** / *Sophistical Refutations*, CH 7 [169^a21–24] **232d**; [169^a33–36] **233a**; CH 10 [170^b18–25] **235a** / *Physics*, BK I, CH 2–3 **259b-262a**; CH 8 [191^a23–$^b13$] **267a-c**; BK III, CH 6 [207^a7–31] **285b-d** / *Heavens*, BK I, CH 8–9 **367b-370d** / *Generation and Corruption*, BK I, CH 1 **409a-410c**; CH 8 [325^a4–$^b5$] **423c-424a** / *Metaphysics*, BK I, CH 3 [983^b7–984^b8] **501d-502c**; CH 5 [986^b8–987^a2] **504c-505a**; CH 6 **505b-506b**; CH 7 [988^a34–$^b5$] **506c**; CH 8 [988^b23–989^a18] **506d-507b**; BK III, CH 1 [996^a4–9] **514c**; CH 3 [998^b14–28] **517b-c**; CH 4 [1001^a4–$^b25$] **519d-520c**; BK IV, CH 2 [1003^b23–1005^a1] **522d-524a**; CH 4 [1007^b19–1008^a3] **527a-b**; BK V, CH 4 [1014^b27–35] **535a-b**; BK VII, CH 4 [1030^b7–14] **553b**; CH 11 [1036^a26–$^b20$] **559d-560b**; CH 16 [1040^b16–27] **564d**; BK VIII, CH 6 [1045^a36–$^b7$] **570b-c**; BK X, CH 2 **580b-d**; BK XI, CH 2 [1060^a36–$^b19$] **588c-d**; BK XII, CH 1 [1069^a18–22] **598a**; CH 4 [1070^a31–$^b8$] **599d-600a**; CH 8 [1074^a31–39] **604d**; CH 10 [1075^a12–24] **605d-606a**; BK XIV, CH 1 [1087^b34–1088^a4] **620a-b** / *Soul*, BK II, CH 1 [412^b6–9] **642c**

12 LUCRETIUS: *Nature of Things*, BK II [1023–1104] **28a-29a**

12 EPICTETUS: *Discourses*, BK I, CH 14 **120d-121c**

12 AURELIUS: *Meditations*, BK II, SECT 3 **257a-b**; BK IV, SECT 29 **266a**; SECT 40 **267a-b**; BK V, SECT 8 **269d-270b**; SECT 30 **273a**; BK VI, SECT 36–45 **277c-278c**; BK VII, SECT 9 **280b-c**; SECT 19 **281a**; BK IX, SECT 8–9 **292b-d**; BK X, SECT 6–7 **297a-c**; BK XII, SECT 30 **310a-b**

13 VIRGIL: *Aeneid*, BK VI [724–729] **230b**

17 PLOTINUS: *Second Ennead*, TR III, CH 13 **46c-47b**; TR IX, CH 1, **65d-66a** / *Third Ennead*, TR VIII **129a-136a**; TR IX, CH 3, **138a,c** / *Fifth Ennead*, TR I, CH 6–7 **211a-212c**; TR II, CH 1 **214c-215a**; TR III, CH 11–17 **222b-226c**; TR V, CH 4–13 **230b-235b**; TR VI, CH 2–6 **235d-237d** / *Sixth Ennead*, TR II, CH 8–12 **272d-276a**; TR IV, CH 7–8 **300b-301c**; CH 11 **302c-d**; TR V **305c-310d**; TR IX **353d-360d** passim

19 AQUINAS: *Summa Theologica*, PART I, Q 6, A 3, REP 1 **29c-30b**; Q 11 **46d-50b** passim, esp A 1 **46d-47d**; Q 30, A 3 **169b-170c**; Q 39, A 8 **210a-213a**; Q 44, A 1, ANS **238b-239a**; Q 47, A 3 **258c-259a**; Q 93, A 9, ANS **500c-501c**; Q 103, A 3, ANS **530a-c**; PART I–II, Q 10, A 1, REP 3 **662d-663d**; Q 17, A 4, ANS **688d-689c**

20 AQUINAS: *Summa Theologica*, PART III, Q 4, A 1, REP 4 730d-731d; Q 17, A 2, ANS 808d-809d; Q 19, A 1, REP 4 816a-818b
23 HOBBES: *Leviathan*, PART III, 172b; PART IV, 269d
31 SPINOZA: *Ethics*, PART I 355a-372d esp PROP 2-8 355d-357d, PROP 10, SCHOL 358a-b, PROP 12 359b-c, PROP 13, COROL and SCHOL 359d, PROP 14, COROL 1 360a, PROP 15 360a-361d, PROP 16, COROL 1-3 362a, PROP 18 363c, PROP 25, SCHOL and COROL 365b, PROP 28 365c-366a, PROP 33, SCHOL 1-PROP 34 367c-369a; PART III, 395a-d
35 LOCKE: *Human Understanding*, BK II, CH VII, SECT 7 132d; CH XIII, SECT 26 154b-c; CH XVI, SECT 1 165c-d
35 BERKELEY: *Human Knowledge*, SECT 13 415c
42 KANT: *Pure Reason*, 43d-44a; 44c-45b / *Judgement*, 550a-551a,c; 564c-565d esp 565c-d; 580c-d

1a. The relation of the one and the many: emanation of the many from the one

7 PLATO: *Republic*, BK V, 370d-373c; BK VII, 392b-394b / *Parmenides* 486a-511d / *Sophist*, 561d-574c esp 564d-574c / *Statesman*, 594d-595a / *Philebus*, 610d-613a
8 ARISTOTLE: *Physics*, BK I, CH 8 [$191^{a}24$-$^{b}12$] 267a-c / *Metaphysics*, BK I, CH 6 505b-506b; CH 7 [$988^{a}34$-$^{b}5$] 506c; BK V, CH 6 [$1016^{b}18$-25] 537b; [$1017^{a}3$-7] 537c; BK X, CH 1 [$1052^{b}1$-$1053^{b}8$] 578d-580a; CH 6 583d-584c; BK XIV, CH 1-2 619b,d-622c
17 PLOTINUS: *First Ennead*, TR VII, CH 2 26c-d / *Second Ennead*, TR III, CH 11 46b-c; CH 18 49c-50a; TR IX, CH 8 70a-d / *Third Ennead*, TR II, CH 16 90c-91c; TR III, CH 1 93b-c; TR VII, CH 11 126a-d; TR VIII 129a-136a passim; TR IX, CH 3, 137b-c / *Fourth Ennead*, TR II 139c-141c; TR III, CH 2-5 142a-144c; TR IV, CH 1, 159b-d; CH 10-12 163a-164d; CH 30-45 174b-183a; TR VIII, CH 3-TR IX, CH 5 202a-207a,c / *Fifth Ennead*, TR I, CH 4-9 209d-213c; TR II, CH 1 214c-215a; TR III, CH 10-12 221b-223c; TR IV 226d-228b; TR VII 238a-239b; TR VIII, CH 7 242d-243c / *Sixth Ennead*, TR II, CH 1-8 268d-273c; CH 20-22 278d-280d; TR IV, CH 4 299a-d; TR V 305c-310d; TR VI, CH 7 313d-314a; TR VII, CH 4-17 323c-331a
19 AQUINAS: *Summa Theologica*, PART I, QQ 3-11 14a-50b passim; Q 14, A 6, ANS 80a-81c; Q 16, A 6 98b-d; QQ 30-31 167a-175c; QQ 44-45 238a-250a; Q 47 256a-259a; Q 77, A 6, REP 1 404c-405c; Q 85, A 8, ANS 460b-461b; QQ 103-105 528a-545b esp Q 103, AA 3-4 530a-531b; PART I-II, Q 17, A 4, ANS 688d-689c
31 SPINOZA: *Ethics*, PART I 355a-372d esp DEF 3,5 355b, AXIOM 1-2 355c-d, PROP 1-8 355d-357d, PROP 11-16 358b-362a, PROP 18 363c, PROP 21-25 364a-365b, PROP 29 366b-c
42 KANT: *Pure Reason*, 43d-44a; 49c-51d esp 51c-d; 74b-76c; 107b-c; 173b-177b; 197b-198a / *Judgement*, 564c-565d esp 565c-d; 580c-d
46 HEGEL: *Philosophy of History*, INTRO, 165a-b; PART III, 306a

1b. The unity or duality of God and the world: the immanence and transcendence of God

8 ARISTOTLE: *Metaphysics*, BK XII, CH 10 [$1075^{a}12$-16] 605d
9 ARISTOTLE: *Motion of Animals*, CH 3 [$699^{a}11$]-CH 4 [$700^{a}5$] 234a-235a
12 EPICTETUS: *Discourses*, BK I, CH 14 120d-121c
12 AURELIUS: *Meditations*, BK II, SECT 1 256b,d; BK VII, SECT 9 280b-c
18 AUGUSTINE: *Confessions*, BK I, par 2-3 1b-2a; BK III, par 10 15b-d; par 18 18b; BK IV, par 26 25c-d; par 31 26c-27a; BK VI, par 4 36a-b; BK VII, par 1-7 43b-45d; par 16-23 48c-50c esp par 21 49d-50a; BK X, par 8-10 73b-74a; BK XII, par 7 100d-101a; par 21 103d-104a / *City of God*, BK IV, CH 12-13 195d-196b; BK VII, CH 6, 248a; CH 30 261b-d; BK X, CH 14 307c-308a; BK XII, CH 17 353a-354a; CH 25 358b-359a / *Christian Doctrine*, BK I, CH 12 627c-d
19 AQUINAS: *Summa Theologica*, PART I, Q 3, A 1, REP 1 14b-15b; A 8 19d-20c; Q 4, A 3 22b-23b; Q 6, A 4 30b-d; Q 8 34c-38c; Q 16, A 6 98b-d; Q 18, A 4 107d-108c; Q 44, AA 1-2 238b-240a; Q 51, A 3, REP 3 277a-278c; Q 52, A 2 279b-280a; Q 61, A 3, REP 2 316a-d; Q 90, A 1 480d-481d; QQ 103-105 528a-545b; PART I-II, Q 17, A 8, REP 2 692a-c
20 AQUINAS: *Summa Theologica*, PART II-II, Q 26, A 2, REP 3 511a-d; PART III SUPPL, Q 84, A 2, REP 1 984c-985d
21 DANTE: *Divine Comedy*, PARADISE, I [94-123] 107b-c; II [112-148] 109a-b; XIII [52-66] 126a; XIX [40-66] 135c-d; XXVIII 148d-150b; XXIX [127-145] 151c-d; XXXIII [76-145] 157a-d
23 HOBBES: *Leviathan*, PART II, 162b
31 DESCARTES: *Discourse*, PART V, 54d-56a / *Objections and Replies*, 110b-112a; 123c-d; 158b-159a
31 SPINOZA: *Ethics*, PART I 355a-372d esp DEF 3-5 355b, AXIOM 1-2 355c-d, PROP 2-8 355d-357d, PROP 10, SCHOL 358a-b, PROP 13, COROL-PROP 18 359d-363c, PROP 22-23 364d-365a, PROP 25, COROL and SCHOL 365b, PROP 28-31 365c-367a, PROP 33-34 367b-369a; PART II, PROP 1-11 373d-377c
32 MILTON: *Paradise Lost*, BK V [469-505] 185b-186a; BK XI [334-346] 306b
34 NEWTON: *Principles*, BK III, GENERAL SCHOL, 370a-371a
35 LOCKE: *Human Understanding*, BK II, CH XIII, SECT 18 152a-c; CH XV, SECT 2-4 162c-163b; BK III, CH VI, SECT 11-12 271b-272b
35 BERKELEY: *Human Knowledge*, SECT 149-150 442d-443b; SECT 155 444b-c
35 HUME: *Human Understanding*, SECT VII, DIV 56 475a-b

(1. *The transcendental one: the Absolute; the unity of being, of nature, of the universe.* 1b. *The unity or duality of God and the world: the immanence and transcendence of God.*)

42 KANT: *Pure Reason*, 192c-d / *Practical Reason*, 342c; 351b-352c / *Judgement*, 550a-551a,c; 564c-565d esp 565c-d; 566c-d; 580c-d; 592a-c
46 HEGEL: *Philosophy of History*, INTRO, 156d-157b; 176b-c; PART I, 220c-221a; 224a-b; 227d-228c; 237d-238a; 245d-246c
48 MELVILLE: *Moby Dick*, 115b-117a
51 TOLSTOY: *War and Peace*, BK V, 216d-218b; BK XIV, 608a-b; BK XV, 631a-c
52 DOSTOEVSKY: *Brothers Karamazov*, BK VI, 153b-d

1c. The one and the many in relation to the universal and the particular: the abstract and the concrete universal

7 PLATO: *Laches*, 32a-33a / *Meno*, 174d-175d / *Euthyphro*, 193a-c / *Republic*, BK VI, 383d-388a; BK VII, 392a-394a / *Parmenides*, 486d-489a / *Theaetetus*, 514b-515d / *Sophist*, 559a-c / *Philebus*, 610d-613a
8 ARISTOTLE: *Categories*, CH 2 [1^a20–$^b9$] 5b-c / *Posterior Analytics*, BK I, CH 11 [77^a5–9] 105d-106a; CH 24 [85^a31–$^b3$] 116c; [85^b15–21] 117a / *Heavens*, BK I, CH 9 [277^b26–278^b9] 369a-d / *Metaphysics*, BK I, CH 6 505b-506b; CH 7 [988^a34–$^b5$] 506c; BK III, CH 4 [1001^a18–$^b6$] 520a-b; BK V, CH 3 [1014^b3–13] 534d; CH 6 [1016^b17–1017^a3] 537b-c; CH 25 [1023^b17–19] 545b-c; CH 25 [1023^b22]–CH 26 [1023^b32] 545c; BK VII, CH 10 [1034^b35–1036^a25] 558b-559d; CH 15 563c-564c; BK X, CH 1 578b,d-580a esp [1052^a28–37] 578d; CH 2 580b-d; BK XII, CH 8 [1074^a32–39] 604d; BK XIII, CH 10 618c-619a,c
17 PLOTINUS: *Fourth Ennead*, TR IX, CH 5 206d-207a,c
19 AQUINAS: *Summa Theologica*, PART I, Q 3, A 2, REP 3 15c-16a; Q 11, A 3, ANS 49a-c; Q 13, A 9, ANS and REP 2 71b-72c; Q 14, A 6, ANS 80a-81c; Q 30, A 3, ANS and REP 1 169b-170c; A 4 170c-171b; Q 47, A 2, ANS 257b-258c; Q 77, A 1, REP 1 399c-401b; Q 79, A 5, REP 2 418c-419b; Q 93, A 9, ANS 500c-501c; PART I-II, Q 10, A 1, REP 3 662d-663d; Q 17, A 4, ANS 688d-689c
20 AQUINAS: *Summa Theologica*, PART III, Q 2, A 1, ANS 710a-711c
23 HOBBES: *Leviathan*, PART I, 55b-c
28 HARVEY: *On Animal Generation*, 332a-333b
31 SPINOZA: *Ethics*, PART II, PROP 40, SCHOL 1 387b-388a
35 LOCKE: *Human Understanding*, BK II, CH XI, SECT 9 145b-c; CH XXXII, SECT 6 244b-c; BK III, CH I, SECT 3 251d-252a; CH III, SECT 1-9 254d-256c passim; CH VI, SECT 1 268b-c; SECT 32-33 277c-278c
35 BERKELEY: *Human Knowledge*, INTRO, SECT 7-19 406a-410c passim, esp SECT 12-16 408a-409d
35 HUME: *Human Understanding*, SECT XII, DIV 125, 507b [fn 1]
42 KANT: *Pure Reason*, 197b-198a; 211c-213a
46 HEGEL: *Philosophy of Right*, INTRO, par 5-7 13a-14c; par 24 17d-18a; PART III, par 156-157 57d; par 165 59d; par 185-186 64b-d; par 353-360 112b-114a,c / *Philosophy of History*, INTRO, 158a-159a; 176b-177b; PART I, 237d-238a; PART III, 306a
53 JAMES: *Psychology*, 308a-311a passim

2. The modes of unity: comparison of numerical, essential, and divine unity

8 ARISTOTLE: *Physics*, BK I, CH 2 [185^b5–186^a4] 260b-d / *Metaphysics*, BK I, CH 5 [986^b8–987^a1] 504c-505a; BK V, CH 6 536a-537c; BK X, CH 1 578b,d-580a / *Soul*, BK II, CH 1 [412^b8–9] 642c; CH 4 [415^a22–$^b8$] 645c-d
17 PLOTINUS: *Fourth Ennead*, TR IX, CH 2 205c-206a; CH 5 206d-207a,c
19 AQUINAS: *Summa Theologica*, PART I, Q 11 46d-50b esp A 4 49d-50b; Q 30, A 1, REP 2,4 167a-168a; A 2, REP 5 168a-169b; Q 93, A 1, REP 3 492a-d; PART I-II, Q 17, A 4, ANS 688d-689c
20 AQUINAS: *Summa Theologica*, PART III, Q 2 709d-723a esp A 9 719d-720c; Q 17 806d-809d
31 DESCARTES: *Objections and Replies*, 224d-225d
31 SPINOZA: *Ethics*, PART II, DEF 7 373c
53 JAMES: *Psychology*, 215b-216a

2a. Numerical unity or identity: the number *one*

7 PLATO: *Republic*, BK VII, 392b-394b / *Theaetetus*, 535b-c; 537a-c
8 ARISTOTLE: *Categories*, CH 5 [4^a10–$^b19$] 8b-9a / *Topics*, BK I, CH 18 [108^b23–32] 153a,c; BK VI, CH 4 [141^b6–8] 194d / *Physics*, BK IV, CH 14 [223^b12–224^a14] 303c-304a,c; BK VII, CH 1 [242^a31–$^b4$] 326c-d / *Metaphysics*, BK III, CH 4 [1001^a25–$^b25$] 520a-c; BK V, CH 6 [1016^b18–1017^a1] 537b-c; CH 9 [1018^a4–9] 538d; CH 13 [1020^a8–9] 541b; BK X, CH 1 578b,d-580a; CH 3 [1054^a30–35] 581a; CH 6 [1056^b33–1057^a16] 584b-c; BK XII, CH 7 [1072^a33–34] 602b; CH 8 [1074^a31–39] 604d; BK XIII, CH 6-9 611d-618c; BK XIV, CH 1 [1087^b34–1088^a14] 620a-b
11 EUCLID: *Elements*, BK VII, DEFINITIONS, 1 127a
11 NICOMACHUS: *Arithmetic*, BK I, 814c; 821d; BK II, 832b; 838c-d; 839d-840a
17 PLOTINUS: *Fourth Ennead*, TR IX, CH 2 205c-206a; CH 5 206d-207a,c / *Fifth Ennead*, TR V, CH 4 230b-d / *Sixth Ennead*, TR II, CH 9-11 273c-275d; TR VI 310d-321b esp CH 5 312c-313b, CH 11-16 315d-319d; TR IX, CH 1-2 353d-355a
19 AQUINAS: *Summa Theologica*, PART I, Q 3, A 5, ANS and REP 2 17c-18b; Q 7, A 4, ANS 33d-34c; Q 10, A 6 45c-46d; Q 11, A 1, REP 1-2 46d-47d; A 2, ANS 47d-48d; A 3, REP 2 49a-c; A

4, REP 2 49d-50b; Q 30, A 1, REP 4 167a-168a; A 2, REP 5 168a-169b; A 3 169b-170c; Q 85, A 8, REP 2 460b-461b; PART I-II, Q 10, A 1, REP 3 662d-663d

20 AQUINAS: *Summa Theologica*, PART III, Q 2, A 3, REP 1 713a-714c; A 9, REP 1 719d-720c; Q 17 806d-809d; PART III SUPPL, Q 79 951b-956b

28 GALILEO: *Two New Sciences*, FIRST DAY, 146c-147a

31 DESCARTES: *Rules*, XIV, 31b-c; 32a-b / *Geometry*, BK I, 296a

31 SPINOZA: *Ethics*, PART I, PROP 12-15 359b-361d

33 PASCAL: *Pensées*, 512 262a

35 LOCKE: *Human Understanding*, BK I, CH III, SECT 4-5 113b-c; BK II, CH XXVII 218d-228c passim; BK IV, CH I, SECT 4 307b-c; CH III, SECT 8 315b-c

35 BERKELEY: *Human Knowledge*, SECT 12-13 415b-c

42 KANT: *Pure Reason*, 99a-101b

2b. The unity of the indivisible or the simple: the individual thing, the point, the atom, the quality

7 PLATO: *Republic*, BK VII, 392b-394b / *Parmenides*, 506d-507b / *Theaetetus*, 545b-547b / *Sophist*, 566a-d / *Philebus*, 611b-c

8 ARISTOTLE: *Categories*, CH 2 [1^b3-9] 5c / *Topics*, BK I, CH 18 [108^b23-32] 153a,c / *Physics*, BK I, CH 2 [185^b17-19] 260c; BK III, CH 7 [207^a31-$^b10$] 285d-286a; BK IV, CH 10 [218^a3-30] 297d-298b / *Generation and Corruption*, BK I, CH 2 [316^a15-317^a17] 411d-413a / *Metaphysics*, BK I, CH 9 [992^a18-24] 510b-c; BK III, CH 4 [1001^b7-19] 520b-c; BK V, CH 3 [1014^b3-13] 534d; CH 5 [1015^b9-16] 536a; CH 6 [1016^b24-31] 537b; BK XI, CH 12 [1069^a13-16] 598c; BK XII, CH 7 [1072^a33-34] 602b / *Soul*, BK III, CH 2 [427^a10-14] 659b-c; CH 6 [430^b6-22] 663a-b

9 ARISTOTLE: *Ethics*, BK X, CH 4 [1174^b9-14] 428d-429a

11 EUCLID: *Elements*, BK I, DEFINITIONS, 1 1a

11 NICOMACHUS: *Arithmetic*, BK II, 832b

12 LUCRETIUS: *Nature of Things*, BK I [483-634] 7a-8d

17 PLOTINUS: *Fourth Ennead*, TR III, CH 2, 142b-c

19 AQUINAS: *Summa Theologica*, PART I, Q 6, A 3, REP 1 29c-30b; Q 8, A 2, REP 2 35c-36b; Q 10, A 1, ANS and REP 1,3,5 40d-41d; Q 11, A 1, ANS 46d-47d; A 2, REP 4 47d-48d; AA 3-4 49a-50b; Q 29, A 4, ANS and REP 3 165c-167a; Q 30, A 1, REP 3 167a-168a; Q 40, A 2, REP 1 214b-215b; Q 42, A 2, REP 4 225d-227a; Q 50, A 2 270a-272a; Q 52, A 2 279b-280a; Q 53, A 1, REP 1 280d-282a; A 2, ANS 282a-283b; Q 76, A 8 397d-399b; Q 85, A 8, ANS and REP 2 460b-461b; PART I-II, Q 13, A 4, REP 2 675a-c

20 AQUINAS: *Summa Theologica*, PART I-II, Q 54, A 4 25b-d; PART III SUPPL, Q 83, A 2, REP 5 976c-978c; A 3, REP 4 978c-980d

31 DESCARTES: *Rules*, XII, 20d-21b

31 SPINOZA: *Ethics*, PART I, PROP 12-15 359b-361d; PART II, DEF 7 373c

34 NEWTON: *Optics*, BK III, 541b

35 LOCKE: *Human Understanding*, BK II, CH II, SECT 1 127d-128a; CH XV, SECT 9 164b-d; CH XVI, SECT 1 165c-d; BK III, CH IV, SECT 15-16 263a-c

35 BERKELEY: *Human Knowledge*, INTRO, SECT 7 406a-b; SECT 99 432b

42 KANT: *Pure Reason*, 120c-129c esp 121a-124d, 126a-128b; 130b-133c esp 131c; 137a-140c esp 137d-138d [antithesis]; 152a-d; 158a-159d; 161d-163a; 211c-213a

2c. The complex unity of a whole composed of parts: the distinction between the indivisible and the undivided

7 PLATO: *Parmenides*, 495c-497c; 505c-506b / *Theaetetus*, 545b-547b / *Sophist*, 566a-d

8 ARISTOTLE: *Topics*, BK VI, CH 13 [150^a1]-CH 14 [151^a32] 204c-206a / *Physics*, BK I, CH 2 [185^b11-17] 260b-c; BK III, CH 6 [206^b33-207^a31] 285b-d; BK IV, CH 3 [210^a25-$^b8$] 289b-c / *Metaphysics*, BK V, CH 6 536a-537c; CH 26 545c-d; BK X, CH 1 578b,d-580a; CH 3 [1054^a20-23] 581a / *Soul*, BK III, CH 6 [430^b6-22] 663a-b

9 ARISTOTLE: *Ethics*, BK X, CH 4 [1174^a13-$^b14$] 428b-429a / *Politics*, BK I, CH 1 [1252^a18-24] 445b; CH 2 [1253^a19-25] 446c

12 LUCRETIUS: *Nature of Things*, BK I [599-634] 8b-d

17 PLOTINUS: *Fourth Ennead*, TR III, CH 2 142a-143b; TR IX, CH 5 206d-207a,c

19 AQUINAS: *Summa Theologica*, PART I, Q 6, A 3, REP 1 29c-30b; Q 11, A 1, ANS and REP 2 46d-47d; A 2, REP 2 47d-48d; Q 30, A 1, REP 4 167a-168a; Q 39, A 3, ANS 204c-205c; Q 85, A 3, REP 2 455b-457a; A 8, ANS 460b-461b; PART I-II, Q 17, A 4, ANS 688d-689c

20 AQUINAS: *Summa Theologica*, PART III SUPPL, Q 79, A 2, REP 2 953b-955c

28 GALILEO: *Two New Sciences*, FIRST DAY, 145b-146c; 150d-151c

34 NEWTON: *Principles*, BK III, RULE III 270b-271a

35 LOCKE: *Human Understanding*, BK II, CH XXII, SECT 4 201c-d; CH XXIV 214b-d; BK III, CH V, SECT 10-11 266b-d

35 BERKELEY: *Human Knowledge*, SECT 12-13 415b-c

46 HEGEL: *Philosophy of Right*, ADDITIONS, 168 145c-d

53 JAMES: *Psychology*, 104a-106b

3. Kinds of wholes or complex unities

8 ARISTOTLE: *Metaphysics*, BK V, CH 6 536a-537c; CH 25-26 545b-d; BK X, CH 1 578b,d-580a

(3. *Kinds of wholes or complex unities.*)

17 PLOTINUS: *Fourth Ennead*, TR III, CH 2–3 142a-143d
19 AQUINAS: *Summa Theologica*, PART I, Q 3 14a-20c; Q 8, A 2, REP 3 35c-36b; Q 11, A 1, REP 2 46d-47d; A 2, REP 2 47d-48d; Q 76, A 8, ANS 397d-399b; Q 77, A 1, REP 1 399c-401b; PART I-II, Q 17, A 4 688d-689c
20 AQUINAS: *Summa Theologica*, PART III, Q 2, A 1, ANS 710a-711c; PART III SUPPL, Q 79, A 3, ANS and REP 1 955c-956b
31 DESCARTES: *Objections and Replies*, 224d-225d
42 KANT: *Pure Reason*, 161d-163a

3a. Quantitative wholes: oneness in matter or motion

8 ARISTOTLE: *Categories*, CH 6 [4b20–5a37] 9a-d / *Physics*, BK IV, CH 5 [212b29–33] 292b; BK VII, CH 1 [242b23–243a3] 327a-b / *Generation and Corruption*, BK I, CH 6 420b-421d; CH 10 426c-428d / *Metaphysics*, BK V, CH 6 [1015b 37–1016a16] 536b-c; [1016b7–18] 537a-b; CH 13 541b-c; CH 25 [1023b13–18] 545b; CH 26 [1023b32–1024a10] 545c-d; BK X, CH 1 [1052a 18–28] 578b,d; BK XI, CH 9 [1066a27–34] 594d; CH 12 [1069a5–12] 598a,c
9 ARISTOTLE: *Ethics*, BK X, CH 4 [1174a13–b14] 428b-429a
17 PLOTINUS: *Fourth Ennead*, TR II, CH 1, 139d
19 AQUINAS: *Summa Theologica*, PART I, Q 8, A 2, REP 3 35c-36b; Q 11, A 2, REP 2 47d-48d; Q 119, A 1, ANS 604c-607b
31 DESCARTES: *Objections and Replies*, 114d-115a
31 SPINOZA: *Ethics*, PART I, PROP 15, SCHOL 360b-361d; PART II, DEF 7 373c; LEMMA 5–7 379d-380b
42 KANT: *Pure Reason*, 129c-159d esp 130b-133c, 137a-140c, 152a-d; 161d-163a

3a(1) The continuity of a quantitative whole

8 ARISTOTLE: *Categories*, CH 6 [5a1–14] 9b-c / *Physics*, BK I, CH 2 [185b5–17] 260b-c; BK III, CH 6–7 284b-286c; BK IV, CH 4 [211a29–b4] 290c; CH 5 [212b3–6] 291d; BK V, CH 3 307b-308b; BK VI, CH 1–2 312b,d-315d / *Metaphysics*, BK V, CH 4 [1014b20–27] 535a; CH 6 [1015b36–1016a17] 536b-c; CH 13 [1020a8–14] 541b; CH 26 [1023b32–36] 545c-d; BK X, CH 1 [1052a18–25] 578b; BK XI, CH 12 [1069a5–11] 598a,c / *Soul*, BK III, CH 2 [427a10–14] 659b-c; CH 6 662d-663c
11 EUCLID: *Elements*, BK X, PROP 1 191b-192a
11 ARCHIMEDES: *Spirals*, 484b / *Quadrature of the Parabola*, 527a-b
11 NICOMACHUS: *Arithmetic*, BK I, 811d-812a
17 PLOTINUS: *Fourth Ennead*, TR II, CH 1, 139d
19 AQUINAS: *Summa Theologica*, PART I, Q 3, A 1, ANS 14b-15b; Q 7, A 3, REP 3-4 32c-33c; A 4, ANS 33d-34c; Q 11, A 2, REP 2 47d-48d; Q 30, A 3, ANS 169b-170c; Q 58, A 2, ANS 301b-d; Q 67, A 2, ANS 350b-351a; Q 76, A 8, ANS 397d-399b; Q 85, A 8, ANS 460b-461b
20 AQUINAS: *Summa Theologica*, PART III, Q 2, A 3, REP 3 713a-714c; PART III SUPPL, Q 79, A 3, ANS and REP 1 955c-956b
28 GALILEO: *Two New Sciences*, FIRST DAY, 139c-153a passim
31 SPINOZA: *Ethics*, PART I, PROP 15, SCHOL 360b-361d
34 NEWTON: *Principles*, BK I, LEMMA 1 25a; LEMMA 11, SCHOL, 31a-32a
42 KANT: *Pure Reason*, 69c-72c; 161d-163a

3a(2) The unity and divisibility of a motion

8 ARISTOTLE: *Physics*, BK IV, CH 11 [219a10–13] 298d-299a; BK V, CH 4 308b-310a; BK VI 312b,d-325d; BK VII, CH 1 [242a31–b4] 326c-d; BK VIII, CH 7 [261a28]-CH 8 [265a12] 347c-352a / *Metaphysics*, BK V, CH 6 [1016a5–7] 536c; CH 13 [1020a25–33] 541c; BK X, CH 1 [1052a18–21] 578b; BK XII, CH 6 [1071b8–11] 601b
9 ARISTOTLE: *Ethics*, BK X, CH 4 [1174a13–b14] 428b-429a
17 PLOTINUS: *Third Ennead*, TR VII, CH 8–9 123b-125d
19 AQUINAS: *Summa Theologica*, PART I, Q 7, A 3, REP 4 32c-33c
28 GALILEO: *Two New Sciences*, THIRD DAY, 201a-202a
30 BACON: *Novum Organum*, BK II, APH 6 139b-c; APH 41 173d-174b
33 PASCAL: *Geometrical Demonstration*, 434a-439b passim
34 NEWTON: *Principles*, BK I, LEMMA II, SCHOL, 31b
42 KANT: *Pure Reason*, 26b-27a; 74b-76c; 130b-133c
51 TOLSTOY: *War and Peace*, BK XI, 469a-d

3a(3) The unity and divisibility of matter

7 PLATO: *Timaeus*, 456a-457b
8 ARISTOTLE: *Physics*, BK III, CH 6-7 284b-286c; BK VI, CH 4 316d-318a / *Heavens*, BK IV, CH 6 [313b6–22] 405a,c / *Generation and Corruption*, BK I, CH 2 [315b25–317a17] 411b-413a; CH 8 [325a23–326b28] 423d-425d; CH 9 [327a1]–CH 10 [328b25] 426a-428d / *Metaphysics*, BK VII, CH 13 [1039a2–11] 562d; CH 16 [1040b5–16] 564c; BK X, CH 1 [1053a21–24] 579d / *Sense and the Sensible*, CH 6 [445b4–446a20] 683b-684c; CH 7 [449a21–30] 688d-689a
10 GALEN: *Natural Faculties*, BK I, CH 12 172d-173c
12 LUCRETIUS: *Nature of Things*, BK I [483–634] 7a-8d
17 PLOTINUS: *Second Ennead*, TR IV, CH 7, 52c / *Fourth Ennead*, TR II, CH 1, 139d
19 AQUINAS: *Summa Theologica*, PART I, Q 3, A 1, ANS 14b-15b; Q 7, A 3, REP 3-4 32c-33c; A 4, ANS 33d-34c; Q 16, A 7, REP 2 99a-d; Q

47, A 3, REP 2–3 258c-259a; Q 50, A 2, ANS 270a-272a; Q 119, A 1, ANS 604c-607b
20 AQUINAS: *Summa Theologica*, PART III, Q 2, A 1, ANS 710a-711c; PART III SUPPL, Q 79, A 1, REP 3 951b-953b
28 GALILEO: *Two New Sciences*, FIRST DAY, 139c-153a passim, esp 147d-148b
30 BACON: *Novum Organum*, BK II, APH 8 140b
31 DESCARTES: *Objections and Replies*, 112b
34 NEWTON: *Optics*, BK III, 541b
35 LOCKE: *Human Understanding*, BK II, CH XVII, SECT 12 170d; CH XXIII, SECT 31 212b-c; CH XXIX, SECT 16, 237b-d; BK IV, CH X, SECT 10, 351d-352a
35 BERKELEY: *Human Knowledge*, SECT 47 421c-422a
42 KANT: *Pure Reason*, 100c-d; 131c; 137a-140c; 152a-d; 161d-163a
43 FEDERALIST: NUMBER 31, 103d
45 FARADAY: *Researches in Electricity*, 850b,d-855a,c

3a(4) The unity and divisibility of time and space

7 PLATO: *Timaeus*, 450c-451a; 456a-457b
8 ARISTOTLE: *Categories*, CH 6 [5a6–29] 9b-c / *Physics*, BK IV, CH 11 [219a10–13] 298d-299a; BK VI 312b,d-325d passim / *Generation and Corruption*, BK II, CH 10 [337a22-34] 439b-c / *Metaphysics*, BK V, CH 13 [1020a25-34] 541c / *Soul*, BK III, CH 6 [430b6–19] 663a-b
17 PLOTINUS: *Third Ennead*, TR VII, CH 8–13 123b-129a
18 AUGUSTINE: *Confessions*, BK XI, par 17–41 93b-99b
19 AQUINAS: *Summa Theologica*, PART I, Q 7, A 3, REP 4 32c-33c; A 4, REP 1 33d-34c
28 GALILEO: *Two New Sciences*, THIRD DAY, 201a-202a
31 DESCARTES: *Discourse*, PART IV, 52d-53a / *Objections and Replies*, 213b-c
33 PASCAL: *Geometrical Demonstration*, 434a-439b passim
35 LOCKE: *Human Understanding*, BK II, CH XIII, SECT 13–14 151b-d; CH XV, SECT 9 164b-d
35 BERKELEY: *Human Knowledge*, SECT 98 432a
42 KANT: *Pure Reason*, 24a-26b; 130b-133c; 160b-163a; 186d-187a
53 JAMES: *Psychology*, 398a-399b; 420a-b; 547a-548b; 631a

3b. Natural or essential wholes: the oneness of a being or a nature

8 ARISTOTLE: *Metaphysics*, BK V, CH 6 536a-537c; BK X, CH 1 578b,d-580a
10 GALEN: *Natural Faculties*, BK II, CH 6, 189a-190b
19 AQUINAS: *Summa Theologica*, PART I, Q 8, A 2, REP 3 35c-36b; Q 11, A 1, REP 2 46d-47d; A 4, REP 3 49d-50b; Q 13, A 9, ANS 71b-72c; Q 85, A 8, ANS 460b-461b; PART I-II, Q 17, A 4, ANS 688d-689c
31 DESCARTES: *Objections and Replies*, 152d-155d; 224d-225d
35 LOCKE: *Human Understanding*, BK III, CH VI, SECT 1–10 268b-271b passim, esp SECT 4 268d-269b; BK IV, CH VI, SECT 11 334b-335b
35 BERKELEY: *Human Knowledge*, SECT 1 413a-b; SECT 12 415b-c; SECT 99 432b

3b(1) The distinction between essential and accidental unity

8 ARISTOTLE: *Posterior Analytics*, BK II, CH 10 [93b36–38] 128b-c / *Metaphysics*, BK V, CH 6 536a-537c; CH 27 545d-546a; BK VII, CH 4-6 552b-555a; CH 12 561b-562a
9 ARISTOTLE: *Politics*, BK VII, CH 8 [1328a21–24] 532c
19 AQUINAS: *Summa Theologica*, PART I, Q 10, A 6, ANS 45c-46d; Q 11, A 1, REP 2 46d-47d; Q 76, A 8, ANS 397d-399b; Q 118, A 3, ANS 603b-604b; PART I-II, Q 17, A 4, ANS 688d-689c; Q 28, A 1, REP 2 740b-741a
20 AQUINAS: *Summa Theologica*, PART III, Q 2, A 1, ANS 710a-711c; A 6 716b-718b; Q 3, A 1, REP 2 723b-724a; Q 17, A 2, ANS 808d-809d; PART III SUPPL, Q 79, A 1, ANS and REP 4 951b-953b; A 2, REP 1-2,4 953b-955c
35 LOCKE: *Human Understanding*, BK III, CH VI, SECT 1–10 268b-271b passim, esp SECT 4 268d-269b

3b(2) The comparison of the unity of natural things with man-made compositions or aggregations: artificial wholes

8 ARISTOTLE: *Metaphysics*, BK V, CH 6 [1015b35-1016a9] 536b-c; CH 26 [1023b32-36] 545c-d; BK VIII, CH 3 [1043b19–24] 568a-b; BK X, CH 1 [1052a18–25] 578b
19 AQUINAS: *Summa Theologica*, PART I-II, Q 17, A 4, ANS 688d-689c
20 AQUINAS: *Summa Theologica*, PART III, Q 2, A 1, ANS 710a-711c; PART III SUPPL, Q 79, A 2, REP 4 953b-955c
42 KANT: *Judgement*, 557a-558b

3b(3) The unity of a substance and of substantial form

8 ARISTOTLE: *Physics*, BK I, CH 3 [186b14–19] 261c-d; BK IV, CH 2 [209b1-210a10] 288b-d / *Heavens*, BK I, CH 9 [277b26-278b9] 369a-d; BK IV, CH 4 [312a12–17] 403d / *Metaphysics*, BK V, CH 6 [1016b1–11] 537a; CH 25 [1023b19–23] 545b-c; BK VII, CH 17 565a-566a,c; BK VIII, CH 6 569d-570d; BK IX, CH 1 [1046a28–29] 571b; BK X, CH 1 [1052a28–34] 578d; BK XII, CH 10 [1075b34–37] 606d; BK XIII, CH 2 [1077a20–23] 608c / *Soul*, BK I, CH 1 [402b1–403a2] 631c-632a; CH 5 [410b10–16] 640c; BK I, CH 5 [411a23]–BK II, CH 2 [414a28] 641b-644c
10 GALEN: *Natural Faculties*, BK I, CH 12 172d-173c; BK II, CH 6, 189a-190b
19 AQUINAS: *Summa Theologica*, PART I, Q 3, AA 2–3 15c-16d; Q 7, A 1, ANS 31a-d; A 2, ANS

(*3b. Natural or essential wholes: the oneness of a being or a nature.* 3b(3) *The unity of a substance and of substantial form.*)

31d-32c; Q 11, A 1, REP 1-2 46d-47d; A 4, REP 2-3 49d-50b; Q 16, A 7, REP 2 99a-d; Q 29, A 2, REP 5 163b-164b; Q 50, A 2, ANS 270a-272a; Q 70, A 3 365b-367a; Q 76, AA 3-4 391a-394c; A 8, ANS 397d-399b; Q 85, A 4, ANS and REP 2 457a-d; Q 119, A 1, ANS 604c-607b; PART I-II, Q 17, A 4, ANS 688d-689c

20 AQUINAS: *Summa Theologica*, PART III, Q 2, A 1, ANS and REP 2 710a-711c; Q 3, A 7, REP 1 728a-729a; Q 17 806d-809d; PART III SUPPL, Q 79, A 1, ANS and REP 4 951b-953b; A 2, REP 1-2,4 953b-955c

31 DESCARTES: *Objections and Replies*, 152d-155d

31 SPINOZA: *Ethics*, PART I, DEF 3 355b; PROP 5-10 356b-358b; PROP 12-15 359b-361d

35 LOCKE: *Human Understanding*, BK II, CH XXIII, SECT 1-6 204a-205c; SECT 37 213d-214b; CH XXVII, SECT 2-7 219b-221a; BK III, CH VI, SECT 1-10 268b-271b passim, esp SECT 4 268d-269b, SECT 10 271b; SECT 21 273c-d; SECT 42 280b-c; SECT 49 282c; BK IV, CH VI, SECT 11 334b-335b

42 KANT: *Pure Reason*, 15b-c; 63a; 63d-64a; 74b-76c; 81b-83b; 91d-93b; 95a-d; 131c-d; 137a-140c; 162b-163a / *Judgement*, 556d-558a; 559b-d; 565b-d; 575c-576a

3b(4) The unity of man as composite of body and soul, matter and spirit, extension and thought

7 PLATO: *Cratylus*, 93b-d / *Phaedrus*, 124b-d / *Phaedo*, 231b-234c / *Republic*, BK III, 338a-339a / *Timaeus*, 453b-c / *Laws*, BK V, 686d-687c

8 ARISTOTLE: *Metaphysics*, BK VII, CH 10 [1035^b13-32] 559a-b; BK VIII, CH 3 [1043^a29-$^b4$] 567d; CH 6 569d-570d; BK XII, CH 10 [1075^b34-37] 606d / *Soul*, BK I, CH 1 [403^a2-$^b19$] 632a-d; CH 5 [410^b10-16] 640c; [411^b5-18] 641c-d; BK II, CH 1-2 642a-644c

9 ARISTOTLE: *Politics*, BK I, CH 5 [1254^a33-$^b7$] 448a

12 LUCRETIUS: *Nature of Things*, BK III [94-176] 31b-32b; [370-395] 34d-35a

12 EPICTETUS: *Discourses*, BK I, CH 3 108b-c; BK IV, CH 11, 240d-242d

12 AURELIUS: *Meditations*, BK IV, SECT 21 265b-c; BK VII, SECT 55 283b-c; BK IX, SECT 8 292b; BK XII, SECT 30 310a-b

17 PLOTINUS: *First Ennead*, TR I 1a-6b / *Second Ennead*, TR I, CH 5, 37c / *Fourth Ennead*, TR III, CH 19-23 151d-154b; TR VII, CH 1 191c-d; CH 8, 197c-198b / *Sixth Ennead*, TR VII, CH 4-8, 323c-325c

18 AUGUSTINE: *City of God*, BK V, CH 11, 216c; BK IX, CH 8-17 289d-295c passim; BK X, CH 29 316d-318b; BK XIII, CH 16 367a-d; CH 19 369c-370c; BK XIV, CH 2-3 377a-378d; CH 5 379c-380b

19 AQUINAS: *Summa Theologica*, PART I, Q 8, A 1, REP 2 34d-35c; A 2, REP 1-2 35c-36b; Q 75, A 2, REP 1-2 379c-380c; A 4 381b-382a; Q 76 385c-399b; Q 118-Q 119, A 1 600a-607b; PART I-II, Q 4, A 5, REP 2 632c-634b; Q 17, A 4, ANS and REP 3 688d-689c

20 AQUINAS: *Summa Theologica*, PART III, Q 2, A 1, ANS and REP 2 710a-711c; A 5 715a-716b; A 6, ANS and REP 2 716b-718b; Q 3, A 7, REP 1 728a-729a; Q 17, A 2, ANS and REP 4 808d-809d; PART III SUPPL, Q 79, AA 1-2 951b-955c; Q 80, AA 1-2 956c-958b; QQ 82-85 968a-992a

21 DANTE: *Divine Comedy*, PURGATORY, XXV [34-78] 91d-92a

25 MONTAIGNE: *Essays*, 294c-295a; 311a-b; 432b-d; 540a-543a,c

30 BACON: *Advancement of Learning*, 48d-49c

31 DESCARTES: *Discourse*, PART IV, 51d-52a; PART V, 60b-c / *Meditations*, II 77d-81d; VI, 98c-99a; 99d-100a / *Objections and Replies*, 119d-120a; DEF VI-VII 130c-d; DEF X 130d; PROP IV 133c; 135d-136b; 152d-155d; 170b-c; 207d-208a; 209c; 224d-225d; 231a-232d; 248b; 276b-c

31 SPINOZA: *Ethics*, PART II, PROP 11-13 377b-378c; PART III, PROP 2 396c-398b; PART V, PREF 451a-452c

33 PASCAL: *Pensées*, 512 262a

35 LOCKE: *Human Understanding*, BK I, CH III, SECT 4-5 113b-c; BK II, CH XXVII, SECT 6-8 220c-222a esp SECT 8, 221d-222a; SECT 15 224b-c; SECT 21 225d-226a; SECT 27-29 227d-228c; BK IV, CH III, SECT 6 313c-315b passim

35 HUME: *Human Understanding*, SECT VII, DIV 52 472c-473c

36 STERNE: *Tristram Shandy*, 229b-230a; 270b; 277a-b

37 FIELDING: *Tom Jones*, 198a-c

42 KANT: *Judgement*, 557c-558b

46 HEGEL: *Philosophy of Right*, PART I, par 47-48 24a-c; ADDITIONS, 2 115d

53 JAMES: *Psychology*, 1a-4a esp 2b-3a, 4a; 84a-93b esp 88a-90b; 116a-119b esp 118b-119b; 130a; 139a-140a; 208a-b; 222b-223a

54 FREUD: *Interpretation of Dreams*, 154c-155a

3b(5) The unity of the human person or the self: the order of man's powers; the split personality

NEW TESTAMENT: *Romans*, 6:12-14; 7-8; 13:13-14

7 PLATO: *Symposium*, 165d-166b / *Gorgias*, 270d-271b / *Republic*, BK IV, 346a-355a esp 350b-355a / *Timaeus*, 453b-454a; 474b-d; 476a-b

8 ARISTOTLE: *Soul*, BK III, CH 6-11 662d-667a

12 EPICTETUS: *Discourses*, BK I, CH 3-4 108b-110a; CH 12 118d-120b; BK III, CH 24 203c-210a

12 AURELIUS: *Meditations*, BK I, SECT 1 253a; BK V, SECT 36 273d; BK VII, SECT 13 280c; SECT 55 283b-c; BK VIII, SECT 1 285a-b; BK IX, SECT 9 292b-d

17 PLOTINUS: *Fourth Ennead*, TR IV, CH 18 166d-167b

18 AUGUSTINE: *Confessions*, BK VIII, par 10–11 55c-56b; par 19–24 58b-60a; BK X, par 39 81b-c
19 AQUINAS: *Summa Theologica*, PART I, Q 77 399b-407a; Q 81, A 3 430c-431d; QQ 93–101 492a-523d; PART I–II, Q 13, A 1 672d-673c; Q 16, A 1 684b-d; Q 17, A 4 688d-689c; Q 36, A 3 782b-783a
20 AQUINAS: *Summa Theologica*, PART I–II, Q 77, A 2 145d-147c; QQ 81–83 162d-174b; PART II–II, Q 29 530b-533a; PART III, Q 2, A 1, REP 2 710a-711c; A 2, ANS and REP 2–3 711d-712d; Q 6 740b-745b; Q 17, A 2, ANS and REP 4 808d-809d; Q 19, A 1, REP 4 816a-818b; PART III SUPPL, Q 70, A 1 893d-895d; Q 79, A 2 953b-955c
21 DANTE: *Divine Comedy*, PURGATORY, IV [1–18] 57c
25 MONTAIGNE: *Essays*, 105c-107a; 159a-162c; 273b-276a; 300d-301c; 326b-327b; 381b-c; 388c-389c
30 BACON: *Advancement of Learning*, 72b
31 DESCARTES: *Meditations*, IV 89a-93a
35 LOCKE: *Human Understanding*, BK II, CH I, SECT 11–12 123d-124c; SECT 19 126a-c; CH XXVII 218d-228c passim, esp SECT 9–26 222a-227d
41 GIBBON: *Decline and Fall*, 150c
42 KANT: *Pure Reason*, 49c-51d esp 51c-d; 120c-129c esp 121a-124d, 126a-128b; 200c-204c / *Pref. Metaphysical Elements of Ethics*, 368d-369a / *Judgement*, 584d-585c
47 GOETHE: *Faust*, PART I [1064–1117] 26b-28a; [3217–3250] 79a-b
51 TOLSTOY: *War and Peace*, BK XII, 554b-555c
53 JAMES: *Psychology*, 1a-b; 130a-139a passim, esp 134b-137b; 147a-149a; 154a-155b; 188a-259b esp 192a-b, 205a-206a, 213a-219a, 222a-b, 225a-258a
54 FREUD: *Origin and Development of Psycho-Analysis*, 6a-9b / *Hysteria*, 28d-29b; 81d-83c esp 82a / *Unconscious*, 430a-b / *General Introduction*, 589c-593b esp 590a-c; 615b-616c; 633d-635c esp 634b / *Beyond the Pleasure Principle*, 640c-d / *Group Psychology*, 689d-690c / *Ego and Id*, 699a-c; 701d-707c esp 701d-703a, 704d; 711b; 712b-716b esp 712b-c, 715c-716a / *Inhibitions, Symptoms, and Anxiety*, 721d-722d esp 722c; 747a / *Civilization and Its Discontents*, 767d-768d / *New Introductory Lectures*, 830a-840a esp 830d-832a, 836d-839b; 843d-845b esp 845b

4. Unity in the realm of mind: unity in thought or knowledge

4a. The unity of mind or intellect, the cognitive faculties, or consciousness

8 ARISTOTLE: *Soul*, BK I, CH 3 [407a3–22] 636b-d; BK III, CH 1–5 656b,d-662d; CH 7 [431a20–b1] 663d-664a; CH 8 [432a2–14] 664c-d
17 PLOTINUS: *Fourth Ennead*, TR III, CH 3 143b-c
19 AQUINAS: *Summa Theologica*, PART I, Q 76, A 2 388c-391a; Q 79, AA 4–5 417a-419b; Q 88, A 1, ANS 469a-471c
20 AQUINAS: *Summa Theologica*, PART I–II, Q 50, A 4, ANS 9a-10b
42 KANT: *Pure Reason*, 49c-51d esp 51c-d; 55a-56c; 99a-101b; 110d-112a; 119a-b; 120c-129c esp 121a-124d, 126a-128b; 185b-c; 193a-200c esp 193d-194b, 194d-195a, 199a-c; 200c-204c / *Practical Reason*, 329a-d / *Judgement*, 463a-475d; 570b-572b
46 HEGEL: *Philosophy of Right*, PART III, par 321–322 106c-107a; par 343 110d-111a / *Philosophy of History*, INTRO, 175c-177b
53 JAMES: *Psychology*, 1a-b; 154a-157b esp 156a; 159b-161a esp 160a-161a

4b. The unity of sense-experience: the unity of attention; the transcendental unity of apperception

7 PLATO: *Theaetetus*, 534d-535b
8 ARISTOTLE: *Posterior Analytics*, BK II, CH 19 [99b36–100a14] 136b-c / *Metaphysics*, BK I, CH 1 [980b25–981a1] 499b / *Soul*, BK II, CH 11 654b-656a; BK III, CH 1 [425a14–b10] 657b-d; CH 2 [426b7–427a15] 658d-659c; CH 7 [431a20–b1] 663d-664a / *Sense and the Sensible*, CH 7 685c-689a,c
17 PLOTINUS: *Fourth Ennead*, TR III, CH 3 143b-c
19 AQUINAS: *Summa Theologica*, PART I, Q 1, A 3, REP 2 4c-5a; Q 78, AA 3–4 410a-413d
20 AQUINAS: *Summa Theologica*, PART I–II, Q 77, A 1, ANS 145a-d; PART III SUPPL, Q 82, A 3, REP 4 971a-972d
21 DANTE: *Divine Comedy*, PURGATORY, IV [1–18] 57c
35 BERKELEY: *Human Knowledge*, SECT 99 432b
42 KANT: *Pure Reason*, 48d-59b esp 49c-51d
48 MELVILLE: *Moby Dick*, 244b-245a
53 JAMES: *Psychology*, 232b-238b esp 232b-234b, 237a-238a; 261a-269a; 315b-318b passim, esp 318a-b; 469a-471a; 502b-503b; 570a-572b esp 572a

4c. Unity in thinking or understanding: the unity of complex ideas and definitions; the unity of the term, the judgment, and the syllogism

7 PLATO: *Laches*, 32a-33a / *Meno*, 174a-179b / *Theaetetus*, 514b-515d; 534d-536a; 545b-547b / *Sophist*, 559a-c
8 ARISTOTLE: *Categories*, CH 5 [2a19–33] 6b-c; [3a6–b9] 7b-d / *Interpretation*, CH 5 26b-c; CH 8 27d-28a; CH 11 31c-32c / *Posterior Analytics*, BK I, CH 23 [84b31–85a1] 115d-116a; BK II, CH 6 [92a28–33] 126b; CH 10 [93b36–38] 128b-c; CH 13 [97b6–25] 133a-b / *Topics*, BK I, CH 18 [108a17–37] 152b-d; BK IV, CH 3 [123a27–29] 171d; CH 6 [127b5–6] 177a; BK VI, CH 2 [139b19–32] 192c-d; CH 4 [141a26–b2] 194c-d; CH 5 [142b30–143a12] 196b-c; CH 10 [148a23]–CH 11 [149a38] 202b-203d; CH 13 [150a1]–CH 14 [151a31] 204c-206a; BK VII, CH 3

(4. Unity in the realm of mind: unity in thought or knowledge. 4c. Unity in thinking or understanding: the unity of complex ideas and definitions; the unity of the term, the judgment, and the syllogism.)

[153a6–22] 208a-b; [154a3–11] 209b; CH 4 [154a15–18] 209c / *Sophistical Refutations*, CH 7 [169b3–6] 233b / *Metaphysics*, BK IV, CH 7 [1012a22–24] 532b; BK V, CH 3 [1014a35–b3] 534c; BK VII, CH 4–6 552b-555a; CH 10–12 558a-562a; CH 17 565a-566a,c; BK VIII, CH 2 [1043a12–28] 567c-d; CH 3 [1043b28–33] 568b; CH 6 569d-570d; BK X, CH 1 [1052a28–37] 578d / *Soul*, BK I, CH 1 [402b1–9] 631c-d; BK II, CH 3 [414b20–32] 644d-645a; BK III, CH 6 662d-663c; CH 8 [432a9–10] 664c

9 ARISTOTLE: *Parts of Animals*, BK I, CH 3 166a-167d esp [643b10–35] 167a-c

19 AQUINAS: *Summa Theologica*, PART I, Q 58, A 2 301b-d; Q 85, A 4 457a-d; A 8 460b-461b

30 BACON: *Advancement of Learning*, 59c-d

35 LOCKE: *Human Understanding*, BK II, CH XII, SECT 1 147b-d; SECT 5–8 148a-d passim; CH XVI, SECT 1 165c-d; CH XXII, SECT 4 201c-d; CH XXIV 214b-d; BK III, CH V 263d-268a passim, esp SECT 4 264b, SECT 10–11 266b-d; CH VI, SECT 28–33 276a-278c passim, esp SECT 32, 278a-b; CH XI, SECT 18 304a-b

35 BERKELEY: *Human Knowledge*, SECT 1 413a-b

42 KANT: *Pure Reason*, 43d-44a; 44c-45b; 45d-46a; 49c-51d esp 51c-d; 107b-c; 110d-112a; 133c; 193a-200c esp 195b-d, 197b-198a; 234c / *Practical Reason*, 329a-d / *Judgement*, 550a-551a,c

46 HEGEL: *Philosophy of History*, PART I, 220c

53 JAMES: *Psychology*, 178a-184a esp 178b-179a, 180a; 213b-214a; 820b-821a

4d. The unity of science: the unity of particular sciences

7 PLATO: *Charmides*, 10b-11a / *Symposium*, 167a-d / *Republic*, BK III, 333b-d; BK VII, 397c-398a

8 ARISTOTLE: *Posterior Analytics*, BK I, CH 7 103c-d; CH 9 104b-d; CH 11 [77a26–35] 106b; CH 28 119c; CH 32 120c-121b / *Topics*, BK II, CH 3 [110b16–28] 155c / *Sophistical Refutations*, CH 9 [170a20–b3] 234b-c / *Metaphysics*, BK III, CH 1 [995b4–26] 513d-514b; CH 2 [996a18–997a34] 514d-516a; BK IV, CH 1–3 522a-525a; BK VI, CH 1 547b,d-548c; BK XI, CH 1–4 587a-590a; CH 7–8 592b-593d

17 PLOTINUS: *Third Ennead*, TR IX, CH 2, 137a / *Fourth Ennead*, TR III, CH 2, 143a; TR IX, CH 5 206d-207a,c

19 AQUINAS: *Summa Theologica*, PART I, Q 1, A 3 4c-5a

20 AQUINAS: *Summa Theologica*, PART I-II, Q 57, A 6, REP 3 40a-41a

23 HOBBES: *Leviathan*, PART I, 71c-d; 72a-d

30 BACON: *Advancement of Learning*, 13a-c; 15d-16b; 44c-45a; 48d-49b

31 DESCARTES: *Rules*, I 1a-2a

42 KANT: *Pure Reason*, 193a-200c esp 197b-198a / *Judgement*, 560d-561a; 578a-b

51 TOLSTOY: *War and Peace*, BK V, 197b; BK VI, 248d-249a

53 JAMES: *Psychology*, 1a-4a passim

54 FREUD: *New Introductory Lectures*, 874a

4e. The one and the many, or the simple and the complex, as objects of knowledge: the order of learning with respect to wholes and parts

7 PLATO: *Phaedrus*, 126a-c; 134b-c / *Symposium*, 167a-d / *Meno*, 174a-183a / *Phaedo*, 231b-232b / *Republic*, BK III, 333b-d; BK V, 368c-373c; BK VII, 392b-394b / *Timaeus*, 465d / *Parmenides* 486a-511d / *Theaetetus*, 534d-536a; 537a-c; 545b-547b / *Sophist*, 569d-570a / *Statesman*, 594d-595a / *Philebus*, 609b-613c

8 ARISTOTLE: *Posterior Analytics*, BK II, CH 19 136a-137a,c / *Topics*, BK V, CH 5 [135a20–b6] 186d-187a / *Physics*, BK I, CH 1 259a-b / *Metaphysics*, BK III, CH 4 [999a24–29] 518a; BK V, CH 6 [1016b18–25] 537b; BK VII, CH 17 [1041a6–b11] 565a-d; BK X, CH 1 [1052b1–1053b8] 578d-580a; CH 3 [1054a20–29] 581a; BK XI, CH 10 594d-596a / *Soul*, BK I, CH 1 [402b15–403a2] 631d-632a; BK III, CH 1 [425a14–b10] 657b-d; CH 6 662d-663c / *Sense and the Sensible*, CH 7 685c-689a,c

9 ARISTOTLE: *Parts of Animals*, BK I, CH 1 [639a12–b9] 161b-d / *Politics*, BK I, CH 1 [1252a18–24] 445b

17 PLOTINUS: *Fourth Ennead*, TR IV, CH 1 159a-d

19 AQUINAS: *Summa Theologica*, PART I, Q 3, A 3, REP 1 16a-d; Q 10, A 1, REP 1 40d-41d; Q 11, A 2, REP 4 47d-48d; A 3, REP 2 49a-c; Q 12, AA 8–10 57b-59d; Q 14, AA 5–6 79a-81c; A 10, REP 1 83d-84c; Q 30, A 1, REP 4 167a-168a; A 3, REP 3 169b-170c; Q 39, A 8 210a-213a; Q 58, A 2 301b-d; Q 85, AA 3–4 455b-457d; A 8 460b-461b; PART I-II, Q 10, A 1, REP 3 662d-663d

30 BACON: *Advancement of Learning*, 44c-45a / *Novum Organum*, PREF 105a-106d; BK I, APH 19–36 108b-109b; BK II, APH 3–5 137c-139a; APH 17 149b-d; APH 27 157b-158d; APH 30 159c-d; APH 35 162a-164a; APH 37 168d-169c

31 DESCARTES: *Rules*, VIII, 14b-c; IX 14d-15d; XII 18b-25a esp 20d-24c / *Discourse*, PART II, 46c-48b

35 LOCKE: *Human Understanding*, BK III, CH III, SECT 7 255c-256a; CH VI, SECT 32 277c-278b; BK IV, CH VI, SECT 11 334b-335b

35 BERKELEY: *Human Knowledge*, SECT 99 432b

35 HUME: *Human Understanding*, SECT I, DIV 9 454c-455a

42 KANT: *Pure Reason*, 49c-51d esp 51c-d; 110d-111c; 193d-200c / *Practical Reason*, 294a-b / *Judgement*, 572a-b

51 TOLSTOY: *War and Peace*, BK V, 197b; BK VI, 248d-249a; BK XII, 555b-c
53 JAMES: *Psychology*, 315a-319a esp 317b-318b; 327a-331b; 360a; 397a; 406b; 452b-453b [fn 1]; 456b-457a; 503b-504a; 547a-548b; 551b-552a

4f. The unity of knower and known, or of subject and object

7 PLATO: *Seventh Letter*, 809c-810d esp 810c
8 ARISTOTLE: *Interpretation*, CH 1 [16^{a}4-9] 25a / *Topics*, BK I, CH 18 [108^{a}17-37] 152b-d / *Metaphysics*, BK XII, CH 7 [1072^{b}18-24] 602d-603a; CH 9 [1074^{b}35-1075^{a}11] 605c-d / *Soul*, BK I, CH 5 [409^{b}18-411^{a}7] 639c-641a; BK II, CH 5 [416^{b}32-417^{a}2] 647b; [417^{a}17-21] 647d; [418^{a}2-6] 648c-d; BK III, CH 2 [425^{b}17-426^{b}8] 657d-658d; CH 3 [427^{a}16-^{b}6] 659c-d; CH 4 661b-662c; CH 5 [430^{a}14-16] 662c; [430^{a}20-22] 662d; CH 7 [431^{a}1-8] 663c; CH 7 [431^{b}13]-CH 8 [432^{a}2] 664b-c / *Sense and the Sensible*, CH 6 [446^{b}13-27] 685a-b / *Memory and Reminiscence*, CH 1 [450^{a}25-451^{a}19] 691a-692b
17 PLOTINUS: *Third Ennead*, TR IX, CH 1 136a-d / *Fifth Ennead*, TR III, CH 10 221b-222a; TR VI, CH 1 235b-d
18 AUGUSTINE: *Confessions*, BK X, par 17 75c-d; par 19 76a-b; par 22-24 76d-77c; par 27-28 78b-d / *City of God*, BK VIII, CH 6, 269b
19 AQUINAS: *Summa Theologica*, PART I, Q 14, A 2 76d-77d; A 6, REP 1,3 80a-81c; A 9, REP 2 83b-d; Q 27, A 1, REP 2 153b-154b; Q 85, A 8, RÉP 3 460b-461b; Q 117, A 1 595d-597c; PART I-II, Q 28, A 1, REP 3 740b-741a
42 KANT: *Pure Reason*, 23a-24a; 52c-53a; 88b-91d
46 HEGEL: *Philosophy of Right*, INTRO, par 31 19c-20a; PART III, par 146-147 55c-56a; par 343 110d-111a; par 360 113d-114a,c / *Philosophy of History*, INTRO, 160c-161a
48 MELVILLE: *Moby Dick*, 231a
53 JAMES: *Psychology*, 142a-143b; 147a-b; 176a-178a; 232b-238b esp 232b-233a, 234a-235a, 236a-237b; 307a; 309a-311a passim, esp 311a; 852a

5. Unity in moral and political matters

5a. The unity of virtue and the many virtues

7 PLATO: *Laches*, 32a-37b / *Protagoras*, 48a-50d; 58a-64d / *Meno* 174a-190a,c esp 174a-175d / *Statesman*, 605d-607a / *Laws*, BK XII, 795c-797b
8 ARISTOTLE: *Topics*, BK V, CH 1 [128^{b}34-39] 178d
9 ARISTOTLE: *Ethics*, BK V, CH 1 [1129^{b}12]-CH 2 [1130^{b}29] 377a-378b; BK VI, CH 13 394b-d
12 AURELIUS: *Meditations*, BK VIII, SECT 39 288c; BK XI, SECT 10 303b-c
17 PLOTINUS: *First Ennead*, TR II, CH 7 9c-10a; TR III, CH 6 11d-12b
20 AQUINAS: *Summa Theologica*, PART I-II, Q 60, A 1 49d-50c; Q 61, AA 3-4 56b-58b; Q 65 70a-75a; Q 68, A 5 92c-93c; Q 73, A 1 119c-120c; PART II-II, Q 23, AA 4-8 485d-489c; Q 184, A 1 629a-d
30 BACON: *Advancement of Learning*, 80a-81a
33 PASCAL: *Pensées*, 20 175a
42 KANT: *Fund. Prin. Metaphysic of Morals*, 256a-b / *Pref. Metaphysical Elements of Ethics*, 377d
43 MILL: *Utilitarianism*, 469a-b

5b. The unity of the last end: the plurality of intermediate ends or means

8 ARISTOTLE: *Soul*, BK III, CH 10 [433^{b}5-13] 666b
9 ARISTOTLE: *Ethics*, BK I, CH 1-2 339a-d; CH 4 [1095^{a}13-29] 340b-c; CH 6 [1096^{a}11-^{b}8] 341b-d
12 EPICTETUS: *Discourses*, BK III, CH 14, 189d
12 AURELIUS: *Meditations*, BK V, SECT 16 271c-d; BK VI, SECT 42 278a
17 PLOTINUS: *First Ennead*, TR IV, CH 4-16 14a-19b / *Sixth Ennead*, TR IX, CH 6-11 357a-360d
18 AUGUSTINE: *City of God*, BK VIII, CH 4 266d-267c; CH 8-9 270a-271a / *Christian Doctrine*, BK I, CH 35 634c-d
19 AQUINAS: *Summa Theologica*, PART I-II, Q 1, AA 5-8 613a-615c; Q 12, A 3, REP 1 670d-671b; Q 13, A 3, REP 2 674c-675a; Q 16, A 3, CONTRARY and REP 3 685b-686a
20 AQUINAS: *Summa Theologica*, PART II-II, QQ 2-4 390d-409d
42 KANT: *Pure Reason*, 234c-240b esp 235a-b, 236d-237a, 238c-239a / *Fund. Prin. Metaphysic of Morals*, 257c-d; 266c-267d; 271d-279d esp 273d-277b; 286c-287d / *Practical Reason*, 307a-d; 317a-b; 327d-329a; 337a-355d / *Judgement*, 588b [fn 2]; 591b-592c esp 592a-c; 594c-597d
43 MILL: *Utilitarianism*, 448a; 461c-463d

5c. The unity of subjective will and objective morality in the ethical realm

46 HEGEL: *Philosophy of Right*, INTRO, par 8 14c; par 33 20b-d; PART II, par 141 54b-d; PART III, par 155 57c; par 183 64a; par 185 64b-d; par 229 75b; par 258 80b-81c; par 260-261 82a-83d; par 270 84d-89c; par 353-360 112b-114a,c esp par 360 113d-114a,c; ADDITIONS, 100-101 133a-b; 118 136a-b

5d. The unity of the family and the unity of the state: the limits of political or social unification

7 PLATO: *Republic*, BK IV, 343c-344a; BK V, 356b-365d / *Statesman*, 605d-608d
9 ARISTOTLE: *Ethics*, BK VIII, CH 1 [1155^{a}22-28] 406d; BK IX, CH 6 420c-421a / *Politics*, BK I, CH 1-2 445a-446d; BK II, CH 1-6 455b,d-461d esp CH 2 455d-456c; BK VII, CH 4 530a-d; CH 8 532c-533a
18 AUGUSTINE: *City of God*, BK II, CH 21, 161b-c; BK XII, CH 21 357a-b; BK XVII, CH 14, 464d; BK XIX, CH 14-17 520a-523a

(5. *Unity in moral and political matters.* 5d. *The unity of the family and the unity of the state: the limits of political or social unification.*)

20 AQUINAS: *Summa Theologica*, PART I-II, Q 81, A 1, ANS 163a-164d
23 HOBBES: *Leviathan*, PART II, 99a-101a; 109c-d; 111a-b; 121a; 152c-d; 155b
33 PASCAL: *Pensées*, 871 344b
35 LOCKE: *Civil Government*, CH VII, SECT 78-80 42b-43a
38 MONTESQUIEU: *Spirit of Laws*, BK I, 3b-c; BK X, 64a; 64d-65b; BK XIX, 140a-c
38 ROUSSEAU: *Political Economy*, 367a-369a passim / *Social Contract*, BK I, 392b-393b; BK III, 419c-d; BK IV, 425a-427a
40 GIBBON: *Decline and Fall*, 18a
42 KANT: *Science of Right*, 455c-456a
43 FEDERALIST: NUMBER 1-2, 30d-32a; NUMBER 14 60a-62d passim, esp 61b-c
43 MILL: *Representative Government*, 352b-353a; 417c-433b passim / *Utilitarianism*, 460a-461c
44 BOSWELL: *Johnson*, 56a-b
46 HEGEL: *Philosophy of Right*, PART III, par 158-159 58a; par 173 61a-b; par 181 63c-d; par 270 84d-89c; par 276 92b; ADDITIONS, 117 135d-136a; 161 143a-b; 168 145c-d; 178 147d-148a / *Philosophy of History*, INTRO, 170c-178a; PART I, 211a-212c; 222a-c; 236a-c; PART III, 302d-303a; PART IV, 363c-d
50 MARX-ENGELS: *Communist Manifesto*, 421a-d esp 421c-d; 427c-428b
54 FREUD: *Group Psychology*, 677b-678b; 684d / *Civilization and Its Discontents*, 785c-788d; 791b-c; 799a-800a

5e. The unity of sovereignty: its divisibility or indivisibility; the problem of federal union

23 HOBBES: *Leviathan*, PART I, 97c-98a,c; PART II, 100c-105c; 150b; 151a-152a; PART III, 198a-199a
38 MONTESQUIEU: *Spirit of Laws*, BK I, 3b; BK IX, 58b,d-60a
38 ROUSSEAU: *Social Contract*, BK I, 392b-393b; BK II, 395a-396a; BK III, 406b,d-410a; 420d; 422a-c
41 GIBBON: *Decline and Fall*, 577b-c
42 KANT: *Science of Right*, 437c-d; 439a-441d; 452c-d; 455c-456a / *Judgement*, 586a-587a
43 CONSTITUTION OF THE U.S.: 11a-20a,c passim, esp ARTICLE VI [583-590] 16d, AMENDMENTS, X 18a
43 FEDERALIST: NUMBER 1-14 29a-62d passim; NUMBER 15, 63d-64a; 65c-d; NUMBER 18-20 71a-78b passim; NUMBER 32, 105d-107b NUMBER 39, 126b-128b; NUMBER 42, 138c; NUMBER 44, 146d-147c; NUMBER 82 242b-244a
43 MILL: *Representative Government*, 428b-433b passim
46 HEGEL: *Philosophy of Right*, PART III, par 276-278 92b-93a; par 281 95b-d; par 321-322 106c-107a / *Philosophy of History*, PART II, 278c; PART IV, 342b-d; 355c-d

6. Unity in the supernatural order

6a. The unity and simplicity of God

OLD TESTAMENT: *Exodus*, 20:1-6 / *Deuteronomy*, 4:39; 5:6-10; 6:4; 32:29 / *I Kings*, 8:23,60—(*D*) *III Kings*, 8:23,60 / *Psalms*, 18:31—(*D*) *Psalms*, 17:32 / *Isaiah*, 37:16,20; 43:10-15; 44:6,8; 45:5-6,18,21-22; 48:12—(*D*) *Isaias*, 37:16,20; 43:10-15; 44:6,8; 45:5-6,18,21-22; 48:12 / *Jeremiah*, 10:6—(*D*) *Jeremias*, 10:6 / *Hosea*, 13:4—(*D*) *Osee*, 13:4 / *Zechariah*, 14:9—(*D*) *Zacharias*, 14:9 / *Malachi*, 2:10—(*D*) *Malachias*, 2:10
APOCRYPHA: *Wisdom of Solomon*, 12:13—(*D*) OT, *Book of Wisdom*, 12:13 / *II Maccabees*, 1:24-25—(*D*) OT, *II Machabees*, 1:24-25
NEW TESTAMENT: *Matthew*, 23:9; 28 / *Mark*, 12:29-34 / *John*, 17:3 / *I Corinthians*, 8:1-6; 12:1-13 / *Ephesians*, 4:1-6 / *I Timothy*, 2:1-6 / *James*, 2:19
8 ARISTOTLE: *Physics*, BK VIII, CH 10 353b-355d / *Metaphysics*, BK XII, CH 7 [1073^a4-11] 603a-b; CH 8 [1074^a32-39] 604d; CH 9 [1075^a5-11] 605c-d
9 ARISTOTLE: *Ethics*, BK VII, CH 14 [1154^b20-31] 406c
17 PLOTINUS: *Sixth Ennead*, TR IX 353d-360d
18 AUGUSTINE: *Confessions*, BK I, par 10 3b-c; par 12 4a; BK IV, par 24 25b-c; par 29 26b; BK VII, par 2 43c-44a; par 16-23 48c-50c esp par 21 49d-50a; BK XIII, par 4 111c / *City of God*, BK VIII, CH 6 268d-269c; CH 11, 272c; BK XI, CH 10 327d-328d / *Christian Doctrine*, BK I, CH 5 625d-626a; CH 32 633c-d
19 AQUINAS: *Summa Theologica*, PART I, Q 3 14a-20c; Q 4, A 2, REP 1-2 21b-22b; A 3 22b-23b; Q 6, A 3 29c-30b; Q 7, A 2 31d-32c; Q 8, A 2, REP 2-3 35c-36b; A 4 37c-38c; Q 11 46d-50b; Q 13, A 1, REP 2-3 62c-63c; A 4 65c-66b; A 11 73c-74b; Q 14, A 1, REP 2 75d-76c; A 4 78b-79a; Q 26, A 1, REP 1 150b-c; Q 27, A 1, REP 2 153b-154b; Q 30, A 1, REP 3-4 167a-168a; A 3 169b-170c; Q 40, A 1, REP 1 213b-214b; Q 44, A 1, ANS 238b-239a; Q 47, A 1 256a-257b; Q 50, A 2, REP 3 270a-272a; A 3, REP 2 272a-273b; Q 54, A 1, ANS 285a-d; A 3, REP 2 286c-287b; Q 55, A 1, ANS and REP 3 289a-d; A 3, ANS 291a-d; Q 57, A 1, ANS 295a-d; Q 84, A 2, ANS and REP 3 442b-443c; Q 88, A 2, REP 4 471c-472c; PART I-II, Q 18, A 1, ANS 694a-d
20 AQUINAS: *Summa Theologica*, PART I-II, Q 49, A 4, ANS 5a-6a; Q 50, A 6, ANS 11a-12a; Q 73, A 1, REP 3 119c-120c; PART III, Q 2, A 2, ANS and REP 1 711d-712d; Q 3, A 2, REP 3 724a-c; A 3 724c-725b; Q 6, A 5, REP 2 744a-d
21 DANTE: *Divine Comedy*, PARADISE, XIII [52-66] 126a; XXIV [115-154] 143d-144b; XXIX [127-145] 151c-d; XXXIII [76-145] 157a-d

23 HOBBES: *Leviathan*, PART II, 151d
31 DESCARTES: *Discourse*, PART IV, 52a-d / *Meditations*, III 81d-89a esp 88a-b / *Objections and Replies*, 122b-c; 232b
31 SPINOZA: *Ethics*, PART I 355a-372d esp DEF I 355a, DEF 3,6 355b, AXIOM 2 355c-d, PROP 1-8 355d-357d, PROP 13-15 359c-361d, PROP 16, COROL 1,3 362a, PROP 17, COROL 2 362b, PROP 18 363c, PROP 20 363d-364a, PROP 29, SCHOL 366b-c; PART II, PROP 4 374c; PROP 7, SCHOL, 375b
35 LOCKE: *Human Understanding*, BK I, CH III, SECT 15 116c-d; BK II, CH XXIII, SECT 35 213b-c; BK III, CH VI, SECT 11 271b-d
40 GIBBON: *Decline and Fall*, 307b-c
41 GIBBON: *Decline and Fall*, 229c-230b
42 KANT: *Pure Reason*, 176b-c; 192c-d; 205a-b
46 HEGEL: *Philosophy of History*, PART I, 224a-b; 227d-228a; PART III, 306a-c; PART IV, 322a-c

6b. The unity of the Trinity

NEW TESTAMENT: *John*, 1:1-5 / *I John*, 5:7
18 AUGUSTINE: *Confessions*, BK XIII, par 12 113b-d; par 32 119a-b / *City of God*, BK X, CH 23-24, 312c-313a; BK XI, CH 10 327d-328d; CH 24-28 335c-338d / *Christian Doctrine*, BK I, CH 5 625d-626a
19 AQUINAS: *Summa Theologica*, PART I, Q 11, A 4, CONTRARY 49d-50b; QQ 27-31 153a-175c; Q 39, A 8 210a-213a; Q 42 224a-230a
20 AQUINAS: *Summa Theologica*, PART III, Q 2, A 3, REP 1 713a-714c; Q 3, A 3 724c-725b; Q 17, A 1, REP 5 807a-808d; A 2, REP 3 808d-809d; PART III SUPPL, Q 95, A 3, ANS 1045b-1046d
21 DANTE: *Divine Comedy*, PARADISE, XIV [28-33] 127b; XXIV [115-154] 143d-144b; XXXIII [76-145] 157a-d
22 CHAUCER: *Troilus and Cressida*, BK V, STANZA 267 155a / *Second Nun's Tale* [15,798-809] 467a-b
23 HOBBES: *Leviathan*, PART III, 207b; 207d-208c; PART IV, 259d
30 BACON: *Advancement of Learning*, 100c-d
31 DESCARTES: *Objections and Replies*, 232b
32 MILTON: *Christs Nativity* [1-14] 1a-b / *Paradise Lost*, BK V [600-615] 188b; BK XII [469-551] 329b-331a
40 GIBBON: *Decline and Fall*, 307a-313d esp 307b-c, 310b-312a; 605a-b
46 HEGEL: *Philosophy of History*, PART III, 303d-304a; 306a-c

6c. The unity of the Incarnation

NEW TESTAMENT: *John*, 1:9-14; 10:30,38; 14:10-11 / *Philippians*, 2:5-7 / *Colossians*, 2:9
18 AUGUSTINE: *City of God*, BK IX, CH 14-17 293a-295c; BK X, CH 29 316d-318b / *Christian Doctrine*, BK I, CH 13 627d
20 AQUINAS: *Summa Theologica*, PART III, QQ 1-26 701b,d-846d esp Q 2 709d-723a, Q 17 806d-809d; PART III SUPPL, Q 95, A 3, ANS 1045b-1046d
21 DANTE: *Divine Comedy*, PURGATORY, XXXI [76-126] 101c-102a; PARADISE, II [31-45] 108a; VII [25-33] 115c; XXXIII [76-145] 157a-d
33 PASCAL: *Pensées*, 512 262a; 765 322a
40 GIBBON: *Decline and Fall*, 308a-b
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46 HEGEL: *Philosophy of History*, PART III, 306b-307b

CROSS-REFERENCES

For: Other discussions of the problem of the one and the many in relation to the order of being, nature, or reality, *see* BEING 2-2a; GOD 5d-5e; NATURE 1b; OPPOSITION 2b, 2c; RELATION 3; WORLD 3a-3b.

Problems closely related to that of the one and the many, *see* RELATION 1d; SAME AND OTHER 2b, 2e; UNIVERSAL AND PARTICULAR 1.

The dialectical significance of the problem of the one and the many, *see* DIALECTIC 3a, 3d; OPPOSITION 2b.

Other discussions of numerical unity or identity, or the unity of the individual or the indivisible, *see* ELEMENT 5a-5b; INFINITY 4b; MATHEMATICS 2c; QUANTITY 2, 6a; SAME AND OTHER 1a-1b.

Discussions relevant to the unity and divisibility of matter, motion, time, and space, *see* CHANGE 5b; ELEMENT 5b; INFINITY 4b; QUANTITY 2; SPACE 3a; TIME 1.

The problem of essential and accidental unity, *see* SAME AND OTHER 3a.

The problem of the unity of substantial form, *see* FORM 2c(3).

The problem of the unity of man, or of unity in the human personality, *see* MAN 3a, 5-5a; OPPOSITION 4-4b, 4d; SOUL 4a.

Considerations of unity in the faculties or operations of thought or knowledge, *see* DEFINITION 1d; MEMORY AND IMAGINATION 6c(2); MIND 1g(3); SAME AND OTHER 4c; SENSE 3c(5).

For: The one and the many, or the simple and the complex, as objects of knowledge and in relation to the order of learning, *see* IDEA 5d; KNOWLEDGE 5b.

The unity and diversity of knower and known, *see* KNOWLEDGE 1; SAME AND OTHER 4a.

The controversy over the unity of virtue and the plurality of virtues, *see* COURAGE 4; PRUDENCE 3b; TEMPERANCE 1a; VIRTUE AND VICE 1b, 3b.

Other discussions of the order of means and ends, *see* GOOD AND EVIL 5c; PRINCIPLE 4a; RELATION 5a(2).

Unity as an aesthetic or an artistic principle, *see* ART 7b; BEAUTY 1c; POETRY 8a(1).

Matters bearing on the unity of the family and the state, and relevant to the process and limits of social unification, *see* CITIZEN 8; FAMILY 2a; GOVERNMENT 1b; STATE 1b, 10a–10f; WAR AND PEACE 11a, 11d.

Considerations germane to the divisibility or indivisibility of sovereignty, *see* GOVERNMENT 1g, 5d; STATE 9d.

Other discussions of the uniqueness and simplicity of God, and of the mysteries of the Trinity and the Incarnation, *see* GOD 4b, 9a–9b; MAN 11c; RELATION 2.

ADDITIONAL READINGS

Listed below are works not included in *Great Books of the Western World*, but relevant to the idea and topics with which this chapter deals. These works are divided into two groups:

I. Works by authors represented in this collection.
II. Works by authors not represented in this collection.

For the date, place, and other facts concerning the publication of the works cited, consult the Bibliography of Additional Readings which follows the last chapter of *The Great Ideas.*

I.

AQUINAS. *On the Trinity of Boethius*, Q 4
DANTE. *On World-Government or De Monarchia*, BK I, CH 14–15
DESCARTES. *The Principles of Philosophy*, PART I, 60–65
HEGEL. *The Phenomenology of Mind*
——. *Science of Logic*, VOL I, BK I, SECT I, CH 3(B); BK II, SECT II, CH 3(A)
W. JAMES. *Memories and Studies*, CH 8
——. *Pragmatism*, LECT IV
——. *A Pluralistic Universe*
——. *Some Problems of Philosophy*, CH 7–8

II.

SEXTUS EMPIRICUS. *Against the Physicists*, BK I (Concerning Whole and Part)
PROCLUS. *The Elements of Theology*, (A, H)
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ALBO. *The Book of Principles (Sefer ha-Ikkarim)*, BK II, CH 8, 10–13
G. PICO DELLA MIRANDOLA. *Of Being and Unity*
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SUÁREZ. *On the Various Kinds of Distinctions (Disputationes Metaphysicae*, VII)
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SCHELLING. *Von der Weltseele*
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FECHNER. *Über die physikalische und philosophische Atomenlehre*
LOTZE. *Metaphysics*, BK I, CH 6
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C. S. PEIRCE. *Collected Papers*, VOL VI, par 373–383
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——. *Appearance and Reality*
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Chapter 64: OPINION

INTRODUCTION

THE noble Houyhnhnms are paragons of reason. They have no conceptions or ideas of what is evil in a rational nature. "Their grand maxim," according to Swift, their creator, "is to cultivate reason and to be wholly governed by it. Neither is reason among them a point problematical as with us, where men can argue with plausibility on both sides of the question; but strikes you with immediate conviction, as it needs must do where it is not mingled, obscured, or discolored by passion and interest."

What Captain Gulliver finds most striking in the contrast between men and this noble race of horses is that the perfect rationality of the Houyhnhnms lifts them entirely above the vagaries and vicissitudes of opinion. "I remember it was with extreme difficulty," he says, "that I could bring my master to understand the meaning of the word *opinion*, or how a point could be disputable; because reason taught us to affirm or deny only where we are certain, and beyond our knowledge we cannot do either. So that controversies, wranglings, disputes, and positiveness in false and dubious propositions, are evils unknown among the Houyhnhnms."

Among men it is not the meaning of "opinion" but of "knowledge" which causes trouble. If men had no conception of knowledge at all, as the Houyhnhnms seem to have no conception of opinion, they would find themselves disagreeing about many matters of opinion, but probably not about the nature of opinion itself. The great controversies concerning opinion in the tradition of western thought all relate to its distinction from knowledge, both with regard to the difference in their respective objects and with regard to the way in which the mind works when it knows and when it opines.

Only when something better than opinion is proposed as attainable do the characteristics of opinion come to be questioned. That something may stand in relation to opinion as certainty to probability, as fact to conjecture, as adequate to inadequate knowledge, as demonstration to persuasion. The chief source of disagreement about the nature of opinion seems to be the meaning of the other term in the comparison. Yet a few commonly recognized features of knowledge—if that is taken as the contrasting term—throw some light on the characteristics of opinion. Certain things which are never said about knowledge seem to be generally said of opinion.

AN OPINION, it is said, may be either true or false. But knowledge is never said to be false. For a great many writers, though not for all, doubt and belief are attitudes of mind which accompany the holding of opinions, but not the possession of knowledge. It is possible to opine and doubt at the same time, but not to know and doubt. Belief overcomes doubt with respect to opinion, but in those matters in which the mind is convinced of the truth of its judgments, an act of belief does not seem to be necessary.

In the sense in which belief implies a willingness to assent where assent might reasonably be withheld, belief seems to be appropriate to opinion but incompatible with knowledge. The opposite of an opinion may be reasonably maintained, whereas the opposite of that which is known must be error or falsehood, and therefore untenable. The traditional distinction between axioms and postulates (or assumptions) exemplifies this difference between knowledge and opinion. If a proposition is axiomatic, its contrary must be false. But if something is proposed as an assumption to be taken for granted,

then its opposite can also be postulated, and probably will be postulated by those who are unwilling to grant what has been proposed.

This last point in the comparison of knowledge and opinion appears to have political significance. It is not merely that men are accustomed to expect more disagreement in the sphere of politics than in science; they take a different attitude toward scientific and political controversy, largely because one is supposed to occur in the domain of knowledge and the other in the realm of opinion. Men speak of having a right to their own opinions, which includes a right to persist in them despite the conflicting opinions of others. The notion of a right to a certain obstinacy in differing from one's fellow men seems to follow from the nature of opinion and to accord with its distinction from knowledge. With regard to matters concerning which it is supposed that knowledge rather than opinion is possible, disagreement may of course occur, but never without the expectation that reasonable men should be able to reach agreement on the disputed point by re-examining the facts.

The differences between men which we appeal to a consensus to resolve are differences of opinion, not knowledge. Sometimes conflicts of opinion cannot be settled in any other manner, and for practical purposes it may be necessary to accept the opinion of the majority. The theory of majority rule raises many questions on which the great books take opposite views, but for the most part they restrict the application of the theory to matters of opinion. Disputed issues in mathematics or other theoretic sciences are seldom, if ever, settled by counting heads. The weight of numbers seems to be peculiarly relevant to measuring the worth of conflicting opinions.

The traditional consideration of opinion naturally divides, therefore, into two major lines of discussion. The first deals with the theoretical problem of the difference between knowledge and opinion, and involves such related terms as doubt, belief, faith, certitude, and probability. The second assumes that distinction for the most part, and deals with the problems of decision and responsibility in the sphere of opinion—the problem of liberty of conscience, of freedom of thought and expression, of majorities and minorities, and of individual judgment in difficult cases of conscience.

THE DISTINCTION between knowledge and opinion is sometimes made in terms of a difference in their objects, and sometimes in terms of a difference in the way the mind works when it knows and when it opines. These two modes of differentiation may, of course, supplement one another—the object of opinion being such that the mind must operate in a certain way with respect to it. The same authors usually treat the matter both ways. But not all the great books in which these things are discussed use the words "knowledge" and "opinion" to signify the basic opposition.

Locke, for example, says that "the mind has two faculties conversant about truth and falsehood: first, knowledge, whereby it certainly *perceives* and is undoubtedly satisfied of the agreement or disagreement of any ideas; secondly, judgment, which is the putting ideas together, or separating them from one another in the mind, when their certain agreement or disagreement is not perceived, but *presumed* to be so." To the faculty of judgment belongs "belief, assent, or opinion, which is the admitting or receiving of any proposition for true, upon arguments or proofs that are found to persuade us to receive it as true, without certain knowledge that it is so."

As demonstration is to persuasion, as certainty is to probability, so for Locke knowing or perceiving stands to judging or presuming. Others, like Hume, tend to use the term 'belief' in the place of 'opinion' as the opposite of 'knowledge'; or, like Spinoza, to assign opinion along with imagination to the domain of inadequate as opposed to adequate knowledge. But such differences in vocabulary do not seem to obscure the fact that these authors are making distinctions which, if not identical, are at least analogous.

A certain parallelism or analogy exists between different statements of the objects of knowledge and opinion. The knowable seems to have the properties of necessity and immutability, of universality, clarity, and distinctness. That which is contingent and variable, or confused and obscure, is usually regarded as the object of opinion.

Plato, for example, says that that which is apprehended by intelligence and reason "always is, and has no becoming," whereas "that which is conceived by opinion with the help of sensation and without reason, is always in a process of becoming and perishing and never really is." As understanding and reason divide the realm of knowledge, whose object is the immutable being of the intelligible forms, so fancy and perception divide the realm of opinion, whose objects are the sensible things which come to be and perish.

According to Aristotle, the object of science is the essential and the necessary, the object of opinion the accidental and the contingent. To whatever extent sensible particulars involve contingent accidents of all sorts, they belong to opinion, while the intelligible essences of things, universal in the sense of being common to many individuals, belong to science. The parallel which so far seems to be present between Plato's and Aristotle's statements of the objects of knowledge and opinion does not continue when we consider the consequences of their analyses.

For Aristotle, it is possible to have scientific knowledge as well as probable opinion about the changing things of the physical world, to the extent that these things are both intelligible and sensible, and have aspects both of necessity and contingency. But for Plato the realm of becoming belongs exclusively to opinion, as the quite separate realm of being belongs exclusively to knowledge. In consequence, Aristotle's enumeration of the sciences includes physics along with mathematics and theology, whereas the study of the physical world does not yield a science, according to Plato, but only, as he says in the *Timaeus*, "a likely story"—a plausible composition of probable opinions.

At first glance, Hume seems to provide a closer parallel to Plato. "All the objects of human reason or enquiry may naturally be divided into two kinds," he writes, "*relations of ideas*, and *matters of fact*." Objects of the first sort are capable of demonstratively certain knowledge, *e.g.*, the mathematical sciences. Matters of fact, which include questions concerning the real existence of anything or the causal connection of one thing with another, do not permit demonstration. They are objects of belief or opinion.

It would seem, therefore, that Hume, like Plato, regards the objects of knowledge and opinion, or science and belief, as belonging to altogether distinct realms. They even seem to agree that physics cannot be classified as a science, though the probabilities it establishes may be quite sufficient for action. But this agreement must be qualified by the fact that the realm of ideas is for Plato the reality which changing things image, while for Hume ideas have no reality at all. They exist only in the mind, which obtains them from the impressions of sense-experience.

A parallel between Hume and Aristotle might also be drawn, at least insofar as both connect opinion with the contingent—that which can be otherwise. If the opposite of a proposition is not impossible or does not lead to self-contradiction, then the proposition and its contrary are matters of opinion. This criterion, in Aristotle's terms, excludes all self-evident and demonstrable propositions. Such propositions, for both Hume and Aristotle, express knowledge, not opinion. Yet Aristotle, unlike Hume, does not seem to think that the real existence even of immaterial beings is indemonstrable, or that no necessary connections can be discovered between cause and effect.

THESE EXAMPLES might be extended to include similar observations concerning Locke, Spinoza, Kant, James—in fact, almost every writer who distinguishes between knowledge and opinion by reference to characteristically different objects. In the tradition of western thought the major controversies concerning the objects of knowledge and opinion occur with regard to the kind of being or reality assigned to each type of object; and, in consequence, with regard to applications of the distinction. One writer treats as knowledge what another, by apparently the same criterion, calls opinion. The term 'opinion' gets its skeptical impact from this circumstance. The skeptic never denies that men can form opinions about a given subject; he denies that the topic can be a matter of certain or unquestionable knowledge.

Skepticism approaches its limit when it is maintained that everything is a matter of opinion. At the furthest extreme, it is sometimes said that nothing is either true or false, though

Aristotle and others argue that such skepticism is self-destructive since the proposition 'nothing is true or false' is inconsequential if it is false, and self-contradictory if it is true. But the proposition 'everything is a matter of opinion' can itself be an opinion, and its opposite an opinion also.

The position which Montaigne takes in the *Apology for Raimond de Sebonde* is not the provisional skepticism of universal doubt in order to discover the foundations of certain knowledge. It is rather a resolute skepticism which reduces all human judgments to the status of equally tenable opinions and gives man no hope that he will ever be able to do better than adopt opinions on insufficient grounds or else suspend judgment entirely. No axioms, according to Montaigne, have ever won the universal consent of mankind; no demonstrations have ever escaped the need to assume their initial premises. Unless men beg the question in this way, they cannot avoid an infinite regress in reasoning. There is no proposition about which men have not disagreed or changed their minds. Illusions and hallucinations suggest the pervasive unreliability of the senses, as errors of judgment and reasoning suggest the radical infirmity of the mind.

"How variously do we judge of things?" Montaigne asks. "How often do we alter our opinions? What I hold and believe today," he continues, "I hold and believe with my whole belief. . . .I could not embrace nor preserve any truth with greater assurance than I do this; but has it not befallen me, not only once but a thousand times, and every day, to have embraced some other thing with the same instruments, and in the same condition, which I have since judged to be false? A man must, at least, become wise at his own expense; if I have often found myself betrayed under this color, if my touch prove ordinarily false and my balance unequal and unjust, what assurance can I now have more than at other times? . . . We ought to remember that whatever we receive into the understanding, we often receive things that are false; and that it is by the same instruments that so often give themselves the lie, and are so often deceived."

MONTAIGNE EXEMPTS religious faith from the uncertainty of all beliefs or opinions which man arrives at through the unaided efforts of his senses and his reason. Though we must "accompany our faith with all the reason we have," we must do so "always with this reservation, not to fancy that it is upon us that it depends, nor that our arguments and endeavors can arrive at so supernatural and divine a knowledge." Faith is distinguished from ordinary belief, according to Montaigne, only "if it enter into us by an extraordinary infusion."

What is an article of faith to one man may, however, be merely a matter of opinion to another. This seems to be generally recognized by all who differentiate religious faith from secular belief. The difference lies not in the object, but in the causes of belief.

Those who distinguish between knowledge and opinion also admit that a difference in the way the mind judges, is able to produce either knowledge or opinion concerning the same object. It is impossible, according to Aristotle, for the same mind with regard to the same object to know and opine at the same time. A given individual, for example, cannot hold a proposition of geometry to be true *both* as a matter of knowledge and of opinion. But this does not prevent the individual who once held the proposition to be true merely on the authority of his teacher—and thus as a matter of opinion—from subsequently learning the reasons for its truth and thus coming to know what formerly he merely opined. Two individuals may likewise assert the same truth in different ways, the one as knowledge, the other as opinion.

The traditional account of the difference in the activity of the mind when it knows and when it opines appears to involve two related points. The point which both Plato and Aristotle emphasize is that the man who knows does not merely assert something to be true, but has adequate reasons for doing so. The truth of right opinion is no less true than the truth of knowledge. It differs, as the discussion in Plato's *Meno* and *Theaetetus* seems to show, in that the man of right opinion cannot explain why what he asserts is true. He cannot give the causes of its truth, or trace its connections with other truths which help to demonstrate it. The fact that an opinion is true does not prevent its being overturned or given up, since without adequate reasons it is insecure against attack. Un-

supported by reasons, opinion is not only unstable as compared with knowledge, but it is also unteachable in the sense in which knowledge can be learned and taught. The man of right opinion, unable to explain satisfactorily why he thinks as he does, cannot help others understand the rightness of his opinions.

The other characterization of the mind's activity in forming opinions seems to follow from the preceding observation. If reasons do not determine the mind to think *this* rather than *that*, what is the cause of its judgment? If the mind is not compelled by the object under consideration to think of it in a certain way, what does move the mind in its act of assent or dissent to that which is proposed? To such questions, the traditional answer seems to be wish or desire, whether an act of free choice on the part of the will or an inclination determined by the driving power of the emotions.

Pascal makes this point when he observes that there are two ways in which men come to think as they do. The more natural way "is that of the understanding, for one should only agree to demonstrated truths; but the more usual... is that of the will; for all men are nearly always led to believe, not by proof, but by inclination." Hobbes similarly differentiates knowledge, which rests upon definitions and demonstrations, from the opinions or beliefs which the mind adopts, not as the result of reasoning, but by an act of will.

The assent of reason is not, according to Aquinas, subject to command by the will in respect to all matters on which the reason can judge. If "that which the reason apprehends is such that it naturally assents thereto, *e.g.*, first principles, it is not in our power to assent to it or to dissent. For in such cases," he holds, "assent follows naturally, and consequently, properly speaking, is not subject to our command. But some things which are apprehended do not convince the intellect to such an extent as not to leave it free to assent or dissent, or at least suspend its assent or dissent for some cause or other; and in such things, assent or dissent is in our power, and is subject to our command." Knowledge, it would seem, consists in those judgments wherein the mind is moved to assent solely by the matter being considered, whereas all matters about which we are free to make up our minds one way or the other are matters of opinion.

Though they vary in the terms of their analyses, Descartes, Locke, and Hume seem also to agree that when the mind is moved to assent by the relations it perceives between ideas, especially when these are clear and distinct, it knows beyond doubt or the possibility of error. But when the mind, lacking such intuitive or rational grounds, nevertheless forms a judgment concerning what is not evident, then the result is opinion entertained as merely probable, accompanied by doubt, and subject to error.

For Descartes, the will, freely exercised, moves the mind to such fallible judgments. Except when it is so moved the mind, responding to its object alone, is naturally infallible. For Hume, the mind is free to imagine whatever it pleases, but its beliefs are determined by a sentiment or feeling of instinctive origin, "which depends not on the will, nor can be commanded at pleasure." The issue between those who connect opinion with free will and those who deny that beliefs are voluntarily formed is discussed in the chapter on WILL. It does not seem to affect the fairly general agreement on the point that opinion is an act of the mind caused by *something other than the object itself* which the mind is considering.

DOES THIS DISTINCTION between knowledge and opinion exhaustively divide all the acts of the mind? As we have seen, Montaigne appears to reject both alternatives and substitutes instead supernatural faith and ordinary belief. Aquinas, on the other hand, accepts knowledge and opinion as exhaustive on the plane of the mind's natural operations and makes religious faith a supernatural alternative to both.

He calls faith a mean or intermediate between science and opinion because he conceives it as having some of the characteristics of each. "To believe," he says, "is an act of the intellect assenting to the truth at the command of the will." In this faith resembles opinion. The act of faith is due to the will rather than to the rational evidence of the object. Faith is "the evidence of things unseen." But faith also resembles science because the affirmations of faith have the certitude or freedom from doubt

which characterizes knowledge. According to Aquinas, faith has greater certitude than natural knowledge, since, as intellectual virtues, "science, wisdom, and understanding. . . are based upon the natural light of reason, which falls short of the certitude of God's word, on which faith is founded." Faith differs from knowledge in that the object of faith exceeds the intellect's comprehension. That is why faith requires an act of the will to move the intellect to assent; but whereas ordinary opinions are adopted by a man's own volition, Aquinas attributes faith to God. "Faith," he writes, "as regards the assent which is the chief act of faith, is from God moving man inwardly by grace."

Just as skepticism with respect to science takes the form of reducing all human judgments to opinion, so skepticism with respect to religion takes the form of attributing all belief to purely natural causes. If Freud is correct that all beliefs are the product of wishful thinking, then it is difficult to separate religion from superstition or prejudice—or even, perhaps, to separate science from religion.

James finds the will to believe in science as well as religion. Like Freud, he explains belief in terms of emotion and desire. "Will and Belief, meaning a certain relation between objects and the Self," he writes, "are two names for one and the same *psychological* phenomenon." Except for those necessary truths which concern only ideal relationships, the mind in thinking about reality is free to choose between alternative theories, in the sphere of science as well as in religion. To believe is to attribute reality to a theory. Though the operation of the will to believe is not for James entirely independent of objective criteria, neither is it mainly determined thereby.

"That theory will be most generally believed," he says, "which, besides offering us objects able to account for our sensible experience, also offers those which are most interesting, those which appeal most urgently to our aesthetic, emotional, and active needs. . . .So-called 'scientific' conceptions of the universe have so far gratified the purely intellectual interests more than the mere sentimental conceptions have. But. . .they leave the emotional and active interests cold. *The perfect object of belief would be a God or 'Soul of the World,' represented both optimistically and moralistically (if such a combination could be), and withal so definitely conceived as to show us why our phenomenal experiences should be sent to us by Him in just the very way in which they come.*"

OPINION RAISES moral and political as well as psychological issues of liberty. One of them is the problem of freedom of discussion. This problem has aspects which belong to other chapters—freedom in scientific inquiry to SCIENCE, freedom in artistic or poetic expression to ART and POETRY, freedom of conscience and worship to RELIGION, freedom in teaching to EDUCATION, and the general issue of freedom of thought and speech to the chapter on LIBERTY. Yet what is common to all these related questions seems to be determined by the nature of opinion, particularly in its distinction from knowledge.

None of the books which argue for freedom of expression—Milton's *Areopagitica*, Locke's *Letter Concerning Toleration*, or Mill's essay *On Liberty*—defends the right to disseminate error or falsehood *knowingly*. All of them argue that the individual who claims the right to be heard is morally bound by the duty to speak the truth as it appears to him. Nor do those, like Plato and Hobbes, who recommend political censorship seek thereby to fortify the state by suppressing truth. In saying that the sovereign should "judge of what opinions and doctrines are averse, and what conducing to peace," Hobbes observes that "though in matters of doctrine, nothing ought to be regarded but the truth, yet this is not repugnant to regulating the same by peace. For doctrine repugnant to peace can no more be true, than peace and concord can be against the law of nature."

Since knowledge as distinct from opinion has the character of incontrovertible truth, the issue of freedom or censorship cannot be stated in terms of knowledge. But what some men hold to be knowledge others regard as opinion. The issue of free expression applies therefore to the entire range of human thought on the supposition that *no* proposition or doctrine is exempt from controversy, and no human judgment secure from contradiction. This supposition does not abolish the distinction between knowledge and opinion; nor does it flout the law of

contradiction by treating opposite answers to the same question as in fact equally true.

"If all mankind minus one were of one opinion, and only one person were of the contrary opinion, mankind," according to Mill, "would be no more justified in silencing that one person, than he, if he had the power, would be justified in silencing mankind. . . . The peculiar evil of silencing the expression of an opinion is, that it is robbing the human race; posterity as well as the existing generation; those who dissent from the opinion, still more than those who hold it. If the opinion is right, they are deprived of the opportunity of exchanging error for truth; if wrong, they lose, what is almost as great a benefit, the clearer perception and livelier impression of truth produced by its collision with error."

Mill advances four distinct reasons for recognizing "the necessity to the mental well-being of mankind (on which all their other well-being depends) of freedom of opinion, and freedom of the expression of opinion. . . . First, if any opinion is compelled to silence, that opinion may, for aught we can certainly know, be true. To deny this is to assume our own infallibility. Secondly, though the silenced opinion be an error, it may, and very commonly does, contain a portion of truth; and . . . it is only by the collision of adverse opinions that the remainder of the truth has any chance of being supplied. Thirdly, even if the received opinion be not only true, but the whole truth; unless it is suffered to be, and actually is vigorously and earnestly contested, it will, by most of those who receive it, be held in the manner of a prejudice, with little comprehension or feeling of its rational grounds. And not only this, but, fourthly, the meaning of the doctrine itself will be in danger of being lost, or enfeebled."

The aim is not to perpetuate controversy; nor is it to keep all doctrines perpetually on the level of debatable opinion. "As mankind improve," Mill writes, "the number of doctrines which are no longer disputed or doubted will be constantly on the increase; and the well-being of mankind may almost be measured by the number and gravity of the truths which have reached the point of being uncontested. The cessation, on one question after another, of serious controversy, is one of the necessary incidents of the consolidation of opinion; a consolidation as salutary in the case of true opinions, as it is dangerous and noxious when the opinions are erroneous."

As Mill argues the case for freedom of thought and discussion, it appears to be based on the hypothesis that the public debate of all matters, carried on without any restriction except those minimum restraints needed to prevent violence, serves the end of separating true from false opinion and, by the clarification of opinion as well as the correction of error, discovering the reasons which turn opinion into knowledge. It is not to multiply opinions but to advance knowledge, not to encourage skepticism but to invigorate the search for truth, that Mill advocates the submission of all matters to open dispute so long as any disagreement remains.

His fundamental principle, like that of Locke, consists in divorcing political from logical criteria. Logically, the disputants may stand opposed to each other as one who knows and one who merely opines, or as one who holds a true and one a false opinion, or even as one who enjoys God's gift of supernatural faith and one who lacks such light; but considered politically, the opponents represent a conflict of opinion, with each party equally deserving the benefit of the doubt that it may have the truth on its side. If the state were to intervene, it would be deciding a disputed question, not by reason, but by force, in an area to which force is inapplicable.

"The business of laws," Locke writes, "is not to provide for the truth of opinions, but for the safety and security of the commonwealth, and for every particular man's goods and person. And so it ought to be. For the truth certainly would do well enough if she were once left to shift for herself. . . .She is not taught by laws, nor has she any need of force to procure her entrance into the minds of men. Errors indeed prevail by the assistance of foreign and borrowed succours. But if Truth makes not her way into the understanding by her own light, she will be but the weaker for any borrowed force violence can add to her."

Those who argue that state censorship is justified, whether the matters whose debate is prohibited are speculative or practical, moral,

political, or theological, appear to extend the safeguarding of the common good beyond security from immediate peril of violence; or to proceed upon the hypothesis of sufficient wisdom in the rulers to discriminate unerringly between truth and falsehood. Those who distinguish between church and state with regard to censorship tend to limit the application of ecclesiastical authority to questions of faith and morals, on which the church is supposed to have supernatural guidance in deciding what is true or sound.

THE PRINCIPLE OF majority rule in matters of opinion seems to be opposite to the principle that the voice of a minority should be heard. To settle a difference of opinion by taking a vote gives a decisive weight to numbers which, it may be thought, is as illegitimate as resolving a debate by force. But when it is necessary to legislate or to act, debate must be terminated and issues resolved.

On speculative questions, which may be answerable by knowledge rather than by opinion, and with respect to which agreement may be possible, the end of truth seems to be served by permitting discussion to go on as long as reason opposes reason. But if the discussion is for the sake of determining action and if, in addition, the subject under discussion is strictly a matter of opinion concerning which it is possible for reasonable men perpetually to disagree, then it may be necessary to appeal to some principle other than reason.

Traditional political theory appears to offer only two solutions. One principle of decision is to follow the opinion of a single man—an absolute monarch or an elected chief magistrate—whether or not that one man also has the wisdom commensurate with such responsibility. The other principle is to accept the opinion of the majority. According to Aristotle, this second principle is operative in every form of government except absolute monarchy. It is not only in democracy, he says, that "the greater number are sovereign, for in oligarchy, and indeed in every government, the majority rules." It is characteristic of every form of constitutional state that "whatever seems good to the majority of those who share in the government should have authority."

Considered in this way, the principle of majority rule leaves open the question whether the majority should be a preponderance of the many or the few. Should it be a democratic majority or, according to some aristocratic standard, the majority of the few who are wiser, more expert, or more virtuous than the many? With regard to some questions, Aristotle suggests, the multitude may be a better judge than any individual, even the most expert. "If the people are not utterly degraded, although individually they may be worse judges than those who have special knowledge, as a body they are as good or better."

The opposing claims of the greater number and the more competent, as well as the possibility of combining the merits of both, are discussed in the chapters on DEMOCRACY and ARISTOCRACY. The problem of majority rule also appears in those chapters as a factor in the theory of representation, especially the question considered by Mill—whether the representative shall exercise his own judgment or act on the opinion of the majority of his constituents.

Mill tries to separate those problems of government which should be submitted to representative assemblies and decision by majorities from those which should be solved by experts. But even on matters subject to deliberation by representatives of the people, Mill advocates such measures as plural voting and minority representation to offset the sheer weight of numbers and prevent its being the decisive force in settling political differences and determining action.

Such qualifications of the principle of majority rule do not seem necessary to those who, like Rousseau, think that "the general will is found by counting votes." What Rousseau says of any individual opinion applies to minority opinions as well, namely, that when a contrary opinion prevails, it proves that what the minority "thought to be the general will was not so." On the question of how large a majority should be decisive, he thinks that "the more grave and important the questions discussed, the nearer should the opinion that is to prevail approach unanimity. . . .The more the matter in hand calls for speed, the smaller the prescribed difference in the number of votes may be allowed to become."

There is, according to Rousseau, only one political decision which requires unanimity, and that is the decision to enter upon the social contract, to set up popular government under which individual liberty endures as long as "the qualities of the general will still reside in the majority." When the principle of majority rule is unanimously adopted, each individual agrees to substitute the general will for his own particular opinion.

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REFERENCES

To find the passages cited, use the numbers in heavy type, which are the volume and page numbers of the passages referred to. For example, in **4** HOMER: *Iliad*, BK II [265-283] **12d**, the number **4** is the number of the volume in the set; the number **12d** indicates that the passage is in section d of page 12.

PAGE SECTIONS: When the text is printed in one column, the letters **a** and **b** refer to the upper and lower halves of the page. For example, in **53** JAMES: *Psychology*, **116a-119b**, the passage begins in the upper half of page 116 and ends in the lower half of page 119. When the text is printed in two columns, the letters **a** and **b** refer to the upper and lower halves of the left-hand side of the page, the letters **c** and **d** to the upper and lower halves of the right-hand side of the page. For example, in **7** PLATO: *Symposium*, **163b-164c**, the passage begins in the lower half of the left-hand side of page 163 and ends in the upper half of the right-hand side of page 164.

AUTHOR'S DIVISIONS: One or more of the main divisions of a work (such as PART, BK, CH, SECT) are sometimes included in the reference; line numbers, in brackets, are given in certain cases; *e.g.*, *Iliad*, BK II [265-283] **12d**.

BIBLE REFERENCES: The references are to book, chapter, and verse. When the King James and Douay versions differ in title of books or in the numbering of chapters or verses, the King James version is cited first and the Douay, indicated by a *(D)*, follows; *e.g.*, OLD TESTAMENT: *Nehemiah*, 7:45—*(D) II Esdras*, 7:46.

SYMBOLS: The abbreviation "esp" calls the reader's attention to one or more especially relevant parts of a whole reference; "passim" signifies that the topic is discussed intermittently rather than continuously in the work or passage cited.

For additional information concerning the style of the references, see the Explanation of Reference Style; for general guidance in the use of *The Great Ideas*, consult the Preface.

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31 SPINOZA: *Ethics*, PART II, PROP 10 376c-377a; PROP 27-31 384b-385c; PROP 40, SCHOL 2 388a-b; PROP 44 389b-390a

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42 KANT: *Pure Reason*, 228c-d; 240b-243c / *Fund. Prin. Metaphysic of Morals*, 285c-286a / *Judgement*, 601d; 603d-604b

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48 MELVILLE: *Moby Dick*, 272b-276b esp 276a-b

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35 LOCKE: *Human Understanding*, 85a-c; 87b-c; BK I, CH III, SECT 23-25 119b-120d; BK III, CH X, SECT 16 295d; BK IV, CH XV, SECT 1 365a-c; SECT 4-5 365d-366b; CH XVI 366d-371c passim, esp SECT 6-14 368b-371c; CH XVII, SECT 2 371d-372b; SECT 19 379d-380a; SECT 24 380c-d; CH XVIII-XIX 380d-388d passim, esp CH XIX, SECT 2-4 384d-385b, SECT 14 387d-388a; CH XX, SECT 17 394a-b
35 BERKELEY: *Human Knowledge*, INTRO, SECT 20 410d-411a
35 HUME: *Human Understanding*, SECT IV-VI 458a-470d passim, esp SECT V, DIV 34-38, 464a-466c; SECT X 488d-497b passim, esp DIV 86-91 488d-491c; SECT XI, DIV 104, 498c; DIV 107, 499c-d
38 ROUSSEAU: *Social Contract*, BK IV, 434b-435a
39 SMITH: *Wealth of Nations*, BK V, 346c-347a
40 GIBBON: *Decline and Fall*, 308c-309d passim
42 KANT: *Pure Reason*, 15c-16c; 146a-149d; 176d-177a / *Fund. Prin. Metaphysic of Morals*, 260d-261b
43 FEDERALIST: NUMBER 49, 159d-160a
43 MILL: *Liberty*, 269c-270c; 275a-277b; 283c-288c; 294d-295a
44 BOSWELL: *Johnson*, 129b
46 HEGEL: *Philosophy of Right*, ADDITIONS, 91, 131b-c / *Philosophy of History*, PART IV, 351d-352a
48 MELVILLE: *Moby Dick*, 243a
51 TOLSTOY: *War and Peace*, BK IV, 170d-171c; BK VI, 260b-c; BK IX, 358b-365c; EPILOGUE I, 661c-662a
54 FREUD: *Psycho-Analytic Therapy*, 125a-b

3. Opinion, knowledge, and truth

3a. The truth of knowledge and of right opinion: their difference with respect to manner of acquisition, stability, and teachability

7 PLATO: *Protagoras*, 62c / *Cratylus*, 103d / *Symposium*, 163b / *Meno*, 182c-183a; 188b-189a / *Gorgias*, 256b-c / *Theaetetus*, 527b-d; 536b-549d esp 539a-540c, 544c-549d / *Sophist*, 564a-b / *Statesman*, 591a-c / *Philebus*, 622d-626a; 633a-635b
8 ARISTOTLE: *Categories*, CH 5 [$4^{a}10$-$^{b}13$] 8b-9a / *Posterior Analytics*, BK I, CH 2 [$71^{b}8$-16] 97d-98a; CH 6 102b-103c; CH 8 104a-b; CH 33 121b-122a,c / *Topics*, BK IV, CH 2 [$123^{a}16$-19] 171c / *Metaphysics*, BK I, CH 2 [$982^{a}28$-30] 500c; BK IV, CH 4 [$1008^{b}27$-32] 528b; CH 5-6 528c-531c; BK VII, CH 15 [$1039^{b}31$-$1040^{a}8$] 563d-564a; BK IX, CH 10 577c-578a,c; BK XI, CH 6 590d-592b / *Soul*, BK III, CH 3 [$428^{a}20$-$^{b}9$] 660c-d
9 ARISTOTLE: *Ethics*, BK I, CH 3 [$1094^{b}12$]-CH 4 [$1095^{a}28$] 339d-340b; CH 7 [$1098^{a}25$-$^{b}8$] 343d-344a; BK II, CH 2 [$1103^{b}27$-$1104^{a}5$] 349b-c; BK III, CH 2 [$1111^{b}30$-$1112^{a}13$] 357d-358a; BK VI, CH 3 [$1139^{b}14$-18] 388b; CH 5 389a-c; CH 8-11 390d-393b esp CH 9 [$1142^{b}7$-13] 391d; BK VII, CH 2-3 395c-398a passim; CH 8 [$1151^{a}11$-19] 401d-402a; CH 9 [$1151^{a}28$-$^{b}16$] 402b-c; BK X, CH 8 [$1179^{a}16$-23] 433d-434a / *Rhetoric*, BK I, CH 1 [$1355^{a}4$-$^{b}7$] 594b-d
17 PLOTINUS: *Sixth Ennead*, TR VIII, CH 3, 344a
19 AQUINAS: *Summa Theologica*, PART I, Q 16, A 8 99d-100d; Q 79, A 9, REP 3 422b-423d; Q 83, A 1, ANS 436d-438a; Q 85, A 6, REP 2 458d-459c
20 AQUINAS: *Summa Theologica*, PART I-II, Q 53, A 1 19d-21a; Q 57, A 2, REP 3 36a-37b; Q 77, A 2, REP 3 145d-147c; PART II-II, Q 1, A 5, REP 4 383b-384b
23 HOBBES: *Leviathan*, PART I, 53c-54a; 60c-61a; 65b-c
31 DESCARTES: *Discourse*, PART I, 43d; PART II, 45a; PART III, 49a-b; PART IV, 53c-d; PART VI, 63c-64d / *Meditations*, I, 75a-c; 77a-c; V, 95b-96a
31 SPINOZA: *Ethics*, PART II, PROP 43 388c-389b
32 MILTON: *Areopagitica*, 406a-b
42 KANT: *Pure Reason*, 240b-243c / *Judgement*, 603a-b
43 MILL: *Liberty*, 276b-277a; 283c-288c
46 HEGEL: *Philosophy of Right*, ADDITIONS, 1 115a-d

3b. Certain and probable, adequate and inadequate knowledge: degrees of certitude; modes of assent

7 PLATO: *Republic*, BK V, 370d-373c; BK VI-VII, 383d-398c / *Timaeus*, 447a-d / *Philebus*, 633a-635b
8 ARISTOTLE: *Interpretation*, CH 9 28a-29d / *Prior Analytics*, BK I, CH 13 [$32^{b}4$-23] 48b-d; BK II, CH 25 91a-b / *Posterior Analytics*, BK I, CH 2 97d-99a; CH 19 [$81^{b}10$-30] 111c-d / *Topics*, BK I, CH 1 [$100^{a}25$-31] 143a; BK V, CH 3 [$131^{b}19$-30] 182b-c / *Meteorology*, BK I, CH 7 [$344^{a}5$-7] 450b / *Metaphysics*, BK IV, CH 3 [$1005^{b}8$-34] 524c-525a; BK VII, CH 15 [$1039^{b}31$-$1040^{a}8$] 563d-564a; BK XII, CH 8 [$1074^{a}14$-16] 604c
9 ARISTOTLE: *Ethics*, BK VI, CH 3 [$1139^{b}14$-34] 388b-c / *Rhetoric*, BK I, CH 1 [$1355^{a}14$-17] 594b; CH 2 [$1357^{a}23$-$^{b}24$] 596d-597c; BK II, CH 25 [$1402^{b}13$-$1403^{a}17$] 652b-653a
10 HIPPOCRATES: *The Law*, par 4 144d
12 AURELIUS: *Meditations*, BK IV, SECT 12 264c
16 COPERNICUS: *Revolutions of the Heavenly Spheres*, 505a-506a
18 AUGUSTINE: *Confessions*, BK V, par 19 32b-c / *City of God*, BK VIII, CH 3, 266a-b; BK XI, CH 26 336d-337b; BK XIX, CH 18 523a-b

(3. *Opinion, knowledge, and truth.* 3b. *Certain and probable, adequate and inadequate knowledge: degrees of certitude; modes of assent.*)

19 AQUINAS: *Summa Theologica*, PART I, Q 12, A 7, ANS and REP 2 56a-57b; Q 14, A 13, ANS and REP 3 86d-88c; Q 47, A 1, REP 3 256a-257b; Q 57, A 3, ANS 297b-298a; Q 58, A 7, REP 3 305c-306b; Q 82, A 2, ANS 432d-433c; Q 86, A 4, ANS 463d-464d; PART I-II, Q 17, A 6, ANS 690b-d
20 AQUINAS: *Summa Theologica*, PART I-II, Q 51, A 3 14b-15a; Q 67, A 3, ANS 83b-84d; PART II-II, Q 1, AA 4-5 382c-384b; Q 4, A 8, ANS 409a-d; PART III, Q 9, A 3, REP 2 765b-766b
28 HARVEY: *On Animal Generation*, 333c-d
30 BACON: *Advancement of Learning*, 27a-c
31 DESCARTES: *Rules*, II 2a-3b; III, 3d-4a; XII, 22a-b / *Discourse*, PART III, 49a-b; 49d-51a; PART IV, 51b-52a; 53c-d / *Meditations*, 72b,d; 74a,c; I-III, 75a-82d; V, 95b-96a; VI 96b-103d passim / *Objections and Replies*, 123b-125b; 126a-b; POSTULATE I-III 130d-131a; POSTULATE VI-VII 131c; 152d-153c; 226d; 237b-c
31 SPINOZA: *Ethics*, PART II, DEF 4 373b; PROP 27-31 384b-385c; PROP 37-44 386b-390a; PROP 49, SCHOL, 391d-392a; PART III, PROP 17, SCHOL 401d-402a
33 PASCAL: *Pensées*, 233-241 213b-217b
35 LOCKE: *Human Understanding*, INTRO 93a-95d passim; BK IV, CH I, SECT 2 307a; CH II, SECT 14, 312b; CH III, SECT 25-29 321a-323a passim; CH IV, SECT 3-12 324b-326d; CH VI 331b-336d passim, esp SECT 13 335c-d; CH XI, SECT 9-11 356d-357c; CH XII, SECT 6-14 360a-363a passim; CH XIV-XVI 364b-371c; CH XVII, SECT 2 371d-372b; SECT 14-17 378c-379c; CH XIX, SECT 1 384c-d
35 HUME: *Human Understanding*, SECT IV, DIV 20-21 458a-c; DIV 30, 462a; SECT VI, 469d [fn 1]; SECT X, DIV 86-91 488d-491c passim, esp DIV 87 489b-d
38 ROUSSEAU: *Inequality*, 348a,c
39 SMITH: *Wealth of Nations*, BK V, 335d-336a
42 KANT: *Pure Reason*, 1a-4a,c; 14c-15c; 39c-41c esp 40d-41c; 194b-c; 211c-218d esp 217c-d; 228c-d; 230c-233d; 240b-243c / *Practical Reason*, 330d-331a / *Judgement*, 600d-603d
43 MILL: *Liberty*, 274b-293b passim
46 HEGEL: *Philosophy of Right*, INTRO, par 31 19c-20a; PART III, par 318 105b; ADDITIONS, 91 131a-d
54 FREUD: *General Introduction*, 463d / *Beyond the Pleasure Principle*, 661c-662a

3c. The skeptical reduction of human judgments to opinion

7 PLATO: *Cratylus*, 86a-d; 107d-109a / *Phaedo*, 236c-238a / *Republic*, BK VII, 400a-d / *Timaeus*, 457c-d / *Theaetetus*, 517b-532a passim, esp 517b-c, 522b, 525a-526c, 531b-532a
8 ARISTOTLE: *Posterior Analytics*, BK I, CH 3 [72^{b}5-18] 99b / *Metaphysics*, BK IV, CH 5-6 528c-531c; BK X, CH 1 [1053^{a}31-^{b}3] 580a; CH 6 [1057^{a}7-11] 584b; BK XI, CH 6 [1062^{b}12-1063^{b} 14] 590d-592a
12 LUCRETIUS: *Nature of Things*, BK IV [469-477] 50b
12 EPICTETUS: *Discourses*, BK II, CH 20 164c-166c
18 AUGUSTINE: *Confessions*, BK V, par 19 32b-c / *City of God*, BK XIX, CH 18 523a-b
19 AQUINAS: *Summa Theologica*, PART I, Q 84, A 1, ANS 440d-442a
25 MONTAIGNE: *Essays*, 80b-82b; 208a-294b esp 212c-215a, 238c-246a, 258c-261c, 267c-268a, 271b-273b, 276b-278a, 285c-294b; 308c-d; 318a-319b; 439c-440a; 497d-502c
30 BACON: *Advancement of Learning*, 57d-58b; 95d-96a / *Novum Organum*, BK I, APH 67 115d-116a
31 DESCARTES: *Discourse*, PART II, 46b-c / *Objections and Replies*, 272a-273a
33 PASCAL: *Pensées*, 385 238b-239a
35 BERKELEY: *Human Knowledge*, INTRO, SECT 1-3 405a-c; SECT 86-88 429c-430b
35 HUME: *Human Understanding*, SECT IV, DIV 26 460b-c; SECT IV, DIV 28-SECT V, DIV 38 460d-466c; SECT VII, DIV 60 477a-c; SECT XII 503c-509d
42 KANT: *Pure Reason*, 224a-227a / *Practical Reason*, 294c-295d; 311d-313a
43 MILL: *Liberty*, 274b-293b passim
44 BOSWELL: *Johnson*, 121c-d
46 HEGEL: *Philosophy of Right*, PREF, 2c-6a; 7a; PART III, par 270, 86b-c
50 MARX-ENGELS: *Communist Manifesto*, 428b-d
51 TOLSTOY: *War and Peace*, BK V, 194a-195a
52 DOSTOEVSKY: *Brothers Karamazov*, BK VI, 168b-c
54 FREUD: *New Introductory Lectures*, 881d-882b

4. Opinion, belief, and faith

7 PLATO: *Gorgias*, 256b-c / *Republic*, BK VI, 386d-388a / *Timaeus*, 447b-d
8 ARISTOTLE: *Soul*, BK III, CH 3 [428^{a}20-^{b}9] 660c-d
18 AUGUSTINE: *Confessions*, BK VI, par 6-8 36c-37c / *City of God*, BK XXII, CH 4-5 588b-590a / *Christian Doctrine*, BK II, CH 40 655b-656a
19 AQUINAS: *Summa Theologica*, PART I, Q 1, A 8, REP 2 7c-8d
20 AQUINAS: *Summa Theologica*, PART I-II, Q 67, A 3, ANS 83b-84d; PART II-II, Q 1, A 3, ANS and REP 3 381d-382c; A 4 382c-383b; Q 2, A 1, ANS 391a-392a; Q 4, A 1, ANS 402a-403d; Q 10, A 1 426d-427c; Q 18, A 4, ANS 464c-465a; PART III, Q 7, A 3, REP 3 747b-748a
23 HOBBES: *Leviathan*, PART I, 65b-66c; 78a-b; PART III, 165b-166a; 238c; 241a-242a; PART IV, 248c
25 MONTAIGNE: *Essays*, 80b-82a; 98b-99a; 150d-

151a; 208a-294b esp 209a-c, 238c-239c, 250a-b, 259d-261a, 267c-268a, 271b-273b
30 BACON: *Advancement of Learning*, 27a-c; 95d-96a
31 DESCARTES: *Meditations*, 69b-d / *Objections and Replies*, 125c-126a; 168b-d
35 LOCKE: *Human Understanding*, BK IV, CH XVIII 380d-384b
35 HUME: *Human Understanding*, SECT V, DIV 38-40 466b-467c
42 KANT: *Pure Reason*, 240b-243c / *Practical Reason*, 292a-c; 353a-354d / *Judgement*, 599d-600a; 601d-607c esp 601d-602a, 603a-b, 604d-606d; 607d-609b
46 HEGEL: *Philosophy of Right*, PART III, par 147 55d-56a / *Philosophy of History*, PART IV, 349b-350b
48 MELVILLE: *Moby Dick*, 360b-361a
51 TOLSTOY: *War and Peace*, BK V, 196a-198b
52 DOSTOEVSKY: *Brothers Karamazov*, BK I, 11a-b
53 JAMES: *Psychology*, 652a-654a

4a. Comparison of supernatural or religious faith with science and opinion

NEW TESTAMENT: *Hebrews*, 11:1
18 AUGUSTINE: *Confessions*, BK I, par 1 1a-b; BK VI, par 6-8 36c-37c / *City of God*, BK XIX, CH 18 523a-b; BK XXII, CH 5, 589b-590a; CH 7 591c-d / *Christian Doctrine*, BK II, CH 7 638d-639c; CH 40 655b-656a; CH 42 656c-d
19 AQUINAS: *Summa Theologica*, PART I, Q 1, AA 1-2 3b-4c; A 5, REP 1-2 5c-6a; A 6 6b-7a; A 8 7c-8d; Q 12, A 13, REP 3 61c-62b; Q 32, A 1, REP 2 175d-178a; Q 84, A 5 446c-447c
20 AQUINAS: *Summa Theologica*, PART I-II, Q 67, A 3, ANS 83b-84d; PART II-II, Q 1, A 1 380b-381a; AA 4-5 382c-384b; Q 2, A 1 391a-392a; A 3, REP 3 392d-393c; A 4 393c-394b; A 9 398c-399b; Q 4, A 1 402a-403d; A 8 409a-d; Q 8, A 8 422c-423b; Q 9, A 1, ANS and REP 2 423c-424b
21 DANTE: *Divine Comedy*, PARADISE, II [25-148] 108a-109b passim; XX [88-93] 137c
23 HOBBES: *Leviathan*, PART I, 65b-66c; PART II, 163a-b; PART III, 165b-c; PART IV, 267a-c
30 BACON: *Advancement of Learning*, 2c-4c; 41b-d; 55b-d; 95d-96a; 96c-97c
31 DESCARTES: *Meditations*, 69b-d / *Objections and Replies*, 125c-126a
32 MILTON: *Paradise Lost*, BK XII [552-587] 331a-332a
33 PASCAL: *Provincial Letters*, 147b-148b / *Pensées*, 265-290 221b-225a; 434 248a-250a; 862 342b-343a / *Vacuum*, 365b-366a / *Geometrical Demonstration*, 440a-b
35 LOCKE: *Human Understanding*, BK IV, CH VII, SECT 11, 340b-c; CH XI, SECT 12 357c-d; CH XVI, SECT 13-14 371a-c; CH XVII, SECT 23-CH XVIII, SECT 11 380b-384b
35 HUME: *Human Understanding*, SECT XII, DIV 132, 509c
40 GIBBON: *Decline and Fall*, 200d; 308b-309a
42 KANT: *Judgement*, 604d-606d
46 HEGEL: *Philosophy of History*, INTRO, 158c-160b
51 TOLSTOY: *War and Peace*, BK V, 196a-198b

4b. Criticism of superstitious or dogmatic belief as opinion without foundation or warrant

6 HERODOTUS: *History*, BK I, 12d-13b; BK III, 95c
6 THUCYDIDES: *Peloponnesian War*, BK I, 353d-354b
12 AURELIUS: *Meditations*, BK I, SECT 6 253b
14 PLUTARCH: *Camillus*, 114d-115a / *Alexander*, 575d-576a
15 TACITUS: *Histories*, BK IV, 274b
18 AUGUSTINE: *Confessions*, BK IV, par 4-6 20a-d; BK VII, par 8-10 45d-47a / *City of God*, BK I-X 129a-322a,c passim, esp BK V, CH 1-7 207d-212c / *Christian Doctrine*, BK II, CH 21-24 647a-649a
19 AQUINAS: *Summa Theologica*, PART I, Q 84, A 5 446c-447c; Q 115, A 4 589d-590c; Q 116, A 1, ANS 592d-593d; PART I-II, Q 9, A 5, REP 3 660d-662a
23 HOBBES: *Leviathan*, PART I, 51d-52b; 56b-d; 68d-69b; 79a-b; 79b-84c passim; PART II, 149d; 151a-c; 163a-b; PART III, 165d-166a; 172a-177c esp 172b-d; 192c-195d; PART IV, 247a-267a; 269b-271c; 272b-c; 274a-c; 276c
25 MONTAIGNE: *Essays*, 37b-c; 80b-82b; 500a-d
28 HARVEY: *On Animal Generation*, 331b-332a; 333c-d
30 BACON: *Advancement of Learning*, 13a-c; 16c; 57d-58b / *Novum Organum*, BK I, APH 65 114b-c; APH 67 115d-116a; APH 74 118b; APH 89 124a-d
31 DESCARTES: *Objections and Replies*, 125d-126a
31 SPINOZA: *Ethics*, PART III, PROP 50 411b-c
35 LOCKE: *Toleration*, 4d-5b; 8d-9a / *Human Understanding*, BK I, CH III, SECT 23-25 119b-120d; BK IV, CH XIX 384c-388d; CH XX, SECT 7-17 390d-394b passim
35 BERKELEY: *Human Knowledge*, SECT 54-55 423b-c; SECT 74-75 427c-d; SECT 124 437d-438a
35 HUME: *Human Understanding*, SECT I, DIV 6 453c; SECT XI, DIV 107 499c-500b; SECT XII, DIV 132, 509d
36 SWIFT: *Gulliver*, PART I, 27b-28a
40 GIBBON: *Decline and Fall*, 189d-191a; 200d-201b; 308c-309d; 465d-467a
41 GIBBON: *Decline and Fall*, 333b-334c
42 KANT: *Pure Reason*, 129c-130a; 187c-188b 218d-222b esp 221c-222b / *Judgement*, 607d 608c
43 MILL: *Liberty*, 278a-c
46 HEGEL: *Philosophy of Right*, PART III, par 270 85b-c; 86a-c; ADDITIONS, 162 143b-144c
48 MELVILLE: *Moby Dick*, 228b-229b
50 MARX: *Capital*, 36c-d [fn 2]

(*4. Opinion, belief, and faith. 4b. Criticism of superstitious or dogmatic belief as opinion without foundation or warrant.*)

50 MARX-ENGELS: *Communist Manifesto*, 433c-d
54 FREUD: *New Introductory Lectures*, 874a-875a; 877b-880b; 881c; 883d-884a

5. Freedom in the sphere of opinion

5a. Rights and duties with respect to the expression of opinion

5 AESCHYLUS: *Suppliant Maidens* [365-401] 5c-6a
5 SOPHOCLES: *Antigone* [497-511] 135b-c; [683-745] 137a-c
6 HERODOTUS: *History*, BK I, 44d-45a; BK VII, 239a-c
6 THUCYDIDES: *Peloponnesian War*, BK II, 402b-c
7 PLATO: *Protagoras*, 43b-c / *Apology* 200a-212a,c / *Statesman*, 601c-602c / *Laws*, BK XII, 789b-790a
12 AURELIUS: *Meditations*, BK I, SECT 6 253b; SECT 14 254b-c
13 VIRGIL: *Aeneid*, BK IV [173-197] 171b-172b
14 PLUTARCH: *Cato the Younger*, 632d; 636b-637c
15 TACITUS: *Annals*, BK I, 21b-d; BK IV, 72b-73a
18 AUGUSTINE: *City of God*, BK X, CH 23, 312d
21 DANTE: *Divine Comedy*, PARADISE, XIII [112-142] 126c-d
22 CHAUCER: *Troilus and Cressida*, BK III, STANZA 41-48 59b-60b
25 MONTAIGNE: *Essays*, 7a-d; 80b-82b; 208b-c; 240c-242a; 270a-271a; 381a-388c passim; 446d-450c; 497d-502c; 521d-522a
26 SHAKESPEARE: *2nd Henry IV*, INDUCTION 467b,d-468a
32 MILTON: *Areopagitica* 381a-412b esp 384b-390a
35 LOCKE: *Toleration* 1a-22d / *Human Understanding*, BK IV, CH XVI, SECT 4 367c-368b
36 SWIFT: *Gulliver*, PART II, 75b
37 FIELDING: *Tom Jones*, 223b-d
38 MONTESQUIEU: *Spirit of Laws*, BK XII, 89c-90c; BK XIX, 143a-b
38 ROUSSEAU: *Inequality*, 326b / *Social Contract*, BK IV, 425d
40 GIBBON: *Decline and Fall*, 231a-c; 309c-d
42 KANT: *Pure Reason*, 220b-221b
43 DECLARATION OF INDEPENDENCE: [1-6] 1a
43 CONSTITUTION OF THE U.S.: AMENDMENTS, I 17a
43 FEDERALIST: NUMBER 1 29a-31a
43 MILL: *Liberty*, 272d-273a; 274b-293d; 302d-312a passim / *Representative Government*, 370a-389b passim; 392b-399d passim; 401a-406a passim
44 BOSWELL: *Johnson*, 221d-224a; 300c-301a esp 301a-d [fn 1]; 402a-c; 512c-d
46 HEGEL: *Philosophy of Right*, PART III, par 270, 89a-b; par 316-317 104c-105a; par 319 105b-106c; par 324 107a-d; ADDITIONS, 185 149a
51 TOLSTOY: *War and Peace*, BK V, 233b-234a; BK VIII, 307d-309c passim, esp 308b; BK IX, 384c-388a,c
54 FREUD: *War and Death*, 757b

5b. Advantages and disadvantages of freedom of discussion

6 HERODOTUS: *History*, BK VII, 216d-218a
6 THUCYDIDES: *Peloponnesian War*, BK II, 397b; BK III, 425a-d; 427a-c
7 PLATO: *Protagoras*, 43b-c / *Statesman*, 601c-602c
15 TACITUS: *Annals*, BK III, 57a; BK IV, 72b-73a; BK XIV, 153b-c
23 HOBBES: *Leviathan*, PART II, 102d-103a; 114d-115a; 129b-130a; 149b-d; 150c-151a; 155d-156b; PART IV, 274c-d
25 MONTAIGNE: *Essays*, 65a-66a; 208b-c; 270a-271a; 324c-326b esp 326a-b; 446d-450c
30 BACON: *Novum Organum*, BK I, APH 77 118d-119b / *New Atlantis*, 214a-b
31 DESCARTES: *Discourse*, PART VI, 60d-61a / *Objections and Replies*, 283c-284a
32 MILTON: *Areopagitica* 381a-412b esp 384b-389a, 398a-b
35 LOCKE: *Toleration*, 4a; 15b-c; 18c-21c / *Human Understanding*, BK IV, CH III, SECT 20 319b-c
38 MONTESQUIEU: *Spirit of Laws*, BK XII, 89c-90c; BK XIX, 143a-b; 146a,c
40 GIBBON: *Decline and Fall*, 309c-d; 669a-670d
41 GIBBON: *Decline and Fall*, 161c-162b; 334d-335a,c
42 KANT: *Pure Reason*, 220b-221b; 223a-c
43 FEDERALIST: NUMBER 1 29a-31a; NUMBER 10 49c-53a passim
43 MILL: *Liberty*, 274b-293b esp 274c-275a; 293b-294a; 318a-319b / *Representative Government*, 361b-362c; 410d-412a
44 BOSWELL: *Johnson*, 221d-224a; 300c-301a; 512c-d
46 HEGEL: *Philosophy of Right*, PART III, par 270 84d-89c passim; par 314-315 104b-c; par 317 104d-105a / *Philosophy of History*, PART II, 279d-280b
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CROSS-REFERENCES

For: Other discussions of the distinction between knowledge and opinion in terms of their objects, *see* BEING 8e; KNOWLEDGE 4b; NECESSITY AND CONTINGENCY 4a; PRINCIPLE 3c(2); TIME 6f; TRUTH 3b(2); and for other discussions of this distinction in terms of psychological causes, *see* CUSTOM AND CONVENTION 9a; DESIRE 5b; EMOTION 3b; WILL 3b(1).

The logic of argumentation in the sphere of opinion, *see* DIALECTIC 2b-2b(2); REASONING 5c-5d; RHETORIC 4c-4c(3).

The consideration of opinion in relation to truth and falsity, to certainty and probability, and to adequate and inadequate knowledge, *see* JUDGMENT 9; KNOWLEDGE 6d(1)-6d(3); NECESSITY AND CONTINGENCY 4a; TRUTH 2e.

Other statements of the extreme skeptical position that everything is a matter of opinion, *see* CUSTOM AND CONVENTION 9b; KNOWLEDGE 5c; PRINCIPLE 5; RELATION 6b; TRUTH 7a-7b; UNIVERSAL AND PARTICULAR 7a.

The more limited skepticism which treats philosophy as opinion in contrast to science, *see* METAPHYSICS 4a; PHILOSOPHY 6b; SCIENCE 7a; and for still another variety of skepticism which treats all moral or aesthetic judgments as matters of opinion, *see* BEAUTY 5; CUSTOM AND CONVENTION 5a; GOOD AND EVIL 6d; RELATION 6c; UNIVERSAL AND PARTICULAR 7b.

The special problem of applying moral principles or legal rules to particular cases, *see* JUSTICE 10d; LAW 5g; REASONING 5e-5e(3); UNIVERSAL AND PARTICULAR 6c.

The conception of supernatural faith as distinguished from both science and opinion, *see* GOD 6c-6c(2); KNOWLEDGE 6c(5); RELIGION 1a; THEOLOGY 2, 4b; TRUTH 4a; WILL 3b(3); and for the treatment of religious faith as ordinary belief or as the result of the will to believe, *see* GOD 13; RELIGION 6f; SCIENCE 7a; THEOLOGY 5; WILL 3b(1), 3b(3).

Other considerations of the problem of freedom in the sphere of opinion, *see* KNOWLEDGE 9b; LIBERTY 2a; PROGRESS 6e; TRUTH 8d.

Other considerations of the value of the majority opinion, the principle of majority rule, and the problem of minority opinions, *see* ARISTOCRACY 6; CONSTITUTION 9-9a; DEMOCRACY 2a, 3b, 5b(1); GOVERNMENT 1h; STATE 8d(3); TYRANNY 2c.

ADDITIONAL READINGS

Listed below are works not included in *Great Books of the Western World*, but relevant to the idea and topics with which this chapter deals. These works are divided into two groups:

I. Works by authors represented in this collection.
II. Works by authors not represented in this collection.

For the date, place, and other facts concerning the publication of the works cited, consult the Bibliography of Additional Readings which follows the last chapter of *The Great Ideas.*

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Chapter 65: OPPOSITION

INTRODUCTION

CERTAIN words in the vocabulary of common speech, used at almost every turn of discourse, indicate ideas so indispensable to human thought that they are often employed without analysis. The word "is" is one of these, signifying the idea of being or existence. The word "not" and the pair of words "either. . . . or" have the same character. Taken together, "not" and "either. . . .or" signify the idea of opposition. The quality of redness is *not* the same as the quality of hotness, yet this negative relation by itself does not make them opposite, for something can be red-hot. It is only when a thing can have *either* one quality *or* another, but *not* both, that the qualities are said to be opposed. Opposites are more than merely distinct; they exclude one another.

Opposition seems to be as pervasive as the familiar words which signify it. Even if it were not itself one of the great ideas, it would be manifest in all the other basic notions which come in antithetical pairs, *e.g.*, good and evil, life and death, war and peace, universal and particular, pleasure and pain, necessity and contingency, same and other, one and many, virtue and vice. Each of these notions seems to imply its opposite and to draw its meaning from the opposition. There are other terms in the list of great ideas which, though not paired in the same chapter, stand opposed to one another: art to nature, chance to fate, liberty to slavery, time to eternity, knowledge to opinion, matter to form, democracy to oligarchy and similarly other forms of government. Still other terms cannot be discussed without reference to their opposites, even though we have not explicitly listed them, such as being and non-being, truth and falsity, love and hate, justice and injustice, wealth and poverty.

The enumeration might extend to include every fundamental notion, except for the inconvenience in certain cases of not having readily familiar names to designate the opposites. In some instances, moreover, the opposition seems to involve more than a pair of terms, as, for example, is the case with poetry, history, and science; or physics, mathematics, and metaphysics.

In the tradition of the great books we not only find the opposition of one idea to another, but we also find opposite points of view, conflicting theories or doctrines, in the discussion of almost every basic topic under the heading of these ideas. We find the same word used with contrary meanings, the same proposition affirmed and denied. We find reasoning opposed to reasoning. The same conclusion is reached from apparently opposite principles, or opposite conclusions are drawn from premises apparently the same.

But though opposition seems to be inherent in the realm of ideas and in the life of thought, the idea of opposition is not itself explicitly thought about in many of the great books. This does not mean that in the consideration of other matters the significance and consequences of opposition go unnoted. On the contrary, all the chapters dealing with the nature and conduct of man, or with the institutions and history of society, give evidence of the general recognition—by poets and historians, by scientists and philosophers—that opposition in the form of active conflict characterizes the phenomena. The fact of warring opposites not only enters into descriptions of the way things are, but also poses problems for psychologists, moralists, economists, and statesmen to solve.

The study of nature, as well as of man and society, discovers opposition at the root of change. The physics of antiquity, for example, defines the elements or the bodily humours in terms of contrary qualities; according to Aristotle, contraries are among the ultimate prin-

ciples of nature—the terms of change. The cosmology of Lucretius makes the conflict of opposites the principle of growth and decay in the universe. Destruction struggles against creativity; life against death. "The death-dealing motions," the poet writes, "cannot keep the mastery always nor entomb existence for evermore, nor on the other hand can the birth and increase-giving motions of things preserve them always after they are born. Thus the war of first-beginnings waged from eternity is carried on with dubious issue: now here, now there, the life-bringing elements of things get the mastery and are overmastered in turn."

Modern mechanics deals with action and reaction in the impact of bodies and the resolution of forces tending to produce opposite results. The theory of evolution pictures the world of living organisms as engaged in the struggle for survival, organism competing with organism or against an adverse environment for the means of subsistence or reproduction.

These indications of the prevalence of conflict in the realm of thought itself, or as a fundamental conception in man's thinking about nature and society, do not alter the point that only in logic or metaphysics is opposition abstracted from special subject matters, to become itself the object of thought. Even so, not all of the great speculative works develop an explicit theory of opposition—classifying its types, analyzing its structure, formulating it as a universal principle of being, mind, or spirit.

Four authors especially treat opposition as a primary theme, though not out of the context of such other notions as being, relation, one and many, same and other, or identity and difference. They are Plato, Aristotle, Kant, and Hegel. It should not be surprising that the same authors are the principal figures in the chapter on DIALECTIC. Their disagreement about the nature or meaning of dialectic has a parallel here in their conflicting theories of opposition.

SOCRATES ARGUES, in the *Protagoras*, for the unity of virtue by using the principle that "everything has one opposite and not more than one." If wisdom is the opposite of folly, and if it also appears that folly is opposed by temperance, then either wisdom and temperance are the same, or a thing may have more than one opposite. Protagoras reluctantly accepts the first alternative; he is apparently unwilling to re-open the question concerning the pairing of opposites. But the question is reopened by others. It is one of the great problems in the theory of opposition, relevant to the distinction of different kinds of opposites.

The problem can most readily be stated in terms of the logical processes of division and definition. On the hypothesis that opposites always come in pairs, every class can be divided into two sub-classes which not only exclude each other, but also exhaust the membership of the divided class. Such division is called dichotomy. Many of the Platonic dialogues—notably the *Sophist* and the *Statesman*—exemplify the method of dichotomous division, used as a device for constructing definitions. The object to be defined, the character of the statesman or the sophist, is finally caught in the net of classification when, division after division having been made, two sub-classes are reached which leave no other possibilities open. The thing is either one or the other.

In the *Sophist* a preliminary exercise is undertaken in the method of division as preparation for the use of this method to define the sophist. It will serve us here as an example of dichotomy. All the arts are first divided into two kinds, the productive and the acquisitive; then the acquisitive arts are divided into those making voluntary exchanges and those which obtain goods by coercion; the coercive divides into fighting and hunting according to the alternatives of open or secret attack; hunting into the hunting of the lifeless and the living; hunting of the living into hunting of swimming or walking animals; the hunting of swimming animals into the hunting of winged animals and the hunting of water animals; the hunting of water animals into opposite methods of catching fish, with further sub-divisions made until the art of angling can be defined as an acquisitive art which, being coercive, is a form of hunting, distinguished from other forms of hunting by the character of its object—animals which swim in water rather than air—and by the method used to catch them—hooks or barbs rather than nets or baskets.

Aristotle objects to this process of division as a way of defining things. "Some writers," he

says, "propose to reach the definitions of the ultimate forms of animal life by bipartite division. But this method is often difficult, and often impracticable." For one thing, it tends to associate or dissociate natural groups arbitrarily, *e.g.*, the classification of birds with water animals, or of some birds with fish and some birds with land animals. "If such natural groups are not to be broken up, the method of dichotomy cannot be employed, for it necessarily involves such breaking up and dislocation."

Aristotle also calls attention to the fact that the method of dichotomy often uses negative terms in order to make an exhaustive division into two and only two sub-classes. But the class which is formed by a negative characterization cannot be further sub-divided. "There can be no specific forms of a negation, of featherless for instance or of footless, as there are of feathered and of footed." It is impossible, Aristotle says, to "get at the ultimate specific forms of animal life by bifurcate division." He therefore proposes a method of defining by genus and difference, according to which it is possible in biological classification to sub-divide a genus into more than two species. To avoid sub-division into two and only two, that which differentiates each species from the others within the same genus must be some positive characteristic.

As ALTERNATIVE methods of definition, dichotomous division and the differentiation of species within a genus are discussed in the chapter on DEFINITION. Here we are concerned with the problem of the number of opposites produced by the exhaustive division of a class or kind. For example, how many species of color are there? If the primary colors are more than two, it would appear that each primary color has more than one opposite, since the same object at the same time and in the same respect cannot be both red and yellow, red and green, green and yellow. But Aristotle seems to restrict the notion of contrariety to pairs of opposite qualities. "Red, yellow, and such colors, though qualities, have no contraries," he says. Whether or not he would have regarded them as contraries if he had been acquainted with the chromatic series of the spectrum, remains a conjecture.

To find a single opposite for red, it is necessary to employ the negative term 'not-red.' But then another difficulty arises which Aristotle recognizes when he calls the negative term "indefinite" and which Kant discusses when he treats the infinity of the negative. The not-red includes more than other colors which are not red, such as green and yellow. It includes everything in the universe, colored or colorless, which is *not* red, *e.g.*, happiness or atoms or poetry.

Perfect dichotomy can be achieved by using positive and negative terms as opposites, or what Aristotle sometimes calls "contradictory terms"—such as man and not-man or just and not-just. But the class which is thus divided is absolutely indeterminate. It is the universe, everything, the infinite. It is necessary, furthermore, to distinguish between the opposition of 'just' and 'not-just' and the opposition of 'just' and 'unjust.' The term 'unjust' is the contrary rather than the contradictory of 'just,' for these opposites apply only to men, or laws, or acts; only certain kinds of things are either just or unjust, and that is why it is said that contraries are always opposites within a genus or a definite kind. In contrast, 'not-just' is the contradictory rather than the contrary of 'just,' for these opposites apply to everything in the universe; everything is either the kind of thing to which just and unjust apply or it is the kind of thing to which neither of these terms apply, and so it is the not-just.

In addition to separating contraries (both of which are positive terms) from contradictory opposites (one of which is a positive, the other a negative term), Aristotle distinguishes two sorts of contraries. On the one hand, such contraries as odd and even exhaustively divide a limited class (*e.g.*, integral numbers): on the other hand, such contraries as white and black represent the extremes of a continuous series of shades, in which any degree of grayness can be considered as the opposite of either extreme or of a darker or a lighter gray.

There are still other kinds of opposite pairs, according to Aristotle, such as the terms 'double' and 'half,' which have the peculiarity of implying each other; or the terms 'blindness' and 'sight,' which are opposite conditions of the same subject. In this last case, one of the opposites naturally belongs to a certain kind of

thing, and the other represents a loss of that natural property or trait. It is therefore called a "privation."

Considering these various modes of opposition, Aristotle proposes a fourfold classification of opposite terms: *correlative* opposites, like double and half; *contrary* opposites, like odd and even, white and black, just and unjust; the opposites of *possession* and *privation*, such as sight and blindness; the opposites of *affirmation* and *negation*, such as man and not-man, or just and not-just. He discusses the special characteristics of each type of opposition, but it is only contrariety which he thinks requires further subdivision.

Even though both are always positive terms, some contraries, like odd and even, exhaust a definite class, just as positive and negative opposites exhaust the infinite. They admit of no intermediate terms and hence they differ from contraries like white and black. White and black are extreme limits of a continuous series and thus permit an indefinite number of intermediates which fall between them. Things which differ only in degree are like the sort of contraries which find their place in a continuous series. Things which differ in kind are like the sort of contraries between which no intermediates are possible.

One of the great problems of classification, especially with respect to living organisms, is whether the diverse species which fall within a single genus differ in kind or only in degree. The answer would seem to depend on whether the several species are related by one or the other sort of contrariety. As the chapter on EVOLUTION indicates, the basic meaning of the word "species" changes when the possibility of "intermediate forms" is rejected or admitted. When a class is divided by contraries without intermediates, the genus can have only two species, as for example, the division of animals into brutes and men. When a genus is divided into more than two sub-classes, (*e.g.*, the division of vertebrates into fish, amphibians, reptiles, birds, and mammals), it would seem to follow that the species are like points in a continuous series and admit the possibility of intermediate types.

According to Darwin's conception of species, their contrariety always tends to take the latter form. Aristotle, on the other hand, seems to use the word "species" in two distinct senses which correspond to the two kinds of contrariety—with and without intermediates. "A thing's difference from that from which it differs in species," he writes, "must be a contrariety." But though contrariety is always a "complete difference," the fact that "contraries are so-called in several senses" leads him to observe that "their modes of completeness will answer to the various modes of contrariety which attach to the contraries."

THE LOGICAL OPPOSITION of propositions or judgments depends in part on the opposition of terms or concepts. If contrary things are said about the same subject of discourse (*i.e.*, if the same number is called odd and even, or the same act is called cowardly and courageous, or the same animal is called a bird and a mammal), pairs of contrary statements are made, of which both cannot be true. But it does not seem to follow that one of the two statements must be true. Both can be false. In the examples given, the number may be a fraction and neither odd nor even; the act may be foolhardy and neither courageous nor cowardly; the animal may be a reptile and neither bird nor mammal.

This characteristic of contrary statements—the impossibility of their both being true combined with the possibility of their both being false—can also be found, according to Aristotle, in propositions which have the same subject and do not contain contrary terms as predicates. The propositions 'All men are white' and 'No men are white' cannot both be true, but they can both be false. The contrariety of these two statements, which can be taken as typifying the opposition of all universal affirmations and negations, does not depend on contrary predicates, but on the opposed meanings of 'all are' and 'none is.'

Keeping the terms constant and varying only the quality and quantity of the propositions, Aristotle formulates two other typical modes of opposition between pairs of statements. When both statements are particular or limited, but one is affirmative and the other negative, both cannot be false though both can be true, *e.g.*, 'Some men are white' and 'Some men are not white.' This pair of opposites Aris-

totle calls "sub-contraries." When one statement is universal and affirmative and the other is particular and negative—or when one is universal and negative, the other particular and affirmative—the two propositions are, according to Aristotle, contradictory. Contradiction is the most complete type of opposition, for contradictory statements are opposite in both quality and quantity. Of a pair of contradictories, both cannot be true and both cannot be false. One must be true and the other false, *e.g.*, it must be true either that all men are white or that some men are not white.

The formal scheme of opposite statements, traditionally known as "the square of opposition," appears to exhaust all possibilities. It indicates, moreover, that every statement may have two opposites, a contradictory and either a contrary or a sub-contrary; for example, 'All men are white' is contradicted by 'Some men are not white' and opposed in a merely contrary fashion by 'No men are white.' The latter is a weaker form of opposition since it permits the dilemma to be avoided by the truth of a third statement, that some men are white and some are not. The dilemma set up by a contradiction cannot be avoided in this way.

The propositions 'God exists' and 'God does not exist,' or 'The world had a beginning' and 'The world did not have a beginning,' constitute contradictions from which there seems to be no escape. It would seem to make a difference, therefore, in facing the great controversies in the tradition of western thought, to know whether the opposite views which men have taken on fundamental issues are genuine contradictions, requiring everyone to take sides, or whether they are merely contrary positions. In the latter alternative, the inconsistency of the theories prevents us from agreeing with both parties to the dispute, but it does not require us to agree with either, for contrary doctrines never exhaust the possibilities. Between such extreme positions, for example, as that everything is in flux and nothing changes, both of which cannot be true, the truth may lie in the doctrine that some elements of permanence are involved in all change; or it may be in the theory of a realm of becoming that lacks permanence and a realm of being that is free from change.

ONE OF THE BASIC controversies in the tradition of the great books concerns opposition itself. Is the principle of contradiction the ultimate test of the truth of judgments and reasoning? Is the truth of indemonstrable propositions or axioms certified by the self-contradiction of their contradictories? For example, is the truth of the proposition 'The whole is greater than the part' made necessary by the impossibility of the contradictory statement 'The whole is *not* greater than the part,' on the theory that this latter statement is impossible because it is self-contradictory? And when a conclusion is demonstrated by propositions which seem to be necessarily true, must not the contradictory of this conclusion be false—or at least be incapable of demonstration by propositions which are also necessarily true?

On both these questions Kant and Aristotle seem to be opposed. According to Aristotle, no truths are necessary or axiomatic unless their contradictories are self-contradictory. But Kant makes a distinction between analytical and synthetical propositions (discussed in the chapter on JUDGMENT) and in terms of it he restricts the principle of contradiction to serving as a criterion of truth for analytical judgments alone. "In an analytical judgement," he writes, "whether negative or affirmative, its truth can always be tested by the principle of contradiction." But though we must admit, Kant continues, that "the principle of contradiction is the general and altogether sufficient principle of all analytical knowledge, beyond this its authority and utility, as a sufficient criterion of truth, must not be allowed to extend." In "the synthetical part of our knowledge, we must no doubt take great care never to offend against that inviolable principle, but we ought never to expect from it any help with regard to the truth of this kind of knowledge."

The reason, Kant explains, is that "in forming an analytical judgement I remain within a given concept, while predicating something of it. If what I predicate is affirmative, I only predicate of that concept what is already contained in it; if it is negative, I only exclude from it the opposite of it." For example, if the meaning of the concept 'whole' involves 'being greater than a part,' self-contradiction results from denying that the whole is greater than a part.

"In forming synthetical judgements, on the contrary, I have to go beyond a given concept, in order to bring something together with it, which is totally different from what is contained in it. Here," Kant declares, "we have neither the relation of identity nor of contradiction, and nothing in the judgement itself by which we can discover its truth or its falsehood"; for example, the judgment that everything which happens has a cause. The truth of such synthetical judgments, according to Kant, is as necessary and as *a priori* as the truth of analytical judgments, but the principle of contradiction does not provide their ground or validation.

For Aristotle, in contrast, those propositions which do not derive necessity from the principle of contradiction belong to the sphere of opinion rather than to the domain of knowledge. They can be asserted as probable only, not as true or false. In the domain of knowledge, it is impossible to construct valid arguments for contradictory conclusions, for if one must be true and the other false, one can be validly demonstrated and the other cannot be demonstrated at all. But in the sphere of opinion, dialectical opposition is possible. Because the contradictory of a probable statement is itself also probable, probable arguments can be constructed on the opposite sides of every dialectical issue.

For Kant dialectical issues do not consist in a conflict of opposed probabilities. Far from setting probable reasoning against probable reasoning, dialectical opposition consists in what appear to be *demonstrations* of contradictory propositions. For example, in that part of the *Critique of Pure Reason* devoted to the Transcendental Dialectic, Kant presents opposed arguments which look like demonstrations of contradictory propositions—such as the thesis that "the world has a beginning in time" and its antithesis that "the world has no beginning"; or the thesis that "there exists an absolutely necessary being" and its antithesis that "there nowhere exists an absolutely necessary being." These are two of the four issues which Kant calls the "antinomies of a transcendental dialectic."

Such issues, Aristotle would agree with Kant, do not belong to the sphere of opinion or probability. But Kant would not agree with Aristotle that such issues belong to the domain of science or certain knowledge. The problem of the world's beginning or eternity, for example, is one which Aristotle treats in his *Physics* and appears to think is solved by the demonstration that motion can have neither beginning nor end. The problem of the existence of a necessary being is one which Aristotle treats in his *Metaphysics* and which he also appears to think is capable of a demonstrative solution. For him, therefore, both are problems to which scientific answers can be given. But for Kant the demonstration of the antitheses, or contradictory propositions, in both cases is as cogent as the demonstrations of the theses; and therefore, since we know that both of a pair of contradictory propositions cannot be validly demonstrated, we must conclude that the arguments advanced are only counterfeit demonstrations, or as Kant says, "illusory." He calls these demonstrations "dialectical," and the issues they attempt to resolve "antinomies," precisely because he thinks the reasoning goes beyond the limits of scientific thought and because he thinks the issues are problems reason cannot ever solve.

With respect to conclusions affirming or denying matters beyond experience, the antinomies can be interpreted either as showing that contradictory arguments are equally sound or as showing that they are equally faulty. On either interpretation, Kant and Aristotle seem to be opposed on the applicability of the principle of contradiction to conflicting arguments and conclusions (except, of course, those which are merely probable). This difference between them accords with the difference in their conceptions of science and dialectic, and in their theories of the scope and conditions of valid knowledge.

THE OPPOSITION between Kant and Aristotle may not present the only alternatives. Hegel's theory of the dialectical process seems to offer a third. Where Aristotle appears to think that all contradictions must be resolved in favor of one of the opposites, and where Kant appears to think that some contradictions cannot be resolved at all, Hegel proposes the resolution of all contradictions, not by a choice between

them, but by a synthesis uniting the opposites and reconciling their differences.

According to Aristotle, opposites exclude one another in existence as well as in thought. A thing cannot both exist and not exist at the same time; nor in any particular respect can it simultaneously both be and not be of a certain sort. Only with the passage of time and in the course of change can opposites be realized, when a thing passes from being to non-being, or gives up one attribute in order to assume its contrary.

The difference for Aristotle between becoming and being (or between change and complete actuality) seems to be that the one includes and the other excludes opposites. Change cannot occur except as one opposite comes into existence *while* the other passes away. But opposites cannot co-exist with complete actuality. So far as reality consists of co-existent actualities, it is limited by the principle of contradiction—as a principle of being—to those which are not contradictory. All possibilities cannot, therefore, be simultaneously realized, for, as Leibnitz states the principle, all possibilities are not "compossible."

According to Hegel, every finite phase of reality—everything except the Absolute Idea itself—has its contradictory, as real as itself, and co-existent with it. Contradictories imply one another and require each other, almost as correlative opposites do. Whatever is partial and incomplete presupposes something which is partial and incomplete in an opposite respect. The opposition between them can therefore be overcome by a synthesis which includes them both, and which complements each by uniting it with the other.

For example, the category of being is opposed by non-being. These opposites both exclude and imply one another. They are in a sense even identical with one another, insofar as the notion of being contains the notion of non-being, and, conversely, the notion of non-being, the notion of being. Except for the Absolute, everything which is also is not, and everything which is not also is. The apparent contradiction involved in this simultaneous application of opposite categories to the same thing is overcome by a third category, becoming, which is the synthesis of being and non-being. Being and non-being are united in becoming.

This reconciling of opposites, by their union in a more inclusive whole embracing both, typifies the Hegelian dialectic of thesis, antithesis, and synthesis. The motion repeats itself as the synthesis of one contradiction faces its own opposite and requires a higher synthesis to overcome the contradiction it has generated. Thus every opposition in reality or thought is a phase in the progressive realization of the Absolute, wherein all contradictions are resolved.

In Hegel's *Philosophy of History* and in his theory of the development of the state in the *Philosophy of Right*, the dialectical process is exemplified at every stage of progress. The conflict of interdependent opposites—of opposite classes or forces in society, of opposite political institutions or principles—calls for a resolution which shall unite rather than exclude the opposites.

Considering the division of labor, for example, Hegel writes: "When men are dependent on one another and reciprocally related in their work and the satisfaction of their needs, subjective self-seeking turns into a contribution to the satisfaction of the needs of everyone else. That is to say, by a dialectical advance, subjective self-seeking turns into the mediation of the particular through the universal, with the result that each man in earning, producing, and enjoying on his own account is *eo ipso* producing and earning for the enjoyment of everyone else." The opposition between the particular good of each individual and the universal good of all is thus overcome by that advance in social organization which is the division of labor.

Each of the stages of world history is, according to Hegel, "the presence of a necessary moment in the Idea of the world mind." But the world mind itself is a synthesis, a resolution of the conflicting opposites—of the various national minds "which are wholly restricted on account of their particularity. Their deeds and destinies in their reciprocal relations to one another are the dialectic of the finitude of these minds, and out of it arises the universal mind, the mind of the world, free from all restrictions, producing itself as that which exercises its right —and its right is the highest right of all—over these finite minds in the 'history of the world which is the world's court of judgment.'"

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REFERENCES

To find the passages cited, use the numbers in heavy type, which are the volume and page numbers of the passages referred to. For example, in **4** HOMER: *Iliad*, BK II [265–283] **12d**, the number **4** is the number of the volume in the set; the number **12d** indicates that the passage is in section d of page 12.

PAGE SECTIONS: When the text is printed in one column, the letters **a** and **b** refer to the upper and lower halves of the page. For example, in **53** JAMES: *Psychology*, **116a-119b**, the passage begins in the upper half of page 116 and ends in the lower half of page 119. When the text is printed in two columns, the letters **a** and **b** refer to the upper and lower halves of the left-hand side of the page, the letters **c** and **d** to the upper and lower halves of the right-hand side of the page. For example, in **7** PLATO: *Symposium*, **163b-164c**, the passage begins in the lower half of the left-hand side of page 163 and ends in the upper half of the right-hand side of page 164.

AUTHOR'S DIVISIONS: One or more of the main divisions of a work (such as PART, BK, CH, SECT) are sometimes included in the reference; line numbers, in brackets, are given in certain cases; *e.g.*, *Iliad*, BK II [265–283] **12d**.

BIBLE REFERENCES: The references are to book, chapter, and verse. When the King James and Douay versions differ in title of books or in the numbering of chapters or verses, the King James version is cited first and the Douay, indicated by a *(D)*, follows; *e.g.*, OLD TESTAMENT: *Nehemiah*, 7:45—*(D) II Esdras*, 7:46.

SYMBOLS: The abbreviation "esp" calls the reader's attention to one or more especially relevant parts of a whole reference; "passim" signifies that the topic is discussed intermittently rather than continuously in the work or passage cited.

For additional information concerning the style of the references, see the Explanation of Reference Style; for general guidance in the use of *The Great Ideas*, consult the Preface.

1. Opposition in logic

1*a*. Kinds of opposition among terms: correlation, contrariety, privation, negation

7 PLATO: *Protagoras*, 49a-50b / *Phaedo*, 226d-227a; 242d-245c / *Republic*, BK IV, 351b-c

8 ARISTOTLE: *Categories*, CH 10 16d-19c / *Prior Analytics*, BK I, CH 46 70b-71d / *Topics*, BK II, CH 8 159b-160a; BK IV, CH 4 [124^{a}35–^{b}34] 173a-d; BK V, CH 6 187a-188c; BK VI, CH 9 201a-202a / *Metaphysics*, BK IV, CH 2 [1004^{a}9–17] 523a-b; [1004^{b}27–1005^{a}2] 523d-524a; BK V, CH 10 539a-c; BK IX, CH 1 [1046^{a}29–36] 571b; CH 2 [1046^{b}7–15] 571c-d; BK X, CH 4 [1055^{a}34–^{b}28] 582b-d; BK XI, CH 3 [1061^{a}18–28] 589b-c

19 AQUINAS: *Summa Theologica*, PART I, Q 17, A 4 103c-104b; PART I-II, Q 18, A 8, REP 1 699d-700b; Q 36, A 1, ANS 780c-781b

20 AQUINAS: *Summa Theologica*, PART I-II, Q 64, A 3, REP 3 68b-69b; Q 71, A 6, REP 1 110b-111b

23 HOBBES: *Leviathan*, PART I, 57b-c

1*b*. The analysis of contrariety: the kinds of terms which can be contrary; contrariety with and without intermediates between extremes

7 PLATO: *Lysis*, 21b-22b / *Euthydemus*, 83d-84a / *Symposium*, 163b / *Republic*, BK IV, 350c-351d; BK V, 372b-373c

8 ARISTOTLE: *Categories*, CH 5 [^{b}24–31] 8a; [^{a}10–^{b}4] 8b-d; CH 6 [^{b}11–^{a}18] 10a-c; CH 7 [^{b}15–19] 11b; CH 8 [^{b}11–25] 15d; CH 10 [^{b}33–^{a}25] 17a-c; CH 11 19c-d / *Topics*, BK II, CH 7 158b-159a; BK IV, CH 3 [123^{b}1–124^{a}10] 171d-172c; BK V, CH 6 [135^{b}7–16] 187a-b; BK VI, CH 9 [147^{a}32–^{b}25] 201b-d / *Metaphysics*, BK IV, CH 7 531c-532b; BK V, CH 10 [1018^{a}25–^{b}7] 539a-b; BK X, CH 3–10 581a-586d; BK XI, CH 3 [1061^{a}18–28] 589b-c; CH 6 [1063^{b}19–24] 592a; CH 12 [1068^{b}26–31] 597d; [1069^{a}1–5] 597d-598a

9 ARISTOTLE: *Ethics*, BK VIII, CH 1 [1155^{b}8–15] 407a

17 PLOTINUS: *Sixth Ennead*, TR III, CH 20 292b-293a

19 AQUINAS: *Summa Theologica*, PART I, Q 48, A 1, REP 1 259b-260c; PART I-II, Q 18, A 8, REP 1 699d-700b; Q 22, A 2, REP 1 721c-722c

(1. *Opposition in logic.* 1*b. The analysis of contrariety: the kinds of terms which can be contrary; contrariety with and without intermediates between extremes.*)

20 AQUINAS: *Summa Theologica*, PART I–II, Q 64, A 3, REP 3 68b-69b
24 RABELAIS: *Gargantua and Pantagruel*, BK I, 12d-13b
53 JAMES: *Psychology*, 387b

1c. The exclusiveness of opposites as a principle of logical division

1c(1) Dichotomous division: positive and negative terms

7 PLATO: *Phaedrus*, 134b-c / *Sophist*, 552b-561d; 577c-579d / *Statesman* 580a-608d esp 595a-d / *Philebus*, 610d-613a
8 ARISTOTLE: *Prior Analytics*, BK I, CH 31 64b-65a / *Posterior Analytics*, BK II, CH 5 125b-d; CH 13 [96^{b}25-97^{b}5] 132a-133a / *Topics*, BK VI, CH 6 [143^{b}11-144^{a}4] 197b-c / *Metaphysics*, BK VII, CH 12 [1038^{a}8-14] 561d
9 ARISTOTLE: *Parts of Animals*, BK I, CH 2-3 165d-167d
17 PLOTINUS: *First Ennead*, TR III, CH 4 11a-c / *Sixth Ennead*, TR III, CH 8-10 285a-286d
42 KANT: *Pure Reason*, 43d-44a

1c(2) Division of a genus by differentia: the contrariety of species

7 PLATO: *Theaetetus*, 548c-549d
8 ARISTOTLE: *Categories*, CH 3 [1^{b}16-24] 5d; CH 5 [3^{a}22-^{b}23] 7b-8a / *Posterior Analytics*, BK II, CH 13 [96^{b}25-97^{b}6] 132a-133a / *Topics*, BK I, CH 18 [108^{a}38-^{b}9] 152d; [108^{b}19-32] 153a,c; BK IV, CH 3 [123^{a}20-124^{a}9] 171c-172c; CH 6 [127^{b}7-17] 177a; [128^{a}20-30] 177d-178a; BK VI, CH 5-6 196b-199c / *Physics*, BK I, CH 3 [186^{b}14-34] 261c-262a; CH 5 [188^{a}18-25] 263c; CH 6 [189^{a}11-14] 264c; [189^{b}23-27] 265b / *Metaphysics*, BK III, CH 3 [998^{b}21-27] 517c; BK V, CH 10 [1018^{a}38-^{b}7] 539b; CH 28 [1024^{a}37-^{b}9] 546b-c; BK VII, CH 12 [1037^{b}28-1038^{a}34] 561c-562a; BK VIII, CH 3 [1043^{b}24-1044^{a}14] 568b-d; CH 6 569d-570d; BK X, CH 8-9 585b-586c / *Soul*, BK I, CH 1 [402^{b}15-403^{a}2] 631d-632a
9 ARISTOTLE: *Parts of Animals*, BK I, CH 2-4 165d-168c
17 PLOTINUS: *Sixth Ennead*, TR III, CH 1, 281a-b; CH 8-10 285a-286d; CH 18 291a-d
19 AQUINAS: *Summa Theologica*, PART I, Q 3, A 4, REP 1 16d-17c; A 5, ANS 17c-18b; Q 4, A 2, REP 2 21b-22b; Q 29, A 1, REP 3 162a-163b; Q 47, A 2 257b-258c; Q 48, A 3, REP 3 261b-262a; Q 75, A 3, REP 1 380c-381b; A 4, ANS 381b-382a; Q 76, A 3, REP 4 391a-393a; Q 77, A 1, REP 7 399c-401b; PART I–II, Q 1, A 3, ANS 611b-612a; Q 3, A 5, ANS 626b-627a; Q 18, AA 5-10 697a-702a; Q 29, A 2, REP 1 745c-746b; Q 35, A 4 774d-775d; A 8, ANS and REP 3 779c-780c
20 AQUINAS: *Summa Theologica*, PART I–II, Q 49, A 2, REP 3 2b-4a; Q 52, A 1, ANS 15d-18a; A 2, ANS 18a-19a; Q 55, A 4, ANS and REP 1–2 28c-29d; Q 61, A 1, REP 1 54d-55c; Q 72, A 5, ANS 115a-116b; A 7, ANS 117a-118a; Q 95, A 4, ANS 229b-230c; PART II–II, Q 21, A 3, REP 2-3 479c-480b; PART III, Q 2, A 1, ANS 710a-711c
42 KANT: *Pure Reason*, 193a-200c esp 197b-198a
53 JAMES: *Psychology*, 344b-345b

1d. The opposition of propositions or judgments

1d(1) The square of opposition: contradictories, contraries, subcontraries

8 ARISTOTLE: *Categories*, CH 10 [13^{b}1-35] 19a-c / *Interpretation*, CH 6 26c-d; CH 10 29d-31c / *Posterior Analytics*, BK I, CH 2 [72^{a}13] 98c
20 AQUINAS: *Summa Theologica*, PART I–II, Q 64, A 3, REP 3 68b-69b
42 KANT: *Pure Reason*, 64d-65c; 156d-157b; 174b-d

1d(2) Modal opposition: the necessary and the contingent

8 ARISTOTLE: *Interpretation*, CH 12-13 32d-35c
31 DESCARTES: *Rules*, XII, 22a-b
42 KANT: *Pure Reason*, 39c-41c esp 40d-41c; 193a-200c esp 194b-d
53 JAMES: *Psychology*, 851a; 861b

1e. Opposition in reasoning and proof: the conflict of dialectical arguments; the antinomies of a transcendental dialectic

7 PLATO: *Euthydemus* 65a-84a,c / *Phaedrus*, 134b-c / *Phaedo*, 226d-227a / *Republic*, BK IV, 350c-351d; BK VII, 392b-393d / *Parmenides*, 491a-511d / *Theaetetus*, 525d-526b / *Sophist*, 558b-d; 571d-574c / *Statesman*, 594d-595d
8 ARISTOTLE: *Prior Analytics*, BK I, CH 30 [46^{a}3-10] 63d; BK II, CH 15 84b-85b / *Topics*, BK I, CH 11 148a-c / *Sophistical Refutations*, CH 9 234b-d / *Heavens*, BK I, CH 10 [279^{b}4-12] 370d / *Metaphysics*, BK XIII, CH 4 [1078^{b}18-28] 610b
9 ARISTOTLE: *Politics*, BK V, CH 8 [1307^{b}26-29] 509d / *Rhetoric*, BK I, CH 1 [1355^{a}28-39] 594c-d; BK II, CH 23 [1397^{a}6-18] 645a-b; [1399^{a}18-28] 647d-648a
19 AQUINAS: *Summa Theologica*, PART I, Q 89, A 5, ANS 477a-478b
20 AQUINAS: *Summa Theologica*, PART III, Q 9, A 3, REP 2 765b-766b
25 MONTAIGNE: *Essays*, 446d-449d
31 DESCARTES: *Rules*, II, 2c
35 LOCKE: *Human Understanding*, BK IV, CH XVI, SECT 9 369b-c

35 HUME: *Human Understanding*, SECT X, DIV 86–91 488d-491c
42 KANT: *Pure Reason*, 1a-b; 7a-8b; 120c-173a esp 133c; 174b-177b; 187a-192d; 200c-209d; 219a-220b; 229b-c; 231c-232a / *Fund. Prin. Metaphysic of Morals*, 260d-261b; 283d-284d / *Practical Reason*, 291a-292a; 296a-d; 302a-d; 307d-308b; 331c-337a,c; 340a-342d; 348d-349a / *Science of Right*, 407a-408b / *Judgement*, 540a-542a; 562a-578a esp 562d-564c, 570b-572b, 575b-578a; 584c-d
43 MILL: *Liberty*, 274b-293b passim
54 FREUD: *General Introduction*, 545d

2. The metaphysical significance of opposition

2a. Opposition as limiting coexistence: non-contradiction as a principle of being

7 PLATO: *Phaedo*, 244b-246c / *Republic*, BK IV, 350d-351b / *Parmenides*, 504c-d / *Sophist*, 573a-574c
8 ARISTOTLE: *Interpretation*, CH 13 [22^b28–23^a 26] 34d-35c / *Metaphysics*, BK III, CH 1 [995^b 6–10] 514a; CH 2 [996^b26–997^a15] 515b-d; BK IV, CH 3–6 524b-531c; CH 8 532b-d; BK V, CH 10 [1018^a22–26] 539a; BK IX, CH 9 [1051^a4–22] 577a-b; BK XI, CH 1 [1059^a23–26] 587a; CH 5–6 590a-592b
19 AQUINAS: *Summa Theologica*, PART I–II, Q 1, A 5, REP 2–3 613a-614a
20 AQUINAS: *Summa Theologica*, PART I–II, Q 94, A 2, ANS 221d-223a; Q 113, A 7, REP 5 366a-367c
31 SPINOZA: *Ethics*, PART III, PROP 4–5 398d; PROP 10 399c-d; PART V, AXIOM 1 452c
35 LOCKE: *Human Understanding*, BK IV, CH III, SECT 15 316d-317a
42 KANT: *Pure Reason*, 99a-101b; 107b-c; 179c-182b / *Pref. Metaphysical Elements of Ethics*, 367d-368a
53 JAMES: *Psychology*, 302a esp 302b [fn 1]

2b. Opposites in the realm of being, mind, or spirit: the one and the many; the dialectical triad of thesis, antithesis, and synthesis

7 PLATO: *Phaedrus*, 134b-c / *Phaedo*, 244b-246c / *Republic*, BK III, 333b-d; BK V, 368c-373c; BK VII, 392b-394b / *Parmenides* 486a-511d / *Theaetetus*, 534d-536a / *Sophist*, 561d-577b esp 574d-575a / *Philebus*, 610d-613a; 615c-617d; 634b-635a
8 ARISTOTLE: *Interpretation*, CH 13 [22^b32–23^a8] 34d-35a / *Metaphysics*, BK IV, CH 2 522b-524b; BK V, CH 6 [1017^a3–7] 537c; BK X, CH 3–10 581a-586d; BK XI, CH 3 589a-d; BK XII, CH 10 [1075^a25–33] 606a; BK XIV, CH 1 619b,d-620d
11 NICOMACHUS: *Arithmetic*, BK I, 813d-814b; BK II, 839d-840b
17 PLOTINUS: *Third Ennead*, TR II, CH 16–17, 91b-92c; TR III, CH 1 93b-c; TR VII 119b-129a; TR IX 136a-138a,c / *Fifth Ennead* 208a-251d esp TR I 208a-214c, TR IV–V 226d-235b / *Sixth Ennead*, TR VI, CH 1–3 310d-312b; TR IX, CH 1–2 353d-355a
19 AQUINAS: *Summa Theologica*, PART I, Q 11, A 2 47d-48d; Q 17, A 4 103c-104b
31 DESCARTES: *Discourse*, PART IV 51b-54b / *Meditations*, II 77d-81d; VI, 98c-d / *Objections and Replies*, 115a,c; DEF V–VII 130b-c; PROP IV 133c; 152b,d-155b; 231a-232d
42 KANT: *Pure Reason*, 7a-8b; 43d-44a; 99a-101b; 107b-c; 133c; 173b-177b; 197b-198a
46 HEGEL: *Philosophy of Right*, INTRO, par 26 18b-c; par 31 19c-20a; PART I, par 39 21d; par 97 37a; PART II, par 106 40a-b; par 109–111 41a-c; PART III, par 256 79d-80a; par 353–360 112b-114a,c esp par 353 112b-c, par 360 113d-114a,c; ADDITIONS, 61 125d-126a; 70 127b / *Philosophy of History*, INTRO, 156d-157b; 160c-161a; 165a-b; 205d-206a,c; PART I, 235d-236a; 237d-238c; 245b-d; PART II, 260b-c; 279c-280b; PART III, 286c-287a; 305c-306c; PART IV, 316a-b; 333d-334d
53 JAMES: *Psychology*, 107a-b; 117b; 238b [fn 2]

2c. Nonbeing as the opposite of being

7 PLATO: *Republic*, BK V, 371c-373c / *Parmenides*, 507c-511d / *Theaetetus*, 518a / *Sophist*, 561d-577b
8 ARISTOTLE: *Physics*, BK I, CH 5 [188^a18–25] 263c; CH 9 [192^a2–16] 268a; BK V, CH 1 [225^a 20–29] 305b-c / *Metaphysics*, BK I, CH 4 [985^b 3–10] 503c; CH 5 [986^b25–987^a1] 504d-505a; BK IV, CH 2 [1003^a33–$^b11$] 522b; [1004^b27–29] 523d; BK VII, CH 4 [1030^a25–26] 553a; BK XII, CH 2 [1069^b27–34] 599a
17 PLOTINUS: *First Ennead*, TR VIII 27b-34a / *Second Ennead*, TR IV 50a-57c / *Third Ennead*, TR VI, CH 6–7 109d-111c
18 AUGUSTINE: *City of God*, BK XII, CH 2 343c-d
19 AQUINAS: *Summa Theologica*, PART I, Q 13, A 7, ANS 68d-70d; Q 14, A 9 83b-d; Q 16, A 3, REP 2 96b-d; A 5, REP 3 97c-98b; Q 17, A 4, REP 2 103c-104b; Q 104, A 3, REP 1 537b-d
20 AQUINAS: *Summa Theologica*, PART I–II, Q 71, A 6, REP 1 110b-111b
31 DESCARTES: *Meditations*, IV, 89c-d / *Objections and Replies*, 214d-215a

2d. The opposition of good and evil in the world and in relation to God

7 PLATO: *Republic*, BK II, 322a-b / *Theaetetus*, 518a-b; 530b-531a / *Statesman*, 587a-589c
8 ARISTOTLE: *Categories*, CH 11 [13^b36–14^a6] 19c / *Metaphysics*, BK I, CH 4 [984^b33–985^a9] 503a-b; BK IX, CH 9 [1051^a17–22] 577a-b; BK XII, CH 10 [1075^a34–$^b7$] 606a-b; BK XIV, CH 4 [1091^a29–1092^a8] 624a-d
12 EPICTETUS: *Discourses*, BK I, CH 12 118d-120b; CH 20, 126c-d; CH 25 129d-131b; CH 29 134d-138a

(2. *The metaphysical significance of opposition. 2d. The opposition of good and evil in the world and in relation to God.*)

17 PLOTINUS: *First Ennead*, TR VIII 27b-34a esp CH 6-7 29d-30d / *Third Ennead*, TR II, CH 5-7 85b-86c; CH 10-14 88a-89d

18 AUGUSTINE: *Confessions*, BK III, par 11 15d-16a; BK IV, par 24 25b-c; BK V, par 20 32d-33a; BK VII, par 3-7 44a-45d; par 11-23 47a-50d; BK VIII, par 22-24 59a-60a; BK XIII, par 45 123a / *City of God*, BK VIII, CH 24, 283a-b; BK X, CH 21 311c-312a; BK XI, CH 9 326d-327d; CH 18 331d-332a; BK XII, CH 3 343d-344b; CH 6-9 345b-348b; BK XIV, CH 1-5 376b,d-380b; CH 10 11 385b-387a; BK XXII, CH 1 586b,d-587b / *Christian Doctrine*, BK I, CH 33, 633d-634a; BK II, CH 23 648a-c; BK III, CH 37, 673d-674a

19 AQUINAS: *Summa Theologica*, PART I, Q 8, A 1, REP 4 34d 35c; A 3, ANS 36b-37c; QQ 48-49 259b-268a,c; Q 65, A 1, ANS and REP 2-3 339b-340b; Q 66, A 3, ANS 347b-348d; Q 72, A 1, REP 6 368b-369d; PART I-II, Q 18, A 8, REP 1 699d-700b; Q 36, A 1, ANS 780c-781b

20 AQUINAS: *Summa Theologica*, PART I-II, Q 75, A 1 137d-138c; PART III SUPPL, Q 74, A 1, REP 1 925c 926c

21 DANTE: *Divine Comedy*, HELL, VIII [65]-IX [103] 11c-13b; XXVII [55-136] 40a-41b; PURGATORY, V [85-129] 59d-60c; VIII [1-108] 64a-65b; XI [1-30] 68d-69a; PARADISE, I [103-142] 107b-d; XIII [52-87] 126a-b; XIX [40-66] 135c-d

23 HOBBES: *Leviathan*, PART II, 160d-161a

30 BACON: *Advancement of Learning*, 17d-18a

32 MILTON: *Comus* 33a-56b esp [414-475] 42b-44a / *Paradise Lost*, BK II [496-505] 122a; BK IV [32-104] 153a-154b; BK V [600-904] 188b-195a; BK VII [519-549] 228b-229a; BK VIII [319-337] 239a-b; BK IX [679-779] 262a-264a; BK XI [84-98] 301a / *Areopagitica*, 395a

40 GIBBON: *Decline and Fall*, 81b-c

41 GIBBON: *Decline and Fall*, 230b; 330a-b

42 KANT: *Practical Reason*, 316a-317d

46 HEGEL: *Philosophy of History*, INTRO, 160a; PART I, 237d-238c; PART IV, 346b-c

47 GOETHE: *Faust*, PROLOGUE 7a-9b; PART II [11,676-843] 284a-288a

48 MELVILLE: *Moby Dick* esp 4b-5a, 135a-145a, 171b, 370b-372a, 409b 410b, 414b-419b

52 DOSTOEVSKY: *Brothers Karamazov*, BK V, 120d-126d; BK XI, 308c-309a; 341a-345c

54 FREUD: *Civilization and Its Discontents*, 790d; 791b [fn 1]

2e. The reconciliation of opposites in the divine nature: the synthesis of all contraries in the Absolute

19 AQUINAS: *Summa Theologica*, PART I, Q 3 14a-20c; Q 4, A 2, REP 1-2 21b-22b; Q 65, A 1 339b-340b; Q 91, A 1, ANS 484a-485b

21 DANTE: *Divine Comedy*, PARADISE, XXXIII [76-145] 157a-d

31 SPINOZA: *Ethics*, PART I, PROP 15 360a-361d; PART II, PROP 1-2 373d-374a

46 HEGEL: *Philosophy of History*, INTRO, 156d-160a; 165a-b; 205d-206a,c; PART I, 237d-238c; 245b-d; PART III, 306a-c

3. Opposition in the realm of physical nature

3a. The contraries as principles of change

7 PLATO: *Symposium*, 165c-166b / *Phaedo*, 226c-228a; 243c-246c / *Republic*, BK IV, 350d-351b / *Theaetetus*, 519d-520b / *Sophist*, 565a-c / *Laws*, BK X, 760a; 762b-764c

8 ARISTOTLE: *Categories*, CH 5 [4^a10-$^b19$] 8b-9a; CH 10 [13^a17-37] 18d-19a; CH 14 [15^b1-16] 21b-c / *Physics*, BK I, CH 5-9 263c-268d; BK II, CH 1 [193^b19-22] 270a; BK III, CH 1 [201^a4-8] 278c; BK IV, CH 9 [217^a20-$^b26$] 297a-c; BK V, CH 1 [224^b27-225^a12] 304d-305a; [225^a34-$^b9$] 305d; CH 2 [226^a23-$^b9$] 306d-307a; CH 3 [226^b24-34] 307c; CH 5 310a-311a; CH 6 [230^b10-21] 312a; [230^b27-231^a2] 312b-c; BK VI, CH 4 [234^b10-21] 316d-317a; BK VIII, CH 2 [252^b9-11] 336b c; CH 7 [260^a29-$^b1$] 346b-c / *Heavens*, BK I, CH 3 [270^a13-23] 361b-c; CH 4 362a-c; CH 6 [273^a7-21] 364b; CH 8 [277^a13-34] 368b-c; CH 12 [283^b17-23] 375c-d; BK IV 399a-405a,c / *Generation and Corruption*, BK I, CH 3-5 413c-420b; CH 7 421d-423b; BK II, CH 1-5 428b,d-433d esp CH 4-5 431b-433d / *Metaphysics*, BK I, CH 8 [989^a18-29] 507b-c; BK II, CH 2 [994^a19-$^b6$] 512c-d; BK IV, CH 7 [1011^b29-38] 531d; BK VIII, CH 5 569b-d; BK IX, CH 9 [1051^a5-13] 577a; BK X, CH 7 [1057^a16-34] 584c-d; BK XI, CH 9 [1065^b5-14] 593d-594a; CH 11 596a-d; BK XII, CH 2-3 598c-599d; CH 10 [1075^a25-34] 606a / *Soul*, BK II, CH 4 [416^a18-$^b8$] 646c-d / *Longevity*, CH 2-3 710b-711b

9 ARISTOTLE: *Generation of Animals*, BK I, CH 18 [724^a20-$^b13$] 264b-d; BK IV, CH 3 [768^a2 7] 309c / *Ethics*, BK VIII, CH 1 [1155^b2-8] 407a; CH 8 [1159^b19-23] 411d

10 GALEN: *Natural Faculties*, BK I, CH 2, 167b-d

11 NICOMACHUS: *Arithmetic*, BK I, 813d-814b; BK II, 839d-840b

14 PLUTARCH: *Agesilaus*, 482c

17 PLOTINUS: *Third Ennead*, TR VI, CH 8 111c-d / *Sixth Ennead*, TR III, CH 22 293d-294c; CH 27 296b-297a

19 AQUINAS: *Summa Theologica*, PART I, Q 23, A 1, REP 3 132c-133b; Q 58, A 7, REP 3 305c-306b; Q 62, A 7, REP 1 322d-323b; PART I-II, Q 18, A 8, REP 1 699d-700b; Q 23, A 2 724c-725c

28 HARVEY: *On Animal Generation*, 408c-d

31 SPINOZA: *Ethics*, PART III, PROP 4-6 398d-399a; PART IV, PROP 29-35 431d-434a; PART V, AXIOM 1 452c

42 KANT: *Pure Reason*, 27a; 76c-83b esp 76c-d; 91d-93c
46 HEGEL: *Philosophy of History*, INTRO, 160c-d; 165a-b; 178a-d; 179b-d

3b. Contrariety of quality in the theory of the elements or humours

7 PLATO: *Symposium*, 155d-157a / *Timaeus*, 462b-464b
8 ARISTOTLE: *Physics*, BK IV, CH 9 [217a20-26] 297a / *Heavens*, BK II, CH 3 [286a22-28] 377d / *Generation and Corruption*, BK II, CH 1-3 428b,d-431a; CH 7 [334b8-30] 435d-436b / *Metaphysics*, BK I, CH 8 [989a18-29] 507b c / *Sense and the Sensible*, CH 2-7 674a-689a,c passim
9 ARISTOTLE: *Parts of Animals*, BK II, CH 7 177c-179a; BK III, CH 7 [670b18-25] 199b; BK IV, CH 2 [677a5-b1] 206d-207b / *Generation of Animals*, BK IV, CH 1 [765b8-766b25] 306d-308a
10 HIPPOCRATES: *Ancient Medicine*, par 13-20 4c-7d
10 GALEN: *Natural Faculties*, BK II, CH 8 9 191b-199a,c
12 LUCRETIUS: *Nature of Things*, BK V [380-415] 66a-c
19 AQUINAS: *Summa Theologica*, PART I, Q 66, A 2, ANS 345d-347b; Q 91, A 1, ANS and REP 3 484a-485b
28 HARVEY: *On Animal Generation*, 435b-c
30 BACON: *Novum Organum*, BK I, APH 66, 114d-115a

3c. The opposition of motion and rest, and of contrary motions

7 PLATO: *Cratylus*, 112b / *Republic*, BK IV, 350d-351b / *Timaeus*, 453b-c; 460c-d / *Sophist*, 567a-574c / *Statesman*, 587a-589c esp 587a-b
8 ARISTOTLE: *Categories*, CH 14 [15b1-16] 21b-c / *Physics*, BK V, CH 5-6 310a-312d / *Heavens*, BK I, CH 4 362a-c / *Metaphysics*, BK IV, CH 2 [1004b28-30] 523d; BK XI, CH 12 [1068b19-25] 597c-d / *Soul*, BK I, CH 3 [406a22-27] 635c
10 GALEN: *Natural Faculties*, BK I, CH 2, 167b-d
11 NICOMACHUS: *Arithmetic*, BK II, 832c
16 COPERNICUS: *Revolutions of the Heavenly Spheres*, BK I, 517b-518a; 519b 520b
16 KEPLER: *Epitome*, BK IV, 931b
17 PLOTINUS: *Sixth Ennead*, TR III, CH 24, 295b; CH 27 296b-297a
19 AQUINAS: *Summa Theologica*, PART I, Q 10, A 4, REP 3 43b-44b; Q 18, A 1, REP 2 104c-105c; Q 53, A 3, ANS 283b-284d; Q 73, A 2, ANS 371b-d; PART I-II, Q 6, A 1 644d-646a; A 4 647b-648a; Q 9, A 4, REP 2 660a-d; Q 41, A 3 799c-800b
20 AQUINAS: *Summa Theologica*, PART III SUPPL, Q 75, A 3, ANS and REP 3-5 938a-939d; Q 84, A 3, REP 2 985d-989b
23 HOBBES: *Leviathan*, PART I, 50a
28 GILBERT: *Loadstone*, BK II, 26a-b; BK VI, 110b
30 BACON: *Novum Organum*, BK II, APH 35, 163a
31 SPINOZA: *Ethics*, PART II, AXIOM 1 378c; LEMMA 1-3 378c-379a
34 NEWTON: *Principles*, DEF III 5b; LAW I 14a

3d. The opposition of physical forces and its resolution

11 ARCHIMEDES: *Equilibrium of Planes*, BK I, POSTULATES-PROP 7 502a-504b
16 KEPLER: *Epitome*, BK V, 969a-972a
20 AQUINAS: *Summa Theologica*, PART III SUPPL, Q 84, A 3, REP 2-3 985d-989b
28 GILBERT: *Loadstone*, BK I, 11b-12d; BK II, 38a-39b; 52d-54d; 59a-d; BK III, 65a-67a
28 GALILEO: *Two New Sciences*, THIRD DAY, 209a-210a; 224d-225c; FOURTH DAY, 240a-d; 243d-249b passim
34 NEWTON: *Principles*, COROL I-II 15a-16b; BK I, PROP 57-69 111b-130b
45 LAVOISIER: *Elements of Chemistry*, PART I, 9a-12d
45 FARADAY: *Researches in Electricity*, 691b-692a; 788c-793c; 817a-b
51 TOLSTOY: *War and Peace*, BK XIII, 570d; EPILOGUE II, 678a-b
53 JAMES: *Psychology*, 105a

3e. The struggle for existence: the competition of species

6 HERODOTUS: *History*, BK III, 112d-113b
7 PLATO: *Protagoras*, 44c-45a
9 ARISTOTLE: *History of Animals*, BK IX, CH 1 [608b19] CH 2 [610b20] 134a-136b
36 SWIFT: *Gulliver*, PART II, 79a-80a
38 ROUSSEAU: *Inequality*, 334b,d 337d; 348d-349d
39 SMITH: *Wealth of Nations*, BK I, 34a
42 KANT: *Judgement*, 584d 585c
49 DARWIN: *Origin of Species*, 7b; 32a 39a,c esp 32d-33b, 36a-38a; 49d-51d passim; 52d-53b; 182d; 233d-234a / *Descent of Man*, 328b-c; 596c
54 FREUD: *General Introduction*, 573c; 592b / *Civilization and Its Discontents*, 791c-d

4. Opposition or conflict in the psychological and moral order

4a. The conflict of reason and the passions

5 EURIPIDES: *Hippolytus* [373-430] 228b-d
7 PLATO: *Phaedrus*, 120b-c; 128a-129c / *Phaedo*, 224a-226c; 230d-234c / *Republic*, BK IV, 346a-355a esp 350c-353d; BK IX, 416a-c; 425c-427b / *Laws*, BK VIII, 735b-738b
8 ARISTOTLE: *Soul*, BK III, CH 10 [433b5-12] 666b; CH 11 [434a10-15] 666d-667a / *Memory and Reminiscence*, CH 2 [453a25-31] 695c-d
9 ARISTOTLE: *Motion of Animals*, CH 11 239a-d / *Ethics*, BK I, CH 13 [1102b13-28] 348a-c; BK III, CH 1 [1111a35-b4] 357b; BK VII 395a-406a,c / *Politics*, BK III, CH 15 [1286a17-20] 484b-c; [1286a33-37] 484d

(4. *Opposition or conflict in the psychological and moral order.* 4a. *The conflict of reason and the passions.*)

12 LUCRETIUS: *Nature of Things*, BK III [307–322] 34a-b
12 EPICTETUS: *Discourses*, BK II, CH 18 161a-162b
12 AURELIUS: *Meditations*, BK II, SECT 5 257b-c; SECT 10 257d-258a; SECT 16–17 259a-d; BK III, SECT 4 260b-261a; SECT 12 262b-c; BK V, SECT 8–9 269d-270c; BK VII, SECT 55 283b-c; SECT 68–69 284c-d; BK VIII, SECT 39 288c
13 VIRGIL: *Aeneid*, BK IV 167a-186b
18 AUGUSTINE: *Confessions*, BK VI, par 18–26 40d-43a; BK VIII, par 10–24 55c-60a / *City of God*, BK IV, CH 3 190a-c; BK XIV, CH 1–5 376b,d-380b; CH 10–11 385b-387a; BK XIX, CH 15 521a-c
19 AQUINAS: *Summa Theologica*, PART I, Q 81, A 3 430c-431d; Q 95, A 2, ANS and REP 1 507c-508a; Q 111, A 2, ANS 569c-570b; PART I-II, Q 6, AA 6-7 649a-650d; Q 9, A 2 esp REP 3 658d-659c; Q 10, A 3 664d-665c; Q 17, A 7 690d-692a; Q 28, A 3, ANS 742a-d; Q 33, A 3 767a-d; Q 34, A 1, REP 1 768c-769d; Q 48, A 3 824c-825b
20 AQUINAS: *Summa Theologica*, PART I-II, Q 61, A 3, ANS 56b-57a; Q 72, A 2, REP 1,4 112b-113a; Q 77 144d-152a; Q 80, A 2 160d-161c; Q 91, A 6 212c-213c; Q 93, A 6 219d-220d; Q 94, A 6, ANS 225d-226b; PART II-II, Q 183, A 4, ANS 627d-628d; Q 186, A 4, ANS 655c-656b
21 DANTE: *Divine Comedy*, HELL, II 2c-4a; V 7a-8b
22 CHAUCER: *Troilus and Cressida*, BK IV, STANZA 82 99a / *Parson's Tale*, par 12, 503b-504a
23 HOBBES: *Leviathan*, PART I, 57d-58a; 58c-d; PART II, 105d-106a; 141a-b; 151b-c
25 MONTAIGNE: *Essays*, 5a-6c; 20d-22a; 36c-41a esp 39b-40a; 165c-167a; 200d-205b; 273b-276a; 344a-347c passim; 350d-354b; 486b-495d
26 SHAKESPEARE: *Merchant of Venice*, ACT I, SC II [11–29] 408b-c
27 SHAKESPEARE: *Hamlet*, ACT III, SC II [61–79] 49c-d / *Troilus and Cressida*, ACT II, SC II 113c-115d esp [17–50] 113d-114a, [168–182] 115b-c; ACT III, SC II [74–81] 121a / *Othello*, ACT I, SC III [330–337] 212c; ACT II, SC III [204–207] 219a / *King Lear*, ACT III, SC IV 264a-266b
30 BACON: *Advancement of Learning*, 55b-d; 66c-d; 67a-b; 78a-d
31 SPINOZA: *Ethics*, PART IV, PROP 1–18 424c-429d; PROP 59–APPENDIX, III 442b-447b; APPENDIX, XXXII 450c-d; PART V, PROP 1–20 452d-458a
32 MILTON: *Paradise Lost*, BK VIII [521–643] 243b-246a; BK XII [80–110] 321a-b
33 PASCAL: *Pensées*, 104 193a; 412–413 242a; 423 243b
35 LOCKE: *Civil Government*, CH II, SECT 13 28a-b / *Human Understanding*, BK II, CH XXI, SECT 54 192b-c; BK IV, CH XX, SECT 12 392c
35 HUME: *Human Understanding*, SECT I, DIV 3 451d
36 STERNE: *Tristram Shandy*, 239b-243a
37 FIELDING: *Tom Jones*, 109c
42 KANT: *Fund. Prin. Metaphysic of Morals*, 282b-283d; 284d-285a / *Practical Reason*, 303b-304b / *Intro. Metaphysic of Morals*, 385c-386b / *Judgement*, 483d-484b; 586a-587a
43 FEDERALIST: NUMBER 15, 65b-c
44 BOSWELL: *Johnson*, 116b
46 HEGEL: *Philosophy of History*, PART III, 312d-313a; PART IV, 321b-d
47 GOETHE: *Faust*, PART I [3217–3373] 79a-82a esp [3217–3250] 79a-b; [3835–4205] 93b-103a
49 DARWIN: *Descent of Man*, 318d-319a
52 DOSTOEVSKY: *Brothers Karamazov*, BK III, 50c-62a
53 JAMES: *Psychology*, 706b; 799a-808a; 816a-819a
54 FREUD: *Unconscious*, 433b-c / *Ego and Id*, 702c-d; 715c-716a / *Inhibitions, Symptoms, and Anxiety*, 721d-722c / *War and Death*, 760d-761a / *Civilization and Its Discontents*, 800d-801a / *New Introductory Lectures*, 819b-c; 838a-839b; 843d-845b esp 845b

4b. Conflicting emotions, humours, instincts, or habits

8 ARISTOTLE: *Metaphysics*, BK IX, CH 5 [1048a 21–24] 573c
9 ARISTOTLE: *Ethics*, BK II, CH 5–9 351b-355a,c / *Rhetoric*, BK II, CH 2–11 623b-636a passim
12 LUCRETIUS: *Nature of Things*, BK IV [1073–1120] 58a-d
18 AUGUSTINE: *Confessions*, BK VIII, par 6-8 54c-55a / *City of God*, BK XIV, CH 5–10 379c-385d
19 AQUINAS: *Summa Theologica*, PART I-II, Q 23, A 2 724c-725c; Q 31, A 8 758b-759a; Q 35, AA 3–5 774a-777a; Q 46, A 1, REP 2 813b-814a
20 AQUINAS: *Summa Theologica*, PART I-II, Q 53, A 1 19d-21a; Q 71, AA 1–2 105d-107c
21 DANTE: *Divine Comedy*, PARADISE, IV [1–27] 110d-111a
22 CHAUCER: *Wife of Bath's Prologue* [6270–6292] 267b
24 RABELAIS: *Gargantua and Pantagruel*, BK I, 8c-d
25 MONTAIGNE: *Essays*, 105c-107a; 350d-354b; 381b-c
26 SHAKESPEARE: *Romeo and Juliet*, ACT III, SC II [71–127] 304a-c
27 SHAKESPEARE: *Sonnets*, CXXIX 606a
31 SPINOZA: *Ethics*, PART III, PROP 17 401d-402a; PROP 51 411c-412a; PART IV, DEF 5 424b; AXIOM 424c; PROP 1, SCHOL–PROP 7 424d-426b; PROP 9–18 426d-429d; PROP 60 442d-443a; APPENDIX, XXI–XXV 449a-c

33 PASCAL: *Pensées*, 411 242a
42 KANT: *Fund. Prin. Mctaphysic of Morals*, 258b-c
46 HEGEL: *Philosophy of Right*, INTRO, par 17 16c; ADDITIONS, 13 118c
47 GOETHE: *Faust*, PART I [354-429] 11a-12b; [1064-1117] 26b-28a; [1322-1706] 32b-41a; [3217-3250] 79a-b; [3469-3501] 84b-85a
49 DARWIN: *Descent of Man*, 311a-314b passim, esp 311a-b, 312d-313a; 318c-319a
50 MARX: *Capital*, 293c-294a
51 TOLSTOY: *War and Peace*, BK III, 120a; BK VI, 235a-238c; 247d-249a; 265d-266b; BK VII, 292b-296a; BK VIII, 338a-339c; BK XII, 560a-562d
52 DOSTOEVSKY: *Brothers Karamazov*, BK IV, 95b-100c; BK VIII, 200c-201c
53 JAMES: *Psychology*, 704b-706b; 717a-718a; 720b; 729b; 734b-735b
54 FRLUD: *Narcissism*, 401b-c / *Instincts*, 414d-421a,c / *General Introduction*, 590a-593b; 615b-616c / *Beyond the Pleasure Principle*, 640c; 651d-654c esp 653c-d; 659b-d; 663c / *Group Psychology*, 677c-678c / *Ego and Id*, 708d-712a esp 709c-710c / *War and Death*, 758b; 766a-b / *Civilization and Its Discontents*, 789c-791d / *New Introductory Lectures*, 846b-851d

4c. Conflict as the cause of repression and as a factor in neurotic disorders

54 FREUD: *Origin and Development of Psycho-Analysis*, 6a-9a esp 7a-c, 8a-b / *Hysteria*, 65c-d; 81d-84a esp 82c; 117a / *Interpretation of Dreams*, 370b; 377b-382a esp 380a-b, 381d-382a / *Narcissism*, 406d-407c / *Repression* 422a-427a,c passim, esp 424b-d / *General Introduction*, 566a-569c esp 568d-569b; 589c-591d; 593d-594c; 611a-623b esp 614c-615a, 616b-c; 623d-624d esp 624c-d; 626d-627b; 633d-635a / *Beyond the Pleasure Principle*, 640c-d / *Group Psychology*, 690a-691c esp 691a / *Ego and Id*, 704d; 712b-715a passim / *Inhibitions, Symptoms, and Anxiety* 718a-754a,c passim, esp 719b-c, 720a-722d, 724b-725a, 726b-c, 731c-d, 746c-747b, 750a-d

4d. The conflict of loves and loyalties, desires and duties

OLD TESTAMENT: *Genesis*, 4:1-16; 22:1-12 / *Judges*, 11:30-40 / *Ruth*, 1 / *II Samuel*, 11-13 —(*D*) *II Kings*, 11-13 / *I Kings*, 11:1-13—(*D*) *III Kings*, 11:1-13
APOCRYPHA: *Wisdom of Solomon*, 9:15—(*D*) OT, *Book of Wisdom*, 9:15 / *Susanna*, 19-24—(*D*) OT, *Daniel*, 13:19-24
NEW TESTAMENT: *Matthew*, 8:21-22; 10:34-37; 12:46-50; 26:41 / *Mark*, 14:38 / *Romans*, 6:12-14; 7-8; 13:13-14 / *Galatians*, 5:16-26 / *Philippians*, 1:21-26 / *James*, 1:12-17; 4:1-2 / *I Peter*, 2:11
4 HOMER: *Iliad*, BK VI [369-502] 43d-45a
5 AESCHYLUS: *Seven Against Thebes* [1011-1084] 38b-39d / *Agamemnon* [184-247] 54a-c / *Choephoroe* [885-930] 78d-79b
5 SOPHOCLES: *Antigone* 131a-142d esp [1-99] 131a-132a, [162-210] 132c-d, [441-470] 134d-135a / *Philoctetes* 182a-195a,c esp [895-1292] 190a-193c
5 EURIPIDES: *Hippolytus* [373-430] 228b-d / *Phoenician Maidens* [1625-1746] 392b-393c
5 ARISTOPHANES: *Lysistrata* 583a-599a,c esp [706 780] 592b-593b, [1072-1188] 596d-597d
6 HERODOTUS: *History*, BK VI, 197a-b; 201d-202c; BK VII, 223c-d
7 PLATO: *Symposium*, 153b-157a / *Laws*, BK VIII, 737a-c
12 LUCRETIUS: *Nature of Things*, BK IV [1121-1140] 58d-59a
12 EPICTETUS: *Discourses*, BK IV, CH 2 223d-224b
13 VIRGIL: *Aeneid*, BK IV [333-361] 176a-177a
14 PLUTARCH: *Poplicola*, 77d-79c / *Fabius*, 152b-d / *Coriolanus*, 189d-191c / *Timoleon*, 196b-198b / *Agis*, 654c-655a
17 PLOTINUS: *Third Ennead*, TR V, CH I 100c-101c
20 AQUINAS: *Summa Theologica*, PART II-II, Q 24, A 12 499c-500d
21 DANTE: *Divine Comedy*, PURGATORY, X [70-93] 68a-b
22 CHAUCER: *Troilus and Cressida*, BK IV 88b-120a esp STANZA 76-92 98b-100b, STANZA 223-229 117b-118b / *Franklin's Tale* 351b-366a esp [11,767-854] 363b-365a
23 HOBBES: *Leviathan*, PART III, 240a-c; 245c-246a,c
25 MONTAIGNE: *Essays*, 200d-205b; 381a-388c; 467b-470a; 486b-488b
26 SHAKESPEARE: *Two Gentlemen of Verona*, ACT II, SC IV [192-214] 238b; SC VI 239a-c; ACT III, SC I [4-21] 240c / *Love's Labour's Lost*, ACT IV, SC III 268b-272c / *Romeo and Juliet* 285a-319a,c esp PROLOGUE 285a-b, ACT III, SC II [64 131] 303d-304c, SC V 307a-309d / *Richard II*, ACT V, SC II [85-117] 347b-c; SC III [23-146] 348a-349c / *Midsummer-Night's Dream*, ACT I, SC I [22 -127] 352d-353d / *Much Ado About Nothing*, ACT II, SC I [182 189] 509a-b / *Julius Caesar*, ACT III, SC II [11-44] 583d-584a
27 SHAKESPEARE: *Troilus and Cressida* 103a-141a,c esp ACT IV, SC II-IV 126d-129d / *Othello*, ACT I, SC III [175-189] 210d-211a / *Macbeth*, ACT I, SC VII [1-28] 289b-c / *Antony and Cleopatra* 311a-350d esp ACT I, SC II [92-204] 313b-314c / *Coriolanus*, ACT IV, SC II-III 377d-379a
29 CERVANTES: *Don Quixote*, PART I, 120b-137d
30 BACON: *Advancement of Learning*, 24b
32 MILTON: *Samson Agonistes* [843-870] 358a-b; [1003-1007] 361b
33 PASCAL: *Pensées*, 104 193a
37 FIELDING: *Tom Jones*, 77c-78b; 79d-80b; 126c-127c
42 KANT: *Fund. Prin. Metaphysic of Morals*, 259a

(4. Opposition or conflict in the psychological and moral order. 4d. The conflict of loves and loyalties, desires and duties.)

48 MELVILLE: *Moby Dick*, 394a-397a
49 DARWIN: *Descent of Man*, 310d-314c; 318d-319a
51 TOLSTOY: *War and Peace*, BK VI, 273c-274a,c; BK VII, 291a-292b; 301b-302d; BK VIII, 327a-329c; BK IX, 365d-366a; BK XI, 490a-493d; 520a-521b; EPILOGUE I, 669b-c
52 DOSTOEVSKY: *Brothers Karamazov*, BK III, 58d-59a; BK IV, 95b-100a; BK X, 282b-283c; EPILOGUE, 402a-404c
53 JAMES: *Psychology*, 199b-201b; 293b; 791a-798b passim; 824a-b
54 FREUD: *General Introduction*, 452c-d; 467b-476a,c passim, esp 472d-475a / *Group Psychology*, 694c-695b / *War and Death*, 757c-759d; 764d-766d / *Civilization and Its Discontents*, 780d-781d; 783c-789b esp 783c-784d, 788d-789a; 792a-802a,c passim / *New Introductory Lectures*, 853a-b

4e. Conflict in human life: opposed types of men and modes of life

OLD TESTAMENT: *Genesis*, 4:1-8; 25-27 / *I Kings*, 8:53—*(D) III Kings*, 8:53 / *Jeremiah*, 12:1-3—*(D) Jeremias*, 12:1-3
APOCRYPHA: *Ecclesiasticus*, 33:10-15 esp 33:14—*(D)* OT, *Ecclesiasticus*, 33:10-15 esp 33:15
NEW TESTAMENT: *Matthew*, 5-7; 25 / *Mark*, 4:1-20 / *Luke*, 8:4-15 / *Acts*, 16:19-23 / *Romans*, 6:12-14; 7:8; 13:13-14 / *Ephesians* / *I Thessalonians*, 3:11-4:12—*(D) I Thessalonians*, 3:11-4:11 / *I Timothy*, 5:5-6 / *II Timothy*, 3 / *Hebrews*, 11:24-26 / *I Peter*, 2:1-5:11 esp 3:12
4 HOMER: *Iliad*, BK III [191-224] 20d-21b
5 EURIPIDES: *Ion* [585-647] 287d-288b / *Hippolytus* 225a-236d
5 ARISTOPHANES: *Clouds* [882-1114] 499b-502b
6 HERODOTUS: *History*, BK VII, 232d-233d; 253b-254a; BK VIII, 264c; BK IX, 305d-306a
6 THUCYDIDES: *Peloponnesian War*, BK I, 366b-367a; BK II, 396d-397a
7 PLATO: *Phaedo*, 223d-225a / *Republic*, BK I, 308b-309b; BK III, 340b-341a; BK VIII-IX 401d-427b / *Theaetetus*, 528c-531a / *Statesman*, 605d-608d / *Philebus* 609a-639a,c / *Laws*, BK V, 690a-c / *Seventh Letter*, 806a; 806d
9 ARISTOTLE: *Ethics*, BK I, CH 5 340d-341b; BK II, CH 3 350a-c; BK VII, CH 14 [1154^{b}20-30] 406c; BK X, CH 7-8 431d-434a / *Rhetoric*, BK II, CH 12-17 636a-639a
10 HIPPOCRATES: *Airs, Waters, Places*, par 12-24 14b-19a,c
12 LUCRETIUS: *Nature of Things*, BK II [1-61] 15a-d; BK III [59-86] 30d-31b; [830-1094] 40c-44a,c; BK V [1105-1135] 75c-d; BK VI [1-41] 80a-d
12 EPICTETUS: *Discourses*, BK I, CH 3 108b-c; CH 29 134d-138a; BK II, CH 11 150a-151b; BK III, CH 10 185d-187a; CH 15 190a-191a; CH 22 195a-201a; BK IV, CH 6 230b-232c; CH 8 235b-237d
13 VIRGIL: *Aeneid*, BK IX [590-620] 295a-b
14 PLUTARCH: *Themistocles*, 99b-c / *Marcellus*, 254c-256b / *Demetrius*, 726a-d
17 PLOTINUS: *First Ennead*, TR III, CH 1-3 10a-11a / *Fourth Ennead*, TR IV, CH 18 166d-167b / *Fifth Ennead*, TR IX, CH 1-2 246c-247b
18 AUGUSTINE: *Confessions*, BK X, par 39 81b-c / *Christian Doctrine*, BK III, CH 14 663c-d
19 AQUINAS: *Summa Theologica*, PART I, Q 92 488d-491d; Q 93, A 4, REP 1 494c-495b; Q 96, AA 3-4 512a-513c; Q 99, A 2 520a-d; Q 112, A 1, REP 3 571d-573a; Q 113, A 2, REP 3 576d-577d; Q 115, A 3, REP 4 588c-589c; PART I-II, Q 8, A 1, REP 1-2 655b-656a; Q 19, A 10, ANS and REP to CONTRARY 3 710b-711d; Q 46, A 5, ANS and REP 1 815d-816d
20 AQUINAS: *Summa Theologica*, PART II-II, Q 25, A 7 506a-d; Q 29, A 3, REP 2 531d-532c; QQ 37-42 570c-584d; Q 179 606a-607c; PART III SUPPL, Q 81, A 3 966a-c; Q 82, A 3, REP 4 971a-972d; Q 96, A 11 1063d-1064d
22 CHAUCER: *Prologue* 159a-174a / *Tale of Melibeus*, par 30-31, 413b-414a
23 MACHIAVELLI: *Prince*, CH XVIII, 25a-b
23 HOBBES: *Leviathan*, PART I, 66d-67a; 84c-d; PART II, 154a; 155d; CONCLUSION, 279a-c
24 RABELAIS: *Gargantua and Pantagruel*, BK I, 62b-63c; BK III, 189c-191a
25 MONTAIGNE: *Essays*, 43d-47a; 91d-98b esp 93b-94a; 103c-104a; 150c-151a; 159a-162c; 167a-169a; 200d-205b; 235a-236a; 278a-279c; 281a-284c; 318a-319b; 326b-327d; 406a-408b; 445a-c; 446a-450a; 458b-c; 492b-493a; 524b-d; 528c-529b
26 SHAKESPEARE: *Love's Labour's Lost*, ACT I, SC I [1-162] 254a-256a / *Midsummer-Night's Dream*, ACT I, SC I [67-78] 353a-b / *Merchant of Venice* 406a-433d esp ACT I, SC I [41-94] 406d-407b, SC III 409c-411b, ACT III, SC I [25-76] 419a-b / *1st Henry IV* 434a-466d esp ACT I, SC III 437d-440d / *2nd Henry IV* 467a-502d esp ACT IV, SC IV-V 492d-496d / *Much Ado About Nothing*, ACT I, SC III [1-41] 506d-507a; ACT II, SC I [345-363] 510d / *Julius Caesar*, ACT I, SC II 569b-572c / *As You Like It*, ACT II, SC I [1-20] 603c-d; ACT IV, SC I [1-41] 617a-c
27 SHAKESPEARE: *Twelfth Night*, ACT II, SC III-IV 8c-11d / *Hamlet* 29a-72a,c esp ACT II, SC II [575-616] 46b-c, ACT III, SC I [56-90] 47c-d, SC II [58-79] 49c-d, [360-389] 52d-53a, ACT IV, SC IV [32-66] 59a-c / *Troilus and Cressida* 103a-141a,c esp ACT I, SC III [17-54] 108b-c, ACT II, SC I-II 112b-115d / *Othello*, ACT I, SC III 208d-213a / *Antony and Cleopatra* 311a-350d esp ACT I, SC IV 315d-316d / *Coriolanus*, ACT IV, SC VII [27-57] 384c-d / *Timon of Athens*, ACT I, SC I [175-293] 395c-396d; ACT IV, SC III [197-398] 413a-415a
29 CERVANTES: *Don Quixote* esp PART I, 49c-50b, 113b-115d, 145b-147d, PART II, 228a-d

30 BACON: *Advancement of Learning*, 18a-b; 20c-d; 69d-76a passim; 76d-77c / *Novum Organum*, BK I, APH 42 109d; APH 53–58 111c-112b
31 SPINOZA: *Ethics*, PART III–IV 395a-450d passim
32 MILTON: *Paradise Lost*, BK II [496–505] 122a
33 PASCAL: *Pensées*, 125–183 195b-204b
36 SWIFT: *Gulliver*, PART I, 21b-23a
38 ROUSSEAU: *Social Contract*, BK III, 416c-417a
40 GIBBON: *Decline and Fall*, 89d; 191c-194a; 398d-399a; 409d-410a; 593b,d-599a passim; 632b-633d
43 MILL: *Liberty*, 290a-291d; 293b-302c; 303d-306c passim / *Representative Government*, 346c-348c
46 HEGEL: *Philosophy of Right*, PART I, par 39 21d; PART II, par 139 48d-49b; PART III, par 256 79d-80a; ADDITIONS, 128–129 137b-c / *Philosophy of History*, INTRO, 192a-194a; PART I, 232d-233a; PART II, 276d-277a; 280b-281b; PART III, 289d; PART IV, 318c-319b
47 GOETHE: *Faust*, PRELUDE [33]–PART I [429] 2a-12b; PART I [522–601] 15a-16b; [1064–1117] 26b-28a; [3217–3250] 79a-b; [3469–3501] 84b-85a; PART II [5199–5290] 128b-130b
48 MELVILLE: *Moby Dick* esp 39b-40a, 79a-82a, 83a-91a, 122b-125a, 285d-288a, 303a, 317a-321a, 370b-371b, 394a-397a
49 DARWIN: *Descent of Man*, 318d-319a
50 MARX-ENGELS: *Communist Manifesto* 415a-434d passim
51 TOLSTOY: *War and Peace*, BK I, 15a-b; BK III, 131c-135c; BK VI, 238c-243d; 244b-c; 249a; 260a-262a; BK VII, 284c-285a; BK VIII, 303d-304b; 336b-337d; BK IX, 358b-365c passim, esp 362d-363a; BK X, 403a-406c; 426a-430b; BK XI, 480a-482b; 515c-521c; BK XIII, 577a-578b; BK XIV, 605b-d; BK XV, 630c-631a
52 DOSTOEVSKY: *Brothers Karamazov* esp BK I–IV, 1a-88a, BK VI 146b,d-170d, BK XI, 337a-346a
53 JAMES: *Psychology*, 199b-204b; 800a-807b
54 FREUD: *Interpretation of Dreams*, 246c-247c / *General Introduction*, 501d-504b; 616b-c / *Beyond the Pleasure Principle*, 640b-d / *Group Psychology*, 689d-690c / *Ego and Id* 697a-717a,c / *Inhibitions, Symptoms, and Anxiety*, 746c-747a / *Civilization and Its Discontents*, 771c-802a,c esp 772a-c, 776b-777a, 780d-781d, 783c-784c, 787a-789a, 790a-791d, 796a-c, 799a-802a,c / *New Introductory Lectures*, 830a-853b esp 830b-832c, 837b-839b, 849d-853b

5. Conflict in society and history

5*a*. Competition in commerce and the rivalry of factions in politics

6 THUCYDIDES: *Peloponnesian War*, BK III, 434c-438b; BK IV, 458d-459c; BK V, 502d-504b; BK VIII 564a-593a,c passim, esp 568d-569a, 575c-576c, 577b-d, 579c-583c, 584b-585a, 585d-586b, 587a-590c
9 ARISTOTLE: *Ethics*, BK IX, CH 6 420c-421a / *Politics*, BK V, CH 9 [1309^{b}14–1310^{a}12] 511d-512b / *Athenian Constitution*, CH 5 554d-555a; CH 8, par 5 556c
14 PLUTARCH: *Solon*, 68d; 75c-d / *Pericles*, 126c-d / *Agesilaus*, 482a-c / *Pompey*, 521c-d
15 TACITUS: *Annals*, BK VI, 97b-c / *Histories*, BK II, 224d-225a
23 MACHIAVELLI: *Prince*, CH IX, 14c-d
23 HOBBES: *Leviathan*, PART II, 103d-104a; 121b-d; 148d-149b; 150b-151a; 152b-d
25 MONTAIGNE: *Essays*, 42a-b
26 SHAKESPEARE: *1st Henry VI* 1a-32a,c / *2nd Henry VI* 33a-68d / *3rd Henry VI* 69a-104d / *Richard III* 105a-148a,c esp ACT V, SC V [15–41] 148a,c / *Richard II* 320a-351d / *1st Henry IV* 434a-466d / *2nd Henry IV* 467a-502d
27 SHAKESPEARE: *Troilus and Cressida*, ACT I, SC III [75–137] 108d-109c
38 MONTESQUIEU: *Spirit of Laws*, BK III, 9d; BK XIX, 142b-143a; BK XX, 148d-149a
39 SMITH: *Wealth of Nations*, BK I, 23c-27b esp 25c-26c; 42a,c; 51a-62a; BK II, 142c-d; BK IV, 192c-201d esp 193a-194b, 201b-d; 225d-228a; 269d-271a; BK V, 420c-d
40 GIBBON: *Decline and Fall*, 652b-655c
41 GIBBON: *Decline and Fall*, 572c-d
43 FEDERALIST: NUMBER 7, 42d-43c; NUMBER 10, 49c-51b; NUMBER 43, 141d-142d; NUMBER 50–51 161d-165a passim; NUMBER 60, 185b-187a; NUMBER 70, 212b-c
43 MILL: *Liberty*, 289c-d; 312b-313a / *Representative Government*, 361b-362b; 366a-370a; 371c-372a; 376a-c; 412b-413a
44 BOSWELL: *Johnson*, 124d-125d
46 HEGEL: *Philosophy of Right*, PART III, par 289 97b-d; par 304 102a / *Philosophy of History*, PART II, 275b-d; 279b; 283b-c; PART III, 285d; 298c-d; PART IV, 336a-c; 356c-357a; 366d-367a
50 MARX: *Capital*, 130c; 171d-176a esp 174b-c; 270c-271c passim; 308d-311a esp 310b; 316d-317c; 371c-377a passim, esp 372c; 379a-383d
50 MARX-ENGELS: *Communist Manifesto*, 425b

5*b*. The class war: the opposition of the rich and the poor, the propertied and the propertyless, capital and labor, producers and consumers

5 EURIPIDES: *Suppliants* [229–245] 260b-c
6 HERODOTUS: *History*, BK VI, 203a-b; BK VII, 243b-c
6 THUCYDIDES: *Peloponnesian War*, BK III, 423a-c; 434c-438c; BK IV, 458d-459c; 463a-465c; 467a-b; 480a-c; BK V, 482d-483a; 502d-504b; BK VI, 520a-d; 524d-525d; 533a-c; BK VIII 564a-593a,c passim, esp 568d-569a, 575c-576c, 577b-d, 579c-583c, 584b-585a, 585d-586b, 587a-590c
7 PLATO: *Republic*, BK IV, 343c-d; BK VIII, 405c-416a

(5. *Conflict in society and history.* **5b. The class war: the opposition of the rich and the poor, the propertied and the propertyless, capital and labor, producers and consumers.**)

9 ARISTOTLE: *Politics*, BK II, CH 6 [1265^{b}6–12] 461a; CH 7 461d-463c; CH 9 [1269^{a}33–^{b}12] 465c-d; BK III, CH 10 [1281^{a}11–29] 478d-479a; BK IV, CH 4 489b-491d passim, esp [1290^{a}30–^{b}20] 489b-d, [1291^{b}5–13] 490d; CH 11-12 495b-497b; BK V, CH 3 [1303^{b}5–8] 505a; CH 4 [1304^{b}1–6] 506a; CH 5 [1304^{b}18]–CH 6 [1305^{b}22] 506b-507c; CH 7 [1306^{b}22–1307^{a}2] 508c-d; CH 9 [1310^{a}19–25] 512c; CH 10 [1310^{b}9–15] 512d-513a; CH 12 [1316^{a}39–^{b}22] 519c-d / *Athenian Constitution*, CH 2-6 553a-555c

14 PLUTARCH: *Lycurgus*, 36a-37c / *Solon*, 68d-71c / *Camillus*, 117c-121a,c / *Coriolanus*, 176b-184c / *Agis* 648b,d-656d / *Tiberius Gracchus*, 674c-681a,c / *Caius Gracchus* 681b,d-689a,c

15 TACITUS: *Annals*, BK VI, 97b / *Histories*, BK II, 224d-225a

23 MACHIAVELLI: *Prince*, CH IX, 14c-d

27 SHAKESPEARE: *Coriolanus*, ACT I, SC I [1–167] 351a-353a

36 SWIFT: *Gulliver*, PART IV, 154b-155b

38 MONTESQUIEU: *Spirit of Laws*, BK XI, 77b-83c

38 ROUSSEAU: *Political Economy*, 381c-382b / *Social Contract*, BK IV, 429c-d

39 SMITH: *Wealth of Nations*, BK I, 28a-d; 55d-56a; 61c-62d; BK IV, 239c-240a; 243b,d-244a; 279b-288c esp 287d-288c; BK V, 309a-311c

40 GIBBON: *Decline and Fall*, 126d-127c; 144a-d; 501b-502c

41 GIBBON: *Decline and Fall*, 574b-582b passim

43 FEDERALIST: NUMBER 10, 50b-51b; NUMBER 35, 113b-114a; NUMBER 36, 114c-115a; NUMBER 60, 185b-186a

43 MILL: *Representative Government*, 345c-346a; 366d-367b; 369b-370a / *Utilitarianism*, 473b-c

46 HEGEL: *Philosophy of Right*, PART III, par 244 77c; ADDITIONS, 149 140d-141a / *Philosophy of History*, INTRO, 193b-c; PART I, 250a-c; PART II, 263b-d; 275b-276a; PART III, 287d-288b; 295d-297a; PART IV, 335a-336c; 356c-357a

50 MARX: *Capital*, 6c-11d passim, esp 7b, 8a-9c; 63b-c; 111c-146c esp 113c, 115c, 130a-131a, 134c-d, 141b-c, 143a-c, 145a-146c; 209c-215a; 262a; 282d-286a passim; 294b-295a; 354a-368b esp 354c-355b, 356c-358a, 366a-b, 367c-368b; 377c-378d

50 MARX-ENGELS: *Communist Manifesto* 415a-434d esp 415b-416d, 419b,d-420a, 422b-425c, 428d-429c, 434c-d

52 DOSTOEVSKY: *Brothers Karamazov*, BK VI, 165b-166a

54 FREUD: *New Introductory Lectures*, 882c-d; 884a

5c. The inevitability of civil strife and war between states

5 ARISTOPHANES: *Peace* 526a-541d esp [195–222] 528b-c, [1061–1126] 538a-539a

6 THUCYDIDES: *Peloponnesian War*, BK I, 384c-386c; BK III, 436c-438b esp 436d-437d; BK VI, 518a-520d

7 PLATO: *Republic*, BK II, 318d / *Laws*, BK I, 640d-641a; BK VIII, 732b

9 ARISTOTLE: *Politics*, BK II, CH 6 [1265^{a}20–27] 460c; CH 7 [1267^{a}21–36] 463a; BK VII, CH 6 531b-d; CH 11 [1330^{b}1–1331^{a}18] 535a-d; CH 14 [1333^{a}41–1334^{a}11] 538b-d

14 PLUTARCH: *Demetrius*, 727d

23 MACHIAVELLI: *Prince*, CH III, 5c; CH XIV, 21b; CH XVIII, 25a-b; CH XXI, 32a-d

23 HOBBES: *Leviathan*, PART I, 76c-d; 84c-86b; PART II, 114b-c; 116c-d; 157a; 159c

32 MILTON: *Paradise Lost*, BK II [496–505] 122a

36 SWIFT: *Gulliver*, PART II, 76b-78b

38 MONTESQUIEU: *Spirit of Laws*, BK I, 2d-3a; BK X, 61b,d-62b

38 ROUSSEAU: *Inequality*, 324c; 355b-c / *Socia Contract*, BK II, 403c-404a

42 KANT: *Science of Right*, 452a-458a,c esp 457a 458a,c / *Judgement*, 504a-b; 586a-587a

43 FEDERALIST: NUMBER 3 10 33b-53a passim; NUMBER 16, 68d; NUMBER 23, 85b; NUMBER 24, 88d-89c passim; NUMBER 28, 96c; NUMBER 34, 110a-d; NUMBER 41, 132c-135a passim

46 HEGEL: *Philosophy of Right*, PART III, par 333–334 109b-c / *Philosophy of History*, PART II, 278c-279b

50 MARX-ENGELS: *Communist Manifesto*, 428a-b

51 TOLSTOY: *War and Peace*, BK I, 12d-13a; BK IX, 342a-344b

53 JAMES: *Psychology*, 717a-b

54 FREUD: *War and Death*, 755c-757a esp 755c; 766c-d / *Civilization and Its Discontents*, 787a-788c

5d. Opposition or strife as a productive principle or source of progress

18 AUGUSTINE: *City of God* 129a-618d esp BK I, PREF 129a-d, CH 36 149c-d, BK II, CH 2-3 150c-151c, BK IV, CH 33 206c-d, BK V, CH 11–26 216c-230a,c, BK XI, CH 1 322b,d-323a, CH 18 331d-332a, BK XII, CH 21 357a-b, BK XIV, CH 28–BK XV, CH 1 397a-398c, BK XV, CH 21-22 415b-416c, BK XVIII, CH 1–2 472b,d-473d, BK XIX, CH 5–7 513d-515c

23 HOBBES: *Leviathan*, PART II, 100a-c

38 ROUSSEAU: *Inequality*, 338c-339b

39 SMITH: *Wealth of Nations*, BK III, 170c-173b

40 GIBBON: *Decline and Fall*, 633a-c

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43 MILL: *Representative Government*, 376a-c; 387c-d

46 HEGEL: *Philosophy of Right*, PART III, par 324 107a-d / *Philosophy of History*. INTRO, 178a-179c; 187d-188b; 205d-206a,c; PART I, 235d-

236a; PART II, 260b-c; 274a-275a; 279c-281b; PART IV, 316a-b; 321b-d; 333d-334d; 346a-c
49 DARWIN: *Descent of Man*, 320b-323a passim; 328b-c; 350d-351b; 596c
50 MARX: *Capital*, 377c-378d
50 MARX-ENGELS: *Communist Manifesto* 415a-434d esp 419b,d-425b
51 TOLSTOY: *War and Peace*, BK IX, 342a-344b; EPILOGUE I, 646b-c
53 JAMES: *Psychology*, 717a-b
54 FREUD: *General Introduction*, 545d / *Beyond the Pleasure Principle*, 654a-c / *Civilization and Its Discontents*, 787a-788d; 802a,c / *New Introductory Lectures*, 882c-884c

CROSS-REFERENCES

For: Other considerations of the opposition of terms and propositions, or of opposition in reasoning and argument, *see* DIALECTIC 3b–3d; IDEA 4c; JUDGMENT 7a; NECESSITY AND CONTINGENCY 4c(1); REASONING 5c; SAME AND OTHER 3a(2).

The distinction between dichotomous division and the differentiation of a genus as methods of definition, *see* DEFINITION 2a–2b.

Discussions of the law of contradiction as a principle of thought and of being, *see* LOGIC 1a; METAPHYSICS 3c; PRINCIPLE 1c; TRUTH 3c; and for the various ways in which dialectic is concerned with opposition, *see* DIALECTIC 3a–3d.

The opposition of being and nonbeing, one and many, same and other, *see* BEING 1; DIALECTIC 3a; ONE AND MANY 1a, 1c; SAME AND OTHER 2e; UNIVERSAL AND PARTICULAR 1.

The theory of synthesis or the reconciliation of opposites, *see* DIALECTIC 3d; HISTORY 4a(3); IDEA 1f; LIBERTY 6a; MIND 1f, 10f–10f(2); PROGRESS 1a; STATE 2a(3).

The role of opposition in nature, *see* CHANGE 2b, 4; ELEMENT 3b; EVOLUTION 5a; MECHANICS 6d(3); QUALITY 4a–4b.

Conflict in human nature and the life of man, *see* DESIRE 3d, 4a; DUTY 6, 8; EMOTION 4a; LOVE 3c; MAN 5–5a; MIND 9b; ONE AND MANY 3b(5); and for conflict in society and history, *see* DEMOCRACY 5b(4); LABOR 7c–7c(1); NECESSITY AND CONTINGENCY 5d; PROGRESS 1a; REVOLUTION 5a; STATE 5d–5d(2); WAR AND PEACE 2c, 7; WEALTH 4f.

ADDITIONAL READINGS

Listed below are works not included in *Great Books of the Western World*, but relevant to the idea and topics with which this chapter deals. These works are divided into two groups:

I. Works by authors represented in this collection.
II. Works by authors not represented in this collection.

For the date, place, and other facts concerning the publication of the works cited, consult the Bibliography of Additional Readings which follows the last chapter of *The Great Ideas.*

I.

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HEGEL. *Science of Logic*, VOL I, BK II, SECT I, CH 2
——. *Logic*, CH 8, par 115–122
MARX. *The Poverty of Philosophy*

II.

ERIGENA. *De Divisione Naturae*, BK I
NICOLAS OF CUSA. *De Docta Ignorantia*
SUÁREZ. *Disputationes Metaphysicae*, IV (6), VI (9–10), XXVI (6), XLII (6), XLV
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W. HAMILTON. *Lectures on Metaphysics and Logic*, VOL II (14)
EMERSON. "Compensation," in *Essays*, I
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C. S. PEIRCE. *Collected Papers*, VOL I, par 322–336, 457–461
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——. *Science and Philosophy*, 5
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SHELDON. *Strife of Systems and Productive Duality*
M. R. COHEN. *Reason and Nature*, BK I, CH 4 (5)
OGDEN. *Opposition*
DEWEY. *Logic, the Theory of Inquiry*, CH 10
B. RUSSELL. *Introduction to Mathematical Philosophy*, CH 14
——. *An Inquiry into Meaning and Truth*, CH 20

Chapter 66: PHILOSOPHY

INTRODUCTION

THE difficulties which attend the consideration of any great idea—by philosophers or others—appear with peculiar force in the traditional discussion of philosophy itself. The word "philosophy" not only varies in its descriptive significance, now designating one part of learning, now another, and sometimes even an attitude of mind or a way of life; but it also varies as a term of evaluation. It is seldom used without expressing either praise or dispraise of the methods and accomplishments of philosophy, or of the calling and character of the philosopher.

On the descriptive side the meaning of the word ranges from a conception of philosophy which covers *all* branches of scientific knowledge and which contrasts philosophy with poetry, history, and religion, to a conception of philosophy in which the primary point is its contrast to science and its association with poetry and religion as works of vision, speculation, or belief rather than of knowledge.

On its evaluative side, the word "philosophy" sometimes eulogizes the love and search for truth, the pursuit and even the attainment of wisdom. At the other extreme, it derogates vain learning, idle disputation, and the dogmatism of unsupported opinion. At one time, the good name of the philosopher stands in contrast to the questionable reputation of the sophist. At another, "philosopher" carries almost the same invidious connotation as "sophist." The dismissal of philosophy as useless, or at best ornamental, in the practical affairs of society is sharply opposed to the vision of an ideal state which can come to pass only if philosophers are kings, or kings philosophers.

THESE SHIFTS IN the meaning of the words "philosophy" and "philosopher" record crises in the history of western thought. They reflect the characteristic formations of our culture in its major epochs.

The great books of antiquity, for example, seem to give no intimation of a division between science and philosophy. Particular bodies of knowledge, such as physics or mathematics, are indifferently regarded as sciences or branches of philosophy. The crown of knowledge is wisdom, approached as one rises in the hierarchy of knowledge to the highest science or the first philosophy. Aristotle and Plato may disagree in naming or defining the type of knowledge which deserves to be called wisdom, yet for both it is the ultimate attainment of philosophical inquiry or scientific work.

The differences between Plato and Aristotle discussed in the chapters on DIALECTIC and METAPHYSICS—the one using "dialectic" as the name for the supreme form of knowledge, the other using "theology" to name the summit of the sciences—do not affect their agreement that the philosopher is a man of knowledge, not opinion, and that his ultimate goal is wisdom.

If there is any distinction in antiquity between science and philosophy, it seems to find expression in the sense in which Socrates speaks of philosophy as the love of wisdom, implying thereby its pursuit rather than its attainment. A man would not be called a scientist in a particular field—mathematics, let us say—unless he actually had some mathematical knowledge; but a man who is not actually wise can be called a philosopher by virtue of his effort to become wise. Apart from this point of distinction, the Greeks tend to identify philosophy with the fundamental sciences, which somehow yield speculative or practical wisdom.

Considering the whole of human learning, all its arts and disciplines, we see that the things the ancients distinguish from philosophy are poetry, history, and the particular productive

arts or crafts. Here again Plato and Aristotle do not make the distinction in the same terms. Plato compares the poet unfavorably with the philosopher in the *Republic*. The poet is an imitator of imitations and moves on the level of images and beliefs, whereas the philosopher rises above the imagination to the level of ideas which are the only true objects of knowledge. Aristotle, on the other hand, seems to pay poetry a compliment when in the *Poetics* he says that it is more philosophical than history because it deals with the universal rather than the particular. These attitudes toward poetry in relation to philosophy are somewhat reversed by the fact that for Plato myth and poetry provide materials from which philosophical insights can sometimes be distilled, whereas for Aristotle sense-experience is the source from which, by induction, the principles or axioms of philosophical knowledge are obtained. Despite these differences their accord on the supremacy of the philosopher remains unaffected.

More than poetry and history—and all the knowledge that can be applied productively—philosophy represents the highest use of man's faculties. On this Aristotle and Plato seem to be agreed, even though Aristotle distinguishes the philosophical from the political life and assigns the most perfect happiness to the contemplative activity of the philosopher, whereas Plato—in the *Republic* at least—brings the philosopher back to the shadows of the cave after he has seen the light of truth itself, so that he can put his wisdom to practice in the government of his less fortunate fellow man.

THE PRACTICE OF philosophy seems to become, for the Roman writers, more important than the content of philosophy as a body of doctrine. "What is that which is able to conduct a man?" asks Marcus Aurelius. "One thing and only one, philosophy." It keeps the inner man "free from violence and unharmed, superior to pains and pleasures, doing nothing without a purpose." It enables him to "accept all that happens and all that is allotted . . . and finally to wait for death with a cheerful mind, as being nothing else than a dissolution of the elements of which every living being is compounded." To Aurelius his imperial court is like a stepmother to whom one must be dutiful, philosophy like a mother from whom one gains solace and help. "Return to philosophy frequently and repose in her," he tells himself, so that "what thou meetest with in the court appears to thee tolerable, and thou tolerable in the court."

The Stoic conception of philosophy as a moral discipline and as a consolation creates that sense of the word in which the familiar injunction to a person in distress—"Be philosophical"—carries the same meaning as "Be stoical." Philosophy provides only peace of mind, not worldly riches or external power. "Philosophy does not promise to secure to man anything outside himself," says Epictetus. Nor does it fulfill its promise of inner strength without stern resolution to withdraw desire from the goods of fortune.

"Do you suppose that you can be a philosopher if you do as you do now?" Epictetus asks. "Do you suppose that you can eat and drink as you do now, and indulge your anger and displeasure just as before? No, you must sit up late, you must work hard, conquer some of your desires. . . When you have carefully considered these drawbacks, then come to us . . . if you are willing to pay this price for peace of mind, freedom, tranquility." Do not try to be "first a philosopher, then a tax-collector, then an orator, then one of Caesar's procurators. These callings do not agree . . . You must be busy either with your inner man, or with things outside, that is, you must choose between the position of a philosopher and that of an ordinary man."

There seems to be no difference between the Stoic and Epicurean conception of philosophy. Lucretius praises Epicurus, "thanks to whom sweet solaces of life soothe the mind," for as soon as his philosophy "begins to proclaim aloud the nature of things, the terrors of the mind fly away."

But for Lucretius philosophy achieves this boon not merely by curbing the passions and quieting desires, but also, and primarily, by the truth of its teachings about the constitution of the world and the causes of things. Nor is it merely that the philosophical mind is able "to dwell in the calm high places, firmly embattled on the heights by the teaching of the wise, whence you can look down on others, and see

them wandering hither and thither, going astray as they seek the way of life." Philosophy provides a more specific remedy for the deepest of human ills by "freeing the mind from the close bondage of religion."

Men fear the thunderbolts of the gods, their intervention in the course of nature and human affairs, and the punishments of the after-life. Before Epicurus taught them the mortality of the soul and the atomic determination of all things, "the life of man lay foul to see and grovelling upon the earth, crushed by the weight of religion." His teaching concerning "what can come to be and what cannot, and in what way each thing has its power limited," rids the mind of the terrors fostered by religion. This "darkness of mind must needs be scattered . . . by the outer view and the inner law of nature."

EXCEPT FOR Lucretius, the triumph of philosophy over religion does not seem to be central to ancient conceptions of philosophy's contribution to the mind and life of man. In the pagan world, religious belief is either combined with philosophy to constitute the worship of the gods, which seems to be Plato's view in the *Laws*; or it represents the superstitions of the ignorant as opposed to the sophistication of the educated. Gibbon describes the rift between religion and philosophy not as a matter of intellectual controversy, but as a division of society into classes lacking or having the benefits of education—or, what is the same in the ancient world, instruction in philosophy.

But in the mediaeval world, the distinction between philosophy and religion seems to be essential to the consideration of the nature and value of philosophy. The importance of the distinction appears alike in the great books of the Christian tradition and in the great writings of the Mohammedan and Jewish cultures—in Augustine and Aquinas, Avicenna, Averroës, and Maimonides—though the problem of philosophy's relation to religion and theology may be quite differently solved by each. In all three religious communities secular learning and sacred doctrine are set apart by their origin—the one from the efforts of human reason, the other from the word of God as revealed to the faithful. Even when it is held in highest esteem as the best achievement of secular learning, philosophy is for the most part regarded as inferior to the teachings of religion.

There are those—the simply religious, the devout, the mystical—who abominate the pretensions of reason and the vanity of philosophers who claim either merit or need for any knowledge beyond the truths which God himself has revealed. This position is expressed by such Christian writers as Tertullian, Peter Damian, Bernard of Clairvaux; or, in the Arabic tradition, by Al-Ghazzali's *The Destruction of Philosophy*. Al-Ghazzali is answered by Averroës in his *Destruction of the "Destruction"* which asserts the supremacy of philosophy. Averroës reserves philosophy for men of requisite intellectual strength and relegates theology and religion to those who must substitute opinion and imagination for reason.

Neither Augustine nor Aquinas goes to these extremes. They do not dismiss philosophy as useless learning or as dangerous folly, subversive of the wisdom of faith; but neither do they admit the sufficiency of philosophy for knowledge of God—the mysteries of the divine nature, God's providence and His gracious gift of salvation to man.

Quoting St. Paul's warning to "beware lest any man spoil you through philosophy and vain deceit according to the tradition of men and the rudiments of the world, and not according to Christ," Augustine defends his praise of the Platonic philosophy which in his judgment comes nearest to the Christian faith, on the ground that the Apostle also said to the gentiles that "that which is known of God is manifest among them, for God has manifested it to them." Yet he adds that "the Christian man who is ignorant of their writings . . . is not, therefore, ignorant that it is from the one true and supremely good God that we have that nature in which we are made in the image of God, and that doctrine by which we know Him and ourselves, and that grace with which, by cleaving to Him, we are blessed."

Philosophy, according to Augustine, can thus be dispensed with in all the major concerns of knowledge, love, or action. But Augustine does not argue that it should therefore be discarded. "If those who are called philosophers," he says, "and especially the Platonists, have said aught that is true and in harmony with our faith, we

are not only not to shrink from it, but to claim it for our own use from those who have unlawful possession of it," even as the spoils of the Egyptians belong to the Jews.

Though Augustine and Aquinas conceive the relation of faith and reason differently, they seem to share a conception of philosophy as the handmaiden of theology when faith seeks understanding. For Aquinas this does not appear to imply lack of dignity or even the loss of a certain autonomy on the part of philosophy. On the contrary, so highly does he regard the demonstrations of Aristotle, whom he calls "the philosopher," that he opens the *Summa Theologica* with the question "Whether, besides the philosophical sciences, any further doctrine is required."

He answers that "it was necessary for the salvation of man that certain truths which exceed human reason should be made known to him by divine revelation. Even as regards those truths about God which human reason can investigate, it was necessary that man be taught by a divine revelation. For the truth about God, such as reason can know it, would only be known by a few, and that after a long time, and with the admixture of many errors; whereas man's whole salvation, which is in God, depends upon the knowledge of this truth. . . . It was, therefore, necessary that besides the philosophical sciences investigated by reason, there should be a sacred science by way of revelation." That sacred science is theology—not the theology which is a part of philosophy, but the theology whose principles come from faith rather than from reason.

"There is no reason," Aquinas writes, "why those things which are treated by the philosophical sciences, so far as they can be known by the light of natural reason, may not also be treated by another science so far as they are known by the light of the divine revelation." On this view, sacred theology may treat of certain things, such as the mystery of the Trinity, which do not belong properly to the philosopher because they exceed the power of reason to demonstrate; but other matters concerning nature, man, and God may belong both to the philosopher and to the theologian, who consider them according to their different lights. Since a truth cannot conflict with a truth, though reason sponsors one and faith the other, there can be no conflict between philosophy and theology.

SOME MODERN philosophers, like Bacon and Locke, seem to agree with mediaeval theologians about the subordination of philosophy to theology. But for the most part the modern tendency, increasingly evident in the writings of Descartes, Spinoza, Kant, and Hegel, is to insist upon the complete autonomy of philosophy.

Hegel, for example, challenges "the imputation against Philosophy of being shy of noticing religious truths, or of having occasion to be so," and the insinuated "suspicion that it has anything but a clear conscience in the presence of these truths. So far from this being the case," Hegel remarks, "the fact is that in recent times Philosophy has been obliged to defend the domain of religion against the attacks of several theological systems."

The diverse aspects of the problem of the relation of philosophy to theology, and of theology to faith, are discussed in the chapters on METAPHYSICS, THEOLOGY, and RELIGION. The problem which is more characteristic of the modern consideration of philosophy concerns its relation to science.

To state the problem some distinction between the two is necessary, and making this distinction represents a novel departure, both in thought and language. As we have seen, philosophy and science are almost identified throughout the ancient and mediaeval tradition. Insofar as the word "science" means knowledge rather than opinion, the result of philosophical inquiry is science, and philosophy as a whole is divided into a number of sciences. There may be, as ancient writings seem to suggest, sciences which aim at useful productions rather than at speculative or practical wisdom, and fall below the level of philosophy; or there may be, as some Christian theologians hold, a sacred science superior in its wisdom to all the philosophical sciences. But these exceptions to the identity of philosophy and science merely confirm the point that in the ancient or mediaeval view philosophy is scientific and consists of sciences, even though there may be sciences which are not philosophical.

This use of the words "science" and "philos-

ophy" persists well into modern times. Hobbes, for example, presents his classification of the types of knowledge under the heading "science, that is, Knowledge of Consequences, which is also called Philosophy." Bacon proposes to "divide sciences into theology and philosophy." Descartes uses the words "science" and "philosophy" interchangeably. "Among the different branches of Philosophy," he says, "I had in my younger days to a certain extent studied Logic; and in those of Mathematics, Geometrical Analysis and Algebra—three arts or sciences which seemed as though they ought to contribute to the design I had in view." In the Prefatory Letter to his *Principles of Philosophy*, he likens "philosophy as a whole" to "a tree whose roots are metaphysics, whose trunk is physics, and whose branches, which issue from this trunk, are all the other sciences. These reduce themselves to three principal ones, *viz.*, medicine, mechanics, and morals."

Even as near the end of the eighteenth century as Hume, the word "philosophy" continues to be the general name for the particular sciences. It covers the experimental study of natural phenomena as well as what are for Hume the non-experimental sciences of mathematics and psychology. But it excludes divinity or theology, insofar as "its best and most solid foundation is *faith* and divine revelation"; metaphysics, which is "nothing but sophistry and illusion"; and all inquiries into particular as opposed to general facts, such as "history, chronology, geography, and astronomy."

Nor is this use of terms confined to what readers today would call books of philosophy. The authors of the books which are today regarded as among the foundations of modern science—Galileo, Newton, Huygens and, in the eighteenth century, Lavoisier and Fourier—refer to themselves as philosophers and to the science in which they are engaged, *e.g.*, mathematics, mechanics, physics, chemistry, as parts or aspects of natural philosophy. They do, however, indicate an awareness of how they differ from ancient and mediaeval scientists (who also called themselves philosophers) by calling their own work "experimental philosophy."

In this phrase lies the root of the distinction between philosophy and science as that distinction is generally understood by writers since the eighteenth century. The word "experimental" applied to philosophy signifies a radical difference in the method of inquiry and even in the objects to be investigated, for certain objects can be known only by experimental or empirical research. Kant appears to be the first (in the great books at least) to make a sharp separation between the investigation of either nature or mind by what he calls "empirical" as opposed to "rational" methods. He still uses the name "science" for both sorts of investigation, but he appears to restrict "philosophy" to the latter—the pure, the *a priori*, the rational sciences.

Two other innovations must be noted. Though Kant regards it as a rational discipline, he excludes mathematics entirely from philosophy and criticizes its misleading influence upon those philosophers who have tried to imitate mathematical thought. And though he sometimes uses "metaphysic" narrowly to designate the critical examination of pure reason itself, he also says that "this name of metaphysic may be given to the whole of pure philosophy . . . excluding all that belongs to the empirical and the mathematical employment of reason." Considering that it has only two objects, nature and freedom—that which *is* and that which *ought to be*—Kant divides philosophy into the speculative and the practical use of pure reason, which gives rise to a *metaphysic of nature* and a *metaphysic of morals*. "Metaphysic, therefore, that of nature as well as that of morals, and particularly the criticism of our adventurous reason which forms the introduction to and preparation for it, constitute together," Kant writes, "what may be termed philosophy in the true sense of the word. Its only goal is wisdom, and the path to it, science."

Kant's innovations in vocabulary plainly announce the separation of philosophy from mathematics and experimental science, which is only intimated by earlier modern writers. But Kant still uses the word "science" for both the philosophical and the empirical sciences. The final step is taken in the nineteenth century when the word "science" is restricted to mathematics and to such knowledge of nature, man, and society as can be obtained by the methods of experimental or empirical research. William James, for example, stresses the fact that he is trying to expound psychology as one of the natural

sciences, and to that end he tries to separate the problems which are capable of empirical investigation from those which belong to philosophical speculation. For Freud that separation is an accomplished fact, and one which leaves to philosophy no problem that can be solved by science.

According to Freud, "it is inadmissible to declare that science is one field of human intellectual activity, and that religion and philosophy are others, at least as valuable, and that science has no business to interfere with the other two." On the contrary, Freud thinks it is right for scientific research to look "on the whole field of human activity as its own," and to criticize the unscientific formulations of philosophy. The trouble with philosophy is that "it behaves itself as if it were a science . . . but it parts company with science, in that it clings to the illusion that it can produce a complete and coherent picture of the universe." It is this illusion which science continually punctures, since, in Freud's opinion, "that picture must needs fall to pieces with every new advance in our knowledge."

WHEN SCIENCE AND philosophy are set apart at last, it is possible to make sense of the typically modern questions concerning philosophy. How does it stand in relation to science? Does it consist of verifiable knowledge comparable to that which can be obtained in the natural and social sciences? If not, what is the standard of truth in philosophy? Does it consist of definitions and postulates leading to rigorously demonstrated conclusions in a manner comparable to mathematics, especially in its modern construction? If not, must it not be regarded as opinion or speculation rather than as knowledge in any strict sense? Or if philosophical thought can be compared with mathematics, does not the diversity of definitions and postulates employed by different philosophers reduce philosophy to a collection of competing "systems" rather than a single discipline in which philosophers work cooperatively as do scientists and mathematicians?

However the foregoing questions are answered, there are still others. Does philosophy have distinct branches, divided according to their objects of study like the natural sciences, or is philosophy to be identified with metaphysics? If, in addition to metaphysics, there is a philosophy of nature, how are its principles and conclusions related to the findings of the natural sciences which appear to study the same object? Similarly, if psychology is a branch of philosophy, how is it related to experimental or clinical psychology? What is the relation of moral and political philosophy to the empirical social sciences concerned with describing, not judging or regulating, human conduct and social institutions? Is economics a science or is it a branch of moral philosophy; or, if it is both, how are the two related?

What is the use of philosophy, especially in its theoretic branches, if, unlike science, it cannot be applied to the mastery of physical nature and the production of utilities, whether bridges or bombs? What, finally, at the end of its long history, does philosophy come to if, in such marked contrast to the continuously accelerated progress of the sciences, it cannot claim any signal advance on which all philosophers are agreed, but instead must admit that most of its problems seem to be perennially debated, now as in every preceding century?

SOME OF THESE questions, as well as certain answers to them, are considered in other chapters: the comparison of empirical research and philosophical thought as constituting different types of science, in the chapter on SCIENCE; the distinction and relation between natural philosophy and natural science, in the chapter on PHYSICS; the difference between philosophical and scientific psychology, in the chapter on MAN; the function of definitions, hypotheses, postulates, or axioms in the foundation and method of philosophy and science, in the chapter on PRINCIPLE; the difference between the practical use of philosophy in the sphere of morals and the use of science in the sphere of the productive arts, in the chapter on KNOWLEDGE; the accumulation of truth as measuring advances in science and philosophy, in the chapter on PROGRESS.

Here we must observe that such answers to these questions as tend to subordinate philosophy to science originate exclusively with modern views of the nature of knowledge, of the criteria of truth, and of the capacities of the

human mind, especially the power of reason. Even those modern authors who write at a time when the words "science" and "philosophy" are, for the most part, interchangeable tend in this direction. The points they make about the nature, aim, and method of what they call either science or philosophy have the effect of giving the status of *knowledge* only to mathematics and the empirical sciences, and of reducing philosophical speculation to the status of *opinion*.

Bacon's insistence, for example, that genuine knowledge gives us power over nature and generates productions, seems to have this effect, certainly upon any part of traditional philosophy which cannot meet this test. Hume's insistence upon experimental reasoning with respect to all matters of fact seems to eliminate not only metaphysics, but any science or philosophy of nature which is not experimental. The methodological reforms in philosophy which these philosophers and others, like Hobbes, Descartes, and Spinoza, propose seem to be reforms which eliminate whatever in philosophy cannot become either experimental science or a quasi-mathematical system of thought.

Among the modern reformers of philosophy, Kant represents the exception. By his critical method he hopes to establish philosophy above and independent of all the empirical sciences; and to institute metaphysics as a science which neither imitates mathematics nor accepts it as an equal in the scale of reason's accomplishments. Yet even Kant seems to betray the typically modern attitude toward philosophy. The intellectual revolution which he projects as the philosophical parallel to the Copernican revolution in astronomy is motivated by his desire to secure for philosophy a stability and development comparable to that enjoyed by mathematics and the empirical sciences.

"IN THE PROGRESS of society," writes Adam Smith, "philosophy or speculation becomes, like every other employment, the principal or sole trade and occupation of a particular class of citizens. Like every other employment too, it is subdivided into a great number of different branches, each of which affords occupation to a peculiar tribe or class of philosophers; and this subdivision of employment in philosophy, as well as in every other business, improves dexterity and saves time. Each individual becomes more expert in his own peculiar branch, more work is done upon the whole, and the quantity of science is considerably increased by it."

Despite his use of the word "philosophy," it seems likely that Adam Smith is describing the division of labor in scientific research and the specialization of scientists. Though philosophy has divisions, and though the distinction and order of its parts are discussed by the great philosophers, their own work exhibits a spirit opposed to specialization. In fact, one measure of the greatness of a philosopher is the comprehensiveness of his thought, the range of subject matters and the scope of the problems with which he deals.

Those philosophers, like Aristotle, Bacon, Hobbes, or Kant, who show great interest in the divisions of philosophy seem to be largely concerned with distinguishing the different objects of philosophical thought and differentiating the concepts or principles peculiarly relevant to each. Other chapters deal with subject matters, sciences, or disciplines that have been regarded, by one philosopher or another, as major divisions of philosophy, *e.g.*, LOGIC, METAPHYSICS, THEOLOGY, DIALECTIC, MATHEMATICS, PHYSICS, and psychology (in the chapter on MAN). But one group of sciences or disciplines is not discussed elsewhere and must be briefly noted here. Traditionally within the province of the philosopher, they are sometimes expanded to his whole domain. They come nearer to what the ordinary man means by "philosophy" when he speaks of having a philosophy of life—an over-all yet personal view of the human situation, illuminated by a sense of the values which should direct conduct.

The disciplines in question are traditionally called ethics and politics, or moral philosophy. Socrates is credited with having accomplished the first great reform in philosophy when he turned to such subjects and away from the inquiries of his predecessors. "I do not mean to speak disparagingly of the students of natural philosophy," he says at his trial, "but the simple truth is, O Athenians, that I have nothing to do with physical speculations." Subsequently he tells his judges that he "will never cease from the practice and teaching of philosophy"—re-

proaching those whom he questions with "under-valuing the greater and over-valuing the less," enjoining them not to take thought of their persons or their properties, "but first and chiefly to care about the greatest improvement of the soul." He will not foreswear philosophy even to save his life. "I cannot hold my tongue," he says. "Daily discourse about virtue . . . is the greatest good of man," for "the unexamined life is not worth living."

The conception of ethics and politics and of their relation to other branches of philosophy seems to depend upon the acceptance or rejection of a fundamental principle in the division of philosophy. Aristotle and Kant, for example, divide the philosophical sciences into the theoretic or speculative and the practical or moral, according as they consider what *is* (the nature and causes of things) or what *ought to be* (the objects of choice, the ends and means, in the conduct of life and the institutions of society). According to this conception of the practical, the practical sciences are ethics and politics, and with them economics and jurisprudence; or in another statement of the same divisions, the parts of practical philosophy are moral philosophy, the philosophy of right, the philosophy of law. They are all conceived as normative, prescriptive, or regulative disciplines, determining what is good and evil or right and wrong, and directing action in the sphere of human freedom.

Hobbes proceeds on a different principle. He separates natural philosophy (including *philosophia prima*) from civil philosophy, or the theory of the body politic. But he includes ethics and poetics under natural philosophy as part of the theoretic study of human nature. The distinction between the theoretic and the practical seems to be here ignored, or even implicitly denied insofar as Hobbes would reject the basis of the distinction—the difference between natural necessity and human freedom. Necessity governs the motions of the human body and of the body politic as much as it does the bodies studied by the physicist, and so ethics, politics, and physics are alike sciences of determined consequences.

Still another view seems to be taken by Bacon who separates natural from human and civil philosophy and divides natural philosophy into two main speculative branches (physics and metaphysics) and two main practical branches (mechanics and magic). Psychology, logic, and ethics belong to human philosophy; politics and jurisprudence to civil philosophy. But with respect to all of these Bacon does not apply the distinction between the speculative and the practical which seems to him of the utmost importance in natural philosophy. The reason seems to be that Bacon uses the word "practical" to mean the production of effects resulting from the knowledge of causes, rather than actions to be performed by men as the result of choice. His practical sciences correspond, therefore, to what Aristotle conceives as arts, or productive sciences—the sphere of making or poetics in general—not to what Aristotle means by the practical, the sphere of doing rather than of making, of prudence rather than of art. These matters are discussed in the chapters on ART and POETRY.

The problem of the relation of science to art becomes, if restated in Bacon's terms, the problem of the relation of the theoretic to the practical (*i.e.*, productive) sciences. But in terms of Aristotle, Aquinas, or Kant, the problem of the relation between the speculative and practical branches of philosophy becomes the quite different problem of how knowledge of being or nature relates to knowledge of what should be sought or ought to be done. In Hobbes' terms the problem shifts in still another direction to the consideration of the bearing of physics upon psychology, ethics, and politics.

How, on any of the foregoing views, do speculations concerning the nature of things affect the theory of human life and society, or the practical principles by which man tries to lead a good life and organize a good society? What relation do the truths of physics and metaphysics, or the major philosophical issues in these fields, bear to the truths and issues in psychology, ethics, and politics? Or, as William James puts the question, must not any man who has a philosophy of life also have, implicitly at least, a metaphysics?

Upon the answers to such questions depends the varying esteem in which philosophy is held in the great periods of western culture. Unlike supernatural religion and empirical science, and especially when separated from them, philoso-

phy does not promise eternal salvation or earthly prosperity. The uses of philosophy, as compared with religion and science, must somehow be assessed in the terms which, from the beginning of philosophy, are of its essence—the love of wisdom, and through it the search for a human wisdom which shall be at once speculative and practical.

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REFERENCES

To find the passages cited, use the numbers in heavy type, which are the volume and page numbers of the passages referred to. For example, in **4** HOMER: *Iliad*, BK II [265–283] **12d**, the number **4** is the number of the volume in the set; the number **12d** indicates that the passage is in section d of page 12.

PAGE SECTIONS: When the text is printed in one column, the letters **a** and **b** refer to the upper and lower halves of the page. For example, in **53** JAMES: *Psychology*, **116a-119b**, the passage begins in the upper half of page 116 and ends in the lower half of page 119. When the text is printed in two columns, the letters **a** and **b** refer to the upper and lower halves of the left-hand side of the page, the letters **c** and **d** to the upper and lower halves of the right-hand side of the page. For example, in **7** PLATO: *Symposium*, **163b-164c**, the passage begins in the lower half of the left-hand side of page 163 and ends in the upper half of the right-hand side of page 164.

AUTHOR'S DIVISIONS: One or more of the main divisions of a work (such as PART, BK, CH, SECT) are sometimes included in the reference; line numbers, in brackets, are given in certain cases; *e.g.*, *Iliad*, BK II [265–283] **12d**.

BIBLE REFERENCES: The references are to book, chapter, and verse. When the King James and Douay versions differ in title of books or in the numbering of chapters or verses, the King James version is cited first and the Douay, indicated by a (*D*), follows; *e.g.*, OLD TESTAMENT: *Nehemiah*, 7:45—(*D*) *II Esdras*, 7:46.

SYMBOLS: The abbreviation "esp" calls the reader's attention to one or more especially relevant parts of a whole reference; "passim" signifies that the topic is discussed intermittently rather than continuously in the work or passage cited.

For additional information concerning the style of the references, see the Explanation of Reference Style; for general guidance in the use of *The Great Ideas*, consult the Preface.

1. The definition and scope of philosophy

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1*a*. The relation of philosophy to theology or religion

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46 HEGEL: *Philosophy of History*, INTRO, 182d-183c

51 TOLSTOY: *War and Peace*, EPILOGUE II, 694c-d
53 JAMES: *Psychology*, xiiib xiva; 882a-886a passim
54 FREUD: *Narcissism*, 400d-401a / *Inhibitions, Symptoms, and Anxiety*, 722a-b / *New Introductory Lectures*, 873d-875a esp 874d-875a

1d. The relation of philosophy to myth, poetry, and history

7 PLATO: *Protagoras*, 57a-c / *Phaedrus*, 122d-123a; 138c-140d / *Ion* 142a-148a,c / *Republic*, BK II-III, 319c-334b; BK X, 427c-434c esp 434a-c / *Timaeus*, 443b-447d / *Statesman*, 586c-589d
9 ARISTOTLE: *Poetics*, CH 9 [1451^{a}36-^{b}11] 686a
23 HOBBES: *Leviathan*, PART I, 67b-c; 71c-d; 72a-d
25 MONTAIGNE: *Essays*, 41b-42a
30 BACON: *Advancement of Learning*, 32d; 38d-39b; 44c
31 DESCARTES: *Rules*, III, 3c-d
35 HUME: *Human Understanding*, SECT I, DIV 5, 452d-453a; SECT VIII, DIV 65, 479b-c
38 ROUSSEAU: *Inequality*, 333d-334a; 348a,c
40 GIBBON: *Decline and Fall*, 345b-346b; 544c-545c
41 GIBBON: *Decline and Fall*, 40b-41a
42 KANT: *Judgement*, 575b-c
46 HEGEL: *Philosophy of Right*, INTRO, par 3 10a-12c / *Philosophy of History*, INTRO, 156c-190b esp 177c-d, 184d-185d; PART IV, 368d-369a,c
51 TOLSTOY: *War and Peace*, EPILOGUE II, 690a-b
54 FREUD: *Interpretation of Dreams*, 239c-240a; 246b-248c passim / *Civilization and Its Discontents*, 796c

2. The divisions of philosophy

2a. The distinction between theoretic or speculative and practical or moral philosophy: the distinction between natural and civil philosophy

7 PLATO: *Charmides*, 7d-8a / *Statesman*, 581a
8 ARISTOTLE: *Topics*, BK I, CH 14 [105^{b}19-29] 149c; BK VI, CH 6 [145^{a}12-18] 198d / *Heavens*, BK III, CH 7 [306^{a}14-18] 397b-c / *Metaphysics*, BK I, CH 1-2 499a-501c esp CH 2 [982^{a}30-^{b}27] 500c-501a; BK II, CH 1 [993^{b}19-31] 512a-b; BK IV, CH 4 [1008^{b}2-32] 527d-528b; BK VI, CH 1 [1025^{b}18-28] 547d; BK XI, CH 7 [1064^{a}10-19] 592b-c; BK XII, CH 9 [1074^{b}35-1075^{a}2] 605c
9 ARISTOTLE: *Parts of Animals*, BK I, CH 1 [639^{b}32-640^{a}10] 162a-b / *Ethics*, BK I, CH 3 339d-340b; CH 7 [1098^{a}20-^{b}8] 343c-344a; BK II, CH 2 [1103^{b}26-1104^{a}9] 349b-c; CH 4 350d-351b; BK III, CH 3 [1112^{a}30-^{b}12] 358b-c; BK VI, CH 1-2 387a-388b; CH 5 389a-c; CH 7-8 390a-391c; CH 12-13 393b-394d
12 EPICTETUS: *Discourses*, BK I, CH 26 131b-132b; BK III, CH 6 181d-182b
16 PTOLEMY: *Almagest*, BK I, 5a-6a
18 AUGUSTINE: *City of God*, BK VIII, CH 4 266d-267c; BK XI, CH 25 336b-d
19 AQUINAS: *Summa Theologica*, PART I, Q 1, A 4 5a-b; A 5, ANS 5c-6a; Q 14, A 16 90b-91b; Q 79, A 11 424d-425b; Q 84, A 8, ANS 450b-451b; PART I-II, Q 1, A 6, REP 2 614a-c; Q 3, A 5 626b-627a
20 AQUINAS: *Summa Theologica*, PART I-II, Q 56, A 3, ANS 31a-32b; Q 57, A 5, REP 3 39a-40a; Q 84, A 1, REP 3 174b-175a; Q 94, A 4, ANS 223d-224d; PART III, Q 11, A 1, REP 3 772b-773a; Q 13, A 1, REP 3 780a-781b
23 HOBBES: *Leviathan*, PART I, 72a-d
30 BACON: *Advancement of Learning*, 16d-17a; 40a-c; 42a-c; 55b-d; 65d-66a; 86b-c / *Novum Organum*, BK I, APH 3 107b; BK II, APH 9 140b-c
31 DESCARTES: *Rules*, I 1a-2a / *Discourse*, PART III, 48b-49b; PART VI, 61b-c / *Objections and Replies*, 126a-b; 162d; 206c-207a; 215a-b; 237b-c; 243c-d
35 LOCKE: *Human Understanding*, INTRO, SECT 5-6 94b-95a; BK I, CH II, SECT I 103d-104a; SECT 3-4 104b-105a; BK IV, CH XXI 394d-395a,c
35 HUME: *Human Understanding*, SECT I 451a-455b; SECT VIII, DIV 65, 479b-c; SECT XI, DIV 104 498b-c
42 KANT: *Pure Reason*, 5a-13d; 190c-191a; 234c-235a / *Fund. Prin. Metaphysic of Morals*, 253a-d; 260d-261d; 266c-d; 271a-c; 283d-284d / *Practical Reason*, 291a-297c; 307d-314d esp 310a-b; 319c-321b; 329a-337a,c esp 329b-d / *Intro. Metaphysic of Morals*, 388a-d / *Judgement*, 461a-475d esp 463a-467a, 474b-475d; 578a-b; 596c-598b
43 FEDERALIST: NUMBER 31, 103c-104a
43 MILL: *Utilitarianism*, 445a-d
46 HEGEL: *Philosophy of Right*, PREF, 5c-6a; ADDITIONS, 1 115a-d
53 JAMES: *Psychology*, 865b-866a

2b. The branches of speculative philosophy: the divisions of natural philosophy

7 PLATO: *Republic*, BK VII, 388a-398c esp 396d-398c / *Philebus*, 634b-635b
8 ARISTOTLE: *Topics*, BK I, CH 14 [105^{b}19 29] 149c / *Physics*, BK I, CH 9 [192^{a}33-^{b}2] 268c-d; BK II, CH 2 270a-271a esp [194^{b}9-15] 271a; CH 7 [198^{a}22-31] 275b-c / *Heavens*, BK III, CH 1 [298^{b}13-24] 390a-b / *Metaphysics*, BK I, CH 9 [992^{a}29-^{b}9] 510c-d; BK IV, CH 2 [1004^{a}2-9] 523a; BK VI, CH 1 547b,d-548c; BK VII, CH 11 [1037^{a}13-21] 560d; BK XI, CH 3 [1061^{a}29]-CH 4 [1061^{b}34] 589c-590a; CH 7 592b-593a; BK XII, CH 1 [1069^{a}30-^{b}2] 598b-c; CH 8 [1073^{b}1-7] 603d / *Soul*, BK I, CH 1 [403^{b}10-17] 632d
9 ARISTOTLE: *Parts of Animals*, BK I, CH 1 [641^{a}33-^{b}10] 164b-c
11 NICOMACHUS: *Arithmetic*, BK I, 812b-813d
16 PTOLEMY: *Almagest*, BK I, 5a-6a
17 PLOTINUS: *First Ennead*, TR III, CH 4-6 11a-12b

(2. *The divisions of philosophy.* 2b. *The branches of speculative philosophy: the divisions of natural philosophy.*)

18 AUGUSTINE: *City of God*, BK VIII, CH 4 266d-267c; BK XI, CH 25 336b-d
19 AQUINAS: *Summa Theologica*, PART I, Q 1, A 1, REP 2 3b-4a; Q 85, A 1, REP 2 451c-453c
23 HOBBES: *Leviathan*, PART I, 71c-d; 72a-d; PART IV, 269b-c
30 BACON: *Advancement of Learning*, 15d; 39d-48d esp 40a-41b, 42a-c, 43a-45a; 55b-61d esp 56c-58c, 59c-60c / *Novum Organum*, BK II, APH 9 140b-c
31 DESCARTES: *Rules*, I-II 1a-3b; IV 5a-7d / *Discourse*, PART II, 46c-48b / *Objections and Replies*, 169c-170a
34 NEWTON: *Principles*, 1a-b
35 LOCKE: *Human Understanding*, BK IV, CH XXI 394d-395a,c
35 BERKELEY: *Human Knowledge*, SECT 101, 432c
39 SMITH: *Wealth of Nations*, BK V, 335b-337a
42 KANT: *Pure Reason*, 1a-13d; 15c-16c; 34a-37d esp 34c-35b; 59c; 210b-c / *Fund. Prin. Metaphysic of Morals*, 253a-d; 264d; 266c-d / *Practical Reason*, 300d [fn 1]; 351b-352c / *Judgement*, 463a-467a esp 463b-464a; 476a-479d; 485b-486d; 488a-495a,c; 515b-c; 578a-b
53 JAMES: *Psychology*, 867a

2c. The nature and branches of practical or moral philosophy: economics, ethics, politics, jurisprudence; poetics or the theory of art

7 PLATO: *Republic*, BK X, 427c-434c / *Statesman*, 604c-608d
8 ARISTOTLE: *Topics*, BK I, CH 14 [105^{b}19-29] 149c / *Metaphysics*, BK II, CH 1 [993^{b}20-23] 512a; BK VI, CH 1 [1025^{b}19-28] 547d; BK XI, CH 7 [1064^{a}10-19] 592b-c
9 ARISTOTLE: *Ethics*, BK I, CH 1-4 339a-340d; CH 7 [1098^{a}20-^{b}8] 343c-344a; BK II, CH 2 [1103^{b}26-1104^{a}9] 349b-c; CH 4 350d-351b passim; BK III, CH 3 [1112^{a}30-^{b}12] 358b-c; BK VI, CH 8 390d-391c; BK X, CH 9 434a-436a,c / *Politics*, BK IV, CH 1 487a-488b / *Poetics* 681a-699a,c passim, esp CH 1-5 681a-684a
18 AUGUSTINE: *Confessions*, BK III, par 14 16d-17a / *City of God*, BK VIII, CH 8 270a-d
19 AQUINAS: *Summa Theologica*, PART I, Q 1, AA 4-5 5a-6b; Q 14, A 16 90b-91b; Q 86, A 3, CONTRARY 463b-d
21 DANTE: *Divine Comedy*, PURGATORY, XVIII [40-72] 80b-c
23 HOBBES: *Leviathan*, PART I, 58a-b; 72a-d; 78b-c; 80d-81a; 95d-96b; PART II, 112c-d; 128d-129b; 158c-d; 164a,c; PART IV, 268d; CONCLUSION, 282c-d
30 BACON: *Advancement of Learning*, 81d-95b / *Novum Organum*, BK I, APH 3 107b
31 DESCARTES: *Discourse*, PART VI, 61b-c; 66d-67a,c
34 NEWTON: *Optics*, BK III, 543b-544a
35 LOCKE: *Human Understanding*, BK III, CH XI, SECT 15-18 303b-304b esp SECT 16 303c-d; BK IV, CH III, SECT 18-20 317d-319c; CH IV, SECT 7-10 325b-326b; CH XII, SECT 8 360c; CH XXI, SECT 1-3 394d-395a; SECT 5 395c
35 HUME: *Human Understanding*, SECT I, DIV 1-5 451a-453b passim; SECT XII, DIV 131-132 508d-509d passim, esp DIV 132, 509c-d
38 ROUSSEAU: *Inequality*, 329a-334a,c
41 GIBBON: *Decline and Fall*, 75d-80b passim
42 KANT: *Fund. Prin. Metaphysic of Morals*, 253a-254b; 264b-d; 266c-d; 271a-c; 283d-287d / *Practical Reason*, 291a-296d; 300d [fn 1]; 304a-d; 307d-321b; 327c-d; 329a-337a,c esp 329b-d / *Pref. Metaphysical Elements of Ethics*, 366d-368a; 370d-372a; 373b-c; 374a-c; 378a / *Intro. Metaphysic of Morals*, 383a-d; 388a-d; 390b,d-391a / *Science of Right*, 398a-399c / *Judgement*, 463a-467a; 515b-c; 523d-524a; 596c-598b
43 FEDERALIST: NUMBER 9, 47a-d; NUMBER 31, 103c-104a passim
43 MILL: *Utilitarianism*, 445a-447b passim; 453c
46 HEGEL: *Philosophy of Right*, PREF, 1d-7c; INTRO, par 1 9a
50 MARX: *Capital*, 6a-11d passim, esp 6a-d, 8a-9b; 178d-179c; 265a-266a; 267c-d
51 TOLSTOY: *War and Peace*, EPILOGUE II, 680d-684a; 689b-c
54 FREUD: *Civilization and Its Discontents*, 800c-801b

3. The method of philosophy

3a. The foundations of philosophy in experience and common sense

8 ARISTOTLE: *Prior Analytics*, BK I, CH 30 [46^{a}18-28] 64a / *Posterior Analytics*, BK I, CH 18 111b-c; CH 31 120a-c; BK II, CH 2 [90^{a}24-30] 123b-c; CH 19 136a-137a,c / *Physics*, BK I, CH 1 259a-b / *Heavens*, BK III, CH 1 [298^{b}13-24] 390a-b; CH 7 [306^{a}1-18] 397b-c / *Generation and Corruption*, BK I, CH 2 [316^{a}5-14] 411c-d; CH 3 [318^{b}19-31] 415c-d / *Metaphysics*, BK I, CH 1 499a-500b / *Sense and the Sensible*, CH 1 [436^{b}13-437^{a}16] 673c-674a
12 LUCRETIUS: *Nature of Things*, BK I [418-448] 6b-c; [693-700] 9c; BK IV [353-521] 48d-51a esp [469-521] 50b-51a
23 HOBBES: *Leviathan*, PART IV, 267a-b
28 HARVEY: *Motion of the Heart*, 268a-c / *On Animal Generation*, 331b-335c
30 BACON: *Advancement of Learning*, 16a; 57d-58b / *Novum Organum*, BK I, APH 19-22 108b-c
31 DESCARTES: *Discourse*, PART IV, 53b / *Meditations*, I 75a-77c

31 SPINOZA: *Ethics*, PART II, PROP 10, SCHOL 376d-377a
35 HUME: *Human Understanding*, SECT I, DIV 4, 451d-452a; SECT XII, DIV 130 508c-d
42 KANT: *Pure Reason*, 14a-b; 15c-16c; 19a; 236d-237a; 247a-b / *Fund. Prin. Metaphysic of Morals*, 253a-c; 254b-c; 263b-d; 271a-c; 281c-282d / *Practical Reason*, 320c-321b; 329d-330c; 358a / *Pref. Metaphysical Elements of Ethics*, 365a-d / *Intro. Metaphysic of Morals*, 387a-388a / *Science of Right*, 397b-398a / *Judgement*, 551a-552c; 562d-563b; 603a-b; 604a-b
43 MILL: *Utilitarianism*, 445b-446b
53 JAMES: *Psychology*, 655a-659a

3b. The philosopher's appeal to first principles and to definitions

7 PLATO: *Republic*, BK VI, 383d-388a; BK VII, 388a-398c esp 396d-398c
8 ARISTOTLE: *Posterior Analytics* 97a-137a,c esp BK I, CH 1-3 97a-100a, CH 9 104b-d, CH 11 105d-106b, CH 19-22 111c-115b, CH 31-32 120a-121b, BK II, CH 1-10 122b,d-128d, CH 13 131b-133c / *Topics*, BK I, CH 1 [100^{a}25-^{b}21] 143a-b / *Metaphysics*, BK I, CH 2 [982^{a}25-28] 500c; BK II, CH 2 [994^{b}16-30] 513a-b; BK III, CH 1 [995^{b}6-10] 514a; CH 2 [996^{b}26-997^{a}15] 515b-d; BK VI, CH 1 [1025^{b}1-1026^{a}6] 547b,d-548a; BK XI, CH 1 [1059^{a}23-26] 587a; CH 4 [1061^{b}17]-CH 7 [1064^{a}28] 589d-592c; BK XIII, CH 4 [1078^{b}13-30] 610a-b / *Soul*, BK I, CH 1 631a-632d; BK II, CH 2 [413^{a}11-19] 643a-b; CH 3 [414^{b}20-415^{a}14] 644d-645b
9 ARISTOTLE: *Ethics*, BK I, CH 4 [1095^{a}30-^{b}12] 340c-d; CH 7 [1098^{a}20-^{b}8] 343c-344a; BK VI, CH 6 [1140^{b}31]-CH 7 [1141^{a}19] 389d-390a; CH 11 [1143^{a}32-^{b}10] 392d-393a
19 AQUINAS: *Summa Theologica*, PART I, Q 1, A 2, ANS and REP 1 4a-c; Q 2, A 2 11d-12c
23 HOBBES: *Leviathan*, PART I, 56b-d; 58d-60a; 65d; PART IV, 269b-c
31 DESCARTES: *Rules*, IV, 5c-d; 6d; XII, 21b-c / *Discourse* 41a-67a,c esp PART IV 51b-54b / *Meditations*, 69a-72d; I 75a-77c / *Objections and Replies*, POSTULATE I-III 130d-131a; 206a-207a
31 SPINOZA: *Ethics*, PART II, PROP 10, SCHOL 376d-377a
33 PASCAL: *Geometrical Demonstration*, 430b-434a
35 LOCKE: *Human Understanding*, BK I, CH III, SECT 24-25 120a-d
35 HUME: *Human Understanding*, SECT I, DIV 2 451b-c
42 KANT: *Pure Reason*, 179d-182b; 215d-217a / *Practical Reason*, 293c-294c
43 FEDERALIST: NUMBER 31, 103c-104a
43 MILL: *Utilitarianism*, 445a-447b passim
46 HEGEL: *Philosophy of Right*, PREF, 1b-c; INTRO, par 2 9b-10a; ADDITIONS, 3 116a / *Philosophy of History*, INTRO, 156c-158a

3c. The processes of philosophical thought: induction, intuition, definition, demonstration, reasoning, analysis, and synthesis

7 PLATO: *Protagoras*, 50d-52d; 57a-c / *Euthydemus* 65a-84a,c / *Phaedrus*, 134a-d; 139d-140b / *Meno*, 179d-183c / *Republic*, BK VI-VII, 383d-398c / *Parmenides* 486a-511d esp 491a-d / *Theaetetus*, 514b-515d; 525d-526b / *Sophist*, 570a-574c esp 571a-c / *Statesman* 580a-608d esp 595a-d / *Philebus*, 609a-613c / *Seventh Letter*, 809c-810d
8 ARISTOTLE: *Posterior Analytics* 97a-137a,c esp BK I, CH 1-3 97a-100a, BK II, CH 1-10 122b,d-128d / *Topics*, BK VIII, CH 1 [155^{b}1-16] 211a-b; CH 14 [163^{b}8-16] 222a / *Sophistical Refutations*, CH 16 [175^{a}1-12] 241a / *Physics*, BK I, CH 1 259a-b; CH 2 [184^{b}25-185^{a}19] 259c-260a; BK II, CH 7-9 275b-278a,c / *Heavens*, BK II, CH 13 [294^{b}6-14] 386a; BK III, CH 7 [306^{a}1-18] 397b-c / *Generation and Corruption*, BK I, CH 2 [316^{a}5-14] 411c-d / *Metaphysics*, BK III, CH 2 [997^{a}25-34] 515d-516a; BK IV, CH 2 522b-524b esp [1004^{a}25-31] 523b-c, [1004^{b}18-27] 523d; CH 4 [1005^{b}35-1006^{a}28] 525a-c; CH 7 [1012^{a}18-24] 532a-b; CH 8 [1012^{b}5-8] 532c; BK VI, CH 1 [1025^{b}1-16] 547b; BK XI, CH 1 [1059^{a}29-34] 587b; CH 3 589a-d esp [1061^{a}10-18] 589b; CH 5 [1061^{b}34-1062^{a}19] 590a-c; CH 7 [1064^{a}4-9] 592b; BK XIII, CH 4 [1078^{b}13-30] 610a-c / *Soul*, BK I, CH 1 [402^{a}1]-CH 2 [403^{b}23] 631a-633a; BK II, CH 4 [415^{a}14-22] 645b-c
9 ARISTOTLE: *Ethics*, BK I, CH 3 339d-340b; CH 4 [1095^{a}30-^{b}12] 340c-d; CH 7 [1098^{a}20-^{b}8] 343c-344a; BK VI, CH 3 388b-c; CH 6 389d; CH 11 [1143^{a}32-^{b}11] 392d-393a
17 PLOTINUS: *First Ennead*, TR III, CH 4-6 11a-12b / *Sixth Ennead*, TR II, CH 4 270c-271a
18 AUGUSTINE: *City of God*, BK VIII, CH 2-8 265b-270d passim
19 AQUINAS: *Summa Theologica*, PART I, Q 2, A 2 11d-12c; Q 32, A 1, REP 2 175d-178a
23 HOBBES: *Leviathan*, PART I, 58a-60b; 65c-d; PART IV, 267a-c; 269b-c
24 RABELAIS: *Gargantua and Pantagruel*, BK II, 101b-106a
30 BACON: *Advancement of Learning*, 42a-c; 56c-59c / *Novum Organum* 105a-195d
31 DESCARTES: *Rules*, I-XIII 1a-27d / *Discourse*, PART II, 46c-47d / *Meditations*, I 75a-77c / *Objections and Replies*, 119c-120c; 128a-129a
33 PASCAL: *Geometrical Demonstration*, 442a-443b
34 NEWTON: *Principles*, BK III, RULES 270a-271b / *Optics*, BK III, 543a-544a
35 LOCKE: *Human Understanding*, INTRO, SECT 3-5 93d-94d; BK I, CH III, SECT 24-25 120a-d
35 HUME: *Human Understanding*, SECT I, DIV 2 451b-c; DIV 7-9 453c-455a; SECT II, DIV 17 457a-b; SECT XII, DIV 116, 503d-504a

(3. The method of philosophy. 3c. The processes of philosophical thought: induction, intuition, definition, demonstration, reasoning, analysis, and synthesis.)

38 ROUSSEAU: *Inequality*, 339d; 341b-342b
42 KANT: *Pure Reason*, 1a-13d; 16a-c; 109d-112d; 115d-116a; 119a-b; 184b-c; 185b-c; 193a-200c esp 193d-194b, 199a-c; 211c-218d / *Fund. Prin. Metaphysic of Morals*, 264d / *Practical Reason*, 294a-b; 330d-331a; 336d-337a,c / *Pref. Metaphysical Elements of Ethics*, 365a-366a; 376c-d
43 MILL: *Liberty*, 274b-293b passim
51 TOLSTOY: *War and Peace*, EPILOGUE II, 690a-b
53 JAMES: *Psychology*, 674a-675b esp 675b; 687a

3*d*. The methodological reformation of philosophy

30 BACON: *Advancement of Learning*, 11a-17b esp 12a-13c, 15a-b, 16a; 30b-c; 40a-c; 47d-48d; 65a-c / *Novum Organum* 105a-195d
31 DESCARTES: *Rules*, I-XIII 1a-27d / *Discourse* 41a-67a,c esp PART III-IV 48b-54b / *Meditations*, 69a-71a,c; 1 75a-77c / *Objections and Replies*, 119c-d; 126a-b; 128a-129a; POSTULATE 1 PROP IV 130d-133a,c; 134b-c; 167a-c; 206a-207a; 237b-238b; 267a-277a,c
35 LOCKE: *Human Understanding*, BK IV, CH XII 358c-363b esp SECT 14-15 362d-363b
35 BERKELEY: *Human Knowledge*, INTRO 405a-412a,c passim, esp SECT 21-25 411b-412a,c; SECT 133 134 439c-440a
35 HUME: *Human Understanding*, SECT I, DIV 7-10 453c-455b; SECT VII, DIV 49 471c-d; SECT XII, DIV 116, 503d-504a
42 KANT: *Pure Reason*, 1a-13d; 19a-22a,c; 36d-37b; 101d-102a; 133c-134d; 146a-149d; 157d; 196b-197c; 218d-227a esp 224a-227a; 248d-250a,c / *Fund. Prin. Metaphysic of Morals*, 253c-d; 260d-261c; 273d-274a; 277d-279d / *Practical Reason*, 292a-296d esp 292d-293b, 294a-b; 299d; 311d-313d; 320c-321b; 331a-332d; 335b-c; 336d-337a,c / *Judgement*, 492c-d; 567c-568a
54 FREUD: *New Introductory Lectures*, 875a

4. The uses of philosophy: diverse conceptions of its aim, function, and value

4*a*. The philosophic mode of life: contemplation and happiness

7 PLATO: *Euthydemus*, 69a-71a / *Phaedrus*, 122b-128a / *Symposium*, 167b-d / *Meno*, 183c-184c / *Apology* 200a-212a,c / *Phaedo*, 223a-226c; 231c-234c / *Republic*, BK V-VII, 368c-401d / *Timaeus*, 476a-b / *Theaetetus*, 528b-531a / *Philebus* 609a-639a,c esp 633a-639a,c / *Laws*, BK I, 643c-d / *Seventh Letter*, 808c-809a
8 ARISTOTLE: *Topics*, BK III, CH 2 [118^{a}6-16] 164d-165a / *Metaphysics*, BK XII, CH 7 [1072^{b} 14-29] 602d-603a
9 ARISTOTLE: *Ethics*, BK I, CH 8 [1098^{b}19-1099^{a} 6] 344a-c; BK VI, CH 12 [1144^{a}2-6] 393c; BK X, CH 7-8 431d-434a / *Politics*, BK II, CH 7 [1267^{a} 8-14] 462d; BK VII, CH 1-3 527a-530a
12 LUCRETIUS: *Nature of Things*, BK II [1-61] 15a-d; BK V [1-54] 61a-d; BK VI [1-79] 80a-81b
12 EPICTETUS: *Discourses*, BK I, CH 4 108d-110a; CH 15 121c-d; CH 27 132b-133b; CH 29 134d-138a; BK II, CH 1 138b,d-140c; CH 12 151b-152c; CH 14 153d-155b; CH 17 158d-161a; BK III, CH 5 180d-181d; CH 10 185d-187a; CH 15 190a-191a; CH 21-22 193d-201a; BK IV, CH 6 230b-232c
12 AURELIUS: *Meditations*, BK III, SECT 6 261a-c; SECT 9 261d; SECT 12 262b-c; BK IV, SECT 16 264d; BK V, SECT 8-9 269d-270c; BK VI, SECT 12 274c; BK X, SECT 12 298c-d
13 VIRGIL: *Georgics*, II [490-493] 65b
17 PLOTINUS: *First Ennead*, TR III, CH 5-6 11c-12b; TR IV, CH 4-16 14a-19b
18 AUGUSTINE: *City of God*, BK VIII, CH 5 267d-268d; CH 8 270a-d; BK X, CH 2 299d-300a
19 AQUINAS: *Summa Theologica*, PART I, Q 12, A 8, REP 4 57b-58b; Q 26, A 2, ANS and REP 2 150c-151a; PART I-II, Q 3, AA 4-5 625a-627a
20 AQUINAS: *Summa Theologica*, PART I-II, Q 66, A 5, REP 1-2 79b-80c
22 CHAUCER: *Prologue* [285-308] 164a-b
25 MONTAIGNE: *Essays*, 70d-72a; 107a-112d; 231d-246a; 395d; 503b-504c; 508a-512a; 538a-543a,c
30 BACON: *Advancement of Learning*, 69d-76a esp 70b-72c, 73c-74a
31 DESCARTES: *Rules*, I, 1d / *Discourse*, PART I, 41d-42a; PART III, 49d-50b / *Meditations*, III, 88d-89a
31 SPINOZA: *Ethics*, PART IV, APPENDIX, IV 447b-c; XXXII 450c-d; PART V 451a-463d
35 HUME: *Human Understanding*, SECT I, DIV 6 453b-c
38 ROUSSEAU: *Inequality*, 345a / *Political Economy*, 373d-374a
42 KANT: *Judgement*, 591b-592a
43 MILL: *Utilitarianism*, 451c
46 HEGEL: *Philosophy of History*, PART IV, 368d-369a,c
47 GOETHE: *Faust*, PART I [614-685] 17a-18a; [1194-1201] 29b
48 MELVILLE: *Moby Dick*, 255a; 308a-b

4*b*. Philosophy as a moral discipline: the consolation of philosophy

7 PLATO: *Euthydemus*, 69a-71a / *Meno*, 183c-184c / *Phaedo*, 222a-226c; 231c-234c / *Timaeus*, 476a-b / *Theaetetus*, 528c-531a
12 LUCRETIUS: *Nature of Things*, BK I [62-145] 1d-2d; BK II [1-61] 15a-d; BK III [1-93] 30a-31b; [307-322] 34a-b; [830-1094] 40c-44a,c; BK V [1-54] 61a-d; BK VI [1-41] 80a-d
12 EPICTETUS: *Discourses* 105a-245a,c esp BK I, CH 4 108d-110a, CH 9 114c-116b, CH 15 121c-d, CH 17 122d-124a, CH 24 129a-d, CH 27 132b-

133b, CH 29 134d-138a, BK II, CH I 138b,d-140c, CH 14-17 153d-161a, BK III, CH 5 180d-181d, CH 21-23 193d-203b, BK IV, CH I 213a-223d, CH 10 238d-240d

12 AURELIUS: *Meditations* 253a-310d esp BK II, SECT 11-12 258a-c, SECT 14 258d, SECT 17 259b-d, BK III, SECT 3 260b, BK IV, SECT 3 263b-264a, SECT 5 264b, SECT 46 267c, SECT 48 267d-268a, SECT 50 268c, BK V, SECT 9 270b-c, SECT 14 271b, BK VI, SECT 12 274c, SECT 24 276b, SECT 47 278d, SECT 49 279a, BK VII, SECT 32,35 282a, BK VIII, SECT 1 285a-b, SECT 25 287b-c, SECT 31 287d, SECT 58 290d, BK IX, SECT 3 291d-292a, SECT 21 293b-c, SECT 41 295c, BK XII, SECT 35-36 310c-d

13 VIRGIL: *Georgics*, II [490-493] 65b

18 AUGUSTINE: *City of God*, BK VIII, CH 3 266a-d; CH 8 270a-d

25 MONTAIGNE: *Essays*, 21d-22a; 28a-36b; 55d-62a; 69d-75a; 231d-237d; 240c-242d; 283b-284c; 401c-d; 503b-504c; 508a-512a; 529c-530c

30 BACON: *Advancement of Learning*, 26a-c; 73d-74a

31 SPINOZA: *Ethics*, PART IV, PROP 67-73 444d-447a; PART V, PROP 25-42 458d-463d

33 PASCAL: *Pensées*, 67 180b

35 HUME: *Human Understanding*, SECT I, DIV 1-4 451a-452c; SECT V, DIV 34 463d-464b

36 STERNE: *Tristram Shandy*, 388a-417b

37 FIELDING: *Tom Jones*, 35a-d; 182a-c

38 ROUSSEAU: *Political Economy*, 373d-374a

40 GIBBON: *Decline and Fall*, 644d-646a

42 KANT: *Fund. Prin. Metaphysic of Morals*, 261c-d / *Pref. Metaphysical Elements of Ethics*, 368c-d

46 HEGEL: *Philosophy of History*, PART III, 303b-c

47 GOETHE: *Faust*, PART I [614-685] 17a-18a; PART II [11,398-407] 277b

4c. The social role of philosophy: the philosopher and the statesman; the philosopher king

7 PLATO: *Euthydemus*, 83c-d / *Apology*, 207a-208a / *Gorgias*, 272b-273b; 291c-292b / *Republic*, BK V-VI, 368c-383c; BK VII, 390b-391b; 398c-401d / *Theaetetus*, 525c-526a; 528c-531a / *Statesman*, 598b-608d / *Laws*, BK I, 643c-d / *Seventh Letter*, 801b-802c; 806b-c

8 ARISTOTLE: *Metaphysics*, BK I, CH 2 [982^{a}5-19] 500b-c

9 ARISTOTLE: *Ethics*, BK VI, CH 7-8 390a-391c; BK X, CH 9 434a-436a,c / *Politics*, BK VII, CH 2-3 528a-530a

12 LUCRETIUS: *Nature of Things*, BK II [1-61] 15a-d; BK V [1113-1135] 75c-d

12 AURELIUS: *Meditations*, BK VI, SECT 14 274d-275a

14 PLUTARCH: *Lycurgus* 32a-48d esp 47a-48c / *Numa Pompilius*, 59c-60b / *Solon* 64b,d-77a,c / *Pericles*, 122d-123c / *Alcibiades*, 156c-158b / *Marcus Cato*, 287d-288c / *Alexander*, 543b-544a; 566a-567d; 571b-572a / *Cicero*, 717a-b / *Dion*, 782c-788b

15 TACITUS: *Annals*, BK XIV, 153d-155a; BK XV, 172c-173d

23 HOBBES: *Leviathan*, PART II, 164a,c

24 RABELAIS: *Gargantua and Pantagruel*, BK III, 127b,d-131a,c

25 MONTAIGNE: *Essays*, 55d-62a

30 BACON: *Advancement of Learning*, 5a-b; 20b-26a; 27c; 30a-c

32 MILTON: *Areopagitica*, 383a

35 LOCKE: *Human Understanding*, BK III, CH X, SECT 8-9 293c-294a

35 HUME: *Human Understanding*, SECT I, DIV 4, 452a; DIV 5 452d-453b; SECT XI, DIV 113-114, 502d-503b

38 MONTESQUIEU: *Spirit of Laws*, BK XXIV, 202d-203a

38 ROUSSEAU: *Inequality*, 345a / *Political Economy*, 373d-374a

40 GIBBON: *Decline and Fall*, 32a-b; 205d-206a; 284a-c; 338d-339c; 390d; 669b-c

41 GIBBON: *Decline and Fall*, 40b-41a; 72c; 76d-77b

42 KANT: *Practical Reason*, 360d-361d

43 FEDERALIST: NUMBER 49, 159d-160a

46 HEGEL: *Philosophy of Right*, PREF, 4b-7c / *Philosophy of History*, PART II, 279d-281a; PART III, 303b-c; PART IV, 360b-c; 363d-364c

48 MELVILLE: *Moby Dick*, 107a-b

54 FREUD: *Civilization and Its Discontents*, 780a-b

5. The character and training of the philosopher: the difficulty of being a philosopher

7 PLATO: *Euthydemus*, 84a,c / *Phaedrus*, 125b-126c / *Symposium*, 163a-168a; 169c-172d / *Apology* 200a-212a,c / *Phaedo*, 223a-226c; 231c-234c / *Gorgias*, 271a-b; 273b-d; 291c-292b / *Republic*, BK II, 320b-c; BK V-VII, 368c-401d / *Timaeus*, 476a-b / *Parmenides*, 491a-c / *Theaetetus*, 525c-526b; 528c-531a / *Seventh Letter*, 808c-809a

8 ARISTOTLE: *Posterior Analytics*, BK I, CH 9 [76^{a}26-30] 104d / *Topics*, BK VIII, CH 14 [163^{b} 8-16] 222a / *Heavens*, BK II, CH 12 [291^{b}24-29] 383b-c / *Metaphysics*, BK I, CH 2 500b-501c / *Soul*, BK I, CH I [402^{a}1-22] 631a-b

9 ARISTOTLE: *Ethics*, BK I, CH 6 [1096^{a}11-17] 341b; BK X, CH 7 [1177^{a}19-^{b}3] 431d-432a

10 GALEN: *Natural Faculties*, BK I, CH 14, 178d-179a; BK III, CH 10, 207d

12 EPICTETUS: *Discourses*, BK I, CH 8 113d-114c; CH 26 131b-132b; CH 29 134d-138a; BK II, CH 1 138b,d-140c; CH 3 141d-142a; CH 8-9 146a-148c; CH 11-12 150a-152c; CH 17 158d-161a; CH 19 162c-164b; BK III, CH 2 177c-178d; CH 19 192c-d; CH 21-22 193d-201a; BK IV, CH 6 230b-232c; CH 8 235b-237d

5. The character and training of the philosopher: the difficulty of being a philosopher.)

12 AURELIUS: *Meditations*, BK V, SECT 9 270b-c; BK VII, SECT 3 279d-280a
17 PLOTINUS: *First Ennead*, TR III 10a-12b; TR IV, CH 4-16 14a-19b / *Fifth Ennead*, TR IX, CH 1-2, 246c-d
25 MONTAIGNE: *Essays*, 55d-62a esp 60a-c; 70d-72a; 150c-151a; 451a-c; 539d-540a
28 HARVEY: *Motion of the Heart*, 268a-c / *On Animal Generation*, 331c-332a
30 BACON: *Advancement of Learning*, 16a-b; 26a-27a
31 DESCARTES: *Discourse* 41a-67a,c esp PART II-III 44c-51b, PART VI 60d-67a,c
33 PASCAL: *Pensées*, 4 172b
35 HUME: *Human Understanding*, SECT I, DIV 6 453b-c
37 FIELDING: *Tom Jones*, 81c-82a
40 GIBBON: *Decline and Fall*, 31d-32b; 644b-646a
41 GIBBON: *Decline and Fall*, 526c-527a
42 KANT: *Practical Reason*, 337a-338b
46 HEGEL: *Philosophy of Right*, PREF, 1d-2a
47 GOETHE: *Faust*, PART I [614-685] 17a-18a; [1868-2050] 44b-48b

6. Praise and dispraise of the philosopher and his work

6a. The philosopher as a man of science or wisdom: the love and search for truth

7 PLATO: *Phaedrus*, 125b-126c / *Symposium*, 163a-168a; 169c-172d / *Apology* 200a-212a,c / *Phaedo*, 222a-224a / *Gorgias*, 271a; 280d-294d / *Republic*, BK II, 319c-320c; BK V-VII, 368c-401d / *Timaeus*, 476a-b / *Theaetetus*, 528c-531a / *Sophist*, 551a-552c; 569a-571c / *Seventh Letter*, 808c-809a
8 ARISTOTLE: *Heavens*, BK II, CH 12 [291^{b}24-29] 383b c / *Metaphysics*, BK I, CH 1-2 499a-501c
9 ARISTOTLE: *Ethics*, BK I, CH 6 [1096^{a}11-17] 341b; BK VI, CH 7 [1141^{a}9-19] 390a; BK IX, CH 1 [1164^{b}2-6] 417b; BK X, CH 7 [1177^{a}19-^{b}3] 431d-432a / *Politics*, BK VII, CH 2 [1324^{a}24-34] 528b
10 GALEN: *Natural Faculties*, BK III, CH 10, 207d
12 LUCRETIUS: *Nature of Things*, BK I [62-79] 1d-2a; BK III [1-30] 30a-b; BK V [1-54] 61a-d; BK VI [1-41] 80a-d
12 EPICTETUS: *Discourses*, BK II, CH 22 167d-170a; CH 24 172d-174b; BK III, CH 9 184c-185d; CH 21-22 193d-201a; BK IV, CH 5 228a-230b
12 AURELIUS: *Meditations*, BK V, SECT 9 270b-c
14 PLUTARCH: *Marcellus*, 252a-255a
17 PLOTINUS: *First Ennead*, TR III 10a-12b / *Fifth Ennead*, TR IX, CH 1-2, 246c-d
18 AUGUSTINE: *Confessions*, BK III, par 8 14d-15a / *City of God*, BK VIII, CH 3 266a-d; CH 10 271a-d
25 MONTAIGNE: *Essays*, 55d-62a; 70d-72a; 150c-151a; 446d-450a
28 HARVEY: *Motion of the Heart*, 268a-c / *On Animal Generation*, 331c-332a
30 BACON: *Advancement of Learning*, 1a-28d esp 17b-27c
31 DESCARTES: *Discourse*, PART I, 41d-42a; 43d-44a; PART III, 50b-51a; PART VI 60d-67a,c esp 66d-67a,c
33 PASCAL: *Pensées*, 261 221a; 327 231a-b
35 LOCKE: *Human Understanding*, 87a-b
35 HUME: *Human Understanding*, SECT I 451a-455b passim, esp DIV 2 451b-c, DIV 5-10 452d-455b
41 GIBBON: *Decline and Fall*, 526c-527a
42 KANT: *Practical Reason*, 337c-338b / *Pref. Metaphysical Elements of Ethics*, 365b [fn 1]
46 HEGEL: *Philosophy of Right*, PREF, 1d-2a

6b. The philosopher and the man of opinion: sophistry and dogmatism, idle disputation, perpetual controversy

5 ARISTOPHANES: *Clouds* 488a-506d esp [93-267] 489a-491a, [412-476] 493c-494b
7 PLATO: *Laches*, 36a / *Protagoras*, 42a-43b / *Euthydemus* 65a-84a,c / *Gorgias*, 271b-273b / *Republic*, BK I, 300b-301c; BK VI, 379c-d / *Theaetetus*, 518d-519a; 525d-526b / *Sophist* 551a-579d
9 ARISTOTLE: *Ethics*, BK IX, CH 1 [1164^{a}22-^{b}6] 417a-b; BK X, CH 9 [1180^{b}29-1181^{b}12] 435d-436a,c
10 GALEN: *Natural Faculties*, BK I, CH 13, 174c-175a; CH 14-15, 177a-179d esp CH 14, 178d-179a; BK II, CH 9, 199a,c
12 EPICTETUS: *Discourses*, BK I, CH 8 113d-114c; CH 25-26 129d-132b; BK II, CH 17 158d-161a; CH 19 20 162c-166c; BK III, CH 2 177c-178d; CH 21 193d-195a; BK IV, CH 8 235b-237d
14 PLUTARCH: *Marcus Cato*, 287d-288c / *Alexander*, 566a-567d
23 HOBBES: *Leviathan*, PART I, 49d; 54b-c; 56d; 57c-d; 59a-60a; 71a-b; 84a; PART II, 163a-b; PART IV, 267a-274d passim; 276c
24 RABELAIS: *Gargantua and Pantagruel*, BK I, 18b-24a; BK II, 78b-80d; 101b 106a; 124d-125b; BK III, 197b-200d
25 MONTAIGNE: *Essays*, 55d-62a; 74d-77d; 89c-d; 239d-294b passim, esp 240c-246a, 257d-264a, 276b-278a; 448d-449a; 517b-519a
30 BACON: *Advancement of Learning*, 1a-28d esp 2c-17b; 57d-58b; 66c-67c / *Novum Organum*, BK I, APH 44 110a-b; APH 54 111c-d; APH 56 112a; APH 62-65 113b-114c; APH 71 117a-c
31 DESCARTES: *Rules*, II 2a-3b; X, 16d-17a / *Discourse*, PART I, 43d-44b; PART II, 46b; PART VI, 64a-c
33 PASCAL: *Pensées*, 327 231a-b
35 LOCKE: *Human Understanding*, 89a-c; BK III, CH IV, SECT 7-11 260d-262b passim; CH VI, SECT 24 274c; CH VIII, SECT 2 284c-285a; CH X, SECT 2 291d-292a; SECT 6-14 293a-295a;

BK IV, CH III, SECT 30 323a-c; CH VII, SECT 11, 341a-d; CH VIII, SECT 9 347d-348a

35 BERKELEY: *Human Knowledge*, INTRO, SECT 17 409d-410a; SECT 20, 411a; SECT 85 429c; SECT 88 430a-b; SECT 97 431d-432a; SECT 143 441c-d

35 HUME: *Human Understanding*, SECT I, DIV 6-7 453b-454a passim; SECT VIII, DIV 62-63, 478c-d; SECT XII, DIV 132, 509d

36 STERNE: *Tristram Shandy*, 227a-228a; 234b-236b; 318b-321a; 329b-336a; 421b-422b

39 SMITH: *Wealth of Nations*, BK V, 336b-337a

40 GIBBON: *Decline and Fall*, 159a-d

41 GIBBON: *Decline and Fall*, 299a-b; 526d-527a

42 KANT: *Pure Reason*, 36a-37d esp 36d-37b; 120c-121c; 187c-188b; 221c-222b / *Fund. Prin. Metaphysic of Morals*, 260d-261d / *Practical Reason*, 299d / *Judgement*, 607d-608c

46 HEGEL: *Philosophy of Right*, PREF, 2d-4a

47 GOETHE: *Faust*, PART I [1908-1963] 45b-46b; [4343-4366] 107a-b; PART II [7843-7846] 191a

51 TOLSTOY: *War and Peace*, BK VI, 243b

53 JAMES: *Psychology*, 227b; 235b

54 FREUD: *New Introductory Lectures*, 874c-875b esp 875a; 877b-c

6c. The philosopher as a man of reason: the limits of reason; its supplementation by experience or faith

16 PTOLEMY: *Almagest*, BK I, 5a-6a

18 AUGUSTINE: *Confessions*, BK III, par 8 14d-15a; BK IV, par 30-31 26b-27a; BK V, par 3-5 27c-28c; BK VI, par 6-8 36c-37c / *City of God*, BK XI, CH 2 323a-c; BK XVIII, CH 41 495b-496c; BK XIX, CH 1-4 507a-513c

19 AQUINAS: *Summa Theologica*, PART I, Q I, A 1 3b-4a; Q 2, A 2, REP 1 11d-12c; Q 12, A 12 60d-61c; Q 32, A 1 175d-178a; Q 46, A 2 253a-255a

21 DANTE: *Divine Comedy*, PURGATORY, III [16-45] 56a-b; PARADISE, XXIV [52-81] 143b-c; XXIX [70-126] 151a-c

25 MONTAIGNE: *Essays*, 208a-294b esp 208d-209c, 212a-215a, 238c-239c, 257d-264a, 267c-268a, 271b-273b

30 BACON: *Advancement of Learning*, 2c-4c; 96d-97b / *Novum Organum*, BK I, APH 65 114b-c; APH 95 126b-c

31 DESCARTES: *Rules*, II 2a-3b; VIII, 13a-14a / *Discourse* 41a-67a,c esp PART I, 43c, PART III 48b-51b

33 PASCAL: *Pensées*, 77-79 186a; 184-241 205a-217b passim; 245 218b; 248 219a; 265-290 221b-225a; 425-428 243b-244b; 434-435 248a-251a; 561-567 272b-273b; 585-588 277a-b / *Geometrical Demonstration*, 440a-b

35 LOCKE: *Human Understanding*, INTRO 93a-95d

35 BERKELEY: *Human Knowledge*, INTRO, SECT 1-4 405a-d

35 HUME: *Human Understanding*, SECT I 451a-455b passim, esp DIV 2 451b-c, DIV 7-10 453c-455b; SECT IV, DIV 26 460b-c; SECT V, DIV 34 463d-464b; SECT VIII, DIV 81 487a; SECT XII, DIV 116, 503d-504a; DIV 129-130 508a-d

37 FIELDING: *Tom Jones*, 379c-380a

40 GIBBON: *Decline and Fall*, 186a-d esp 186c; 200c-201b; 308b-309b; 390d

42 KANT: *Pure Reason*, 129c-173a esp 133c-d; 217d-218a; 219a-220b; 227a-235a esp 231c-232a / *Fund. Prin. Metaphysic of Morals*, 285a-287d / *Practical Reason*, 291a-292a; 296a-d; 320c-321b; 337a-355d / *Judgement*, 497a-498b; 551a-552c; 570b-572b; 575b-c; 588a-607c

47 GOETHE: *Faust*, PART I [354-514] 11a-14b; [614-807] 17a-21a; PART II [10,113-121] 246b-247a

48 MELVILLE: *Moby Dick*, 307a

51 TOLSTOY: *War and Peace*, BK VI, 242c-243b; BK IX, 361d-365c

52 DOSTOEVSKY: *Brothers Karamazov*, BK XI, 337a-346a

6d. The philosopher as a man of theory or vision: neglect of the practical; withdrawal from the affairs of men and the marketplace

7 PLATO: *Protagoras*, 54c-55a / *Symposium*, 149d 150a / *Apology* 200a-212a,c / *Gorgias*, 272b-273b; 291c-292b / *Republic*, BK VI, 375b-376c; BK VII, 390b-391b / *Theaetetus*, 528c-531a

9 ARISTOTLE: *Ethics*, BK II, CH 4 [1105^b5-19] 351a-b; BK VI, CH 7 [1141^a34-$^b8$] 390b-c / *Politics*, BK I, CH II [1259^a5-21] 453b-c

12 EPICTETUS: *Discourses*, BK I, CH 22 127c-128c; CH 26 131b-132b; BK III, CH 6 181d-182b; CH 22 195a-201a; BK IV, CH 1 213a-223d; CH 8 235b-237d

14 PLUTARCH: *Pericles*, 130c-d / *Marcellus*, 252a-255a

25 MONTAIGNE: *Essays*, 55d-57b; 63d-75a; 327b-d; 478c-482b; 514a-c; 538a-543a,c

30 BACON: *Advancement of Learning*, 1a-28d esp 2c-17b; 30b-c; 73d-74c

35 BERKELEY: *Human Knowledge*, SECT 97 431d-432a; SECT 119 436c

35 HUME: *Human Understanding*, SECT I, DIV 2-4 451b-452c; SECT V, DIV 34, 463d-464a

36 SWIFT: *Gulliver*, PART II, 78b

36 STERNE: *Tristram Shandy*, 421b

38 ROUSSEAU: *Inequality*, 345a / *Political Economy*, 373d-374a

39 SMITH: *Wealth of Nations*, BK V, 335d-337a

42 KANT: *Pure Reason*, 187c-188b / *Fund. Prin. Metaphysic of Morals*, 263b-264a; 266a-b / *Practical Reason*, 304d-305a; 320c-321b; 358a / *Pref. Metaphysical Elements of Ethics*, 365b-c / *Judgement*, 607d-608c

43 MILL: *Representative Government*, 346c-347a

46 HEGEL: *Philosophy of Right*, PREF, 5c-6a / *Philosophy of History*, PART III, 303b-c

(6. Praise and dispraise of the philosopher and his work. 6d. The philosopher as a man of theory or vision: neglect of the practical; withdrawal from the affairs of men and the marketplace.)

48 MELVILLE: *Moby Dick*, 116a-117a; 255a
50 MARX-ENGELS: *Communist Manifesto*, 430d-432a
51 TOLSTOY: *War and Peace*, BK IX, 361d-365c
53 JAMES: *Psychology*, 271a-b
54 FREUD: *Inhibitions, Symptoms, and Anxiety*, 722a-b

7. Observations on the history of philosophy: the lives of the philosophers in relation to their thought

7 PLATO: *Protagoras*, 54c-55a / *Apology* 200a-212a,c / *Phaedo*, 240d-242b / *Sophist*, 564c-568a / *Seventh Letter* 800a-814d
8 ARISTOTLE: *Sophistical Refutations*, CH 34 [183^{b}16-184^{b}8] 253a-d / *Physics*, BK I, CH 2-9 259b-268d / *Heavens*, BK I, CH 10 [279^{b}4-12] 370d; BK III, CH 7 [306^{a}6-18] 397b-c / *Metaphysics*, BK I, CH 3 [983^{a}24]-BK II, CH 1 [993^{b}19] 501c-512a; BK XI, CH 6 590d-592b; BK XII, CH 8 [1074^{b}1-14] 604d-605a; CH 10 [1075^{a}25-1076^{a}4] 606a-d / *Soul*, BK I, CH 2-5 633a-641d
9 ARISTOTLE: *Parts of Animals*, BK I, CH 1 [642^{a}25-30] 165b-c / *Ethics*, BK I, CH 6 341b-342c / *Politics*, BK I, CH 11 [1259^{a}5-21] 453b-c
10 GALEN: *Natural Faculties*, BK III, CH 10 207b-d
12 LUCRETIUS: *Nature of Things*, BK I [62-79] 1d-2a; BK III [1-30] 30a-b; BK V [1-54] 61a-d; BK VI [1-34] 80a-c
12 EPICTETUS: *Discourses*, BK II, CH 12 151b-152c; BK III, CH 2 177c-178d; CH 6, 182a; CH 21-22 193d-201a
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The relation of philosophy to theology and religion, *see* RELIGION 6g; SCIENCE 2a; THEOLOGY 2, 4a; TRUTH 4a.

The relation between philosophy and mathematics, *see* MATHEMATICS 1a–1b; PHYSICS 1b.

The relation of the philosophical to the experimental and empirical sciences, *see* PHYSICS 2–2b; PROGRESS 6b; SCIENCE 1c.

The comparison of philosophy, poetry, and history, *see* HISTORY 1; POETRY 5b; SCIENCE 2b.

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The association or contrast of the philosopher with the sophist, the rhetorician, or the dogmatist, *see* DIALECTIC 6; METAPHYSICS 4a; OPINION 4b; RHETORIC 1a; WISDOM 3.

The comparison of progress in philosophy and science, and for the conditions of progress in philosophy, *see* PROGRESS 6b–6c.

ADDITIONAL READINGS

Listed below are works not included in *Great Books of the Western World*, but relevant to the idea and topics with which this chapter deals. These works are divided into two groups:

I. Works by authors represented in this collection.
II. Works by authors not represented in this collection.

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Chapter 67: PHYSICS

INTRODUCTION

CONCERNING the subject matter of physics, one thing seems to be traditionally taken for granted. The object of its study is the sensible world of changing things or matter in motion. When Plato, for example, conceives astronomy as dealing not with the actual and observable motions of the heavenly bodies, but with the possible forms of the motions of solids, he gives it the character of a mathematical rather than a physical science. He associates it with geometry, as for a similar reason he associates music—divorced from concern with audible harmonies—with arithmetic. In anyone's view, if a science does not investigate sensible realities, if it does not undertake to account for the motions of actual bodies, or, stated most generally, if it has no concern with the phenomena of change, then it does not have the character of physical or natural science.

The early Greek physicists, the pre-Socratics, to whom Plato and Aristotle refer, inaugurate the study of change with speculations about ultimate origins, the underlying principles or causes of natural phenomena. Sometimes they are called philosophers and sometimes scientists —or, at least, precursors of empirical science. But there seems to be no difference of opinion about their title as physicists. Their undisputed claim to this title derives, not from the method they employ, but from the object they study—change. In that primary meaning of the word "nature" which comes from the Latin *natura*—the equivalent of *phüsis* in Greek—they can be called "naturalists" or "physicists" indifferently. The realm of nature is the realm of change.

It is for this reason that Aristotle, considering the theories of his predecessors in the opening chapters of his *Physics*, sets Parmenides apart from all the rest. Parmenides' affirmation of the unity of being, which leads to his denial of the reality of change or motion, cannot be treated as a physical theory. On the contrary, it is, according to Aristotle, a complete negation of the subject matter of physics. No matter what other points physicists may dispute among themselves, they must all at least agree in taking a stand against Parmenides. Aristotle does not even seem to think that a book on physics is the proper place to argue against Parmenides. That argument belongs to another part of philosophy. The reality of change seems to him sufficiently evident to assure the physicist that he has a subject matter to investigate.

THE QUESTION whether the early physicists were scientists or philosophers calls attention to different methods of investigating natural phenomena. Agreement on the subject matter of physics may prevail, therefore, only in very general terms. When, in a manner to accord with the method employed, the object of physical inquiry is more specifically defined, there seem to be two physics, not one—a philosophical and a scientific physics, a philosophy of nature and a natural science, or, to use Kant's phrasing, a rational or pure physics and an empirical or experimental physics.

Though Newton may call his work a philosophy of nature, he also refers to it as an experimental philosophy, in order to distinguish it from the work of earlier natural philosophers who did not perform experiments. The difference between the physics of Newton and that of Aristotle seems, however, to involve more than a divergence in method. The problems which Newton and Aristotle try to solve indicate a difference in subject matter as well. Nevertheless, this difference falls within what, in the most general terms, must be conceived as the domain of physics. For all their differ-

ences, both are physicists, though both are not philosophers or scientists in the same sense.

There are other sources of variation in the definition of physics. The problem of the relation of physics to other disciplines—whether these are other branches of philosophy or other fields of empirical research—raises issues about the object and scope of physics. Aristotle, Bacon, Descartes, and Kant, for example, do not seem to have a common understanding of the relation of physics to mathematics and metaphysics. In consequence they conceive physics itself differently.

On the level of empirical research, physics is sometimes regarded as just one of the natural sciences and sometimes as the whole group of natural sciences. In the latter case it includes such fields as astronomy, mechanics, optics, acoustics, thermodynamics, magnetism, and electricity; and sometimes chemistry, biology, and even psychology are included under the head of physical or natural sciences, contrasted in the broadest terms to the social sciences. The conception of physics obviously changes when its scope is determined by a boundary line which separates it from chemistry, or from biology and psychology, or from the study of society.

The separation of these other sciences from physics does not necessarily imply a discontinuity in nature or the natural sciences. The biologist and the psychologist, for example, consider the physical bases of life and the physical conditions or correlates of mental phenomena. Hybrid sciences like biophysics and psychophysics have developed. Even the study of society draws upon physics to the extent that the laws of matter in motion and considerations of space and time must be appealed to for an understanding of the physical foundations of economic and political life.

OTHER CHAPTERS DEAL with specific physical sciences, *e.g.*, ASTRONOMY and MECHANICS. The latter tries to cover the various branches of mechanics and related fields of study, such as dynamics, optics, the theory of heat, magnetism, and electricity; particularly so far as these are represented in the work of Galileo, Newton, Huygens, Gilbert, Fourier, and Faraday. The basic concepts of mechanics and its branches or affiliates are also treated in that chapter. Still other chapters deal with fundamental terms representing concepts or problems in the larger domain of physics, philosophical or scientific, *e.g.*, CAUSE, CHANGE, ELEMENT, INFINITY, MATTER, PRINCIPLE, QUANTITY, SPACE, and TIME—not to mention NATURE and WORLD, terms which represent in the most comprehensive way the reality studied by the physicist.

Our discussion here can therefore be restricted to the problems raised in the great books concerning the conception of physics, its subject matter and method, its relation to other sciences or other parts of philosophy. It will lead to such questions as whether physics is supreme among the sciences studying reality or the nature of things and, at the other extreme, whether physics is at all possible as a science, whether there can be scientific knowledge of bodies in motion or of the whole realm of change and becoming.

The problem of the distinction between philosophical and scientific physics would appear to be only a special case of the distinction between philosophy and science in general. But it is more than that. It is the case which tests the main distinction itself, since here both philosopher and scientist claim to be expounding the same subject matter or at least to be dealing with the same general field of phenomena.

Mathematics and metaphysics bear on the distinction between philosophy and science in a different way. If, for example, we take experimentation or empirical research to be characteristic of science in distinction from philosophy, then mathematics would seem to resemble philosophy rather than science. On no understanding of the nature of mathematical knowledge is mathematics ever divided into two kinds which are capable of being described as empirical and rational. The possibility of metaphysical knowledge may be challenged, but no one has ever proposed an experimental metaphysics to challenge the metaphysics of the philosophers.

But physics seems to permit both an experimental and a philosophical treatment. Whether they are to be regarded as in conflict with one another depends on whether they are attacking

the same problems by different methods or whether they represent something like a division of labor. In the latter view, each would deal, according to its method, with different problems and tend to supplement rather than to exclude the other. Psychology is another subject matter which seems to receive a dual treatment—philosophical and experimental—in the tradition of the great books. It raises issues similar to those just mentioned. They are considered in the chapter on MAN.

As the chapters on PHILOSOPHY and on SCIENCE indicate, the discussion of their difference from and relation to one another is complicated by the double use of both terms. The word "science," for example, is used for both the philosophical and the experimental sciences throughout the greater part of the tradition. Similarly, until quite recently, the name of philosopher is taken by those who experiment as well as by those who do not.

It is impossible, therefore, to speak without confusion of a scientific and a philosophical physics unless the verbal ambiguities are resolved by some convention, such as the understanding that when the context indicates that the words "science" and "philosophy" are being used as opposites rather than as synonyms, then "science" shall signify the experimental and "philosophy" the non-experimental mode of treatment. Beyond this, it is necessary to proceed as if the chapters on PHILOSOPHY and SCIENCE formed a background for some of the matters to be discussed here. Otherwise the consideration of natural philosophy and natural science would tend to become a general discussion of philosophy and science.

THE GREAT BOOKS of experimental physics seem to have three characteristics in common. First, and most naturally, they insist upon experimentation as either the indispensable source or the ultimate test of scientific formulations. Second, they tend to rely upon mathematics as much as upon experiment, both for the formulation of nature's laws and for the demonstration of the consequences or corollaries of the primary laws. Third, though experiments and observations multiply as science develops, they seek to bring all the phenomena of nature under the smallest number of generalizations, which have the utmost simplicity in mathematical statement.

On the second and third points, Newton's declarations seem to be most explicit. "Nature," he says, "is pleased with simplicity and affects not the pomp of superflous causes." Accordingly, Newton directs his efforts toward the simplest statement of the laws of motion, and these he seeks to give the universality requisite for covering every type of natural phenomenon. At the opening of the third book of the *Mathematical Principles of Natural Philosophy*, he explains that in the preceding books, he has "laid down the principles of philosophy, principles not philosophical but mathematical; such, namely, as we may build our reasonings upon in philosophical inquiries. These principles are the laws and conditions of certain motions, and powers or forces." From these same principles, he will now undertake to "demonstrate the frame of the System of the World."

In the Preface to the first edition of this work, Newton describes the third book as one in which he derives "from the celestial phenomena the forces of gravity with which bodies tend to the sun and the several planets. Then from these forces, by other propositions which are also mathematical," he goes on, "I deduce the motions of the planets, the comets, the moon, the sea." But he does not consider his work to have attained the goal of physics—the comprehension of all natural phenomena by a few simple mathematical formulae.

His confession of failure may also be read as a prognostication of what an experimental physics based on mathematical principles might some day be able to achieve. "I wish we could derive the rest of the phenomena of nature by the same kind of reasoning," he writes, "for I am induced by many reasons to suspect that they may all depend upon certain forces by which the particles of bodies, by some causes hitherto unknown, are either mutually impelled towards one another, and cohere in regular figures, or are repelled and recede from one another." Einstein's unified field equations, covering both gravitational phenomena on the astronomical scale and the electrical attractions and repulsions of sub-atomic particles, seem to realize, or at least closely to approximate, the ideal Newton has in mind.

Midway between Newton and Einstein, Fourier also bears testimony to the ideal of physics as a science at once simple in its principles and universal in the scope of their application. The successors of Newton and Galileo, he writes, "have extended their theories and given them an admirable perfection; they have taught us that the most diverse phenomena are subject to a small number of universal laws which are reproduced in all the acts of nature. It is recognized that the same principles regulate all the movements of the stars, their form, the inequalities of their courses, the equilibrium and the oscillations of the seas, the harmonic vibrations of air and sonorous bodies, the transmission of light, capillary actions, the undulations of fluids, in fine the most complex effects of all natural forces. Thus has the thought of Newton been confirmed," he concludes, referring to Newton's praise of geometry, whose glory it is that the few mathematical principles it provided for use in physics should have been "able to produce so many things."

On the experimental side, the great works of physical science seem to contain diverse notions of the purposes served by experimentation, accompanied by a fairly uniform recognition of the dependence of natural science upon experiment. In the field of magnetism, for example, Gilbert sets aside as unscientific all those authors who "have written about amber and jet as attracting chaff . . . but with never a proof from experiments. . . . These writers deal only in words. . . . Such philosophy bears no fruit." The fruitfulness of experiments on the vacuum, the equilibrium of fluids, and the weight of air leads Pascal to conclude that the secrets of nature remain hidden until "the experiments which supply us with knowledge about it" can be performed and multiplied.

"We ought never to search for truth but by the natural road of experiment and observation," writes Lavoisier; and Faraday describes himself as "an experimentalist" who feels "bound to let experiment guide me into any train of thought which it may justify." The science of electricity, he finds, "is in that state in which every part of it requires experimental investigation, not merely for the discovery of new effects," but ultimately for "the more accurate determination of the first principles of action of the most extraordinary and universal power in nature."

Methods of experimentation necessarily differ in different fields of physical research. Newton's optical experiments with mirrors and prisms were adapted to the phenomena of light, as Galileo's experiment with the inclined plane, Pascal's experiment on the equilibrium of fluids, or Faraday's experiments with induction coils were adapted to the phenomena of dynamics, hydrostatics, and electricity. The materials employed, the apparatus or instruments devised, the factors controlled or isolated from irrelevant circumstances, and the units of measurement in which the results are recorded, naturally vary with the phenomena under observation. Yet one thing is common to the variety of experiments described in the great books of physical science. They all involve the construction of an artificial physical system which permits more accurate and refined observation than does nature uncontrolled or untampered with.

The student of nature must observe in any case, no matter whether he is a philosopher or a scientist. To say that philosophical physics is non-experimental does not mean for Aristotle that knowledge of nature is possible without observation or induction from experience. But the experimentalists insist upon the distinction between the kind of observations which men normally make in the course of everyday experience and the kind which involve the special experience enjoyed only by those who observe and, in addition, measure the results of specially contrived experiments.

This point of distinction seems to be strikingly illustrated by a passage in Galileo's *Two New Sciences*. One of the persons in the dialogue, Simplicio, declares "everyday experience to show the propagation of light to be instantaneous." He explains that "when we see a piece of artillery fired at a great distance, the flash reaches our eyes without lapse of time; but the sound reaches the ear only after a noticeable interval." Sagredo replies that this familiar bit of experience permits him to infer only that "sound, in reaching our ear, travels more slowly than light." It does not inform us, he says, "whether the coming of light is instanta-

neous or whether, although extremely rapid, it still occupies time." The choice between these alternatives could not be determined by ordinary experience. An experiment had to be constructed in order to measure the velocity of light.

Recourse to experimentation to find by observation and measurement the answers which ordinary experience fails to yield does not exhaust the uses of experiment. The great experimental physicists indicate at least three distinct uses to which experiments can be put in addition to a merely exploratory use for "the discovery of new effects."

In natural philosophy as in mathematics, writes Newton, "the method of analysis ought ever to precede the method of composition" or synthesis. In physics, the method of analysis "consists in making experiments and observations, and in drawing conclusions from them by induction." In contrast, the synthetic method begins with the principles *assumed*, therefrom "explaining the phenomena . . . and proving the explanations."

Here experiments perform a probative rather than an inductive function. As Huygens observes, proof in physics does not have the certitude of mathematical demonstration, but it can have an extremely high degree of probability —"very often scarcely less than complete proof"—as a result of the experimental confirmation of a conclusion deduced from the assumed principles. This occurs "when things which have been demonstrated by the principles that have been assumed, correspond perfectly to the phenomena which experiment has brought under observation, especially when there are a great number of them." A single crucial experiment, so perfect in construction that all relevant factors have been controlled, makes unnecessary the multiplication of experiments to establish the conclusion.

A third use of experiment is illustrated by Galileo when he measures the velocity of a ball rolling down an inclined plane, in order to decide whether a certain mathematical definition of uniformly accelerated motion describes the acceleration "which one meets in nature in the case of falling bodies." The persons in the dialogue seem to be satisfied with some mathematical reasoning which shows that the velocity increases with the units of time elapsed rather than with the intervals of space traversed. But when Simplicio asks for an experiment to show that the mathematical conclusion has physical reality, in the sense of describing observable phenomena, Salviati replies that this request "is a very reasonable one, for this is the custom —and properly so—in those sciences where mathematical demonstrations are applied to natural phenomena" and "where the principles once established by well-chosen experiments become the foundations of the entire superstructure." Here experiment does not confirm conclusions. It establishes principles, not by inductive generalization but by comparing actual measurements with mathematical expectations.

WITHOUT EXPERIMENT but not without inductions from experience, without measurements but not without recourse to observation, Aristotle's *Physics*—and with it such physical treatises as his works *On the Heavens* and *On Generation and Corruption*—represents a philosophy of nature. In Aristotle's meaning of the term 'science,' these treatises expound sciences, but they also constitute one part of philosophy, to be distinguished from mathematics and from what Aristotle regards as the first or highest part of philosophy, *i.e.*, the science of metaphysics.

Aristotle's tripartite division of the theoretic sciences or speculative philosophy into physics, mathematics, and metaphysics raises a question concerning his numerous biological works, and perhaps also his treatise *On the Soul*. Are these to be classified as physical sciences or parts of natural philosophy? The fact that Aristotle distinguishes between the forms and properties of living and non-living matter does not seem to affect the answer. By his criteria of physical inquiry—namely, that it investigates what neither exists nor can be conceived apart from matter and motion, and that it is concerned with every type of change—all these works belong to the domain of physics. Accordingly even such apparently psychological studies as those dealing with sensation, memory, dreams, justify the title under which they have been traditionally grouped—*Parva Naturalia*, *i.e.*, short physical treatises.

For all these more specialized considerations of natural phenomena the *Physics* seems to serve as a general introduction, as well as being in its own right an exposition of the most fundamental science in the sphere of natural philosophy. It tries to define change and to state the principles underlying every type of change. It tries to classify the types of change, separating coming to be and passing away simply (or generation and corruption), from coming to be in a special respect (or change in quality, quantity, and place) which Aristotle usually calls "motion" in distinction from "becoming" or "generation." It undertakes to analyze the conditions or causes of change or motion, to distinguish what happens by chance from what happens of necessity, to discriminate between natural and unnatural or violent motions, to treat the relation of mover and moved, to deal with the continuity and divisibility of motions, to consider place and time as conditions or aspects of motion, and to ask about the infinity of body and of change, and about the eternity of motion or the whole order of becoming, the natural world of things in motion.

Aristotle's physics thus seems to stand in sharp contrast to the physics of the experimentalists, not merely in method, but in the questions it tries to answer and in the principles to which it appeals. The effort to define change in general and to state the principles and causes operative in every type of change might appear to correspond to the search for formulae of maximum generality to cover all natural phenomena. But where Newton and Fourier hope thereby to reduce nature's variety to the simplest terms—a few laws of motion comprehending the whole framework of nature—Aristotle tends on the contrary to insist upon an irreducible variety of types of motion, kinds of matter, and causes of change.

Furthermore, the principles to which Aristotle appeals are not mathematical. He criticizes the discussion of becoming which takes place in Plato's *Timaeus*, on the ground that it tries to substitute mathematical for physical terms in the analysis of change. "Physical bodies contain surfaces and volumes, lines and points," he writes, "and these are the subject matter of mathematics"; but the mathematician is not concerned with these things as the attributes of physical bodies, but only as separated, in thought at least, from matter and motion. There are sciences which represent mixtures of mathematics and physics, such as optics and harmonics, but the existence of these mixed sciences—the equivalent of what is later called "mathematical physics"—seems to Aristotle to imply rather than deny the separation of purely physical science from pure mathematics.

Where Newton (who can be taken as the exemplary author of a physics which is at once mathematical and experimental) goes to mathematics for the principles of natural philosophy, Aristotle seems to think that physics has its own proper principles. If any deeper understanding of these principles is sought, it is not to be found in mathematics, but in metaphysics, or what Aristotle calls "the first philosophy."

For example, matter, form and privation, are proposed by Aristotle as the basic physical principles. In such terms he is able to state his insight that all change involves a substratum (or *that which* changes) and contraries (or that *from which* and that *to which* the change occurs). But the analysis of matter and form in terms of potentiality and actuality as modes of being, and the consideration of form and privation in terms of being and non-being, belong to metaphysics rather than physics.

Furthermore, Aristotle as a physicist deals with bodies in motion and with the difference between the generation of bodies and their alteration, increase and decrease, or change of place. But he leaves to metaphysics—to the books which come after the books on physics—the discussion of physical bodies as substances composite of matter and form, and the distinction of substance and accident which bears on the difference between substantial and accidental change (*i.e.*, generation and corruption as opposed to the change in quality, quantity, or place).

Though for Aristotle physics is as separate from metaphysics as it is from mathematics in subject matter, physics depends upon metaphysics, as it does not upon mathematics, for the establishment as well as the elucidation of its principles. It is in this sense that metaphysics is logically prior to physics. But there may also be a sense in which philosophical physics is

logically prior to experimental natural science. To the extent that the experimentalist employs physical as opposed to mathematical principles, he may have to derive these from a philosophy of nature. Galileo, for example, investigates the properties of natural and violent motions in the Third and Fourth Day of his *Two New Sciences* (*i.e.*, the motions of freely falling bodies and of projectiles). The problem of establishing the reality of this distinction and of defining the natural and the non-natural types of motion seems to be a matter of philosophical analysis rather than of experimental investigation.

BACON AND KANT appear to agree with Aristotle about the separation of physics from mathematics. Rational (or pure, as opposed to empirical) physics is, according to Kant, "entirely separate from mathematics." It is not to be confused with "what is commonly called *physica generalis*, which is mathematics rather than a philosophy of nature." Criticizing the natural philosophy of the ancients because it is corrupted by logic in the school of Aristotle and by mathematics in the school of Plato, Bacon says that mathematics should "terminate natural philosophy rather than generate or create it. We may hope for better results," he adds, "from pure and unmixed natural philosophy."

Bacon elsewhere observes that "the investigation of nature is best conducted when mathematics are applied to physics." He does not deny "the great use of mathematics in physics," but rather insists that mathematics be regarded as "an appendage or auxiliary" of natural philosophy, not its master. He is writing against the mathematicians "who would have their science preside over physics."

But to whatever extent Aristotle, Bacon, and Kant are in agreement concerning the relation of physics and mathematics, their theories of the scope and subject matter of physics seem to be at variance. For Bacon, physics is only one of the theoretic parts of natural philosophy; the other is metaphysics. Both are sciences of nature or the physical world, though one investigates material and efficient, the other formal and final causes. Both studies, moreover, can be conducted experimentally and can yield practical fruits (in mechanics and what Bacon calls "magic") through the production of effects by the application of a knowledge of causes.

For Kant, the whole body of theoretical knowledge which is rational and *a priori*, not empirical and *a posteriori*, is the metaphysic of nature, of which one part is rational physics, and the other rational psychology. "The metaphysic of corporeal nature," he writes, "is called *physic*, or, because it must contain the principles of an *a priori* knowledge of nature only, *rational physic*." Here physics and metaphysics do not have distinct objects as they do for Aristotle; nor does Kant's conception of physics as purely *a priori* knowledge of nature seem to agree with Aristotle's conception of physics as inductive and empirical, if not experimental.

These issues concerning the relation of physics to mathematics and metaphysics have significance for the experimental as well as the philosophical study of nature. If, for example, following the position taken by Hume, metaphysical inquiry is dismissed as incapable of yielding knowledge, and mathematical knowledge is restricted to the realm of ideal entities, then natural science, which for Hume consists in experimental reasoning about matters of fact, becomes the only knowledge of reality. Even though Hume looks upon the conclusions of experimental reasoning as at best probable, it remains the case that questions about nature which cannot be answered by physics cannot be answered scientifically.

The effect is the same as that achieved by Hobbes, who makes physics the primary science of reality on the ground that nothing exists except bodies in motion. The assertion of the primacy of physics, in short, may be due *either* to the denial that immaterial objects can be known by us, *or* to the denial that such objects have any real existence. Of quite opposite tenor is the view that only immaterial and eternal things can be scientifically known, and that the sensible world of things which come to be, pass away, and are forever undergoing change, belongs to the realm of probability and opinion, not knowledge.

For Plato, mathematics and dialectic can be, respectively, science and wisdom because they study the intelligible reality of being in its im-

mutable forms. But the physicists who try to give an account of becoming in all its changing sensible appearances can do no better than "adduce probabilities as likely as any others." On such matters, Timaeus says, "we ought to accept a tale which is probable and inquire no further." After discoursing at length of physical matters, Timaeus apologizes for the merely conjectural character of his account of natural phenomena, saying that "a man may sometimes set aside meditations about eternal things, and for recreation turn to consider the truths of becoming which are probable only; he will thus gain a pleasure not to be repented of, and secure for himself a wise and moderate pastime."

This view goes further than Hume's in depreciating physics by contrasting its probability with the certitude of mathematics. It praises mathematics and dialectic, as Hume's theory does not, for something more than their certitude—for their being knowledge of reality rather than of appearances.

Furthermore, Hume, unlike Plato, does not think the probability of physics detracts from its utility, the sort of utility which Bacon magnifies more eloquently than Hume—the invention of machines and the technical applications of physics whereby man extends his dominion over nature. In the traditional discussion of the dignity and value of physics, Plato and Bacon seem to represent attitudes as far apart as are the theories of Aristotle and Newton in the discussion of the subject matter and method of physics.

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PAGE SECTIONS: When the text is printed in one column, the letters **a** and **b** refer to the upper and lower halves of the page. For example, in **53** JAMES: *Psychology*, **116a-119b**, the passage begins in the upper half of page 116 and ends in the lower half of page 119. When the text is printed in two columns, the letters **a** and **b** refer to the upper and lower halves of the left-hand side of the page, the letters **c** and **d** to the upper and lower halves of the right-hand side of the page. For example, in **7** PLATO: *Symposium*, **163b-164c**, the passage begins in the lower half of the left-hand side of page 163 and ends in the upper half of the right-hand side of page 164.

AUTHOR'S DIVISIONS: One or more of the main divisions of a work (such as PART, BK, CH, SECT) are sometimes included in the reference; line numbers, in brackets, are given in certain cases; *e.g.*, *Iliad*, BK II [265-283] **12d**.

BIBLE REFERENCES: The references are to book, chapter, and verse. When the King James and Douay versions differ in title of books or in the numbering of chapters or verses, the King James version is cited first and the Douay, indicated by a *(D)*, follows; *e.g.*, OLD TESTAMENT: *Nehemiah*, 7:45—*(D) II Esdras*, 7:46.

SYMBOLS: The abbreviation "esp" calls the reader's attention to one or more especially relevant parts of a whole reference; "passim" signifies that the topic is discussed intermittently rather than continuously in the works or passage cited.

For additional information concerning the style of the references, see the Explanation of Reference Style; for general guidance in the use of *The Great Ideas*, consult the Preface.

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1*a*. The relation of the philosophy of nature to metaphysics and dialectic

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3. The role of mathematics in the natural sciences: observation and measurement in relation to mathematical formulations

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(3. *The role of mathematics in the natural sciences: observation and measurement in relation to mathematical formulations.*)

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45 FOURIER: *Theory of Heat*, 169a-b; 172a-173b; 175b; 177a; 182b-184a; 249a-b
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50 MARX: *Capital*, 170a-c
51 TOLSTOY: *War and Peace*, BK XI, 469a-d
53 JAMES: *Psychology*, 126a-b; 348a-359a esp 351a-354a; 675b; 876a-b; 882a-884b

4. The experimental method in the study of nature

4a. The distinction between simple observation and experimentation: the art of creating ideal or isolated physical systems

28 GALILEO: *Two New Sciences*, FIRST DAY, 148d-149c; 166d-167b
28 HARVEY: *Circulation of the Blood*, 320b
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4b. Experimental discovery: inductive generalization from experiment; the role of theory or hypothesis in experimentation

10 HIPPOCRATES: *Ancient Medicine*, par 1-8 1a-3b
28 GILBERT: *Loadstone*, PREF, 1a-b; BK I, 6a-7a; BK II, 27c-28a
28 GALILEO: *Two New Sciences*, FIRST DAY, 131a-138b; 157b-171b passim; THIRD DAY, 203d-205b; 207d-208a
28 HARVEY: *Motion of the Heart*, 273c-d; 280c-d; 285c-d / *On Animal Generation*, 331b-333d; 336b-d; 383d; 451b-c
30 BACON: *Advancement of Learning*, 16a; 30d-31a; 34b; 42a-c; 56c-59c / *Novum Organum*, PREF-BK I 105a-136a,c esp BK I, APH 64 114b, APH 70 116b-117a, APH 82 120d-121b, APH 99-100 127b-c; BK II, APH 11-14 140d-148d; APH 36 164a-168d
31 DESCARTES: *Discourse*, PART VI, 61d-62c
33 PASCAL: *Vacuum*, 359a-365b / *Equilibrium of Liquids* 390a-403a passim
34 NEWTON: *Principles*, BK III, RULE III-IV 270b-271b; GENERAL SCHOL, 371b-372a / *Optics*, BK I, 379a; 386b-404b; 424a-440a; 450a-453a; BK II, 457a-478b; BK II-III, 496a-516a; BK III, 543a-b
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42 KANT: *Intro. Metaphysic of Morals*, 387a-b
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49 DARWIN: *Origin of Species*, 136b-139a passim
53 JAMES: *Psychology*, 126a-127a; 265a-268a; 341a-344b; 348a-357b passim; 385a-b

4c. Experimental testing and verification: the crucial experiment

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28 GALILEO: *Two New Sciences*, FIRST DAY, 148c-149c; 166d-168a; THIRD DAY, 200a-b; 202d-203a; 203d-205b; 207d 208c
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33 PASCAL: *Vacuum*, 368b-370a / *Great Experiment* 382a-389b / *Weight of Air*, 404a-405b; 425a-429a
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34 HUYGENS: *Light*, PREF, 551b-552a
35 LOCKE: *Human Understanding*, BK IV, CH XII, SECT 13 362c-d
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49 DARWIN: *Origin of Species*, 12b-c; 149d-150a
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4d. Experimental measurement: the application of mathematical formulae

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53 JAMES: *Psychology*, 56a-66a esp 61b-64a; 126a; 265a-268b; 341a-344b; 348a-359a

5. The utility of physics: the invention of machines; the techniques of engineering; the mastery of nature

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28 GILBERT: *Loadstone*, BK III, 75a b; BK IV, 85c-89c; BK V, 100c-101d
28 GALILEO: *Two New Sciences*, FIRST DAY, 160d-161a; SECOND DAY, 191b-193b
30 BACON: *Advancement of Learning*, 34b / *Novum Organum*, BK I, APH 81 120b-c; APH 124 133c-d; APH 129 134d-135d; BK II, APH 39, 170b-c; APH 44-51 175d-194c / *New Atlantis*, 210d-214d
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33 PASCAL: *Equilibrium of Liquids*, 392b-393a
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The relation of physics as a philosophy of nature to mathematics and to metaphysics, *see* MATHEMATICS 1a; MATTER 4b; METAPHYSICS 3b; NATURE 4b; PHILOSOPHY 2b; SCIENCE 1a(2).

The relation of mathematics to experimental physics, and for the nature of mathematical physics, *see* ASTRONOMY 2c; MATHEMATICS 5b; MECHANICS 3; SCIENCE 5c.

Other discussions relevant to the treatment of causes in philosophical and scientific physics, *see* ASTRONOMY 3a-3b; CAUSE 5b; SCIENCE 4c; and for other treatments of problems or concepts fundamental to physics, *see* CHANCE 1a-1b; CHANGE 2-2b, 5a-5b, 6a-6b, 7a-7d; ELEMENT 3-3d, 5; INFINITY 3d-3e, 4a-4b; MATTER 1-1b, 2a-2b; MECHANICS 1a-1c, 6a-6e; NATURE 3a-3c(3); QUANTITY 5a-5c; SPACE 1-2c, 3b; TIME 1.

The logic of the experimental method in the study of nature, *see* INDUCTION 5; LOGIC 4b; MECHANICS 2a; REASONING 6c; and for the theory of experimentation and the use of hypotheses and measurements, *see* ASTRONOMY 2a-2b; EXPERIENCE 5a-5c; HYPOTHESIS 4-4d; MATHEMATICS 5a; MECHANICS 2b, 3a; QUANTITY 6-6c; SCIENCE 5a-5b, 5d-5e.

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The various branches of physics, such as astronomy, statics, dynamics, optics, acoustics, hydrodynamics, magnetism, and electricity, *see* ASTRONOMY 8a-9f; MECHANICS 1b, 5a-5f(2), 6a-6e, 7a, 7b-7c, 7d, 7e.

Discussions relevant to the distinction between physics and biology or psychology, *see* ANIMAL 4a; CHANGE 6c-6d, 9a-9b, 10a-10b; LIFE AND DEATH 2; MECHANICS 4b-4c; MIND 2e; and for the treatment of one aspect of psychophysics, *see* SENSE 3c(2).

ADDITIONAL READINGS

Listed below are works not included in *Great Books of the Western World*, but relevant to the idea and topics with which this chapter deals. These works are divided into two groups:

I. Works by authors represented in this collection.
II. Works by authors not represented in this collection.

For the date, place, and other facts concerning the publication of the works cited, consult the Bibliography of Additional Readings which follows the last chapter of *The Great Ideas*.

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Chapter 68: PLEASURE AND PAIN

INTRODUCTION

PLEASURE and pain, writes Locke, "like other simple ideas, cannot be described, nor their names defined; the way of knowing them is . . . only by experience." That pleasure and pain are elementary experiences, attributed to animals as well as enjoyed or suffered by men, is attested by poets and physiologists alike, by economists and theologians, by historians and moralists. Yet in the tradition of western thought, few of the great writers are content to leave the nature or meaning of pleasure and pain to the intuitions of experience alone.

Conflicting definitions are proposed. Psychologists disagree about the conditions under which the feelings of pleasure and pain occur, their causes and consequences, their relation to sensation, to desire and emotion, to thought, volition, and action. Moralists dispute whether pleasure is the only good and pain the only evil, whether pleasure is only one good among others to be assessed according to its worth in the scale of goods, whether pleasure and pain are morally indifferent, whether some pleasures are good, others bad, or all are intrinsically evil.

Not only in the theory of good and evil, but also in the theories of beauty and truth, pleasure and pain are fundamental terms. They are affected by all the difficulties which belong to these great themes; and also with the difficulties attendant on the ideas of virtue, sin, and punishment, of duty and happiness, into the consideration of which pleasure and pain traditionally enter.

The traditional use of the words "pleasure" and "pain" is complicated by more than the variety of definitions which have been given. Other words are frequently substituted for them, sometimes as synonyms and sometimes to express only one part or aspect of their meaning. Locke, for example, uses "pleasure" or "delight," "pain" or "uneasiness," and he observes that "whether we call it satisfaction, delight, pleasure, happiness, etc., on the one side, or uneasiness, trouble, pain, torment, anguish, misery, etc., on the other, they are still but different degrees of the same thing." Other writers use "joy" and "sorrow" or "grief" as synonyms for "pleasure" and "pain."

The words "pleasure" and "pain" are closely associated in meaning with "pleasant" and "unpleasant," though Freud sometimes uses "unpleasure" (*unlust*) to signify an opposite of pleasure which is not the same as ordinary pain (*schmerz*). The pleasant is often called "agreeable," "enjoyable," or "satisfying." In the language of Shakespeare, the words "like" and "dislike" have currency as the equivalents of "please" and "displease." A person who is displeased by something says of it that "it likes me not."

THE PROBLEM OF what pleasure and pain are seems logically to precede the ethical consideration of their relation to good and evil, happiness and misery, virtue and duty. But in the tradition of the great books, the psychological questions about pleasure and pain are usually raised in moral or political treatises, and sometimes in connection with discussions of rhetoric. What pleasure is, how it is caused, and the effects it produces are seldom considered apart from whether pleasures should be sought or avoided, whether some pleasures should be preferred to others, and whether pleasure is the sole criterion of the good. Sometimes, as with Marcus Aurelius and Epictetus, the ethical point—that pleasure and pain are in one sense morally indifferent—is made without any psychological account of the nature and origin of these experiences. More frequently, as in Plato's *Philebus* and Aristotle's *Ethics*, or in the

writings of Hobbes, Spinoza, Locke, and Mill, the psychological discussion is imbedded in an ethical or political context.

Even Lucretius and William James do not seem to be complete exceptions. James' theory that the feeling of pleasure accompanies activity which is unimpeded, whereas pain attends arrested activity, seems to be a purely psychological observation, and one which can be readily divorced from moral considerations on the ground that it makes no difference to the occurrence of pleasure and pain whether the activity in question is ethically good or bad. Yet James makes this observation the basis for arguing against those whom he calls "the pleasure-philosophers"—those who make pleasure the only motive or goal of conduct. They confuse, he thinks, the pursuit of pleasure itself with the pleasure which accompanies the successful achievement of other things which may be the goals of activity.

"A *pleasant act*," he writes, "and an act *pursuing a pleasure* are in themselves two perfectly distinct conceptions, though they coalesce in one concrete phenomenon whenever a pleasure is deliberately pursued . . . Because a pleasure of achievement *can* become a pursued pleasure upon occasion, it does not follow that everywhere and always that pleasure must be pursued." One might as well suppose that "because no steamer can go to sea without incidentally consuming coal, and because some steamers may occasionally go to sea to *try* their coal, that therefore no steamer *can* go to sea for any other motive than that of coal-consumption."

Psychological observations of this sort have an obvious relevance to Aristotle's theory of good and bad pleasures, as well as to Locke's and Mill's position that pleasure is the only good or the only object of desire. They reveal an ethical strain even in the psychologist's view of pleasure and pain. The same point can be made with regard to James' observation that "pleasures are generally associated with beneficial, pains with detrimental, experiences."

Lucretius appears to give a purely physiological account of pleasure and pain in terms of the effect upon the sense-organs of various atomic configurations. "Those things which can touch the senses pleasantly are made of smooth and round bodies, but those which seem to be bitter and harsh are made up of particles more hooked, and for this reason are wont to tear a way into our senses . . . Hot fires and cold frost have particles fanged in different ways to prick the senses." But Lucretius is concerned to point out not only the basis of pain in the atomic nature of things, but also the natural tendency of all sensible things to avoid pain as the one besetting evil. "Nature cries aloud for nothing else but that pain may be kept far sundered from the body, and that, withdrawn from care and fear, she may enjoy in mind the sense of pleasure."

Without giving any psychological explanation of the pleasures of the mind, Lucretius sets them above the pleasures of the body because the latter—as his diatribe against love makes clear—seem to be inevitably followed by bodily torments or even to be admixed with them. The first maxim of nature, then, is not to seek pleasure, but to avoid pain; and among pleasures to seek only the unmixed or pure, the pleasures of knowledge and truth. The distinction between different qualities of pleasure (pleasures of the body and of the mind, mixed and pure pleasures), which is made by Plato and Mill as well as by Lucretius, inevitably tends to have at once both moral and psychological significance.

If, in the great books, there is any purely psychological theory of pleasure and pain, divorced from moral considerations, it is probably to be found in Freud. The pleasure-principle, according to him, automatically regulates the operation of the mental apparatus. "Our entire psychical activity," he writes, "is bent upon *procuring pleasure* and *avoiding pain*." Though pleasure and pain are for him primary elements of mental life, Freud admits the difficulty they present for psychological analysis. "We should like to know," he writes, "what are the conditions giving rise to pleasure and pain, but that is just where we fall short. We may only venture to say that pleasure is *in some way* connected with lessening, lowering, or extinguishing the amount of stimulation in the mental apparatus; and that pain involves a heightening of the latter. Consideration of the most intense pleasure of which man is capable, the pleasure in the performance of the sexual act, leaves little doubt upon this point."

Yet for Freud the pleasure-principle is not the only regulator of mental life. In addition to the sexual instincts, which aim at gratification and pleasure, there are the ego-instincts which, "under the influence of necessity, their mistress, soon learn to replace the pleasure-principle by a modification of it. The task of avoiding pain becomes for them almost equal in importance to that of gaining pleasure; the ego learns that it must inevitably go without immediate satisfaction, postpone gratification, learn to endure a degree of pain, and altogether renounce certain sources of pleasure. Thus trained, the ego becomes 'reasonable,' is no longer controlled by the pleasure-principle, but follows the reality-principle, which at bottom also seeks pleasure—although a delayed and diminished pleasure, one which is assured by its realization of fact, its relation to reality."

This recognition of a conflict between pleasure and reality, with a consequent attenuation or redirection of the pleasure-principle, is not amplified by Freud into a moral doctrine. It does, however, bear a striking resemblance to the theories of moralists like Kant who oppose duty to pleasure; and also to the teachings of those who, like Aristotle and Aquinas, conceive virtue as the foregoing of certain pleasures and the endurance of certain pains, through a reasonable and habitual moderation of these passions.

IF PLEASURE AND pain were simply sensations, like sensations of color or sound, they would pose a problem for the physiological psychologist no different from the problems which arise in the fields of vision and audition. Modern physiological research claims to have discovered differentiated nerve-endings for pain which, together with the specific sense-organs for pressure, heat, and cold, make up the cutaneous senses. But whether there are special cells for the reception of pain stimuli or whether cutaneous pain results from the too intense stimulation of the pressure and thermal nerve-endings, there seems to be no evidence of organs sensitized to pleasure as, for example, the nerve cells of the retina are sensitized to light. The feeling of pleasure, it would seem to follow, is not a sensation. This seems to be confirmed by the traditional observation that every type of sensation, including the sensation of pain, can be pleasant.

Even if pain, unlike pleasure, is found to be a specific mode of sensation with a special sense-organ of its own, all other types of sensation—visual, auditory, olfactory, etc.—might still have painfulness or a feeling of unpleasantness as an attribute. That such is the case seems to be a matter of traditional observation. Locke, for example, says that "delight or uneasiness, one or the other of them, join themselves to almost all our ideas of sensation and reflection: there is scarce any affection of our senses from without . . . which is not able to produce in us pleasure or pain." So understood, pleasure and pain —or the pleasant and the unpleasant—are not opposite sensations, as are hot and cold, but contrary attributes with which every sort of sensation *can* be affected. All *need* not be. Some sensations may be neutral with respect to what psychologists call "affective tone" or "affective quality."

The kind of pleasure and pain which is called "bodily" or "sensuous" would thus be sensuous because it is an attribute of sensations, and bodily because sensations involve bodily organs. But in almost every great discussion of pleasure and pain, other types are recognized: intellectual delights, the pleasures and pains of learning, aesthetic pleasure in contemplating beauty with the mind as well as with the senses, and the pain of loss, the grief accompanying deprivation, which is so different from the torment of a painful affliction of the senses. The human suffering with which the great poems deal is much more often a torment of the spirit than of the flesh.

To cover these other types of pleasure and pain, we must go beyond sensation to two other terms traditionally connected with the psychological analysis of pleasure and pain. One is emotion, the other desire, the latter to be understood broadly as including both the sensitive and the rational appetites—both the passions and the will. Aquinas, for example, treats joy and sorrow as specific emotions which represent the appetite in a state of satisfaction or frustration. So, too, the will as an appetite can come to rest in the attainment of its object and, with fruition, be in a state of joy.

As conditions of the appetite, pleasure and

pain (or joy and sorrow) can be either passions and, like all other emotions, bodily states; or they can be acts of the will and, according to Aquinas at least, spiritual states. But either way pleasure and pain seem to represent the satisfaction or frustration of desire rather than objects desired or averted. To be pleased by the attainment of an object desired, such as food and drink or knowledge, is not the same as to desire pleasure itself, as, for example, the pleasant sensations which may be involved in eating or drinking.

Aquinas talks about the desire for pleasure and the aversion to pain, as well as the pleasure and pain of satisfied and unsatisfied desires. Since the same words are almost always used to express both meanings, the two senses of pleasure and displeasure may go unnoticed unless by context or by explicit mention the author refers to pleasure as an object of desire or identifies it with the satisfaction of any desire, whether for pleasure or for some other object. As a passage already quoted from James indicates, and as we shall presently see more fully, the distinction between these two senses of pleasure has a critical bearing on the dispute between those who think that pleasure is the only good, and those who think that pleasure is one good among others.

The generally recognized difference between two kinds of pain—the pain of sense and the pain of loss or deprivation—parallels the distinction which most writers acknowledge between sensuous pleasure and the pleasure of possession or satisfaction. Plato's example of the pleasure involved in the relief of itching by scratching seems to catch both meanings, and, in addition, to show that bodily pleasures may be either sensual *objects* or sensual *satisfactions*. In contrast, the pleasures of the mind are satisfactions of intellectual desire, as in the contemplation of beauty or the knowledge of truth.

Aristotle deals with pleasure and pain as *objects* when he defines temperance as a moderate pursuit of bodily pleasures, and courage as controlling the fear of pain and its avoidance. But he also conceives pleasure as that which completes any activity, whether of the senses and the body or of thought and the mind. "Without activity," he writes, "pleasure does not arise, and every activity is completed by the attendant pleasure." This meaning of pleasure seems to be analogous to, if not identical with, pleasure as satisfaction, at least insofar as the satisfaction of a desire is that which completes the activity springing therefrom. There can be as many different kinds of pleasure as there are kinds of activity; the quality of the pleasure is determined by the character of the activity it accompanies.

Though Mill refers to pleasure and freedom from pain as "the only things desirable as ends," he admits many other objects of desire, in the attainment of which men find pleasure or satisfaction. It is wrong to suppose that human beings, he writes, are "capable of no pleasures except those of which swine are capable." Precisely because "human beings have faculties more elevated than the animal appetites," they have sources of pleasure or gratification not open to swine. Here as before two meanings of pleasure seem to be involved. In pointing out that "money, in many cases, is desired in and for itself," Mill is naming an object of desire which, like health, knowledge, power, or fame, is not pleasure, yet which, through being desired, is a source of pleasure (*i.e.*, satisfaction) when achieved. Like other objects of desire, sensual or bodily pleasures may also be sources of satisfaction.

THESE TWO MEANINGS of pleasure are most in need of clear distinction when the relation of pleasure to happiness is being discussed. If happiness, as Aristotle and Mill seem to say, consists in having all desires satisfied, then the content of the happy life can be described either in terms of the goods which the happy man possesses—the objects of desires fulfilled—or in terms of the pleasures which accompany the goods possessed, that is, the pleasures which are satisfactions of desire. If pleasure in the other meaning, especially sensual or bodily pleasure, is only one object of normal desire, then lack or deficiency of pleasure may, like loss of health or fortune, impair a man's happiness. But the pursuit of pleasure in this sense cannot be identified with the pursuit of happiness. A life including every sort of bodily pleasure and free from every sort of bodily pain, if it lacked other things men normally desire, would be marred by many dissatisfactions inconsistent with happiness.

Talking to Don Quixote of the island he would like to govern, Sancho Panza says: "The first thing I would do in my government, I would have nobody to control me, I would be absolute . . . Now he that's absolute, can do what he likes; he that can do what he likes, can take his pleasure; he that can take his pleasure, can be content, and he that can be content, has no more to desire." Here, it would seem, Sancho conceives happiness as the sum of pleasures in the sense of satisfactions—all desires come to rest through the possession of their objects.

Dr. Johnson seems to make the opposite point about pleasure and happiness. Boswell asks him whether abstention from wine would be "a great deduction from life." "It is a diminution of pleasure to be sure," Johnson replies, "but I do not say a diminution of happiness." But, Boswell asks, "if we could have pleasure always, should we not be happy?" Johnson explains his negative answer by saying that "when we talk of pleasure, we mean sensual pleasure. When a man says, he had pleasure with a woman, he does not mean conversation, but something of a different nature. Philosophers tell you that pleasure is contrary to happiness."

This last observation does not seem to describe the position taken by those philosophers who make happiness the greatest good or ultimate end of human striving. Both Aristotle and Mill distinguish the life of pleasure, the bestial or swinish life, from one which employs the higher faculties peculiar to man. In this sense, perhaps, the life of pleasure can be regarded as contrary or opposed to what Johnson, along with Aristotle and Mill, calls "the rational life." But pleasure itself, far from being inimical to happiness, either represents the state of satisfaction which is identical with happiness, or one of the things a man desires and hence a constituent of the happy life.

Hobbes and Locke seem to go further in the direction of identifying pleasure with happiness or the good. "Pleasure," writes Hobbes, "is the appearance or sense of Good . . . and Displeasure, the appearance or sense of Evil." Similarly, Locke says that "things are good or evil only in reference to pleasure or pain. That we call *good* which is apt to cause or increase pleasure or to diminish pain in us . . . And, on the contrary, we name that *evil* which is apt to produce or increase any pain, or diminish any pleasure in us." As for happiness, it is, according to Locke, "the utmost pleasure we are capable of, and misery the utmost pain; and the lowest degree of what can be called happiness is so much ease from all pain, and so much present pleasure, as without which anyone cannot be content."

In which sense of the term is Locke identifying pleasure with happiness? Not sensual pleasure, nor even pleasure as an object of desire, it would seem, for he says: "Let one man place his satisfaction in sensual pleasure, another in the delight of knowledge; though each of them cannot but confess there is great pleasure in what the other pursues, yet neither of them making the other's delight a part of *his* happiness, their desires are not moved, but each is satisfied without what the other enjoys." Yet his understanding of happiness as consisting in the pleasures or satisfactions accompanying the possession of things desired leads him to criticize "the philosophers of old" who "did in vain inquire whether the *summum bonum* consisted in riches, or bodily delights, or virtue, or contemplation; they might have as reasonably disputed whether the best relish were to be found in apples, plums, or nuts, and have divided themselves into sects upon it. For as pleasant tastes depend not on the things themselves, but on their agreeableness to this or that particular palate, wherein there is great variety; so the greatest happiness consists in the having those things which produce the greatest pleasure . . . These, to different men, are very different things."

The difference between Locke's position and that of Mill seems, therefore, not to lie in a different conception of the relation of pleasure —as object or as satisfaction of desire—to happiness, but rather in Locke's conception of degrees of happiness as being determined only by larger and smaller quantities of pleasure, whereas Mill insists upon diverse qualities of pleasure, and upon the possibility of ordering pleasures as higher and lower. In consequence, Mill can say what Locke would seem unable to approve, namely, that "it is better to be a human being dissatisfied than a pig satisfied; better to be Socrates dissatisfied than a fool satisfied."

Locke's denial that happiness is the same

for all men explicitly takes issue with Aristotle's contrary view. It also involves an issue about pleasure. For Locke, as apparently for Hobbes and Mill, the good and the pleasant are inseparable. Nothing which satisfies a desire can be evil. Whether, as in Locke's view, one satisfaction is as good as another, and the only thing which matters is the amount or number of satisfactions; or whether, as in Mill's view one pleasure may be better than another, in no case is a pleasure bad so long as some one desires it, or desires the thing which produces satisfaction when possessed.

But, for Aristotle, desires themselves can be good or bad, and consequently there can be good and bad pleasures, as well as pleasures which vary in quality and in degree of goodness. "Since activities differ in respect of goodness and badness, and some are worthy to be chosen, others to be avoided, and others neutral, so, too," Aristotle writes, "are the pleasures; for to each activity there is a proper pleasure. The pleasure proper to a worthy activity is good, and that proper to an unworthy activity bad; just as the appetites for noble objects are laudable, those for base objects culpable."

Pleasure and pain, in Aristotle's judgment, are measured by virtue, not what is good and evil by pleasure and pain. Pleasure and pain are elements common to the good life and the bad, but only the pleasures which the good man enjoys, and the pains he willingly suffers, can be called good. That is why "in educating the young we steer them by the rudders of pleasure and pain . . . for to enjoy the things we ought and to hate the things we ought has the greatest bearing on virtue or character." Virtue is possessed only by those who habitually take pleasure in the right things.

As INDICATED IN THE chapters on HAPPINESS and DUTY, the moralists who make duty rather than virtue the spring of right conduct, and who make the goodness of anything depend upon its rightness according to the moral law, see little difference among the various theories of pleasure and happiness as the ultimate good and the standard of conduct.

The most eloquent tribute which Kant can pay to the idea of duty is that it "embraces nothing charming or insinuating." Reason, he says, "will never let itself be brought around" to the view that "there is any intrinsic worth in the real existence of a man who merely lives for enjoyment . . . even when in so doing he serves others." Admitting that "the greatest aggregate of the pleasures of life, taking duration as well as number into account," would appear to merit "the name of a true, nay, even of the highest good," Kant adds that "reason sets its face against this, too." The line of duty is always set against the seductions of pleasure or any calculations of utility, whether in terms of the means to achieving happiness or the ways of augmenting life's satisfactions.

According to Stoics like Marcus Aurelius, "pleasure is neither good nor useful," nor is pain an evil, for when we are "pained by any external thing," we should remember that "it is not this thing which disturbs us, but our own judgment about it." Pleasure and pain are morally indifferent, for like death and life, honor and dishonor, pain and pleasure are things which "happen equally to good men and bad" and therefore "make us neither better nor worse . . . and are neither good nor evil."

From the same observation, that pleasure is enjoyed by good and bad men, Aristotle and Plato seem to draw the conclusion, not that it is morally indifferent, but, as we have seen, that there are good and bad pleasures. Plato uses pleasure and wisdom to typify fundamentally different kinds of good. Wisdom is always true and good, but like opinion, which can be either true or false, there are true and false pleasures, good and evil pleasures. Furthermore, wisdom or knowledge represents the kind of good which is definite or intrinsically measured, whereas pleasure, like wealth, is an indefinite good, requiring something external to itself, something like wisdom, to measure it and limit its quantity.

If wisdom be allowed to choose among pleasures, Socrates suggests in the *Philebus*, it will choose those associated with itself in the activities of the mind, not the bodily pleasures which are always mixed with pain. So far as pleasure belongs to the realm of change or becoming, it is, again like opinion, inferior to knowledge and wisdom, which draw their goodness from the realm of immutable being. Yet Plato does not seem to think that knowledge

and wisdom are the only goods. The argument against those who think so seems to be as conclusive as against those who think that pleasure is the only good.

Each of the simple lives—the life of pleasure or the life of wisdom—is deficient. Only the mixed life, the life which combines both pleasure and wisdom, is the complete life. Like the happy life in Aristotle's view, it includes every kind of good; and the difficult problem, for Plato as for Aristotle, seems to be finding the principle which determines the goodness of the mixture or the right order and proportion in which the variety of goods should be combined.

THE MORAL ISSUES which have been raised here with respect to pleasure and pain are more broadly considered in the chapters on GOOD AND EVIL and on VIRTUE, TEMPERANCE, and SIN, as well as in the chapters on HAPPINESS and DUTY. Other issues are reserved entirely for discussion elsewhere, such as the role of pleasure in the perception of beauty and in judgments of taste (the chapter on BEAUTY), or the role of pain in relation to the government of men (the chapter on PUNISHMENT).

Two special problems which involve pleasure and pain remain to be briefly mentioned. The first concerns the contrast between asceticism and self-indulgence or even profligacy.

In the tradition of western thought and culture, and in the ancient as well as in the modern world, those who worship pleasure, though perhaps only as a minor deity to be celebrated in bacchic revels, stand opposed to those who turn away from pleasure, as from the world, the flesh, and the devil, even mortifying the flesh and sanctifying themselves with pain. In their less extreme forms these contrasting attitudes generate the traditional issue concerning the place of worldly recreations in man's life and in the state. Is the pleasure of play a necessary and proper relief from the pain of work, or is it always an indulgence which provides occasions for sin? Are the enjoyment of the theatre, of music and poetry, the gaiety of public festivals, and the diversions of games or sports things to be promoted or prohibited by the state?

Man's avidity for amusements and diversions of all sorts leads Pascal to say, "How hollow and full of ribaldry is the heart of man!" The fact that "men spend their time in following a ball or a hare" and that "it is the pleasure even of kings," indicates to him how deep is the misery from which men try to escape through play and pleasure. "If man were happy," Pascal suggests, "he would be the more so, the less he was diverted." But "so wretched is man that he would weary, even without any cause of weariness, from the peculiar state of his disposition; and so frivolous is he, that, though full of a thousand reasons for weariness, the least thing, such as playing billiards or hitting a ball, is sufficient to amuse him." Men need such diversions in order to "prevent them from thinking of themselves."

Men indulge in pastimes for another reason, according to Aristotle. They "need relaxation because they cannot work continuously" and "amusement is a sort of relaxation." But "happiness does not lie in amusement. It would, indeed, be strange," he says, "if the end were amusement, and one were to take trouble and suffer hardship all one's life in order to amuse one's self." It is true that "pleasant amusements" resemble happiness in having the nature of an end, because we engage in playful activity "not for the sake of other things," whereas we do serious work for some end beyond itself. But in Aristotle's opinion "a virtuous life requires exertion" and since "the happy life is thought to be virtuous," it follows that "serious things are better than laughable things and those connected with amusement."

These reflections on work and play, and the pains and pleasures they involve, lead us to the second of the two problems mentioned above. That concerns pleasure and pain in the life of learning. Here there seems to be no fundamental issue, for the tradition speaks with an almost unanimous voice of the pleasure all men find in knowing and the pain none can avoid in the process of seeking the truth. The problem is rather a practical and personal one which the great books put to their readers, to solve in their individual lives. Their invitation to learning should not be accepted, nor their promise of pleasure relied upon, by those unwilling to take the pains which, however great initially, gradually diminish as the mind, in the very process of learning, learns how to learn.

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To find the passages cited, use the numbers in heavy type, which are the volume and page numbers of the passages referred to. For example, in **4** HOMER: *Iliad*, BK II [265–283] **12d**, the number **4** is the number of the volume in the set; the number **12d** indicates that the passage is in section d of page 12.

PAGE SECTIONS: When the text is printed in one column, the letters **a** and **b** refer to the upper and lower halves of the page. For example, in **53** JAMES: *Psychology*, **116a-119b**, the passage begins in the upper half of page 116 and ends in the lower half of page 119. When the text is printed in two columns, the letters **a** and **b** refer to the upper and lower halves of the left-hand side of the page, the letters **c** and **d** to the upper and lower halves of the right-hand side of the page. For example, in **7** PLATO: *Symposium*, **163b-164c**, the passage begins in the lower half of the left-hand side of page 163 and ends in the upper half of the right-hand side of page 164.

AUTHOR'S DIVISIONS: One or more of the main divisions of a work (such as PART, BK, CH, SECT) are sometimes included in the reference; line numbers, in brackets, are given in certain cases; *e.g.*, *Iliad*, BK II [265–283] **12d**.

BIBLE REFERENCES: The references are to book, chapter, and verse. When the King James and Douay versions differ in title of books or in the numbering of chapters or verses, the King James version is cited first and the Douay, indicated by a (*D*), follows; *e.g.*, OLD TESTAMENT: *Nehemiah*, 7:45—(*D*) *II Esdras*, 7:46.

SYMBOLS: The abbreviation "esp" calls the reader's attention to one or more especially relevant parts of a whole reference; "passim" signifies that the topic is discussed intermittently rather than continuously in the work or passage cited.

For additional information concerning the style of the references, see the Explanation of Reference Style; for general guidance in the use of *The Great Ideas*, consult the Preface.

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43 MILL: *Utilitarianism*, **463c-d**

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54 FREUD: *Narcissism*, **403d-404a** / *Instincts*, **413d** / *General Introduction*, **592d** / *Beyond the Pleasure Principle*, **639b-640a**; **648d-649c**; **663a-c** / *Ego and Id*, **701a-b** / *Civilization and Its Discontents*, **772d-773a**

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49 DARWIN: *Descent of Man*, 308a-309d

53 JAMES: *Psychology*, 94a-b; 526b-527a; 647a; 650b-651b; 654a-655a; 725b-726a; 808b-814b; 829b-830a

54 FREUD: *Interpretation of Dreams*, 377c-380d esp 378b-d; 384c-385c / *Narcissism*, 402d-404b / *Instincts*, 419a-421a / *Repression* 422a-427a,c esp 422a-d, 425b-c / *General Introduction*, 592c-593a / *Beyond the Pleasure Principle* 639a-663d esp 639a-640c, 648b-650a, 651a-d, 652b-d, 654a, 662c-663c / *Ego and Id*, 701b; 711c-712a / *Inhibitions, Symptoms, and Anxiety*, 737b-741c esp 737d, 741a-b; 742b-744a; 753c-d / *New Introductory Lectures*, 843d-846a

4. The kinds of pleasure and pain: different qualities of pleasure

7 PLATO: *Phaedo*, 220d-221a / *Gorgias*, 277d-280d esp 280b-d / *Republic*, BK VIII, 409d-410c; BK IX, 421a-425b / *Philebus*, 609a-610c; 619d-633a

8 ARISTOTLE: *Topics*, BK I, CH 15 [106a36–b1] 150b
9 ARISTOTLE: *Ethics*, BK III, CH 10–11 364b-365d; BK VII, CH 5 [1148b15–18] 399a; CH 13–14 404d-406a,c; BK IX, CH 7 [1168a9–18] 421c; BK X, CH 3 [1173b8–19] 427d-428a; CH 5 429d-430d / *Rhetoric*, BK I, CH 11 613a-615c
12 LUCRETIUS: *Nature of Things*, BK III [94–116] 31b-c
19 AQUINAS: *Summa Theologica*, PART I, Q 64, A 3 337a-c; PART I–II, Q 2, A 6, ANS and REP 2–3 619d-620d; Q 31, AA 3–7 754a-758b; Q 35 772b-780c
20 AQUINAS: *Summa Theologica*, PART I–II, Q 72, A 2, ANS 112b-113a; PART III SUPPL, Q 81, A 4, REP 4 966d-967d
23 HOBBES: *Leviathan*, PART I, 62a-c
25 MONTAIGNE: *Essays*, 432b-d; 537d-543a,c
30 BACON: *Advancement of Learning*, 27c-d; 73c-d
32 MILTON: *L'Allegro* 17b-21a / *Il Penseroso* 21a-25a / *Paradise Lost*, BK VI [327–343] 203b; [386–405] 204b-205a; [430–468] 205b-206b / *Samson Agonistes* [606–632] 352b-353a
33 PASCAL: *Geometrical Demonstration*, 441b-442a
35 LOCKE: *Human Understanding*, BK II, CH XX 176b-178a; CH XXI, SECT 55–56 192c-193b
38 MONTESQUIEU: *Spirit of Laws*, BK XIV, 103a-104a
42 KANT: *Judgement*, 477b-478a
43 MILL: *Utilitarianism*, 447b-450b
50 MARX: *Capital*, 292d-295a esp 293c-294a
51 TOLSTOY: *War and Peace*, BK XIII, 577a-578b; BK XIV, 605b-d; BK XV, 630b-631c
53 JAMES: *Psychology*, 754b-758a; 812a-813b

4a. The pleasant and unpleasant in the sphere of emotion: joy and sorrow, delight and grief

7 PLATO: *Phaedrus*, 120b-c / *Phaedo*, 220b-221a / *Republic*, BK IV, 352d / *Philebus*, 628d-630c / *Laws*, BK I, 649d-650a; BK IX, 748a
8 ARISTOTLE: *Topics*, BK IV, CH 5 [125b28–34] 175a; CH 6 [127b26–32] 177b
9 ARISTOTLE: *Ethics*, BK II, CH 5 [1105b19–28] 351b; CH 9 354d-355a,c; BK III, CH 8 [1116b23–1117a9] 363a-c; CH 9 363d-364b; CH 12 [1119a23–31] 365d-366a; BK VII, CH 5 [1149a5–21] 399c-d; CH 6 [1149b20–1150a8] 400b-c; BK IX, CH 4 [1166b3–29] 419d-420a / *Politics*, BK V, CH 10 [1312b24–33] 515b / *Rhetoric*, BK I, CH 11 [1370a25–b32] 613c-614b; [1371a17–22] 614c; BK II, CH 1 [1378a20]–CH 11 [1388b30] 623b-636a
12 LUCRETIUS: *Nature of Things*, BK IV [1073–1085] 58a-b
12 AURELIUS: *Meditations*, BK II, SECT 10 257d-258a
14 PLUTARCH: *Coriolanus*, 184a-c
17 PLOTINUS: *Fourth Ennead*, TR IV, CH 28 172a-173b
18 AUGUSTINE: *Confessions*, BK III, par 2–4 13c-14b; BK IV, par 10 21c-d; BK VIII, par 7–8 54c-55a; BK X, par 39 81b-c
19 AQUINAS: *Summa Theologica*, PART I–II, Q 22, A 1, ANS 720d-721c; QQ 31–39 752b-792d; Q 48, A 1 822d-823b
23 HOBBES: *Leviathan*, PART I, 62b-c; 63b-d
24 RABELAIS: *Gargantua and Pantagruel*, BK I, 1a,c
29 CERVANTES: *Don Quixote*, PART II, 217d-218a
31 SPINOZA: *Ethics*, PART III, PROP 11–57 399d-415b passim; THE AFFECTS 416b-422a,c
35 LOCKE: *Human Understanding*, BK II, CH VII, SECT 2 131c-d; SECT 5 132c; CH XX 176b-178a passim, esp SECT 3 176d; CH XXI, SECT 40 187d-188b; SECT 42 188c
35 BERKELEY: *Human Knowledge*, SECT I 413a-b
42 KANT: *Intro. Metaphysic of Morals*, 385a-c
44 BOSWELL: *Johnson*, 103b-c
49 DARWIN: *Descent of Man*, 308a-309c passim, esp 308d
53 JAMES: *Psychology*, 197b; 324a; 391b-392a; 702a-703a; 718b-719a; 730a-b; 739b-740a; 754b-758a passim; 808b-809a
54 FREUD: *Interpretation of Dreams*, 378c-d / *Instincts*, 418d-421a,c esp 419c-420a / *Repression* 422a-425b esp 422a-d, 424a-b / *General Introduction*, 608d / *Beyond the Pleasure Principle*, 640c-d; 641d-643c / *Inhibitions, Symptoms, and Anxiety*, 720a-721c; 736d-740c esp 737a-b, 739b, 740c; 752c-754a,c / *New Introductory Lectures*, 843d-846a esp 845c-846a

4b. Sensuous pleasure: the affective quality of sensations

7 PLATO: *Republic*, BK I, 295d-296c; BK IX, 421a-425b / *Timaeus*, 463d-464b; 474b-d / *Philebus*, 619d-620b; 627c-628d / *Laws*, BK VII, 714c-715a
8 ARISTOTLE: *Metaphysics*, BK I, CH 1 [980a22–28] 499a / *Soul*, BK II, CH 2 [413b17–24] 643d; CH 3 [414a28–b5] 644c; CH 9 [421a6–16] 652c; BK III, CH 2 [426a27–b8] 658c-d / *Sense and the Sensible*, CH 3 [439b26–440a1] 677a; CH 4 [442a12–29] 679d-680a; CH 5 [443b17–445a4] 681c-682d
9 ARISTOTLE: *History of Animals*, BK VII, CH 1 [581b11–22] 107b / *Parts of Animals*, BK II, CH 17 [661a6–8] 188a / *Generation of Animals*, BK I, CH 17 [721b12–18] 261c; CH 18 [723b33–724a3] 264a; CH 19 [727b6–12] 267c-d; CH 20 [727b34–728a14] 268a-b; [728a31–34] 268c / *Ethics*, BK I, CH 5 340d-341b; BK III, CH 10–11 364b-365d; BK VII, CH 11 [1152b17–18] 403d; CH 12 [1153a26–36] 404c-d; CH 14 405b-406a,c; BK X, CH 3 [1173b7–19] 427d-428a; CH 4 [1174b15–1175a3] 429a-b; CH 5 [1176a8–14] 430c; CH 6 [1176b8–1177a11] 431a-c / *Rhetoric*, BK I, CH 11 [1370a28–30] 613c
12 LUCRETIUS: *Nature of Things*, BK II [398–477] 20a-21a; BK III [94–116] 31b-c; BK IV [324–331] 48c; [615–721] 52b-53d; [1037–1072] 57d-58a

(4. *The kinds of pleasure and pain: different qualities of pleasure.* 4b. *Sensuous pleasure: the affective quality of sensations.*)

17 PLOTINUS: *Fourth Ennead*, TR IV, CH 19 167b-d; CH 28 172a-173b
18 AUGUSTINE: *Confessions*, BK VI, par 26 42d-43a
19 AQUINAS: *Summa Theologica*, PART I, Q 91, A 3, REP 3 486b-487d; Q 98, A 2, ANS and REP 3 517d-519a; PART I-II, Q 2, A 6, ANS and REP 2 619d-620d
20 AQUINAS: *Summa Theologica*, PART III SUPPL, Q 81, A 4, REP 4 966d-967d
22 CHAUCER: *Wife of Bath's Prologue* [5583-5774] 256a-259a
23 HOBBES: *Leviathan*, PART I, 62c
27 SHAKESPEARE: *Antony and Cleopatra*, ACT II, SC II [175-245] 320c-321b
30 BACON: *Advancement of Learning*, 27c-d; 73c-d
31 DESCARTES: *Meditations*, VI, 97b-98a
35 LOCKE: *Human Understanding*, BK II, CH XX, SECT 1-2 176b-c; SECT 15 177d; CH XXI, SECT 42-44 188c-189b
38 ROUSSEAU: *Inequality*, 345d-346b
42 KANT: *Judgement*, 477b-478a
43 MILL: *Utilitarianism*, 447b-450b passim
44 BOSWELL: *Johnson*, 409c
47 GOETHE: *Faust*, PART I [3835-4205] 93b-103a; PART II [10,160-175] 247b-248a
48 MELVILLE: *Moby Dick*, 307b-308b
49 DARWIN: *Origin of Species*, 95d / *Descent of Man*, 301d-302a; 569a-b; 577b
53 JAMES: *Psychology*, 157a; 650b-651b; 755b-756a; 809b-810b [fn 1]; 829b
54 FREUD: *Origin and Development of Psycho-Analysis*, 15d-16c / *Sexual Enlightenment of Children*, 119d-120b / *Interpretation of Dreams*, 367b-c / *Narcissism*, 403a-c / *General Introduction*, 574a-576a; 578c-579b / *Beyond the Pleasure Principle*, 648b-c; 663a / *Ego and Id*, 701a-c / *Inhibitions, Symptoms, and Anxiety*, 737a-b / *Civilization and Its Discontents*, 773a-b / *New Introductory Lectures*, 847b-849a esp 847c

4c. Intellectual pleasure: the pleasures of reflection and contemplation

7 PLATO: *Symposium*, 149d-150a; 167a-d / *Phaedo*, 220d-221a / *Republic*, BK I, 295d-296c; BK IX, 420d-425b / *Philebus*, 620b-621c; 631b
8 ARISTOTLE: *Metaphysics*, BK I, CH 1 [980^{a}22-28] 499a; BK XII, CH 7 [1072^{b}13-29] 602d-603a
9 ARISTOTLE: *Parts of Animals*, BK I, CH 5 [644^{b}22-645^{a}26] 168c-169a / *Ethics*, BK VII, CH 12 [1152^{b}33-1153^{a}1] 404a; BK X, CH 4 [1174^{b}15-1175^{a}2] 429a-b; CH 5-8 429d-434a / *Politics*, BK VIII, CH 3 [1338^{a}2-^{b}3] 543b-d; CH 5 544c-546a / *Rhetoric*, BK I, CH 11 [1371^{b}4-10] 615a / *Poetics*, CH 4 [1448^{b}4-19] 682c-d
12 LUCRETIUS: *Nature of Things*, BK II [1-61] 15a-d; BK III [1053-1075] 43c-d; BK V [1-54] 61a-d; BK VI [1-41] 80a-d
12 EPICTETUS: *Discourses*, BK III, CH 10 185d-187a; CH 15 190a-191a; CH 22 195a-201a; BK IV, CH 4 225a-228a
12 AURELIUS: *Meditations*, BK III, SECT 6 261a-c; SECT 9 261d; SECT 12 262b-c; BK IV, SECT 16 264d; BK V, SECT 9 270b-c; BK VI, SECT 12 274c; BK X, SECT 12 298c-d
17 PLOTINUS: *First Ennead*, TR IV, CH 12 17d / *Sixth Ennead*, TR VII, CH 30 336b-d
18 AUGUSTINE: *Confessions*, BK VI, par 26 42d-43a; BK IX, par 23-25 68a-c
19 AQUINAS: *Summa Theologica*, PART I, Q 5, A 4, REP 1 25d-26c; PART I-II, Q 3, A 4, ANS 625a-626b; Q 4, AA 1-2 629d-631a; Q 27, A 1, REP 3 737b-d; Q 34, A 3 770c-771c; Q 35, A 5 775d-777a; Q 38, A 4 788d-789b
20 AQUINAS: *Summa Theologica*, PART II-II, Q 180, A 7 614d-616a; PART III SUPPL, Q 90, A 3 1014d-1016a
21 DANTE: *Divine Comedy*, PURGATORY, XXX-XXXI 99b-102b; PARADISE, X [7-27] 120b-c; XXXIII [40-66] 156c-d
23 HOBBES: *Leviathan*, PART I, 62c; 63a
25 MONTAIGNE: *Essays*, 69d-72a
30 BACON: *Advancement of Learning*, 27c-d; 73c-d
31 DESCARTES: *Rules*, I, 1d / *Meditations*, III, 88d-89a
31 SPINOZA: *Ethics*, PART III, PROP 53 413a; PROP 58-59 415c-416b; PART V, PROP 32-36 460b-461c; PROP 42 463b-d
32 MILTON: *Il Penseroso* 21a-25a
35 LOCKE: *Human Understanding*, BK II, CH XX 176b-178a passim, esp SECT 1-2 176b-c, SECT 15 177d; CH XXI, SECT 42-44 188c-189b
40 GIBBON: *Decline and Fall*, 645c-d
42 KANT: *Judgement*, 534c-539d; 551a-552a; 586d-587a
43 MILL: *Utilitarianism*, 447b-450b passim
47 GOETHE: *Faust*, PART I [1178-1201] 29b; [3217-3239] 79a-b
48 MELVILLE: *Moby Dick*, 255a
53 JAMES: *Psychology*, 755a-758a
54 FREUD: *Civilization and Its Discontents*, 773d-774c

4c(1) Pleasure in the beauty of nature or art: disinterested pleasure

4 HOMER: *Odyssey*, BK VIII 222a-228a,c passim
7 PLATO: *Gorgias*, 266d-267a / *Philebus*, 630d-631b / *Laws*, BK II, 653a-656c; BK VII, 720c-d
9 ARISTOTLE: *Parts of Animals*, BK I, CH 5 [645^{a}4-26] 168d-169a / *Ethics*, BK III, CH 10 [1118^{a}1-9] 364c; BK VII, CH 12 [1153^{a}24-26] 404c / *Politics*, BK VIII, CH 3 [1337^{b}27-1338^{a}29] 543a-c; CH 5 544c-546a / *Poetics*, CH 4 [1448^{b}4-23] 682c-d; CH 14 [1453^{b}12-14] 688b-c
12 AURELIUS: *Meditations*, BK III, SECT 2 259d-260a
19 AQUINAS: *Summa Theologica*, PART I, Q 5, A 4, REP 1 25d-26c; Q 91, A 3, REP 3 486b-487d;

PART I–II, Q 27, A 1, REP 3 737b-d; Q 32, A 8, ANS 764c-765b

21 DANTE: *Divine Comedy*, PURGATORY, II [106–133] 55c-d; X [22–105] 67c-68c

26 SHAKESPEARE: *Merchant of Venice*, ACT V, SC I [66–110] 431b-d

29 CERVANTES: *Don Quixote*, PART I, 184b-d

31 SPINOZA: *Ethics*, PART V, PROP 32 460b

32 MILTON: *Samson Agonistes*, 337a-338a

37 FIELDING: *Tom Jones*, 1a-2a; 49a-50c

42 KANT: *Judgement*, 470c-471b; 471d-473a; 476a-483d esp 479a-d; 485b-486d; 495a-496c; 509c-d; 516d-518d; 525a-527b; 532a-d; 534c-539d

44 BOSWELL: *Johnson*, 254c-d

46 HEGEL: *Philosophy of History*, INTRO, 185c-d; PART I, 220b-c; PART II, 267b-268b

47 GOETHE: *Faust*, PART II [9218 9245] 224a-b; [9863–9869] 239b; [11,288 303] 274b-275a

49 DARWIN: *Origin of Species*, 95a-d / *Descent of Man*, 301c-302a; 568d-571b passim; 577b-d

51 TOLSTOY: *War and Peace*, BK VI, 235a-238a passim, esp 237c-238a; 257c-259a; BK VII, 278a-c; 288c-290b; 295c-296a; BK X, 450a-451c; BK XI, 497d-498b; BK XIII, 575d-576a

53 JAMES: *Psychology*, 157a; 886b

54 FREUD: *General Introduction*, 600d-601b / *Beyond the Pleasure Principle*, 643c / *War and Death*, 756a-c / *Civilization and Its Discontents*, 774a-c; 775b-c

4c(2) The pleasure and pain of learning and knowledge

5 AESCHYLUS: *Agamemnon* [160–183] 53d-54a

7 PLATO: *Apology*, 208a / *Republic*, BK I, 296a-c; BK VI, 374d-375a; BK IX, 421a-425b / *Theaetetus*, 515d-517b

8 ARISTOTLE: *Metaphysics*, BK I, CH 1 [980^{a}22–28] 499a

9 ARISTOTLE: *Parts of Animals*, BK I, CH 5 [644^{b}22–645^{a}37] 168c-169b / *Ethics*, BK III, CH 10 [1117^{b}28–32] 364b; BK VII, CH 12 [1153^{a}21–23] 404c; BK X, CH 3 [1173^{b}15–18] 427d-428a; CH 4 [1175^{a}10–17] 429c / *Politics*, BK VIII, CH 3 [1337^{b}27–1338^{a}29] 543a-c; CH 5 [1339^{a}27–29] 544d / *Rhetoric*, BK I, CH 11 [1371^{a}30–33] 614d; [1371^{b}4–10] 615a / *Poetics*, CH 4 [1448^{b}4–19] 682c-d

12 LUCRETIUS: *Nature of Things*, BK I [921–950] 12b-c; BK IV [1–25] 44a-b

12 EPICTETUS: *Discourses*, BK II, CH 14 153d-155b; BK III, CH 23 201a-203b

18 AUGUSTINE: *Confessions*, BK I, par 14–16 4c-5b; par 19–27 5d-7d

19 AQUINAS: *Summa Theologica*, PART I–II, Q 4, A 1, REP 3 629d-630b; Q 32, A 1, REP 1 759b-d; A 2, ANS 759d-760d; A 3 760d-761c; A 8 764c-765b; Q 33, A 3 767a-d; A 4, REP 1 767d-768c; Q 34, A 3, ANS 770c-771c; Q 37, A 1 783d-784c

21 DANTE: *Divine Comedy*, PURGATORY, XX [124]–XXI [75] 84c-85d; PARADISE, IV [115]–V [12] 111d-112b

22 CHAUCER: *Prologue* [285–308] 164a-b

23 HOBBES: *Leviathan*, PART I, 62c; 63a; 78d; 79b-80a

24 RABELAIS: *Gargantua and Pantagruel*, BK I, 26d-27d; 29d-30c

25 MONTAIGNE: *Essays*, 70d-74a; 111b-d; 244d-246a

26 SHAKESPEARE: *Love's Labour's Lost*, ACT I, SC I [70–93] 255a-b

28 HARVEY: *On Animal Generation*, 331c-332a

29 CERVANTES: *Don Quixote*, PART I, 146a-c

30 BACON: *Advancement of Learning*, 3c-4a; 6d-7a; 27c-d

31 DESCARTES: *Geometry*, BK I, 297a-b

31 SPINOZA: *Ethics*, PART III, PROP 53 413a; PROP 58 415c

35 LOCKE: *Human Understanding*, 87a-b; BK II, CH XXI, SECT 44 188d-189b; CH XXXIII, SECT 15 250c

35 HUME: *Human Understanding*, SECT I, DIV 6, 453b

41 GIBBON: *Decline and Fall*, 523c-527a passim, esp 524a-b

42 KANT: *Judgement*, 532a-d; 551d

43 MILL: *Utilitarianism*, 451c-d

44 BOSWELL: *Johnson*, 14b; 15a-c; 130b; 135b-136a; 309c-d

45 LAVOISIER: *Elements of Chemistry*, PREF, 1d-2a

47 GOETHE: *Faust*, PART I [354–736] 11a-19b

51 TOLSTOY: *War and Peace*, BK I, 47b-48d; BK VIII, 306b

53 JAMES: *Psychology*, 524b-525a; 715b; 729b-730a

54 FREUD: *Civilization and Its Discontents*, 779d-780b

4d. The pleasures of play and diversion

4 HOMER: *Iliad*, BK XXIII [262–897] 164a-170d / *Odyssey*, BK VIII 222a-228a,c esp [104–255] 223b-224d

5 EURIPIDES: *Bacchantes* [1–209] 340a-341c; [370–431] 343a-b / *Cyclops* [139–174] 441c-d; [495–589] 444d-445d

5 ARISTOPHANES: *Acharnians* [241–279] 458a-b

6 HERODOTUS: *History*, BK II, 86b

6 THUCYDIDES: *Peloponnesian War*, BK II, 396d; BK III, 442c-443a

7 PLATO: *Symposium* 149a-173a,c / *Gorgias*, 281c-d / *Laws*, BK I–II, 644d-663d esp BK I, 647c-648c, 650c-652d, BK II, 653b-c, 655b-656c, 658c-660a, 662a-663d; BK VII, 717d-718c; BK VIII, 731d-735b

9 ARISTOTLE: *Ethics*, BK II, CH 7 [1108^{a}23–26] 353d; BK IV, CH 8 375a-d; BK VII, CH 14 [1154^{a}22–^{b}19] 405c-406a,c; BK X, CH 6 [1176^{b}8–1177^{a}11] 431a-c / *Politics*, BK VII, CH 17 [1336^{a}23–^{b}24] 541b-d; BK VIII, CH 3 [1337^{b}27–1338^{a}29] 543a-c; CH 5 [1339^{a}11]–CH 6 [1340^{b}33] 544c-546b / *Rhetoric*, BK I, CH 11 [1370^{a}14–17] 613b-c; [1370^{b}34–1371^{a}7] 614b-c; [1371^{b}33–1372^{a}1] 615b-c

(*4. The kinds of pleasure and pain: different qualities of pleasure. 4d. The pleasures of play and diversion.*)

12 LUCRETIUS: *Nature of Things*, BK III [1053-1094] 43c-44a,c
14 PLUTARCH: *Agesilaus*, 489d-490b / *Alexander*, 572b-d
15 TACITUS: *Annals*, BK XIV, 145a-d; 146b-147a
18 AUGUSTINE: *Confessions*, BK I, par 15-16 4d-5b; BK III, par 2-4 13c-14b
19 AQUINAS: *Summa Theologica*, PART I-II, Q 1, A 6, REP 1 614a-c; Q 32, A 1, REP 3 759b-d
22 CHAUCER: *Prologue* [747-821] 172a-173a
23 HOBBES: *Leviathan*, PART I, 82b-d
24 RABELAIS: *Gargantua and Pantagruel*, BK I, 1a-3a,c; 7a-8c; 14c-15c; 25a-26d; BK II, 97b-99b
25 MONTAIGNE: *Essays*, 538d-540b
29 CERVANTES: *Don Quixote*, PART I, 186d-187c
30 BACON: *Advancement of Learning*, 54a-b
33 PASCAL: *Pensées*, 125-183 195b-204b
37 FIELDING: *Tom Jones*, 265c-266d
39 SMITH: *Wealth of Nations*, BK V, 346c-347d esp 347d
40 GIBBON: *Decline and Fall*, 90a-b; 502c-503a; 583d-584b
42 KANT: *Judgement*, 537b-539d
43 MILL: *Liberty*, 308d-309a
44 BOSWELL: *Johnson*, 88a; 287b-c esp 287d [fn 1]; 309a-c
46 HEGEL: *Philosophy of History*, PART II, 267b-268b; PART III, 291d-292c
51 TOLSTOY: *War and Peace*, BK I, 10d-11b; 16a-18b; 37a-d; BK VI, 254c-260a; BK VII, 278a-287a; 296a-298d; BK VIII, 303a-305b esp 305a-b; BK XI, 486c-d; BK XII, 538a-539d
52 DOSTOEVSKY: *Brothers Karamazov*, BK VIII, 220c-235d; BK X, 284b-d
53 JAMES: *Psychology*, 716b-717a; 727b-729a; 732b
54 FREUD: *Interpretation of Dreams*, 250d-251a / *Beyond the Pleasure Principle*, 641d-643c; 651b-d / *Group Psychology*, 690b-c / *Civilization and Its Discontents*, 773a-b

4e. The kinds of pain: the pain of sense and the pain of loss or deprivation

4 HOMER: *Iliad*, BK XVIII [1-126] 130a-131c; BK XIX [276-368] 139d-140c; BK XXII [21-98] 155b-156a; [405-515] 159c-160d; BK XXIV 171a-179d esp [480-805] 176b-179d
5 AESCHYLUS: *Agamemnon* [399-455] 56b-57a
5 SOPHOCLES: *Electra* [86-309] 157a-158b
5 EURIPIDES: *Medea* [1090-1115] 221b-c / *Alcestis* [861-1005] 244d-245d / *Trojan Women* [572-705] 274d-276a; [1156-1333] 279d-281a,c / *Electra* [112-214] 328a-d
7 PLATO: *Phaedo*, 250b-251d / *Gorgias*, 277d-280d esp 280b-d / *Philebus*, 619d-633a
9 ARISTOTLE: *Ethics*, BK III, CH 11 [1118^b28-1119^a5] 365b-c; BK VII, CH 13-14 404d-406a,c passim; BK X, CH 3 [1173^b7-19] 427d-428a; CH 5 [1175^b16-23] 430a-b
12 LUCRETIUS: *Nature of Things*, BK III [459-525] 36a-d; [634-669] 38b-c; [830-1023] 40c-43b; BK IV [324-331] 48c; [1058-1191] 57d-59d
13 VIRGIL: *Aeneid*, BK I [194-209] 108a-b; BK II [735-794] 145a-146b; BK IX [473-502] 291b-292b; BK X [833-856] 325a-b; BK XI [29-58] 328b-329b; [139-181] 331b-333a; BK XII [593-613] 370a
18 AUGUSTINE: *City of God*, BK XIV, CH 15 388d-390a
19 AQUINAS: *Summa Theologica*, PART I, Q 64, A 3 337a-c; PART I-II, Q 35 772b-780c
20 AQUINAS: *Summa Theologica*, PART III, Q 15, A 6 792c-793c; Q 18, A 6, REP 3 814d-815d; PART III SUPPL, Q 97, A 2 1066d-1067b; A 5 1068c-1070a
21 DANTE: *Divine Comedy*, HELL, III [1-18] 4a-b; IV [13-45] 5c-d; V 7a-8b esp [121-123] 8b; VI [94-111] 9b-c; XIV [4-72] 19c-20b; PURGATORY, VII [1-36] 62c-d; XXIII [1-75] 88b-89a
22 CHAUCER: *Troilus and Cressida*, BK V 120b-155a esp STANZA 29-106 124a-134a, STANZA 174-182 143a-144a / *Tale of Melibeus*, par 4-7 401b-402b
23 HOBBES: *Leviathan*, PART I, 62c; 79b-d; PART III, 195b-d; PART IV, 271a
26 SHAKESPEARE: *3rd Henry VI*, ACT II, SC VI [61-84] 83d-84a / *Two Gentlemen of Verona*, ACT III, SC I [170-187] 242b / *Romeo and Juliet* 285a-319a,c esp ACT III, SC III [1-70] 304d-305c, ACT V, SC III 315d-319a,c / *Richard II*, ACT I, SC II [58-74] 323b-c; SC III [139-309] 325a-326d; ACT II, SC II [1-72] 331a-d; ACT IV, SC I [162-318] 343b-344d / *Much Ado About Nothing*, ACT V, SC I [1-38] 524c-525a / *Julius Caesar*, ACT III, SC I [148-275] 582a-583b
27 SHAKESPEARE: *Hamlet*, ACT I, SC II [68-117] 32b-d / *Othello*, ACT I, SC III [199-220] 211a-b / *King Lear*, ACT V, SC III [257-273] 282b / *Antony and Cleopatra*, ACT IV, SC XV [59-91] 344c-345a; ACT V, SC I [13-48] 345b-c
29 CERVANTES: *Don Quixote*, PART II, 333b
31 SPINOZA: *Ethics*, PART III, PROP 55 413b-414a
32 MILTON: *Paradise Lost*, BK I [44-74] 94b-95a; BK II [81-92] 113a; [521-628] 122b-125a; BK VI [327-343] 203b; [386-405] 204b-205a; [430-468] 205b-206b / *Samson Agonistes* [606-632] 352b-353b
35 LOCKE: *Human Understanding*, BK II, CH XX 176b-178a passim
46 HEGEL: *Philosophy of History*, PART I, 245b-d
51 TOLSTOY: *War and Peace*, BK II, 109d-110a,c; BK XII, 551d-554a; BK XV, 614a-618b
52 DOSTOEVSKY: *Brothers Karamazov*, BK VI, 160b-163c, 169c-170b; BK XII, 398a-d
53 JAMES: *Psychology*, 554a-b
54 FREUD: *Inhibitions, Symptoms, and Anxiety*, 736c-740c esp 736c-737b, 739b-c; 743b-744a; 752c-754a

5. The quantity of pleasure: the weighing of pleasures; the limits of pleasure

7 PLATO: *Protagoras*, 57d-62d / *Phaedo*, 225d-226b / *Gorgias*, 275d-277b / *Republic*, BK IX, 421a-425b / *Timaeus*, 474b-d / *Philebus*, 618a; 625c-631d / *Laws*, BK V, 689d-690c

9 ARISTOTLE: *Parts of Animals*, BK I, CH 5 [644^{b} 32-645^{a}1] 168d / *Generation of Animals*, BK I, CH 17 [721^{b}12-18] 261c / *Ethics*, BK III, CH 10-11 364b-365d passim; BK VII, CH 4 398a-399a passim; BK X, CH 3 [1173^{a}13-28] 427b-c; CH 4 [1174^{b}15-1175^{a}9] 429a-c / *Politics*, BK I, CH 9 [1258^{a}2-14] 452a-b / *Rhetoric*, BK I, CH 7 [1364^{b}23-26] 606c

12 LUCRETIUS: *Nature of Things*, BK II [1-36] 15a-c; BK III [931-962] 42a-c; [1076-1084] 44a; BK IV [1058-1120] 57d-58d; BK V [1412-1435] 79b-d

19 AQUINAS: *Summa Theologica*, PART I, Q 98, A 2, ANS and REP 3 517d-519a; PART I-II, Q 2, A 6, REP 2 619d-620d; Q 30, A 4, REP 3 751c-752b; Q 31, AA 5-6 755c-757c; Q 32, A 1, REP 3 759b-d; A 2, ANS and REP 1 759d-760d; A 7, REP 3 763c-764b; Q 33, A 2, ANS 766a-767a; Q 36, A 3, REP 1 782b-783a; Q 37, A 4, ANS 785d-786d; Q 38 786d-789d passim

20 AQUINAS: *Summa Theologica*, PART II-II, Q 28, A 3 528d-529c; PART III SUPPL, Q 71, A 8, REP 3 909d-910d; Q 93, A 1, ANS and REP 4 1037d-1039a

21 DANTE: *Divine Comedy*, HELL, VI [94-111] 9b-c

23 HOBBES: *Leviathan*, PART I, 76d

25 MONTAIGNE: *Essays*, 128c-129d; 326b-327b

33 PASCAL: *Pensées*, 125-172 195b-203b

35 LOCKE: *Human Understanding*, BK II, CH XXI, SECT 42-43 188c-d

38 ROUSSEAU: *Inequality*, 363a-b

41 GIBBON: *Decline and Fall*, 234c

42 KANT: *Practical Reason*, 298d-300a / *Judgement*, 584d-585c

43 MILL: *Utilitarianism*, 448a-450b; 463a-b

46 HEGEL: *Philosophy of Right*, INTRO, par 20 17a; ADDITIONS, 15 118d

47 GOETHE: *Faust*, PART I [1765-1775] 42a-b

51 TOLSTOY: *War and Peace*, BK XIII, 577c-578a; BK XIV, 605b-d; EPILOGUE I, 660d-661b

54 FREUD: *General Introduction*, 592d-593a / *Beyond the Pleasure Principle* 639a-663d esp 639a-640a, 643c, 645d-646a, 648b-650a, 662c-663a / *Civilization and Its Discontents*, 771c-776b esp 772a-b, 773c

6. Pleasure and the good

6*a*. Pleasure as the only good or as the measure of goodness in all other things

7 PLATO: *Protagoras*, 57d-62d / *Gorgias*, 275b-280b / *Republic*, BK VI, 384b-d; 386b-c / *Philebus* 609a-639a,c

8 ARISTOTLE: *Prior Analytics*, BK I, CH 40 68b / *Topics*, BK VIII, CH 9 [160^{b}16-23] 218a-b

9 ARISTOTLE: *Ethics*, BK I, CH 5 [1095^{b}13-21] 340d; BK VII, CH 13 [1153^{b}7-36] 404d-405b; BK X, CH 2 426c-427b; CH 3 [1173^{b}31-1174^{a}12] 428a

12 LUCRETIUS: *Nature of Things*, BK II [1-21] 15a-b

17 PLOTINUS: *Second Ennead*, TR IX, CH 15 74d-75b

18 AUGUSTINE: *City of God*, BK V, CH 20 225b-226a; BK X, CH 18, 310c-d; BK XIX, CH 1 507a-509a

19 AQUINAS: *Summa Theologica*, PART I-II, Q 1, A 7, ANS 614c-615a; Q 2, A 6 619d-620d; Q 34, A 3 770c-771c; Q 39, A 4 792a-d

24 RABELAIS: *Gargantua and Pantagruel*, BK IV, 284c

25 MONTAIGNE: *Essays*, 28a-d

30 BACON: *Advancement of Learning*, 71d-72a

31 SPINOZA: *Ethics*, PART IV, PROP 8 426b-c; APPENDIX, XXX-XXXI 450b-c

32 MILTON: *Paradise Lost*, BK IV [885-899] 171b-172a; BK XI [594-602] 312a

35 LOCKE: *Human Understanding*, BK II, CH XX, SECT 1-2 176b-c; CH XXI, SECT 31-48 185c-190d esp SECT 43 188d; SECT 55-56 192c-193b; SECT 63 194d-195a; CH XXVIII, SECT 5 229c-d

42 KANT: *Practical Reason*, 298c-300d esp 298c-d; 314d-318b / *Judgement*, 478a 479a

43 MILL: *Utilitarianism* 445a-476a,c passim, esp 447b-457b, 461c-464d

53 JAMES: *Psychology*, 808b-814a esp 811b-813b

54 FREUD: *Instincts*, 418d-420c esp 420b-c / *General Introduction*, 574b-d; 592c-593a / *Civilization and Its Discontents*, 772a-c

6*b*. Pleasure as one good among many: pleasure as one object of desire

7 PLATO: *Gorgias*, 275b-280d / *Republic*, BK II, 310c-d / *Philebus* 609a-639a,c

8 ARISTOTLE: *Prior Analytics*, BK I, CH 40 68b / *Topics*, BK III, CH 2 [117^{a}23-25] 163d; CH 3 [118^{b}27-36] 165d-166a; CH 6 [119^{a}37-^{b}1] 166d; BK IV, CH 4 [124^{a}15-20] 172d; [124^{b}7-14] 173b

9 ARISTOTLE: *Motion of Animals*, CH 6 [700^{b}23-30] 236a / *Ethics*, BK III, CH 4 359a-c; BK VII, CH 11-14 403c-406a,c; BK X, CH 2 [1172^{b}23-34] 426d-427a; CH 3 [1174^{a}8-12] 428b / *Rhetoric*, BK I, CH 6 [1362^{b}5-9] 603b; [1362^{b}14-18] 603b-c; CH 7 [1365^{b}7-13] 607c-d

18 AUGUSTINE: *City of God*, BK XIX, CH 1-4 507a-513c passim

19 AQUINAS: *Summa Theologica*, PART I, Q 5, A 6, ANS and REP 2 27c-28b; PART I-II, Q 1, A 6, REP 1 614a-c; A 7, ANS 614c-615a; Q 2, A 6, ANS and REP 2 619d-620d; Q 34, A 2, REP 1 769d-770c; A 3, ANS 770c-771c

21 DANTE: *Divine Comedy*, PURGATORY, XXX [100]-XXXI [63] 100b-101c

25 MONTAIGNE: *Essays*, 90d-91a; 109d-112a; 424d-426b; 527b-528a

40 GIBBON: *Decline and Fall*, 192b

(6. Pleasure and the good. 6b. Pleasure as one good among many: pleasure as one object of desire.)

43 MILL: *Utilitarianism*, 461c-464d
44 BOSWELL: *Johnson*, 404b-c
49 DARWIN: *Descent of Man*, 316a-317a esp 316b,d [fn 42]
53 JAMES: *Psychology*, 808b-814b esp 810b-811a, 812b-814b

6c. Good and bad pleasures: higher and lower pleasures

7 PLATO: *Protagoras*, 57d-62d / *Gorgias*, 277d-280d esp 280b-d / *Republic*, BK VIII, 409d-410c; BK IX, 421a-427b / *Philebus*, 635c-639a,c / *Laws*, BK V, 689c-690c; BK VIII, 736b-c; 738a-c
9 ARISTOTLE: *Ethics*, BK I, CH 8 [1099^{a}7-30] 344c-d; BK III, CH 10-12 364b-366a,c; BK VII, CH 4-5 398a-399d; CH 11 [1152^{b}19-23] 403d; CH 12 [1153^{a}26-36] 404c-d; CH 14 405b-406a,c; BK X, CH 3 [1173^{b}20-1174^{a}12] 428a-b; CH 5 [1175^{b}24-1176^{a}29] 430b-d; CH 6 [1176^{b}8-1177^{a}11] 431a-c / *Politics*, BK VIII, CH 3 [1338^{a}1-9] 543b
12 LUCRETIUS: *Nature of Things*, BK IV [1073-1078] 58a-b
17 PLOTINUS: *First Ennead*, TR IV, CH 12 17d / *Third Ennead*, TR V, CH 1 100c-101b / *Sixth Ennead*, TR VII, CH 26 334c-d
18 AUGUSTINE: *Confessions*, BK VI, par 26 42d-43a; BK VIII, par 7-8 54c-55a
19 AQUINAS: *Summa Theologica*, PART I-II, Q 34, AA 1-3 768c-771c
23 HOBBES: *Leviathan*, PART I, 63a
25 MONTAIGNE: *Essays*, 28a-d; 424d-426b
30 BACON: *Advancement of Learning*, 6d-7a; 27c-d; 73c-74a
31 SPINOZA: *Ethics*, PART III, PROP 56-57 414a-415b; PART IV, PROP 43 437b-c
40 GIBBON: *Decline and Fall*, 38b
42 KANT: *Practical Reason*, 298c-300d esp 298c-d
43 MILL: *Utilitarianism*, 447b-450b passim; 461c-464d

6d. Pleasure as the accompaniment of goods possessed: the satisfaction of desire

7 PLATO: *Gorgias*, 275b-278d / *Republic*, BK IX, 423c-424c / *Philebus*, 620a-b
8 ARISTOTLE: *Topics*, BK III, CH 2 [117^{a}23-25] 163d; CH 3 [118^{b}27-36] 165d-166a / *Metaphysics*, BK XII, CH 7 [1072^{b}13-29] 602d-603a
9 ARISTOTLE: *Ethics*, BK I, CH 8 [1099^{a}7-30] 344c-d; BK III, CH 10-11 364b-365d passim; BK VII, CH 12-13 403d-405b; BK X, CH 3 [1173^{b}7]-CH 5 [1176^{a}29] 427d-430d esp CH 4 [1175^{a}10-22] 429c, CH 5 [1176^{a}3-29] 430c-d / *Politics*, BK II, CH 7 [1267^{a}5-12] 462c-d
17 PLOTINUS: *Sixth Ennead*, TR VII, CH 27, 335b
18 AUGUSTINE: *Confessions*, BK VI, par 9-10 37c-38b / *Christian Doctrine*, BK I, CH 3-4 625b-c
19 AQUINAS: *Summa Theologica*, PART I, Q 5, A 6, ANS 27c-28b; PART I-II, Q 2, A 6 619d-620d; Q 3, A 4 625a-626b; Q 4, AA 1-2 629d-631a; Q 11 666b,d-669b; Q 30, A 4, REP 3 751c-752b; Q 32, A 1, ANS 759b-d; Q 34 768c-772b
20 AQUINAS: *Summa Theologica*, PART II-II, QQ 28-29 527b-533a; PART III SUPPL, Q 69, A 4, ANS 889c-890c
21 DANTE: *Divine Comedy*, PURGATORY, XVIII [19-39] 80a-b; PARADISE, III [58-90] 109d-110b; XXXIII [46-48] 156c
23 HOBBES: *Leviathan*, PART I, 76c-d
42 KANT: *Practical Reason*, 298a-300a; 341c-342a / *Judgement*, 470c-471b
43 MILL: *Utilitarianism*, 448d-449c
49 DARWIN: *Descent of Man*, 308a-b
53 JAMES: *Psychology*, 725b-726a; 812a-813b
54 FREUD: *Interpretation of Dreams*, 377c-d / *Instincts*, 412d-413d esp 413d / *General Introduction*, 574a-d / *Beyond the Pleasure Principle*, 663a / *Ego and Id*, 711d-712a

6e. Pleasure as intrinsically evil or morally indifferent

7 PLATO: *Protagoras*, 60d-61c / *Phaedo*, 224a-226c; 233d-234c / *Gorgias*, 263c-270c
9 ARISTOTLE: *Ethics*, BK VII, CH 12 [1153^{a}18-23] 404b-c; CH 13 [1153^{b}1-20] 404d-405a; BK X, CH 1 [1172^{a}28-33] 426b; CH 2 [1173^{a}5-13] 427b
12 LUCRETIUS: *Nature of Things*, BK II [14-21] 15a-b
12 EPICTETUS: *Discourses*, BK II, CH 11, 151a-b; CH 19, 163c-164a; BK III, CH 24 203c-210a
12 AURELIUS: *Meditations*, BK II, SECT 10-12 257d-258c; SECT 16 259a; BK III, SECT 6 261a-c; BK VI, SECT 16 275b-d; SECT 51 279b-c; BK VII, SECT 27 281d; SECT 64 284a-b; BK VIII, SECT 10 286b; SECT 19 286d-287a; SECT 28 287c; SECT 39 288c; SECT 47 289b-c; BK IX, SECT 1 291a-c; BK X, SECT 34-35 301a-b; BK XII, SECT 3 307b-d
14 PLUTARCH: *Marcus Cato*, 277c
18 AUGUSTINE: *City of God*, BK IX, CH 4 287a-288b; BK XIV, CH 8 381c-383a
19 AQUINAS: *Summa Theologica*, PART I-II, Q 34, A 1 768c-769d; Q 39 790a-792d
25 MONTAIGNE: *Essays*, 90d-91b; 118a-122a; 124c-125a; 165c-169a; 202a-b; 234b-c; 432b-d; 537d-543a,c esp 541d-542c
31 SPINOZA: *Ethics*, PART IV, PROP 41-43 437a-c; APPENDIX, XXXI 450c
33 PASCAL: *Pensées*, 160 202a-b
40 GIBBON: *Decline and Fall*, 192c-193c
42 KANT: *Pure Reason*, 238c-d / *Fund. Prin. Metaphysic of Morals*, 256a-257d; 258d-259a; 262a-263c; 265b / *Practical Reason*, 297a-318b esp 298a-300a, 304d-307d; 325a-327d; 329a-331a; 338c-355d / *Pref. Metaphysical*

Elements of Ethics, 365b-366d / *Intro. Metaphysic of Morals*, 387b-388a / *Judgement*, 478a-479d passim
44 BOSWELL: *Johnson*, 393a-b

7. Pleasure and happiness: their distinction and relation

5 SOPHOCLES: *Antigone* [1155–1171] 140d-141a
5 EURIPIDES: *Alcestis* [773–802] 243d-244a / *Cyclops* [163–174] 441d
7 PLATO: *Protagoras*, 57d-62d / *Gorgias*, 275b-284d / *Republic*, BK IX, 421a-425b / *Philebus*, 635b-639a,c / *Laws*, BK I, 646a; BK II, 657b-658b; BK V, 689c-690c; BK VII, 715c-716a / *Seventh Letter*, 801b-c
8 ARISTOTLE: *Metaphysics*, BK XII, CH 7 [1072^{b} 13–29] 602d-603a
9 ARISTOTLE: *Ethics*, BK I, CH 5 [1095^{b}13–22] 340d; CH 8 344a-345a esp [1099^{a}7–30] 344c-d; BK VII, CH 11 [1152^{b}1–8] 403c; CH 13 [1153^{b}7–1154^{a}7] 404d-405b; BK IX, CH 9 423a-424b; BK X, CH 6 430d-431c; CH 7 [1177^{a}23–28] 431d-432a / *Politics*, BK VIII, CH 3 [1338^{a}1–9] 543b; CH 5 [1339^{b}32–40] 545b-c / *Rhetoric*, BK I, CH 5 [1360^{b}4–18] 600d-601a
12 LUCRETIUS: *Nature of Things*, BK II [1–36] 15a-c; BK III [1003–1010] 43a; BK V [1412–1435] 79b-d
12 EPICTETUS: *Discourses*, BK II, CH 19 162c-164b
14 PLUTARCH: *Demetrius*, 747b
17 PLOTINUS: *First Ennead*, TR IV, CH 1–2 12b-13c; CH 6–7 15a-16a; CH 12 17d; TR V, CH 4 19c; CH 8 20c / *Second Ennead*, TR IX, CH 15 74d-75b
19 AQUINAS: *Summa Theologica*, PART I, Q 26, A 4, ANS and REP 2 151c-152a,c; PART I–II, Q 1, A 6, REP 1 614a-c; A 7, ANS 614c-615a; Q 2, A 6 619d-620d; Q 3, A 4 625a-626b; Q 4, AA 1–2 629d-631a; Q 5, A 8, ANS 642d-643d; Q 34, A 3 770c-771c; Q 35, A 5 775d-777a
20 AQUINAS: *Summa Theologica*, PART I–II, Q 84, A 4, ANS 176d-178a; PART II–II, Q 28 527b-530a; Q 180, A 7 614d-616a; PART III SUPPL, Q 81, A 4, REP 4 966d-967d; Q 90, A 3 1014d-1016a; Q 95, A 5 1048a-1049d; Q 96 1049d-1066a
21 DANTE: *Divine Comedy*, HELL, V–VI 7a-9c; XI [67–90] 15d-16a; PURGATORY, XVI [82–105] 77d; XVII [125–139] 79d; XIX–XXVI 81c-94c esp XIX [1–69] 81c-82a; XXX–XXXI 99b-102b esp XXXI [22–63] 101a-c; PARADISE, I [103–142] 107b-d; XI [1–12] 122a
22 CHAUCER: *Prologue* [331–360] 165a / *Pardoner's Tale* 374a-382b
24 RABELAIS: *Gargantua and Pantagruel*, BK I, 60c-66b esp 65c-66b
25 MONTAIGNE: *Essays*, 28a-d; 71a-73c; 90d-91a; 109d-112a; 128c-129d; 200d-205b; 235c-237d; 326b-327b; 394a-395b; 406a-408b; 424d-426b; 431c-432d; 527b-529b; 537d-543a,c
26 SHAKESPEARE: *Love's Labour's Lost*, ACT I, SC I [1–162] 254a-256a
29 CERVANTES: *Don Quixote*, PART I, 193b
30 BACON: *Advancement of Learning*, 71d-72b
33 PASCAL: *Pensées*, 125–183 195b-204b
35 LOCKE: *Human Understanding*, BK II, CH VII, SECT 2 131c-d; SECT 5 132c; CH XXI, SECT 42–47 188c-190b passim, esp SECT 42–43 188c-d; SECT 55–56 192c-193b
40 GIBBON: *Decline and Fall*, 192b
41 GIBBON: *Decline and Fall*, 234c-d
42 KANT: *Fund. Prin. Metaphysic of Morals*, 256c-257c; 258d-259a / *Practical Reason*, 298c-300d esp 298c-d; 314d-318b / *Judgement*, 478a-479d
43 MILL: *Utilitarianism*, 447b-457b esp 448a; 461c-464d
44 BOSWELL: *Johnson*, 378a-b
46 HEGEL: *Philosophy of Right*, ADDITIONS, 15 118d
47 GOETHE: *Faust*, PART I [1741–1775] 41b-42b
51 TOLSTOY: *War and Peace*, BK VI, 259d-260a; BK VIII, 334d-335a; BK XIII, 577a-578b esp 577d; BK XIV, 605b-d; BK XV, 615a-d; 630c-631a
52 DOSTOEVSKY: *Brothers Karamazov*, BK I, 1a-7a; BK III, 54b-58a; BK IV, 88d; BK XI, 343d; BK XII, 370b-d
54 FREUD: *General Introduction*, 599b-d / *Civilization and Its Discontents*, 771a-776b esp 772a-c

7*a*. Pleasure and pain in relation to love and friendship

4 HOMER: *Iliad*, BK XVIII [1–126] 130a-131c; BK XIX [276–368] 139d-140c; BK XXII [21–98] 155b-156a; [405–515] 159c-160d; BK XXIV 171a-179d esp [480–805] 176b-179d / *Odyssey*, BK XVII [290–327] 280a-c
5 AESCHYLUS: *Agamemnon* [399–455] 56b-57a
5 EURIPIDES: *Medea* [1090–1115] 221b-c / *Alcestis* [861–1005] 244d-245d / *Trojan Women* [572–705] 274d-276a; [1156–1333] 279d-281a,c / *Electra* [112–214] 328a-d
7 PLATO: *Phaedrus*, 120b-122a; 126c-127c / *Symposium*, 160c / *Republic*, BK III, 333b-334b / *Laws*, BK VIII, 735b-738c
9 ARISTOTLE: *Parts of Animals*, BK I, CH 5 [644^{b} 32–645^{a}1] 168d / *Ethics*, BK II, CH 7 [1108^{a}26–29] 353d; BK IV, CH 6 373d-374b passim; CH 8 375a-d; BK VIII, CH 2–6 407a-410c; CH 12 [1162^{a}15–28] 414c-d; BK IX, CH 4 419a-420a passim; CH 7 421a-d passim; CH 9 423a-424b; CH 11 425a-d; BK X, CH 3 [1173^{b}32–1174^{a}1] 428a-b / *Rhetoric*, BK I, CH 11 [1370^{b}19–24] 614a; [1371^{a}17–24] 614c-d; [1371^{b}21–24] 615b; BK II, CH 4 [1380^{b}33–1381^{b}14] 626c-627c
12 LUCRETIUS: *Nature of Things*, BK IV [1037–1208] 57d-60a
12 EPICTETUS: *Discourses*, BK II, CH 22 167d-170a; BK IV, CH 2 223d-224b
13 VIRGIL: *Aeneid*, BK IV [279–705] 174b-186b; BK VII [341–405] 245b-247b; BK XII [54–80] 355b-356a; [593–613] 370a

(7. *Pleasure and happiness: their distinction and relation.* 7a. *Pleasure and pain in relation to love and friendship.*)

18 AUGUSTINE: *Confessions*, BK II, par 16–17 12c-13a; BK VI, par 26 42d-43a / *City of God*, BK XIX, CH 5 513d-514b; CH 7–8 515a-516a

19 AQUINAS: *Summa Theologica*, PART I, Q 21, A 3, ANS 126a-c; Q 98, A 2, ANS and REP 3 517d-519a; PART I-II, Q 4, A 8, ANS and REP 2 636a-c; Q 31, A 6, REP 3 756d-757c; Q 32, A 1, REP 1 759b-d; A 3, REP 3 760d-761c; AA 5–7 762a-764b; Q 34, A 4, REP 1 771c-772b; Q 36, A 1, ANS and REP 3 780c-781b; A 2, ANS 781c-782b; A 3, ANS 782b-783a; Q 38, A 1, REP 3 786d-787c; A 3 788b-d

20 AQUINAS: *Summa Theologica*, PART II-II, Q 28 527b-530a; Q 30, A 2 534b-535a; PART III SUPPL, Q 94, AA 2–3 1041b-1042c

21 DANTE: *Divine Comedy*, HELL, V 7a-8b; PURGATORY, XVII [91]–XVIII [75] 79b-80c

22 CHAUCER: *Troilus and Cressida* 1a-155a esp BK I, STANZA 108–117 15a-16a, BK II, STANZA 111–125 36a-38a, BK III, STANZA 174–178 77a-b, STANZA 219 83a, BK V, STANZA 29–110 124a-134b, STANZA 174–182 143a-144a / *Knight's Tale* 174a-211a esp [1092–1186] 178a-179b, [1574–1627] 186a-b

23 HOBBES: *Leviathan*, PART I, 85b

25 MONTAIGNE: *Essays*, 398c-399d; 426c-427d; 431c-433c

26 SHAKESPEARE: *Two Gentlemen of Verona*, ACT III, SC I [170–187] 242b / *Romeo and Juliet* 285a-319a,c esp ACT V, SC III 315d-319a,c / *Midsummer-Night's Dream*, ACT I, SC I [128–251] 353d-355a / *Much Ado About Nothing*, ACT V, SC I [1–38] 524c-525a / *Julius Caesar*, ACT III, SC I [148–275] 582a-583b

27 SHAKESPEARE: *Hamlet*, ACT I, SC II [68–117] 32b-d; ACT III, SC II [206–225] 51b / *Troilus and Cressida*, ACT III, SC II [8–30] 120b-c; ACT IV, SC II [1–19] 126d; SC IV [11–108] 128b-129b / *Othello*, ACT I, SC III [199–220] 211a-b / *King Lear*, ACT III, SC VI [109–122] 267d; ACT V, SC III [257–273] 282b / *Antony and Cleopatra*, ACT I, SC III 314c-315d; ACT V, SC I [13–48] 345b-c / *Timon of Athens* 393a-420d / *Sonnets* 586a-609d passim

29 CERVANTES: *Don Quixote*, PART I, 73d-89c

31 SPINOZA: *Ethics*, PART III, PROP 12–13 400b-d; PROP 19–26 402c-404b; PROP 33–46 406c-410c; PROP 49 411a-b

32 MILTON: *Paradise Lost*, BK VIII [500–617] 243a-245b

35 LOCKE: *Human Understanding*, BK II, CH XX, SECT 4–5 176d-177a

37 FIELDING: *Tom Jones*, 126c-127b; 235b-238d

38 ROUSSEAU: *Inequality*, 345d-346b

43 MILL: *Utilitarianism*, 451b-c

47 GOETHE: *Faust*, PART I [3620–3645] 88b-89a

49 DARWIN: *Descent of Man*, 308a-313a passim, esp 308d-309a

51 TOLSTOY: *War and Peace*, BK I, 30a-31a; 56b; BK II, 69a-c; BK III, 135c-137c; 140c-142d; BK IV, 167c-d; BK V, 203a-d; BK VI, 259d-260a; BK VII, 276b-277a; BK VIII, 319c-d; 323b-324b; 340d-341a,c; BK XV, 615a-d; 639a-b

52 DOSTOEVSKY: *Brothers Karamazov*, BK I, 4a-5b; BK II, 32d-36c; BK III, 58d-59b; 69d-70c; BK IV, 95b-100c; BK VIII, 200c-201b; BK X, 282b-283c; BK XI, 324a-b; EPILOGUE, 402a-408a

53 JAMES: *Psychology*, 391b-392a

54 FREUD: *Instincts*, 418c-421a,c esp 420b-c / *Civilization and Its Discontents*, 774d-775a; 782d-783b

7b. The life of pleasure contrasted with other modes of life: the ascetic life

OLD TESTAMENT: *Numbers*, 6:1–5 / *Ecclesiastes*, 2:1–11; 3:12–22; 5:18–20; 8:14–15—(*D*) *Ecclesiastes*, 2:1–11; 3:12–22; 5:17–19; 8:14–15 / *Isaiah*, 5:11–12; 22:12–13; 28:1,7–8—(*D*) *Isaias*, 5:11–12; 22:12–13; 28:1,7–8

APOCRYPHA: *Wisdom of Solomon*, 2 esp 2:1–9—(*D*) OT, *Book of Wisdom*, 2 esp 2:1–9 / *Ecclesiasticus*, 18:30–32; 19:1–2; 23:5–6—(*D*) OT, *Ecclesiasticus*, 18:30–32; 19:1–3; 23:6

NEW TESTAMENT: *Luke*, 1:13–17; 8:5–15; 16:19–25 / *Romans*, 1:18–32; 8:1–13; 13:13–14 / *I Corinthians*, 5:9–13; 6:13–7:9; 7:36–38; 9:24–27 / *Galatians*, 5:16–25 / *Philippians*, 3:18–19 / *Colossians*, 3:5–8 / *I Thessalonians*, 4:3–7 / *I Timothy*, 4:1–10; 5:6 / *II Timothy*, 3 / *Titus*, 2:11–15; 3:3 / *Hebrews*, 11:24–26 / *James*, 4:1–6; 5:5 / *I Peter*, 4:1–5

5 EURIPIDES: *Alcestis* [782–802] 244a / *Cyclops* [139–174] 441c-d; [495–589] 444d-445d

5 ARISTOPHANES: *Birds* [685–800] 551b-553a / *Plutus* [415–618] 633d-636d; [802–822] 638c

7 PLATO: *Phaedo*, 223d-225a / *Republic*, BK X, 439b-440c / *Timaeus*, 474b-d / *Philebus*, 635a-639a,c / *Laws*, BK II, 656c-658b; BK V, 689d-690c; BK VII, 715d-716a; BK VIII, 737c-738c / *Seventh Letter*, 801b-c; 806a

9 ARISTOTLE: *Ethics*, BK I, CH 5 340d-341b; BK III, CH 10–12 364b-366a,c; BK X, CH 9 [1179^b 20–1180^a13] 434c-d

12 LUCRETIUS: *Nature of Things*, BK II [1–54] 15a-d

12 EPICTETUS: *Discourses*, BK III, CH 10 185d-187a; CH 15 190a-191a; CH 22 195a-201a; CH 24 203c-210a; BK IV, CH 4 225a-228a; CH 6 230b-232c

12 AURELIUS: *Meditations*, BK III, SECT 6 261a-c; SECT 12 262b-c; SECT 16 262d-263a,c; BK V, SECT 8–9 269d-270c; BK VIII, SECT 10 286b

14 PLUTARCH: *Alcibiades*, 161d-162b / *Demetrius*, 732d-733a; 747b / *Antony*, 751b-c; 755d-756c; 757c-758c / *Antony-Demetrius*, 780c-d

17 PLOTINUS: *First Ennead*, TR IV, CH 4–16 14a-19b

18 AUGUSTINE: *Confessions*, BK II, par 2–8 9b-10d; BK VIII, par 26–27 60b-c / *City of God*, BK I, CH 16–18 139c-140d

19 AQUINAS: *Summa Theologica*, PART I, Q 18, A 2, REP 2 105c-106b; Q 26, A 4, ANS 151c-152a,c; PART I–II, Q 1, A 6, REP 1 614a-c; A 7, ANS 614c-615a

20 AQUINAS: *Summa Theologica*, PART II–II, Q 179, A 2, REP 1,3 607a-c; Q 186, AA 3–5 652d-657d; PART III SUPPL, Q 81, A 4, REP 4 966d-967d

21 DANTE: *Divine Comedy*, PURGATORY, XVII [127–139] 79d; XXX–XXXI 99b-102b esp XXXI [22–63] 101a-c; PARADISE, XI [1–12] 122a

22 CHAUCER: *Prologue* [285–308] 164a-b / *Wife of Bath's Prologue* [5583–5774] 256a-259a

23 HOBBES: *Leviathan*, PART II, 155d-156a

24 RABELAIS: *Gargantua and Pantagruel*, BK I, 46a-49c; 60c-66b esp 65c-66b; BK II, 126a-d

25 MONTAIGNE: *Essays*, 28a-d; 109d-112a; 128c-129d; 162c-167a esp 165c-167a; 406a-408b

26 SHAKESPEARE: *Love's Labour's Lost*, ACT I, SC I [1–162] 254a-256a / *1st Henry IV*, ACT I, SC II [1–116] 435c-436c

30 BACON: *Advancement of Learning*, 7d-8b; 54a-b; 69d-74b esp 71d-72a, 73c-74a

32 MILTON: *Il Penseroso* 21a-25a esp [156–176] 24b-25a

40 GIBBON: *Decline and Fall*, 38a-b; 60a-c; 192a-193c; 593b,d-599a

41 GIBBON: *Decline and Fall*, 174c-175c

43 MILL: *Liberty*, 296b-c / *Utilitarianism*, 448a-449c

47 GOETHE: *Faust*, PART I [1765–1775] 42a

51 TOLSTOY: *War and Peace*, BK VI, 273c-274a,c; BK VIII, 321d-322d; 329c-333a; 334d-335a; 336b-337d

52 DOSTOEVSKY: *Brothers Karamazov* esp BK I, 1a-7a, BK II 15a-45d, BK III, 50c-62a, 64c-73b, BK IV, 88d, BK VI 146b,d-170d

54 FREUD: *General Introduction*, 624a-625b / *Civilization and Its Discontents*, 772c-774d esp 772d

8. The discipline of pleasure

8a. Pleasure and pain in relation to virtue: the restraints of temperance and the endurance of courage

OLD TESTAMENT: *Proverbs*, 7:6–27

APOCRYPHA: *Ecclesiasticus*, 19:5—(*D*) OT, *Ecclesiasticus*, 19:5

NEW TESTAMENT: *James*, 1:12–16

4 HOMER: *Odyssey* 183a-322d esp BK IV [265–295] 201d-202a, BK V [192–224] 209d-210b, [282–493] 210d-213a,c, BK IX [82–104] 230a, BK XII [153–200] 251d-252b, BK XX [1–55] 296a-c

5 AESCHYLUS: *Agamemnon* [160–183] 53d-54a

5 SOPHOCLES: *Philoctetes* 182a-195a,c esp [1316–1347] 193d-194a, [1408–1444] 194d-195a,c

6 THUCYDIDES: *Peloponnesian War*, BK II, 397b-c

7 PLATO: *Laches*, 32c / *Phaedrus*, 120a-122a / *Gorgias*, 275d-285a / *Republic*, BK IV, 347a-348d; BK VI, 374a-c; BK VII, 389d-390b; BK IX, 421a-425b / *Timaeus*, 474b-d / *Laws*, BK I, 644b-645c; BK II, 653a-c; 657b-658b; BK III, 669b-670c; BK V, 689c-690c; BK VII, 713d-716a; BK VIII, 737c-738c; BK IX, 748a-c / *Seventh Letter*, 807a; 814b

8 ARISTOTLE: *Topics*, BK VI, CH 8 [146^{b}24–27] 200d / *Physics*, BK VII, CH 3 [246^{b}20–247^{a}19] 330a-b

9 ARISTOTLE: *History of Animals*, BK VII, CH 1 [581^{b}11–22] 107b / *Ethics*, BK I, CH 5 340d-341b; CH 8 [1099^{a}7–30] 344c-d; BK II, CH 2 [1104^{a}19]–CH 3 [1105^{a}16] 349c-350c; CH 7 [1107^{b}3–8] 353a; [1108^{a}23–29] 353d; CH 9 354d-355a,c; BK III, CH 4 359a-c; CH 6–12 361a-366a,c; BK IV, CH 6 373d-374b; CH 8 375a-d; BK VI, CH 5 [1140^{b}11–19] 389b-c; BK VII, CH 4–10 398a-403c; CH 12 [1153^{a}27–36] 404c-d; BK IX, CH 4 419a-420a passim; CH 9 423a-424b passim; BK X, CH 1 426a-c; CH 3 [1173^{b}32–1174^{a}11] 428a-b; CH 5 [1176^{a}3–29] 430c-d; CH 6 [1176^{b}8–1177^{a}11] 431a-c / *Politics*, BK VIII, CH 5 [1340^{a}1–28] 545c-d / *Rhetoric*, BK I, CH 9 [1366^{b}14–16] 609a

12 EPICTETUS: *Discourses*, BK III, CH 21, 194a-b; CH 24 203c-210a

12 AURELIUS: *Meditations*, BK II, SECT 10–11 257d-258b; BK III, SECT 6 261a-c; SECT 16 262d-263a,c; BK V, SECT 26 272c; BK VII, SECT 16 280d; BK VIII, SECT 10 286b; SECT 28 287c; SECT 39 288c; SECT 47 289b-c; BK IX, SECT 1 291a-c

14 PLUTARCH: *Pericles*, 139a-140d / *Coriolanus*, 184a-c / *Agesilaus*, 489d-490b / *Demetrius*, 747b / *Antony-Demetrius*, 780c-d

19 AQUINAS: *Summa Theologica*, PART I, Q 98, A 2, ANS and REP 3 517d-519a; PART I–II, Q 31, A 8, REP 1 758b-759a; Q 32, A 6 762d-763c; Q 34, A 1 768c-769d; A 4 771c-772b; Q 35, A 6, REP 3 777b-778c; Q 39, AA 1–2 790a-791b; A 3, ANS and REP 2 791b-792a

20 AQUINAS: *Summa Theologica*, PART I–II, Q 59, A 3 47c-48c; Q 60, A 4, ANS 52b-53a; A 5, ANS 53a-54d; Q 61, A 2, ANS 55c-56b; A 3, ANS 56b-57a; A 4 57a-58b; Q 74, A 6 132b-133a; A 8 134b-136a; Q 107, A 4, ANS 329d-330d; PART II–II, Q 15, A 3 453c-454c; QQ 35–36 562d-570c; Q 46, A 3 604d-605a,c; PART III, Q 15, AA 5–6 791d-793c

21 DANTE: *Divine Comedy*, HELL, V [1]–VIII [64] 7a-11c; XI [67–90] 15d-16a; PURGATORY, XVI [82–105] 77d; XVII [91]–XVIII [75] 79b-80c; XIX–XXVI 81c-94c esp XIX [1–69] 81c-82a; XXX–XXXI 99b-102b esp XXXI [22–63] 101a-c; PARADISE, I [103–142] 107b-d

22 CHAUCER: *Tale of Melibeus*, par 4–7 401b-402b

(8. *The discipline of pleasure.* 8a. *Pleasure and pain in relation to virtue: the restraints of temperance and the endurance of courage.*)

23 HOBBES: *Leviathan*, PART II, 138d-139a; 163d-164a
24 RABELAIS: *Gargantua and Pantagruel*, BK I, 65c-66b; BK IV, 234a-240a
25 MONTAIGNE: *Essays*, 28a-d; 71a-72a; 89b-91b; 109c-112a; 118a-119d; 162c-167a esp 165c-167a; 200d-205b; 234b-c; 350d-351b; 353c-354b; 365b-367b; 392a-b; 394a-395b; 406a-408b; 424d-426b; 431c-432d; 474b-d; 537d-543a,c esp 540c
30 BACON: *Advancement of Learning*, 71d-72a
31 SPINOZA: *Ethics*, PART IV, PROP 41-73 437a-447a
32 MILTON: *Areopagitica*, 390b-391a
33 PASCAL: *Provincial Letters*, 64b-67b / *Pensées*, 160 202a-b
35 LOCKE: *Human Understanding*, BK II, CH XXI, SECT 35 186b-d; SECT 59 193d-194a; SECT 71 197b-198a
37 FIELDING: *Tom Jones*, 9a-c
38 ROUSSEAU: *Inequality*, 330d-331b; 343d-345c
40 GIBBON: *Decline and Fall*, 192b-193c; 596c-597a
42 KANT: *Pure Reason*, 173c-d / *Pref. Metaphysical Elements of Ethics*, 368d-369a
43 MILL: *Utilitarianism*, 461c-464d
44 BOSWELL: *Johnson*, 116b
49 DARWIN: *Descent of Man*, 315c-317a esp 316c
51 TOLSTOY: *War and Peace*, BK I, 15b-16a; BK III, 122b-c; BK V, 201a-c; 203a-d; BK VI, 245b-c; 248b-250a; BK VIII, 321d-322d; 336b-337d; BK IX, 369c-d; BK X, 426b; BK XI, 481a-482a; BK XII, 551d-554a; BK XIII, 577a-578b; BK XIV, 605b-d; EPILOGUE I, 652a
52 DOSTOEVSKY: *Brothers Karamazov*, BK XI, 343d
54 FREUD: *Civilization and Its Discontents*, 793a-794b / *New Introductory Lectures*, 831b

8b. The conflict between pleasure and duty, or the obligations of justice: the pleasure principle and the reality principle

OLD TESTAMENT: *Proverbs*, 5:1-13; 6:23-35; 7:6-27; 21:17; 23:20-21,29-35 / *Ecclesiastes*, 10:16-17
APOCRYPHA: *Ecclesiasticus*, 18:30-32; 19:1-5; 31:12-31; 37:29-31—(*D*) OT, *Ecclesiasticus*, 18:30-32; 19:1-5; 31:12-42; 37:32-34
5 EURIPIDES: *Hippolytus* [373-430] 228b-d
6 THUCYDIDES: *Peloponnesian War*, BK V, 506b-c
7 PLATO: *Republic*, BK II, 311a-315d / *Laws*, BK IX, 748a-c
12 EPICTETUS: *Discourses*, BK I, CH 3 108b-c; BK II, CH 11 150a-151b; CH 19 162c-164b; BK III, CH 2 177c-178d; CH 10 185d-187a; CH 24 203c-210a
12 AURELIUS: *Meditations*, BK III, SECT 6 261a-c; BK VI, SECT 2 274a; BK VII, SECT 44 282b-c; SECT 55 283b-c; BK VIII, SECT 10 286b; SECT 19 286d-287a; SECT 32 287d-288a; BK IX, SECT 1 291a-c
32 MILTON: *Paradise Lost*, BK VIII [500-617] 243a-245b
33 PASCAL: *Provincial Letters*, 64b-67b
42 KANT: *Pure Reason*, 234c-240b esp 235a-b, 238c-239a / *Fund. Prin. Metaphysic of Morals* 253a-287d esp 256c-257d, 258d-259a, 261c-d, 262a-263c, 267b-d, 282b-283d, 286a-c / *Practical Reason* 291a-361d esp 298a-300a, 304d-307d, 325a-327d, 329a-331a, 338c-355d / *Pref. Metaphysical Elements of Ethics* 365a-379d esp 365b-366d, 369c-373b / *Intro. Metaphysic of Morals*, 387b-388c / *Judgement*, 478a-479d; 584d-587a esp 586a-587a; 588b [fn 2]; 591b-592a; 594c-596c
43 MILL: *Utilitarianism*, 452b-456a passim; 457c-461c passim; 464d-476a,c passim
47 GOETHE: *Faust*, PART I [3025-3072] 73b-74b; [3217-3373] 79a-82a
49 DARWIN: *Descent of Man*, 309c-314c passim, esp 310d
54 FREUD: *General Introduction*, 452c-d; 575a; 592c-593b; 599b-d; 624a-625b / *Beyond the Pleasure Principle*, 640b-d / *Ego and Id*, 702c-d / *Civilization and Its Discontents*, 768b-c; 772b-d; 784a-d; 799c-800a / *New Introductory Lectures*, 837d-839b esp 838a-b

8c. Perversions or degradations in the sphere of pleasure and pain: sadism and masochism

OLD TESTAMENT: *Genesis*, 19:4-11 / *Exodus*, 22:19 / *Leviticus*, 18:22-23; 20:13-16 / *Deuteronomy*, 27:21
NEW TESTAMENT: *Romans*, 1:26-32
5 EURIPIDES: *Bacchantes* 340a-352a,c
7 PLATO: *Laws*, BK I, 645d-646c; BK VIII, 735d-738b
9 ARISTOTLE: *History of Animals*, BK VII, CH 1 [581^{b}11-22] 107b / *Ethics*, BK VII, CH 5 399a-d; CH 6 [1149^{b}24-1150^{a}8] 400b-c; BK X, CH 5 [1176^{a}15-25] 430c-d
12 EPICTETUS: *Discourses*, BK I, CH 3 108b-c
14 PLUTARCH: *Dion*, 783c-784a
15 TACITUS: *Annals*, BK VI, 86a-b; BK XI, 103b-c; 107b-c; 108b-c; BK XIV, 145a-d; 146b-147a; BK XV, 166b-c / *Histories*, BK III, 265a-b
18 AUGUSTINE: *Christian Doctrine*, BK III, CH 18-21 664d-666b
19 AQUINAS: *Summa Theologica*, PART I-II, Q 31, A 7 757c-758b
20 AQUINAS: *Summa Theologica*, PART III, Q 65, A 1, REP 5 879c-881d; PART III SUPPL, Q 81, A 4, REP 4 966d-967d
21 DANTE: *Divine Comedy*, HELL, XI [22-90] 15b-16a; XV-XVI 21a-23d; XVIII [1-99] 25b-26b; PURGATORY, XIX [1-69] 81c-82a
25 MONTAIGNE: *Essays*, 89d-90c; 118a-122a; 166b-167a; 427b-d

27 SHAKESPEARE: *Sonnets*, CXXIX 606a
31 SPINOZA: *Ethics*, PART III, THE AFFECTS, DEF 48, EXPL 421b-d; PART IV, APPENDIX, XIX 449a
32 MILTON: *Paradise Lost*, BK IX [990–1133] 269a-272a
36 SWIFT: *Gulliver*, PART II, 67b
40 GIBBON: *Decline and Fall*, 38a-b; 60a-c; 138d-139a; 389b-c; 484c-d; 649c-650b
41 GIBBON: *Decline and Fall*, 93d-94a; 169a-b; 174c-175c
44 BOSWELL: *Johnson*, 355a
46 HEGEL: *Philosophy of History*, PART III, 292b-d
51 TOLSTOY: *War and Peace*, BK IV, 174b; 188a-190c; BK VI, 267c-d; 271c-273c; BK VIII, 305b-307d; BK XI, 505a-511b; 520b-c; EPILOGUE I, 660d-661b
52 DOSTOEVSKY: *Brothers Karamazov*, BK I, 4a-d; BK II, 39a-40a; BK V, 121d-127b esp 122d-123a; BK XI, 307c-310c
53 JAMES: *Psychology*, 718a-720b
54 FREUD: *Origin and Development of Psycho-Analysis*, 16d / *Interpretation of Dreams*, 204b-c / *Instincts*, 415d-418c / *General Introduction*, 570a-572d; 577a-579d passim / *Civilization and Its Discontents*, 790a-791b / *New Introductory Lectures*, 847c-849b passim; 850a-b

9. The regulation of pleasures by law

OLD TESTAMENT: *Exodus*, 20:14,17 / *Deuteronomy*, 5:18,21; 21:18–21
NEW TESTAMENT: *Matthew*, 5:27
5 EURIPIDES: *Bacchantes* 340a-352a,c esp [215–369] 341d-343a
7 PLATO: *Gorgias*, 283a-285a / *Republic*, BK III, 326c-328a; BK IV, 348a-d; BK X, 432a-434c / *Laws*, BK I–II, 643b-663d esp BK II, 663b-d; BK III, 675c-676b; BK VI, 708c-709a; 712b; BK VII, 713c-716b esp 713c, 716a-b; 718c-720d; BK VIII, 731d-738c
9 ARISTOTLE: *Ethics*, BK V, CH I [1129^b19–24] 377a; BK X, CH 9 [1179^b31–1180^a13] 434c-d / *Politics*, BK II, CH 9 [1269^b13–1270^a14] 465d-466b; BK VII, CH 17 [1336^a23–$^b24$] 541b-d
14 PLUTARCH: *Lycurgus* 32a-48d esp 36b-37b / *Lycurgus-Numa*, 61b,d-62c
15 TACITUS: *Annals*, BK II, 31a-b; BK III, 57b-58d
20 AQUINAS: *Summa Theologica*, PART I–II, Q 100, A 4, ANS and REP 3 253d-255a; A 5, REP 5 255a-257c
21 DANTE: *Divine Comedy*, PURGATORY, XVI [85–114] 77d-78a
25 MONTAIGNE: *Essays*, 131b-132a
27 SHAKESPEARE: *Measure for Measure* 174a-204d passim, esp ACT II, SC I [225–270] 181a-c, ACT III, SC II [91–128] 190c-d
30 BACON: *Advancement of Learning*, 54a-b
32 MILTON: *Areopagitica*, 390a-b; 393a-395b
35 LOCKE: *Toleration*, 8c-d
38 MONTESQUIEU: *Spirit of Laws*, BK V, 19a-d; BK VII, 44d-47a; 47c-48a; 49a-50c; BK XII, 86b; 87c-88a; BK XIV, 105c-106b; BK XVI, 119d; BK XXV, 210a-b
38 ROUSSEAU: *Social Contract*, BK IV, 434b-435a
39 SMITH: *Wealth of Nations*, BK II, 149d-150a; BK IV, 211a-b
40 GIBBON: *Decline and Fall*, 100c-101b; 484c-d
41 GIBBON: *Decline and Fall*, 93d-94a
43 CONSTITUTION OF THE U.S.: AMENDMENTS, XVIII 19c-d; XXI 20c
43 FEDERALIST: NUMBER 12, 58b-c
43 MILL: *Liberty*, 302d-312a; 314b-316b
44 BOSWELL: *Johnson*, 301c-d
54 FREUD: *Group Psychology*, 690b-c

10. The social utility of pleasure and pain

10*a*. The employment of pleasure and pain by parent or teacher in moral and mental training

OLD TESTAMENT: *Proverbs*, 13:24; 19:18; 22:15; 23:13–14; 29:15
APOCRYPHA: *Ecclesiasticus*, 30:1–12 passim—(*D*) OT, *Ecclesiasticus*, 30:1–12 passim
5 ARISTOPHANES: *Clouds* [1303–1464] 504b-506c
7 PLATO: *Protagoras*, 46b / *Republic*, BK III, 339b-340b / *Laws*, BK II 653a-663d esp 653a-656c, 662c-663d; BK VII, 713d-716a
9 ARISTOTLE: *Ethics*, BK II, CH 3 [1104^b8–18] 350a; BK X, CH 1 [1172^a18–23] 426a; CH 9 [1179^b20–1180^a4] 434c-d
18 AUGUSTINE: *Confessions*, BK I, par 14–23 4c-7a / *City of God*, BK XIX, CH 16 521d-522a
19 AQUINAS: *Summa Theologica*, PART I, Q 48, A 6, CONTRARY 264a d
20 AQUINAS: *Summa Theologica*, PART I–II, Q 95, A 1, ANS 226c-227c; Q 99, A 6, ANS 250a-251a
24 RABELAIS: *Gargantua and Pantagruel*, BK I, 26d-30c esp 30b-c
25 MONTAIGNE: *Essays*, 16c-d; 70d-74a; 90d-91a; 185c-d
31 SPINOZA: *Ethics*, PART III, PROP 55, SCHOL 413b-d; THE AFFECTS, DEF 27, EXPL 419a-b
41 GIBBON: *Decline and Fall*, 40d-41a
42 KANT: *Fund. Prin. Metaphysic of Morals*, 264b [fn 1] / *Practical Reason*, 357c-360d
43 MILL: *Liberty*, 287b-c / *Utilitarianism*, 463c-464d
44 BOSWELL: *Johnson*, 191b-c; 199c-200d; 309c-d; 448a-b
51 TOLSTOY: *War and Peace*, BK I, 47b-48d; BK VIII, 306b
53 JAMES: *Psychology*, 290a-291a
54 FREUD: *War and Death*, 759b / *New Introductory Lectures*, 876c

10*b*. The use of pleasure and pain by orator or statesman in persuasion and government

7 PLATO: *Protagoras*, 45b-d / *Apology*, 208c-209b; 210b-d / *Gorgias*, 260a-262a / *Sophist*,

(10. *The social utility of pleasure and pain.* 10*b*. *The use of pleasure and pain by orator or statesman in persuasion and government.*)

554c-d / *Laws*, BK I 640a-652d esp 650c-652d

9 ARISTOTLE: *Ethics*, BK II, CH 3 350a-c; BK VII, CH 11 [1152^{b}1–3] 403c; BK X, CH 9 [1180^{a}1–13] 434d / *Rhetoric*, BK I, CH 2 [1356^{a}14–18] 595c; BK II, CH 1 [1378^{a}20]–CH 11 [1388^{b}30] 623b-636a

14 PLUTARCH: *Pericles*, 125b-130d / *Caesar*, 578b-579a; 598d-599b / *Marcus Brutus*, 810d-811a

15 TACITUS: *Histories*, BK IV, 269d-270b

20 AQUINAS: *Summa Theologica*, PART I-II, Q 99, A 6 250a-251a

23 MACHIAVELLI: *Prince*, CH VIII, 14a-c; CH XXI, 33a

23 HOBBES: *Leviathan*, PART I, 82b-d; PART II, 109b; 128a-b; 145a-147b passim

25 MONTAIGNE: *Essays*, 176a-c; 181d-183a

30 BACON: *Advancement of Learning*, 23a-26a

33 PASCAL: *Geometrical Demonstration*, 440b-442a

37 FIELDING: *Tom Jones*, 320c-321b

40 GIBBON: *Decline and Fall*, 79a-b; 139b-140c; 502c-503a

42 KANT: *Judgement*, 535b-c

51 TOLSTOY: *War and Peace*, BK VI, 245a-c

CROSS-REFERENCES

For: The relation of pleasure and pain to sensations and emotions, *see* EMOTION 1a; SENSE 3c(2).

The discussion of intellectual pleasure with respect to beauty and truth, *see* BEAUTY 4; EDUCATION 5e; KNOWLEDGE 8b(4).

Another discussion of the kinds of pain, *see* PUNISHMENT 1a.

The aspect of infinity in the desire for pleasure, *see* DESIRE 7a(1).

The problem of pleasure and pain in relation to good and evil, *see* GOOD AND EVIL 3d, 4a, 4c; and for the conception of pleasure as an object of desire and as the satisfaction of desire, *see* DESIRE 2b, 2d.

The problem of pleasure in relation to happiness, *see* HAPPINESS 2b(2).

Other discussions of pleasure and pain in relation to moral virtue, *see* COURAGE 1, 3; PUNISHMENT 3a; TEMPERANCE 1, 2; VIRTUE AND VICE 5a; and for the consideration of asceticism and pleasure-seeking, *see* TEMPERANCE 6a–6b.

The conflict between duty and pleasure, *see* DUTY 8; and for the basic issue between an ethics of duty and an ethics of happiness, *see* DUTY 2; HAPPINESS 3.

Pleasure and pain in relation to friendship and love, *see* LOVE 1b.

Another discussion of pleasure in relation to law, *see* TEMPERANCE 5c.

The role of pleasure and pain in moral training, *see* PUNISHMENT 3a; VIRTUE AND VICE 4d(2).

ADDITIONAL READINGS

Listed below are works not included in *Great Books of the Western World*, but relevant to the idea and topics with which this chapter deals. These works are divided into two groups:

I. Works by authors represented in this collection.
II. Works by authors not represented in this collection.

For the date, place, and other facts concerning the publication of the works cited, consult the Bibliography of Additional Readings which follows the last chapter of *The Great Ideas*.

I.

DESCARTES. *The Passions of the Soul*
HUME. *An Inquiry Concerning the Principles of Morals*
J. S. MILL. *An Examination of Sir William Hamilton's Philosophy*, CH 25
FREUD. *Wit and Its Relation to the Unconscious*, CH 1–5
——. *Mourning and Melancholia*

II.

EPICURUS. *Letter to Menoeceus*
CICERO. *De Finibus* (*On the Supreme Good*), I–II
——. *Tusculan Disputations*, II
TERTULLIAN. *De Spectaculis*
T. MORE. *Utopia*, BK II
MALEBRANCHE. *De la recherche de la vérité*, BK IV, CH 5–13

LEIBNITZ. *New Essays Concerning Human Understanding*, BK II, CH 20
FRANKLIN. *Dissertation on Liberty and Necessity, Pleasure and Pain*
HUTCHESON. *An Essay on the Nature and Conduct of the Passions and Affections*
BENTHAM. *An Introduction to the Principles of Morals and Legislation*, CH 1–5
LAMB. *Hospita on the Immoderate Indulgences of the Pleasures of the Palate*
DE QUINCEY. *Confessions of an English Opium-Eater*
ALIBERT. *Physiologie des passions*
LEOPARDI. *Essays, Dialogues, and Thoughts*
COLERIDGE. *The Pains of Sleep*
J. MILL. *Analysis of the Phenomena of the Human Mind*. CH 17–23
W. HAMILTON. *Lectures on Metaphysics and Logic*, VOL I (41–46)
EMERSON. "Compensation," in *Essays*, I
WHEWELL. *The Elements of Morality*, BK II, CH 25
SCHOPENHAUER. "On the Sufferings of the World," "On the Vanity of Existence," in *Studies in Pessimism*
BAIN. *The Emotions and the Will*
HINTON. *The Mystery of Pain*
E. HARTMANN. *Philosophy of the Unconscious*, III
H. SIDGWICK. *The Methods of Ethics*, BK I, CH 4; BK II, CH 1–6; BK III, CH 14; BK IV
SPENCER. *The Principles of Ethics*, PART I, CH 7
T. H. GREEN. *Prolegomena to Ethics*, BK III, CH 4(a)
AVEBURY. *The Pleasures of Life*
FRAZER. *The Golden Bough*, PART VI, CH 8
RIBOT. *The Psychology of the Emotions*
WUNDT. *Outlines of Psychology*, (7)
BRADLEY. *Ethical Studies*, III
——. *Collected Essays*, VOL I(14)
TITCHENER. *Lectures on the Elementary Psychology of Feeling and Attention*, II–IV, VIII
MOORE. *Principia Ethica*, CH 2–3
——. *Ethics*, CH 1–2
ELLIS. *Studies in the Psychology of Sex*, VOL I, PART II, pp 66–188
PROUST. *Remembrance of Things Past*
A. H. ALLEN. *Pleasure and Instinct*
POWYS. *In Defence of Sensuality*
BEEBE-CENTER. *The Psychology of Pleasantness and Unpleasantness*
BERTRAND. *The Art of Suffering*
C. S. LEWIS. *The Problem of Pain*

Chapter 69: POETRY

INTRODUCTION

THE spirit in which the great poets have read their predecessors differs remarkably from the attitude toward the past which prevails in other fields. The philosophers and scientists frequently feel assured that they can improve upon their predecessors. The poets, for the most part, wish only to do as well. Virgil's admiration for Homer; Dante's accolade to Virgil; Milton's praise of Aeschylus, Sophocles, and Euripides as "the three tragic poets unequall'd yet by any"; the tributes which Cervantes and Fielding pay to the poets of antiquity—these testify that there is no battle between the modern and the ancient books of poetry.

Contemporary novelists and dramatists—especially those who are proud of their innovations in the forms or materials of poetry—may constitute an exception. But they would still be the exception to a rule which can be verified for almost all the great books of poetry. Part of the reason for such unusual accord may be that, in the tradition of the great books, one book enjoys the unique distinction of having founded the science of poetry. More than that, it seems to have gained from the poets a large measure of approval, and even adherence to its principles, during a period of more than 2000 years.

Not that Aristotle's *Poetics* is without sources. They exist in Plato's comments on the kinds of poetry; in Aristophanes' critical weighing of Aeschylus and Euripides; and, of course, in the original inventions of Homer and the great dramatic poets, both tragic and comic. Not that the acceptance of Aristotle's theory of poetry is unaccompanied by some dissent, as, for example, in Fielding's quarrel with the rules about the unities of time and place. But Fielding, like Cervantes who is another close student of the *Poetics*, more frequently adopts than rejects Aristotle's basic insights. His most rebellious protest—that the originality of creative genius cannot be bound by the laws of art or held accountable to any established critical standards —would certainly receive sympathetic consideration from the man who formulated the rules of poetry and its measures of excellence by the study of the productions of Greek genius.

One way in which later poets have expressed their disagreement with the *Poetics* confirms Fielding's insight. Those who have violated its rules and yet produced great poems have been men of exceptional genius. Where the genius has been lacking to create new forms, the violation of the rules has usually resulted in formlessness. But it is not only in the creative work of the poets that Aristotle's principles have been put to use and tested. His influence also appears in the comments which the poets make on the nature and purpose of poetry. The terms and distinctions of the *Poetics* are reflected in the writings of Dante, Chaucer, Shakespeare, Milton, Goethe, and Melville, as well as in many essays in criticism from Horace and Demetrius to Boccaccio, Boileau, Dryden, and Pope.

Socrates once complained of the wisdom of the poets. Those whom he asked about their poetry were tongue-tied. They finally resorted to the mystery of inspiration or the inscrutability of genius. "There is hardly a person present," he tells his judges in the *Apology*, "who would not have talked better about their poetry than they did themselves." The poets of a later age were, through benefit of Aristotle, better able to discourse analytically of their art.

IF WE TURN FROM the poets themselves, or rather from their poems, to the analysis of poetry—by poets or others—we find a number of major issues. On what poetry is and on the end it serves, the tradition does not seem to be either unified or harmonious. Basic disagreements begin with the ancients.

On the question, for example, whether the poets have the same obligation to speak the truth—and the same kind of truth—as do philosophers or scientists, Plato and Aristotle seem to be opposed. On the question whether the art of poetry lies in its use of language or is primarily the craft of fiction, Aristotle's *Poetics* and Horace's *Art of Poetry* represent the opposite answers which have been points of departure for divergent discussions of poetry throughout the whole tradition of western thought.

With regard to the second of these two questions, it may be wondered whether we are in the presence of the sort of disagreement which requires us to take one side rather than the other. The fact that Aristotle, in his *Rhetoric*, writes about poetry in a vein contrary to the theory he advances in his *Poetics*, would suggest the possibility of different but not inconsistent points of view about poetry. Unless Aristotle unwittingly contradicts himself, the rhetorical consideration of poetry is simply a different way of conceiving what is poetic.

In the *Advancement of Learning*, Bacon records this difference in the meaning of poetry, which had become traditional by his time. He treats it, moreover, as the sort of difference which does not require the rejection of either alternative as incorrect. Poetry, he writes, can be "taken in two senses: in respect of words or matter. In the first sense it is but a character of style, and belongeth to the arts of speech, and is not pertinent for the present. In the latter it is (as hath been said) one of the principal portions of learning, and is nothing else but feigned history, which may be styled as well in prose as in verse."

When Bacon says that the conception of poetry as a literary style—as an art of writing in verse rather than prose— "is not pertinent for the present," he does not reject that alternative entirely. He merely postpones it for the later section of his work in which he treats of grammar and rhetoric. The other alternative —poetry as "feigned history"—is germane to his present consideration of the kinds of learning. Just as Aristotle does not set his *Rhetoric* against his *Poetics* on the nature of poetry, so Bacon does not exclude one of these conceptions in favor of the other when he observes how different are the principles and considerations appropriate to each.

These two points of view about the nature of poetry are not always treated in this way. Sometimes one or the other is taken as the primary or even the only way of approaching the subject, and then a genuine issue ensues—either with those who take the excluded point of view or with those who find it possible to embrace both. The Alexandrian and Roman critics seem to create such an issue by considering poetry largely in terms of style. Modern criticism, especially since the beginning of the 19th century, goes even further in the direction of identifying poetry with verse.

When Wordsworth discusses the art of poetry in his preface to *Lyrical Ballads*, he is concerned largely with its language. His definition of poetry as "emotion recollected in tranquility" indicates his emphasis upon the lyrical aspect of even narrative poetry. When Edgar Allen Poe writes his *Poetic Principle* and Matthew Arnold his *Essays in Criticism*, each is concerned almost exclusively with lyric poetry, with that kind of poetry which is written in verse rather than prose. The poet tends to become more and more a composer of verses—so much so that the free-verse movement can appear to be a great revolution in poetry. In the *Brothers Karamazov*, Smerdyakov says, "Poetry is rubbish." At Maria's protest that she is very fond of poetry, he adds: "So far as it's poetry, it's essentially rubbish. Consider yourself, whoever talks in rhyme?"

Just as the word "art" has come in popular usage to mean only painting and sculpture, so its sister-word "poetry" has also narrowed in significance. Contemporary readers who are accustomed to think of poems as lyrics and of poetry as verse may be surprised to learn that according to the significance of its Greek root, the word "poetry" can cover all the forms of art or human productivity; they are just as likely to be surprised by the reference to novels and plays, written in prose, as poems. Yet, in the tradition of the great books, novelists like Cervantes, Fielding, and Melville call themselves poets. The great books consider poetry primarily as narrative rather than lyrical, as story rather than song.

This does not mean that they exclude the

other consideration of poetry. Fielding, for example, says in one place that "poetry . . . demands numbers or something like numbers" (*i.e.*, metre), but for the most part he insists that the art of the novelist or romancer lies mainly in the invention of good stories, not in the mastery of rules of prosody which apply only to poems of the lyric sort, written in verse. Speaking of "the sweet influence which melody and rhythm by nature have," Plato may observe "what a poor appearance the tales of the poets make when stripped of the colors which music puts upon them and recited in simple prose"; but for Plato as for Aristotle the poet is a teller of tales, either in prose or in verse.

Aristotle does not ignore the devices of language. In the third book of the *Rhetoric*, where he considers problems of style in all sorts of compositions, he distinguishes "poetic" from "prosaic" writing; and in the *Poetics* also he devotes a few chapters to style. But when in the latter case he deals with the language of poetry, he is not concerned with the style of any sort of composition, but only of dramatic and epic narratives. Except for a brief mention of the form of verse known as the "dithyramb," Aristotle does not discuss the isolated lyric as a kind of poetry. He treats song and spectacle merely as embellishments of the drama. In the *Poetics* his emphasis is not upon the devices of language or the sentiments of the poet, but upon the construction of plot, the development of character, the diction and thought of the characters—in short, upon the subject matter of the poem rather than upon the feelings of the poet and the eloquence with which he expresses them.

Because he regards plot as the "soul of tragedy"—and, by extension, the primary principle of all narrative poetry— Aristotle insists that "the poet or 'maker' should be the maker of plots rather than of verses." He is therefore led to criticize the confusion—apparently prevalent in his day as in ours—which he thinks results from identifying the art of poetry with skill in writing verse. "Even when a treatise on medicine or natural science is brought out in verse," he writes, "the name of poet is given by custom to the author; and yet Homer and Empedocles have nothing in common except the metre, so that it would be better to call the one poet, the other physicist rather than poet." Just as Bacon later remarks that "a true narrative may be delivered in verse and a feigned one in prose," so Aristotle says that "the poet and the historian differ not by writing in verse or in prose. The work of Herodotus might be put into verse, and it would still be a species of history, with metre no less than without it."

That the difference between prose and verse may affect the style of writing but not the essence of storytelling is a point which has wide acceptance among writers who call themselves poets. In the Prologue to Melibeus, Chaucer's host commands him to leave off rhyming and "tell a tale in prose—you might do worse—wherein there's mirth or doctrine good and plain." Thinking of his *History of Don Quixote* as a species of epic poetry, Cervantes declares that "epics may be as well written in prose as in verse."

The use, by Cervantes and Fielding, of the word "history" in the title of their novels indicates the acceptance of the other point in the conception of poetry by reference to its subject matter rather than to its linguistic style. The great poets recognize that, as narratives, their works resemble histories, but they also know that the stories poets tell are, in the words of Bacon, "imaginary history." Just as Fielding writes at length in mock justification of himself as an historian, so Melville touches upon "the plain facts, historical and otherwise," of whale fishery, lest someone "scout at Moby Dick as a monstrous fable, or still worse and more detestable, a hideous and intolerable allegory." In his chapter on the Leviathan's tail, he says, "Other poets have warbled the praise of the soft eye of the antelope, and the lovely plumage of the bird that never alights; less celestial, I celebrate a tail."

THE CONCEPTION of poetry as feigned or imaginary history seems to have a direct bearing on the question of the poet's obligation to speak the truth. We shall return subsequently to other aspects of the comparison of poetry with history and philosophy. For the present we are concerned with the issue in the theory of poetry which arises from applying the standards of knowledge to the inventions of the poet.

Bacon, like Aristotle, denies that such standards are applicable. Though he treats poetry as

"a part of learning," he holds that it is only restrained "in measure of words"; "in all other points," it is "extremely licensed, and doth truly refer to the imagination; which, being not tied to the laws of matter, may at pleasure join that which nature hath severed, and sever that which nature hath joined." Kant, on the other hand, like Plato, judges poetry in terms of its contribution to knowledge. A thing of the imagination, poetry, he maintains, serves the understanding, for it conducts "a free play of the imagination as if it were a serious business of the understanding."

Though "the *poet* promises merely an entertaining *play* with ideas," Kant continues, "yet for the understanding there enures as much as if the promotion of its business had been his one intention." He achieves a certain "combination and harmony of the two faculties of cognition, sensibility and understanding, which, though doubtless indispensable to one another, do not readily permit of being united without compulsion and reciprocal abatement." In so doing, the poet, in Kant's opinion, "accomplishes something worthy of being made a serious business, namely, the using of play to provide food for the understanding, and the giving of life to its concepts by means of the imagination."

Yet Kant and Plato do not agree in their judgment of the poet. Regarding "the poet's promise" as "a modest one"—"a mere play with ideas is all he holds out to us"—Kant praises him for achieving more in actual performance than he promises. Plato, on the contrary, seems to think the poet promises more and achieves less. He seems to regard the poet not as assisting, but as competing with the philosopher. The reason why the poet must fail in this attempt is that he tries to do on the level of the imagination what the philosopher is better able to do on the level of reason.

Both are engaged in a process of imitation—for all knowledge is imitation—but whereas the notions of the philosopher imitate the reality of the Ideas, the images of the poet imitate sensible appearances, which are themselves imitations of the Ideas or eternal Forms. Even when it is accurate or truthful, poetry must, therefore, be an inferior form of knowledge. In Plato's terms, it is on the level of opinion, along with fancy and belief. In any case, it must submit to being judged by the same standards of accuracy as anything else which claims to be knowledge or right opinion. "Imitations," he writes, "are not to be judged of by pleasure and false opinion. . . . They are to be judged of by the standard of truth, and by no other whatever." The competent judge of poetry must, therefore, "possess three things: he must know, in the first place, of what the imitation is; secondly, he must know that it is true; and thirdly, that it has been well executed in words and melodies and rhythms."

The issue concerning poetry and truth can be most sharply drawn between Plato and Aristotle, precisely because Aristotle thinks that poetry is a form of imitation, but that knowledge does not have the character of imitation at all. Since poetry is not a kind of knowledge, the same standards do not apply to both. "There is not the same kind of correctness," he insists, "in poetry as in politics"—or "in medicine or any other special science." The poet's art is at fault if he "meant to describe the thing correctly but failed through lack of power of expression." But if a technical error in physiology enters into his description because he meant to describe the thing "in some incorrect way (*e.g.*, to make the horse in movement have both right legs thrown forward)," then, according to Aristotle, "his error in that case is not in the essentials of the poetic art." The poet's obligation is not to be truthful in such particulars but to make his whole story seem plausible. Aristotle summarizes his position in the statement of his famous rule concerning the probable and the possible. "For the purposes of poetry," he says, "a convincing impossibility is preferable to an unconvincing possibility."

Connected with this issue concerning the kind of truth to be expected from the poet is the controversy over the purpose of poetry—to instruct or to delight, or to do both. This in turn relates to the moral problem of the influence poetry can have on human character or virtue; and to the political problem of the regulation of poetry by the state or the right of poetry to be free from such censorship. It is not surprising that Plato, conceiving poetry as he does, should banish poets from the ideal state described in the *Republic*; or that he should lay

down specific regulations for the content of poetry in the *Laws*.

At the opposite extreme are those who, like Milton and Mill, attack the principle of censorship itself—as applied to poetry as well as to other forms of communication. But the traditional defense of poetry, in essays bearing that title from the pen of Sidney and Shelley or in the writings of Chaucer, Montaigne, and Cervantes, usually tries to answer Plato by praising poetry as an instrument of moral instruction as well as of delight. Waiving the question of its effect upon morals, some, like Adam Smith, answer the sort of criticism Augustine levels against pagan poetry and theatrical presentations by holding the theatre to be a legitimate, a lawful, even a necessary means of recreation.

SOME OF THESE issues touch on considerations dealt with in other chapters. The problem of censorship is discussed in the chapters on ART and LIBERTY; and the theory of imitation as applied to the arts in general, useful as well as fine, is discussed in the chapter on ART. Here we are concerned with the bearing of that theory upon the nature of poetry. The difference we have observed between Plato and Aristotle concerning imitation itself does not seem to affect their use of this notion in treating works of fine art, and more particularly poetry. What Hamlet tells the players is the purpose of their play—"to hold, as 'twere, the mirror up to nature"—Aristotle says is the aim of such arts as poetry, sculpture, painting, music, and the dance, which give both instruction and delight through imitation.

Within the sphere of the fine arts, the distinction of poetry from the others is usually made in terms of the medium of imitation. Poetry, according to Aristotle, imitates through the medium of language; painting and sculpture through lines, planes, colors, and shapes; music through rhythm and harmony. Whether Aristotle's statement that "the objects of imitation are men in action" applies to poetry alone or to all the fine arts, is a question of interpretation to which opposite answers have been given. Some commentators seem to think that human action as the object of imitation specifically defines poetry, whereas music and sculpture have distinct objects as well as distinct mediums of imitation. Others hold that human action is the object of imitation common to all the arts.

However this issue is resolved, the differentiation of the kinds of poetry can be made neither in terms of the object nor the medium of imitation, but only in terms of the manner. "The medium being the same and the object the same," Aristotle writes, "the poet may imitate by narration—in which case he can either take another personality as Homer does, or speak in his own person, unchanged—or he may present all his characters as living and moving before us."

Plato makes the same distinction, pointing out that the Homeric type of poetry combines both the discourse of the poet and the discourse of his characters in dialogue. He calls stage plays pure imitations in the sense that the author never speaks directly, but tells his story entirely through the actions and speeches of the characters; whereas the type of poetry which he calls narrative as opposed to imitative may combine both methods of storytelling or may, in some extreme instances, never resort to dialogue at all.

Since all storytelling is narration, and since all poetry is imitation, it seems slightly confusing to call the two major types of poetry "narration" and "imitation," as Plato sometimes does, or "narrative" and "dramatic," as Aristotle sometimes does. Bacon also speaks of "narrative" and "dramatic" or "representative" poetry. He defines narrative poetry as "such an exact imitation of history as to deceive, did it not often carry things beyond probability," and dramatic poetry as "a kind of visible history, giving the images of things as if they were present, whilst history represents them as past."

The difficulties of language seem to be removed by other terms which both Plato and Aristotle use to express the main distinction. The manner of storytelling, exemplified by Homer, which either employs direct narration without dialogue or combines both, is *epic* poetry. That which uses dialogue alone, is *dramatic*.

These words—"epic" and "dramatic"—may have their difficulties, too, especially for the contemporary reader, unless a number of things are remembered. First, epics and dramas may

be written either in prose or verse. Second, the arts of theatrical representation are auxiliary to the art of the dramatic poet. The writing of a play is completely independent of its acting, "the production of spectacular effects depending," as Aristotle says, "more on the art of the stage machinist than on that of the poet." Third, epic poetry differs from dramatic poetry in other respects than the use of indirect discourse as well as dialogue.

On this last point, Aristotle observes that all the elements of epic poetry are found in drama, whereas the dramatic form may include the embellishments of song and spectacle in addition to plot, character, thought, and diction. Even more important is his distinction of the two in terms of the unities of time, place, and action. Because it need not be limited at all in time and place, epic narration may have a much more complicated plot structure or even, as Aristotle says, "a multiplicity of plots."

With this understanding of the distinction between the two major types of storytelling, we can see why the great novels of Cervantes, Melville, Tolstoy, and Dostoevsky should be classified as epic poems, and were apparently so conceived by their authors, at least in the cases of Cervantes and Melville. As measured by the magnitude of its plot—its reach in time, and its scene the whole universe "from Heaven, through the world, to Hell"—Goethe's *Faust*, even though dramatic in manner, seems to be no less epic in its structure and proportions than the poems of Homer, Virgil, Dante, and Milton. The story of a single white whale can be epic in its immensity if the storyteller, like Melville, makes it "include the whole circle of the sciences, and all the generations of whales, and men, and mastodons, past, present, and to come, with all the revolving panoramas of empire on earth, and throughout the whole universe, not excluding its suburbs."

ANOTHER TRADITIONAL division in the kinds of poetry is that between the tragic and the comic. This distinction is variously expressed. Fielding sees the difference in terms of the misery or happiness to which the poet brings his principal characters in the end. Speaking of tragedy alone, Milton says that it has ever been held "the gravest, moralest, and most profitable of all other poems." In similar vein, Marcus Aurelius praises tragedy "for reminding men of the things which happen to them and that it is according to nature for things to happen so." He does not admit comedy to be of equal worth, though he does look with some favor upon the older forms of comedy which were "useful in reminding men to beware of insolence."

According to Aristotle, "comedy represents men as worse, tragedy as better than in actual life." He describes the action which tragic poetry imitates as serious, adding that tragedies "through pity and fear effect the proper purgation of these emotions." Whether comedies also arouse and purge certain emotions Aristotle does not say, for his promise to speak more fully of comic poetry is not fulfilled in the *Poetics*. Concerning the meaning of the tragic catharsis, there are questions enough.

Augustine asks: "How is it that a man wants to be made sad by the sight of tragic sufferings that he could not bear in his own person? . . . The more a man feels such sufferings in himself, the more he is moved by the sight of them on the stage. Now when a man suffers himself, it is called misery; when he suffers in the suffering of another, it is called pity. But how can the unreal sufferings of the stage possibly move pity?"

Boswell begs Dr. Johnson to explain Aristotle's doctrine of the purging of the passions as the purpose of tragedy. "Why, Sir," Johnson replies, "you are to consider what is the meaning of purging in the original sense. It is to expel impurities from the body. The mind is subject to the same imperfections. The passions are the great movers of human actions; but they are mixed with such impurities, that it is necessary they should be purged or refined by means of terror and pity. For instance, ambition is a noble passion; but by seeing upon the stage, that a man who is so excessively ambitious as to raise himself by injustice is punished, we are terrified by the fatal consequences of such a passion. In the same manner a certain degree of resentment is necessary; but if we see that a man carries it too far, we pity the object of it, and are taught to moderate that passion." Johnson's interpretation seems to be more specific than Milton's notion that to purge the passions by tragedy is "to temper and reduce

them to just measure with a kind of delight, stirr'd up by reading or seeing those passions well imitated."

It may be arguable whether the difference between tragedy and comedy is well defined by reference to the nobility or vulgarity of the leading characters; by the contrast between the pride of the tragic and the wit of the comic hero; by the seriousness or lightness of the tragic and comic themes and by the passions appropriate to each. In any case it seems clear that this division of poetry crosses the other division into epic and dramatic writing. The plays of Sophocles and the *Iliad* of Homer, Aristotle observes, are tragic poetry, yet dramatic and epic respectively in manner; but from another point of view, Sophocles is to be compared with Aristophanes, for though the one writes tragedies and the other comedies, both are dramatists. In the tradition of the great books, there are comic as well as tragic epics—Chaucer's *Troilus and Cressida*, Rabelais' *Gargantua and Pantagruel*, Cervantes' *Don Quixote*, Sterne's *Tristram Shandy*, and Fielding's *Tom Jones*—just as there are tragic and comic plays. The examination of these suggests that talk rather than action is the essence of comedy.

The chief thing which Aristodemus remembers of Socrates' discourse the morning after the banquet, in Plato's *Symposium*, is Socrates' success in compelling Aristophanes and Agathon "to acknowledge that the genius of comedy was the same as that of tragedy, and that the true artist in tragedy was an artist in comedy also. To this they were constrained to assent, being drowsy, and not quite following the argument." Precisely what they assented to has never been entirely clear. On one interpretation of Socrates' remark, examples of his point are difficult to find in the great books—except, perhaps, for the plays of Shakespeare which, in the sphere of dramatic poetry, seem to represent an equal genius for tragic and comic writing. In the sphere of epic poetry, we have only Aristotle's reference to a lost poem of Homer's —the *Margites*—which he says "bears the same relation to comedy that the *Iliad* and *Odyssey* do to tragedy."

According to another interpretation the insight of Socrates is that the totality of the great tragic vision tends to approximate the totality of the great comic vision. The same poem may be both tragic and comic because the poet has been able to see far enough into the nature of things to reveal a world which is at once dreadful and ridiculous. In this sense *Moby Dick* may be both a tragedy and a comedy. "Though in many of its aspects," Melville writes, "this visible world seems formed in love, the invisible spheres were formed in fright"; but he also remarks that "there are certain queer times and occasions . . . when a man takes this whole universe for a vast practical joke."

IN THE SCIENCE of poetics, certain principles or rules seem to apply to all the major forms of poetry, where others relate specifically to epic or dramatic writing, or to tragedy or comedy. Aristotle implies that his most general formulations hold not only for long poems, but for dithyrambic poetry as well. If that is so, they should be capable of extension to other forms of lyric poetry, such as, for example, the sonnets of Shakespeare and Milton, and Milton's odes and elegies. Yet the two principal elements in Aristotle's analysis of poetry—plot and character—seem, superficially at least, to belong peculiarly to narrative poems, long or short. Whether they are present in any comparable manner in the structure of a lyric, or whether the form and content of lyric poetry requires an analysis peculiar to itself, are among the most difficult questions in the theory of poetry.

In the tradition of the great books, there seems to be, as already observed, general agreement about the basic rules for writing narrative poetry. Since these rules aim to direct the artist toward the achievement of excellence, they are also the basic principles of criticism. The science of poetics is at once an organon of production and a canon of criticism.

The simple rules such as those of plot construction afford an example. A well constructed plot must have a beginning, middle, and end. It must observe certain unities (at least of action, if not of time and place). Certain effects, it is held, can best be produced by the use of recognition scenes and reversals of fortune. Whether the events narrated are possible or impossible, the poet must at least invest them with plausibility or verisimilitude. Such rules, formulated by Aristotle and discussed by Cer-

vantes, Fielding, and others, provide standards for judging whether a poem is skillfully made, as well as give directions for the attainment of skill by the poet.

It may be held, of course, that the great poet works by inspiration, by a divine madness rather than by rule; that, as Theseus says in *A Midsummer-Night's Dream*, "the lunatic, the lover, and the poet are of imagination all compact . . . The poet's eye, in a fine frenzy rolling, doth glance from heaven to earth, from earth to heaven; and as imagination bodies forth the forms of things unknown, the poet's pen turns them to shapes, and gives to airy nothing a local habitation and a name." But if there is an art of poetry, then like any other art it is a thing of rules, whether or not genius needs their guidance or can be regulated by them.

The pivotal question here is, Which takes precedence, the creative or the critical faculty? Does Aristotle's rule concerning the primacy of plot derive from the greatest poems of antiquity in which he found this principle observed? Does it set up an infallible measure of excellence in narration or, on the other hand, do certain modern novels have an impeccable greatness despite their violation of this rule by the emphasis they place on the development of character rather than on the action in which the characters are involved? The rule of probability and necessity may, on the other hand, be inviolable. Not even the most original genius may be able to tell a good story without giving it poetic truth, according to the necessities of the characters he has created and the probabilities of the situations in which he places them.

ON THE SIDE of language, poetic theory seems to draw much from the art of rhetoric. The relation of rhetoric to poetics, the nature of rhetorical devices such as metaphor and simile, the choice among existing words or the invention of new ones, are matters dealt with in the chapter on RHETORIC as well as here. Aristotle's treatment of these problems both in his *Rhetoric* and his *Poetics* lays the foundation for the traditional association of these two disciplines. In both, for example, he discusses the various modes of metaphor and their utility in achieving an expansion of meaning combined with a contraction of speech.

This, in turn, relates to his general maxim of style which directs the writer "to be clear without being ordinary. The clearest style," he says, "is that which uses only current or proper words," but in order to avoid being commonplace or ordinary, it must be admixed with lofty diction—"raised above the commonplace by the employment of unusual words. . . . Nothing contributes more to produce a clearness of diction that is remote from commonness than the lengthening, contraction, and alteration of words. . . . Phrases which are not part of current idiom give distinction to style. . . . But the greatest thing by far is to have a command of metaphor. This alone cannot be imparted by another; it is the mark of genius for to make good metaphors implies an eye for resemblances."

One part of Aristotle's theory of style seems to be amplified by Pascal's observation that a certain perfection is achieved by the use of those words which, if altered, would spoil the discourse. In these terms, prosaic as opposed to poetic writing does not result from the lack of a fixed metre but rather from commonplaceness or lack of distinction in language. This standard of style does not apply to poetry alone; for just as history and philosophy may be written in prose or verse, so also may they be written poetically or prosaically.

Dr. Johnson's point that poetry cannot be translated, that "the beauties of poetry cannot be preserved in any language except that in which it was originally written," may be capable of the widest generalization. It may be extended to mean that writing which is poetic cannot be translated into any other form of words, even in the same language. A poetic sentence in English is untranslatable in this absolute sense when no alternative English phrasing is truly its equivalent. For example, it seems impossible to re-state, without loss or ruin, Shakespeare's "Life is a tale told by an idiot, full of sound and fury, signifying nothing" or Hobbes' "Life in a state of nature is solitary, poor, nasty, brutish, and short."

The other part of Aristotle's theory of style, that concerning metaphors, seems to be converted by William James into a general distinction between poetic and philosophic thought, or what he calls "the splendid and the analytic"

types of intellect. Poetic thought tends to develop the implications of an analogy without giving an explication of its grounds. This, in James' view, explains "the abrupt transitions in Shakespeare's thought," which "astonish the reader by their unexpectedness, no less than delight him by their fitness." Quoting a passage from Homer, unfathomably rich in metaphor, he says that "a man in whom all the accidents of an analogy rise up as vividly as this, may be excused for not attending to the ground of the analogy." The two types of intellect are rarely found in conjunction—Plato, according to James, being one of the few exceptions "whose strangeness proves the rule."

ON THE LEVEL of thought and knowledge, as opposed to that of language, poetry is traditionally contrasted to philosophy and history. As indicated in the chapter on HISTORY, historians like Herodotus, Thucydides, and Plutarch emphasize the difference rather than the similarity; the historian is a reporter of fact, the poet a creator of fables or fictions. The one gains credence by his display of evidence and reasons; the other, by the intrinsic plausibility of his tale. "In a good poem," writes Hobbes, "whether it be epic or dramatic . . . both judgment and fancy are required, but the fancy must be more eminent . . . In a good history, the judgment must be eminent, because the goodness consists in the method, in the truth . . . Fancy has no place but only in adorning the style."

Bacon associates poetry most intimately with history, both being concerned with "individuals, circumscribed by time and place," and differing only as one employs the imagination, the other the memory. Aristotle, on the other hand, finds poetry and philosophy more alike, at least to the extent that poetry, unlike history, "tends to express the universal," by which he means "how a person of a certain type will on occasion speak or act, according to the law of probability or necessity." Even if the poet "chances to take an historical subject, he is none the less a poet; for there is no reason why some events that have actually happened should not conform to the law of the probable and possible, and in virtue of that quality in them he is their poet or maker." In this sense the historian also may turn poet. Referring to the speeches in his history, Thucydides tells us that it was his habit "to make the speakers say what was in my opinion demanded of them by the various occasions, of course adhering as closely as possible to the general sense of what they really said."

Some of the great poems, notably the *Divine Comedy*, *Paradise Lost*, and *Faust*, are frequently called philosophical for what appear to be other reasons: either because the discourse of their characters is weighted with doctrine, or because the poet himself is expressing a doctrine, not in particular speeches, nor by argument, but in the symbolism of the poem as a whole. By these criteria, Lucretius' *On the Nature of Things* is a philosophical work, but not a philosophical poem. It is argumentative throughout, not narrative at all; it aims to be a literal rather than an allegorical statement of the truth. Bacon's definition of allegorical poetry—as that "which represents intellectual things to the senses"—seems to characterize both the poetic aspect of philosophy and a distinctively philosophical type of poetry.

Yet Aristotle's point, that poetry and philosophy are alike, may remain valid. All poetry, certainly all the great narrative poems, the great epics and dramas, novels and plays, deal with the abiding problems of human action and the perennial themes of human thought. It is not this moral or metaphysical content, however, which makes poetry more philosophical than history. It is the poet's treatment of such matters. In the persons and events of his story he succeeds in giving the universal a concrete embodiment. Precisely because these are only imaginary, not real particulars, they permit the abstract universal to be readily disengaged.

Poets like Chaucer and Cervantes, who insist that their function is to instruct as well as to delight, do not assume the role of pedagogues or preachers. They teach, not dogmatically, but as experience does, by affording the mind the materials or occasions for insight and inference. As an artistic imitation, poetry may be better than the experience it represents. It may improve upon experience as a teacher, because, born of the poet's mind, it is already impregnated with ideas.

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To find the passages cited, use the numbers in heavy type, which are the volume and page numbers of the passages referred to. For example, in **4** HOMER: *Iliad*, BK II [265–283] **12d**, the number **4** is the number of the volume in the set; the number **12d** indicates that the passage is in section d of page 12.

PAGE SECTIONS: When the text is printed in one column, the letters **a** and **b** refer to the upper and lower halves of the page. For example, in **53** JAMES: *Psychology*, **116a-119b**, the passage begins in the upper half of page 116 and ends in the lower half of page 119. When the text is printed in two columns, the letters **a** and **b** refer to the upper and lower halves of the left-hand side of the page, the letters **c** and **d** to the upper and lower halves of the right-hand side of the page. For example, in **7** PLATO: *Symposium*, **163b-164c**, the passage begins in the lower half of the left-hand side of page 163 and ends in the upper half of the right-hand side of page 164.

AUTHOR'S DIVISIONS: One or more of the main divisions of a work (such as PART, BK, CH, SECT) are sometimes included in the reference; line numbers, in brackets, are given in certain cases; *e.g.*, *Iliad*, BK II [265–283] **12d**.

BIBLE REFERENCES: The references are to book, chapter, and verse. When the King James and Douay versions differ in title of books or in the numbering of chapters or verses, the King James version is cited first and the Douay, indicated by a (*D*), follows; *e.g.*, OLD TESTAMENT: *Nehemiah*, 7:45—(*D*) *II Esdras*, 7:46.

SYMBOLS: The abbreviation "esp" calls the reader's attention to one or more especially relevant parts of a whole reference; "passim" signifies that the topic is discussed intermittently rather than continuously in the work or passage cited.

For additional information concerning the style of the references, see the Explanation of Reference Style; for general guidance in the use of *The Great Ideas*, consult the Preface.

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37 FIELDING: *Tom Jones*, 19a-20a; 49b-50c; 189c
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(3. ***The inspiration or genius of the poet: the influence of the poetic tradition.***)

7 PLATO: *Phaedrus*, 124a / *Ion* 142a-148a,c esp 144b-145c / *Symposium*, 160c-161a; 166b-167b / *Apology*, 202c-d / *Laws*, BK IV, 684b-c
9 ARISTOTLE: *Ethics*, BK IX, CH 7 [1167^{b}34-1168^{a}9] 421b-c / *Rhetoric*, BK III, CH 1 [1403^{b}15-1404^{a}39] 653b,d-654c; CH 2 [1405^{a}7-8] 655b / *Poetics*, CH 4 [1448^{b}24-1449^{a}7] 682d-683a; CH 13 [1453^{a}30-35] 688a; CH 17 [1455^{a}21-39] 690c; CH 22 [1459^{a}5-7] 694d
12 LUCRETIUS: *Nature of Things*, BK I [127-145] 2c-d; [921-950] 12b-c; BK IV [1-25] 44a-b
21 DANTE: *Divine Comedy*, HELL, II [7-10] 2c; IV [67-102] 6a-b; XXVI [19-24] 38a; XXXII [1 12] 47c; PURGATORY, I [1-12] 53a; XXI [76]-XXII [129] 85d-87d; XXIV [49-63] 90a-b; XXVI [88-148] 93d-94c; XXIX [37-42] 98a; PARADISE, I [1-37] 106a-b; II [1-17] 107d; X [28-48] 120c-d; XVIII [82-87] 134c; XXII [106-123] 140d; XXIII [55-69] 141d-142a
22 CHAUCER: *Troilus and Cressida*, BK II, STANZA 1-3 21b-22a; BK V, STANZA 256-257 153b-154a
24 RABELAIS: *Gargantua and Pantagruel*, BK I, 2d-3a,c
25 MONTAIGNE: *Essays*, 52d-53a; 104d-105b; 166d-167a; 195d-197a; 309c; 362a-363b; 455c-d; 482d; 512b-d
26 SHAKESPEARE: *Midsummer-Night's Dream*, ACT V, SC I [1-27] 370d-371a / *Henry V*, PROLOGUE 532b,d
27 SHAKESPEARE: *Timon of Athens*, ACT I, SC I [19-25] 393d / *Sonnets*, C-CVIII 601c-602d
29 CERVANTES: *Don Quixote*, PART I, xia-xiiid; PART II, 251d-252a; 340b
30 BACON: *Advancement of Learning*, 55c-d
31 DESCARTES: *Discourse*, PART I, 43b
32 MILTON: *Lycidas* 27b-32a esp [1-22] 27b-28a, [64-69] 29a, [186-193] 31b-32a / *Paradise Lost*, BK I [1-26] 93b-94a; BK III [1-55] 135b-136b; BK VII [1-39] 217a-218a; BK IX [1-47] 247a-248a
36 STERNE: *Tristram Shandy*, 302a-b
37 FIELDING: *Tom Jones*, 49a-50c; 152a-155b; 189a-191c; 246a-247a; 273a-274c
40 GIBBON: *Decline and Fall*, 24a; 185b; 345b-c; 476d-477a
41 GIBBON: *Decline and Fall*, 527d-528a,c; 573a-574a
42 KANT: *Judgement*, 525c-532a esp 526a-527b, 528c-530c; 542b-543c
44 BOSWELL: *Johnson*, 455a
47 GOETHE: *Faust*, DEDICATION-PRELUDE 1a-6a esp DEDICATION 1a-b, PRELUDE [134-157] 4a-b; PART II [5573-5605] 137b-138a
49 DARWIN: *Descent of Man*, 292a
53 JAMES: *Psychology*, 686b-688a; 863a
54 FREUD: *Interpretation of Dreams*, 181a-b; 239c-240a; 246b-248c; 383d / *General Introduction*, 483c; 600d-601b / *Group Psychology*, 670a-b; 692c-693a / *Civilization and Its Discontents*, 796c

4. The major kinds of poetry: their comparative excellence

4*a*. Epic and dramatic poetry

7 PLATO: *Republic*, BK II, 322a; BK III, 328b-331c
9 ARISTOTLE: *Poetics*, CH 1-3 681a-682c; CH 4 [1448^{b}24-1449^{a}7] 682d-683a; CH 5 [1449^{b}9-19] 683d-684a; CH 23-24 695a-696d; CH 26 698c-699a,c
29 CERVANTES: *Don Quixote*, PART I, 185b
30 BACON: *Advancement of Learning*, 39a-d
43 FEDERALIST: NUMBER 47, 154a
52 DOSTOEVSKY: *Brothers Karamazov*, BK V, 127b-128a
54 FREUD: *Group Psychology*, 692c-d

4*b*. Tragedy and comedy

5 ARISTOPHANES: *Frogs* [1482-1499] 581d-582a
7 PLATO: *Symposium*, 173c / *Gorgias*, 281d-282a / *Republic*, BK III, 329b; BK X, 431b / *Philebus*, 629a-630c / *Laws*, BK II, 655d; BK VII, 727d-728b
9 ARISTOTLE: *Ethics*, BK IV, CH 8 375a-d passim / *Poetics* 681a-699a,c esp CH 5-6 683c-685a, CH 12 687b-c
12 EPICTETUS: *Discourses*, BK I, CH 4, 109d; CH 24, 129c-d; CH 28, 133d-134d
12 AURELIUS: *Meditations*, BK XI, SECT 6 302c-303a
14 PLUTARCH: *Solon*, 76a / *Pericles*, 128d-129a
21 DANTE: *Divine Comedy*, HELL, XVI [124-136] 23d; PARADISE, XXX [19-36] 152a
22 CHAUCER: *Troilus and Cressida*, BK V, STANZA 256-257 153b-154a / *Monk's Prologue* [13,979-988] 433b; [13,997-14,004] 434a
23 HOBBES: *Leviathan*, PART I, 69c
29 CERVANTES: *Don Quixote*, PART II, 237b-c
32 MILTON: *Samson Agonistes*, 337a-338a / *Areopagitica*, 385a
37 FIELDING: *Tom Jones*, 73a-75a; 154d-155a; 273d; 357a-d
42 KANT: *Judgement*, 537a-539d
44 BOSWELL: *Johnson*, 308b-d
46 HEGEL: *Philosophy of History*, PART II, 263a-b
48 MELVILLE: *Moby Dick*, 54b-55a; 84b-85a; 107a-b
53 JAMES: *Psychology*, 373a-b
54 FREUD: *Interpretation of Dreams*, 246c-248c / *General Introduction*, 581d-582b

5. Poetry in relation to knowledge

6 THUCYDIDES: *Peloponnesian War*, BK I, 354b c
7 PLATO: *Lysis*, 19d-20a / *Phaedrus*, 138c-140d / *Ion* 142a-148a,c / *Republic*, BK III, 333b-d; BK X, 427c-434c / *Laws*, BK IV, 684b-c
9 ARISTOTLE: *Rhetoric*, BK I, CH 11 [1371^{b}4-10] 615a / *Poetics*, CH 4 [1448^{b}4-23] 682c-d; CH 9 [1451^{a}36-^{b}32] 686a-c; CH 24 [1460^{a}19-25] 696b-c; CH 25 [1460^{b}6-32] 696d-697b
18 AUGUSTINE: *Confessions*, BK I, par 20-22 6a-c; par 25-27 7a-d; BK III, par 11, 16a

19 AQUINAS: *Summa Theologica*, PART I, Q I, A 9, REP I 8d-9c
20 AQUINAS: *Summa Theologica*, PART I-II, Q 101, A 2, REP 2 267a-268a
21 DANTE: *Divine Comedy*, HELL, I [61-136] 1d-2c; PURGATORY, XXII [64-93] 87a-c; PARADISE, I [1-37] 106a-b; XVII [100-142] 133a-c
23 HOBBES: *Leviathan*, PART I, 67b-c; 72a-d
25 MONTAIGNE: *Essays*, 258c-259a; 362a-363b
30 BACON: *Advancement of Learning*, 32d; 38d-39b; 55d
31 DESCARTES: *Discourse*, PART I, 43b
33 PASCAL: *Pensées*, 33 176b
37 FIELDING: *Tom Jones*, 296b,d-298a
40 GIBBON: *Decline and Fall*, 345c
41 GIBBON: *Decline and Fall*, 300a-b
42 KANT: *Judgement*, 526a-527b; 528c-530c; 532b-d
51 TOLSTOY: *War and Peace*, BK X, 431a
53 JAMES: *Psychology*, 687a; 863a
54 FREUD: *Civilization and Its Discontents*, 796c

5a. The aim of poetry to instruct as well as to delight: the pretensions or deceptions of the poet as teacher

5 ARISTOPHANES: *Acharnians* [497-508] 460d-461a; [628-675] 462b-463a / *Knights* [503-511] 476b / *Clouds* [575-594] 495c-d / *Frogs* 564a-582a,c esp [1008-1098] 576b-577c, [1417-1533] 581a-582a,c
7 PLATO: *Phaedrus*, 140c-d / *Apology*, 202c-d / *Gorgias*, 281d-282a / *Republic*, BK II-III, 320c-339a; BK X, 427c-434c / *Timaeus*, 455b-c / *Laws*, BK II, 653a-663b; BK VII, 726d-728b
9 ARISTOTLE: *Politics*, BK VIII, CH 5 544c-546a; CH 7 [1341^{b}33-1342^{b}18] 547c-548a,c
12 LUCRETIUS: *Nature of Things*, BK I [127-145] 2c-d; [921-950] 12b-c; BK IV [1-25] 44a-b; BK V [110-113] 62c
12 AURELIUS: *Meditations*, BK I, SECT 7 253b-d; BK XI, SECT 6 302c-303a
14 PLUTARCH: *Lycurgus*, 33d-34a; 43b-d / *Solon*, 76a / *Pericles*, 121d-122b
18 AUGUSTINE: *City of God*, BK IV, CH 27 202d-203c; BK XVIII, CH 14 479c-d
22 CHAUCER: *Prologue to Melibeus* 400b-401a / *L'Envoi* 550a-b
24 RABELAIS: *Gargantua and Pantagruel*, BK III, 168a-169d
25 MONTAIGNE: *Essays*, 62b-c; 245d
29 CERVANTES: *Don Quixote*, PART I, xia-xvid; 13b-16c; 184a-187c; 189d-191d; PART II, 322b-c; 427a-429d
32 MILTON: *Paradise Lost*, BK IX [1-47] 247a-248a / *Samson Agonistes*, 337a-338a / *Areopagitica*, 385a
35 HUME: *Human Understanding*, SECT I, DIV 5, 452d-453a
37 FIELDING: *Tom Jones*, 1a-2a; 35a-d; 49a-50c; 73a-75a
39 SMITH: *Wealth of Nations*, BK V, 347c-d
40 GIBBON: *Decline and Fall*, 346a; 494b-495a
41 GIBBON: *Decline and Fall*, 40d-41a
42 KANT: *Judgement*, 532a-d; 534c-539d
44 BOSWELL: *Johnson*, 116b; 158a-b; 284b; 308b-d
46 HEGEL: *Philosophy of History*, PART II, 265c
47 GOETHE: *Faust*, PRELUDE 2a-6a
52 DOSTOEVSKY: *Brothers Karamazov*, BK V, 127b-128a

5b. Poetry contrasted with history and philosophy: the dispraise and defense of the poet

5 ARISTOPHANES: *Frogs* [1482-1499] 581d-582a
6 HERODOTUS: *History*, BK II, 72a-73b; BK IV, 127b
6 THUCYDIDES: *Peloponnesian War*, BK I, 353d-354c
7 PLATO: *Lysis*, 19d-20a / *Protagoras*, 57a-c / *Phaedrus*, 122d-123a; 140a-d / *Gorgias*, 280d-282b / *Republic*, BK II-III, 320c-333b; BK VIII, 415b-c; BK X, 427c-434c / *Laws*, BK IV, 684b-c
9 ARISTOTLE: *Poetics*, CH 9 [1451^{a}36-^{b}32] 686a-c; CH 23 695a-c; CH 25 696d-698c
14 PLUTARCH: *Theseus*, 1a-b / *Solon*, 76a / *Pericles*, 140d
17 PLOTINUS: *First Ennead*, TR III, CH 1-3 10a-11a
18 AUGUSTINE: *City of God*, BK II, CH 14 156c-157c; BK IV, CH 26-27 202a-203c; BK VIII, CH 13 273b-d
19 AQUINAS: *Summa Theologica*, PART I, Q I, A 9, REP I 8d-9c
20 AQUINAS: *Summa Theologica*, PART I-II, Q 101, A 2, REP 2 267a-268a
23 HOBBES: *Leviathan*, PART I, 67b-c
25 MONTAIGNE: *Essays*, 62b c; 194c-201b passim; 258d-259a
26 SHAKESPEARE: *Midsummer-Night's Dream*, ACT V, SC I [212-221] 373a-b / *1st Henry IV*, ACT III, SC I [120-135] 451b-c
28 HARVEY: *On Animal Generation*, 473b
29 CERVANTES: *Don Quixote*, PART I, xia-xiiid; PART II, 212a-215b esp 213b-c; 251a-252b
30 BACON: *Advancement of Learning*, 32d; 38d-39b; 55d
32 MILTON: *Samson Agonistes*, 337a-338a / *Areopagitica*, 385a
33 PASCAL: *Pensées*, II 173b-174a; 34-35 177a; 38-39 177b
35 HUME: *Human Understanding*, SECT I, DIV 5, 452d-453a
37 FIELDING: *Tom Jones*, 19a-20a; 49b-50c
38 ROUSSEAU: *Social Contract*, BK I, 390c
40 GIBBON: *Decline and Fall*, 88a-d; 186c-d; 345b-346b; 398b; 471c-d; 545c; 627b-d
44 BOSWELL: *Johnson*, 120c; 307c
46 HEGEL: *Philosophy of History*, INTRO, 153a-b; PART I, 229b-230a; PART II, 259b-c
47 GOETHE: *Faust*, PART II [7426-7433] 181b-182a; [10,189-191] 248b
51 TOLSTOY: *War and Peace*, BK X, 431a
52 DOSTOEVSKY: *Brothers Karamazov*, BK V, 115a-c; BK XI, 312d-313b,
53 JAMES: *Psychology*, 686b-689a

6. Poetry and emotion

6a. The expression of emotion in poetry

OLD TESTAMENT: *Exodus*, 15:1-21 / *II Samuel*, 1:17-27—(*D*) *II Kings*, 1:17-27 / *Psalms* passim / *Lamentations*

APOCRYPHA: *Judith*, 16—(*D*) OT, *Judith*, 16 / *Song of Three Children*, 28-68—(*D*) OT, *Daniel*, 3:51-90

NEW TESTAMENT: *Luke*, 1:42-55,67-79

7 PLATO: *Ion*, 146d-147a / *Republic*, BK III, 325b-326b; BK X, 432a-434c / *Philebus*, 628d 630c / *Laws*, BK II, 654b-d

9 ARISTOTLE: *Politics*, BK VIII, CH 5 544c-546a; CH 7 [1341^{b}33-1342^{b}18] 547c-548a,c / *Rhetoric*, BK I, CH II [1371^{b}4-11] 615a; BK III, CH 7 659a-660a; CH 16 [1417^{a}37-^{b}7] 671c-d / *Poetics*, CH 15 [1454^{b}7-14] 689c; CH 17 [1455^{a} 29-39] 690c

13 VIRGIL: *Aeneid*, BK I [440-493] 115a-116b

21 DANTE: *Divine Comedy*, HELL, XXXIV [1-36] 51b-c; PURGATORY, XXIV [49 63] 90a-b

25 MONTAIGNE: *Essays*, 104d-105b; 399d-401a; 410a-c

27 SHAKESPEARE: *Sonnets*, LXXVI 597d-598a; LXXVIII-LXXIX 598b; LXXXII-LXXXV 598d-599b

29 CERVANTES: *Don Quixote*, PART I, 184a-185b

30 BACON: *Advancement of Learning*, 38c-39d; 78a-d

32 MILTON: *L'Allegro* 17b-21a / *Il Penseroso* 21a-25a

33 PASCAL: *Pensées*, II 173b-174a

44 BOSWELL: *Johnson*, 53c-d

46 HEGEL: *Philosophy of History*, INTRO, 153a-c; PART IV, 323b-c

49 DARWIN: *Descent of Man*, 570c-571a

54 FREUD: *Interpretation of Dreams*, 246d-248c / *General Introduction*, 483b-c; 600d-601b / *Group Psychology*, 692c-693a passim / *Civilization and Its Discontents*, 773d-774c

6b. The arousal and purgation of the emotions by poetry: the catharsis of pity and fear

4 HOMER: *Odyssey*, BK I [325-359] 186b-c; BK VIII [71-103] 222d-223a; [482-547] 227a-d; BK XII [1-3] 255a

6 HERODOTUS: *History*, BK VI, 189c

7 PLATO: *Ion*, 145a-b / *Republic*, BK III, 325b-326b; BK X, 431b-434c / *Philebus*, 628d-630c

9 ARISTOTLE: *Politics*, BK VIII, CH 5 544c-546a; CH 7 [1341^{b}33-1342^{b}18] 547c-548a,c / *Rhetoric*, BK I, CH II [1371^{b}4-11] 615a; BK III, CH 7 659a-660a / *Poetics*, CH 6 [1449^{b}23-28] 684a; CH 9 [1452^{a}1-10] 686c-d; CH 11 [1452^{a}37-^{b}4] 687a; CH 13-14 687c-689a; CH 16 [1455^{a}17] 690b; CH 17 [1455^{a}29-39] 690c; CH 18 [1456^{a} 19-23] 691c-d; CH 19 [1456^{a}33-^{b}8] 691d-692a; CH 25 [1460^{b}24-26] 697a

12 LUCRETIUS: *Nature of Things*, BK V [1379-1414] 79a-c

14 PLUTARCH: *Lycurgus*, 33d-34a

18 AUGUSTINE: *Confessions*, BK I, par 20-22 6a-c; par 25-27 7a-d; BK III, par 2-4 13c-14b; BK X, par 49-50 83c-84b

21 DANTE: *Divine Comedy*, HELL, V [73-142] 7d-8b; PURGATORY, II [76-133] 55b-d

23 HOBBES: *Leviathan*, PART I, 69c

25 MONTAIGNE: *Essays*, 104d-105c; 410a-c; 507b-c

26 SHAKESPEARE: *Two Gentlemen of Verona*, ACT III, SC II [66-95] 245a-b

27 SHAKESPEARE: *Hamlet*, ACT II, SC II [575-633] 46b-d / *Cymbeline*, ACT II, SC III [1-35] 459b-c

29 CERVANTES: *Don Quixote*, PART I, xiiic

30 BACON: *Advancement of Learning*, 38c-39d; 78a-d; 87c-d

32 MILTON: *Samson Agonistes*, 337a-338a / *Areopagitica*, 385a-b

33 PASCAL: *Pensées*, II 173b-174a; 135 196a

40 GIBBON: *Decline and Fall*, 94a-b

42 KANT: *Judgement*, 509b-d

44 BOSWELL: *Johnson*, 308b-c

49 DARWIN: *Descent of Man*, 570b-571b

51 TOLSTOY: *War and Peace*, BK XV, 638c-639c

53 JAMES: *Psychology*, 288a; 747b-748a

54 FREUD: *Interpretation of Dreams*, 239c-240a; 246c-247d / *General Introduction*, 581d 582b / *Beyond the Pleasure Principle*, 643c / *Group Psychology*, 692c-693a / *War and Death*, 762c

7. The elements of poetic narrative

5 ARISTOPHANES: *Peace* [734-818] 534c-535c / *Frogs* [758-1533] 573a-582a,c

7 PLATO: *Republic*, BK III, 331c

9 ARISTOTLE: *Poetics* 681a-699a,c esp CH 6 684a-685a, CH 12 687b-c

32 MILTON: *Samson Agonistes*, 337a-338a

36 STERNE: *Tristram Shandy*, 335b-336a

7a. Plot: its primacy; its construction

7 PLATO: *Phaedo*, 221d-222a

9 ARISTOTLE: *Poetics*, CH 6 [1450^{a}3-^{b}5] 684b-d; CH 7-11 685b-687b; CH 13-14 687c-689a; CH 15 [1454^{a}39-^{b}8] 689c; CH 16-18 689d-691d; CH 23-24 695a-696d; CH 26 [1462^{b}4-11] 699a,c

32 MILTON: *Samson Agonistes*, 338a

36 STERNE: *Tristram Shandy*, 228b-231a

37 FIELDING: *Tom Jones*, 2d-3a; 204b,d-205c

7b. The role of character: its relation to plot

9 ARISTOTLE: *Poetics*, CH 2 681d-682a; CH 6 [1449^{b}36-1450^{b}10] 684b-685a; CH 13 [1452^{b} 30-1453^{a}30] 687c-688a; CH 15 689a-d

12 EPICTETUS: *Discourses*, BK I, CH 24, 129c-d; CH 28 133b-134d

17 PLOTINUS: *Third Ennead*, TR II, CH 17 91c-92c

37 FIELDING: *Tom Jones*, 49a-50c; 152a-155b; 204b,d-205c

44 BOSWELL: *Johnson*, 157d-158b

48 MELVILLE: *Moby Dick*, 54b-55a
54 FREUD: *Interpretation of Dreams*, 247d-248b

7c. Thought and diction as elements of poetry

7 PLATO: *Protagoras*, 52d-57a
8 ARISTOTLE: *Interpretation*, CH 4 [17a5-7] 26b
9 ARISTOTLE: *Poetics*, CH 1 [1447a14-b30] 681a-d; CH 6 684a-685a; CH 19-22 691d-695a; CH 24 [1459b12-17] 695c; CH 25 [1461a9-b9] 697c-698a; [1461b15-18] 698b
19 AQUINAS: *Summa Theologica*, PART I, Q 1, A 9, REP 1 8d-9c
22 CHAUCER: *Troilus and Cressida*, BK II, STANZA 2-4 21b-22a; STANZA 37-38 26b; STANZA 147-149 40b-41a / *Prologue* [725-746] 171b-172a / *Miller's Prologue* [3167-3186] 212a-b / *Prologue to Melibeus* 400b-401a
27 SHAKESPEARE: *Hamlet*, ACT II, SC II [454-471] 45a
29 CERVANTES: *Don Quixote*, PART I, xiiic
30 BACON: *Advancement of Learning*, 63b-c
31 DESCARTES: *Discourse*, PART I, 43b
32 MILTON: *Vacation Exercise* [1-58] 59a-60b / *Paradise Lost*, BK I [12-16] 93b
36 SWIFT: *Gulliver*, PART IV, 169a-b
42 KANT: *Judgement*, 524b
48 MELVILLE: *Moby Dick*, 335b
53 JAMES: *Psychology*, 687b-688a
54 FREUD: *General Introduction*, 458a-459a

7d. Spectacle and song in drama

7 PLATO: *Republic*, BK III, 331c-333a
9 ARISTOTLE: *Poetics*, CH 1 [1447a14-b30] 681a-d; CH 4 [1448b24-1449a27] 682d-683b; CH 6 684a-685a esp [1449b20-1450a14] 684a-c, [1450b17-20] 685a; CH 12 687b-c; CH 14 [1453b1-12] 688b; CH 18 [1456a1-3] 691b-c; [1456a25-32] 691d; CH 26 [1462a13-17] 698d
32 MILTON: *Samson Agonistes*, 338a
46 HEGEL: *Philosophy of History*, PART II, 263d-265c

8. The science of poetics: rules of art and principles of criticism

5 ARISTOPHANES: *Frogs* [758-1533] 573a-582a,c
7 PLATO: *Ion* 142a-148a,c / *Laws*, BK II, 654a-662a
9 ARISTOTLE: *Politics*, BK III, CH 11 [1281b3-10] 479b / *Poetics* 681a-699a,c
36 STERNE: *Tristram Shandy*, 287b-289b; 335b-336a; 344b-345a
37 FIELDING: *Tom Jones*, 1a-2a; 19a-20a; 35a-d; 49b-50c; 73a-75a; 121b,d-123a; 152a-155b; 189a-191c; 204b,d-205c; 223a-225a; 246a-247a; 273a-274c; 296b,d-298a; 338a-d; 357a-d
40 GIBBON: *Decline and Fall*, 494d-495a,c
41 GIBBON: *Decline and Fall*, 300b; 526b-d passim; 573a
42 KANT: *Pure Reason*, 23d [fn 1] / *Judgement*, 513d-514b; 524a-527b
46 HEGEL: *Philosophy of History*, INTRO, 185c-d

8a. Critical standards and artistic rules with respect to narrative structure

5 ARISTOPHANES: *Peace* [734-818] 534c-535c
9 ARISTOTLE: *Poetics*, CH 7-11 685b-687b; CH 13-14 687c-689a; CH 16-18 689d-691d
33 PASCAL: *Pensées*, 32-33 176a-b
35 HUME: *Human Understanding*, SECT VIII, DIV 70, 481d-482a
36 STERNE: *Tristram Shandy*, 193a-194b; 195a-b; 209a-210b; 228b-231a; 335b-336a; 344b-345a
37 FIELDING: *Tom Jones*, 189a-191c; 204b,d-205c; 223a-225a
41 GIBBON: *Decline and Fall*, 300b
44 BOSWELL: *Johnson*, 513a-b

8a(1) The poetic unities: comparison of epic and dramatic unity

7 PLATO: *Phaedrus*, 133c-d
9 ARISTOTLE: *Poetics*, CH 7-9 685b-686d; CH 17 [1455a38-b23] 690d-691a; CH 18 [1456a10-20] 691c; CH 23 695a-c; CH 26 [1462b3-15] 699a,c
27 SHAKESPEARE: *Winter's Tale*, ACT IV, SC 1 505c-d
29 CERVANTES: *Don Quixote*, PART I, 186b-c
32 MILTON: *Samson Agonistes*, 338a
36 STERNE: *Tristram Shandy*, 245b 246a
37 FIELDING: *Tom Jones*, 19a-20a; 73b-75a

8a(2) Poetic truth: verisimilitude or plausibility; the possible, the probable, and the necessary

6 HERODOTUS: *History*, BK II, 72a-b
6 THUCYDIDES: *Peloponnesian War*, BK I, 354b
7 PLATO: *Phaedrus*, 140c-d / *Ion* 142a-148a,c / *Republic*, BK II, 320d-324c; BK X, 427c-434c / *Sophist*, 561b-d
9 ARISTOTLE: *Poetics*, CH 9 [1451a36]-CH 11 [1452a30] 686a-687a; CH 15 [1454a23-b9] 689b-c; CH 24 [1460a12-b2] 696b-c; CH 25 696d-698c
14 PLUTARCH: *Coriolanus*, 189b-c
21 DANTE: *Divine Comedy*, HELL, XVI [124-136] 23d; XXV [46-151] 36d-38a; XXVIII [112-142] 42c-43a; XXXII [1-12] 47c; PURGATORY, XXXI [124-145] 102a-b; PARADISE, I [38-81] 106c-107a; X [28-48] 120c-d; XXX [19-36] 152a; XXXIII [46-75] 156d-157a
22 CHAUCER: *Troilus and Cressida*, BK II, STANZA 149 41a / *Prologue to Melibeus* 400b-401a
23 HOBBES: *Leviathan*, PART I, 67b
25 MONTAIGNE: *Essays*, 41b-c
27 SHAKESPEARE: *Hamlet*, ACT III, SC II [1-50] 49a-b
29 CERVANTES: *Don Quixote*, PART I, 184c-186d; 189d-191d; PART II, 208d-209d; 215a-b; 386a-388a
30 BACON: *Advancement of Learning*, 38c-39b
31 DESCARTES: *Discourse*, PART I, 43a-b
37 FIELDING: *Tom Jones*, 49b-50c; 152a-155b; 379b-c

(***8a. Critical standards and artistic rules with respect to narrative structure. 8a(2) Poetic truth: verisimilitude or plausibility; the possible, the probable, and the necessary.***)

40 GIBBON: *Decline and Fall*, 345c; 471c-d; 494d-495a
41 GIBBON: *Decline and Fall*, 693d [n 83]
44 BOSWELL: *Johnson*, 282c-d; 446c-447a
46 HEGEL: *Philosophy of Right*, ADDITIONS, 12 118a-c / *Philosophy of History*, INTRO, 153a-c
47 GOETHE: *Faust*, PART II [7426-7433] 181b-182a
48 MELVILLE: *Moby Dick*, 151b-152a
51 TOLSTOY: *War and Peace*, BK III, 134a-c

8a(3) The significance of recognitions and reversals in the development of plot

9 ARISTOTLE: *Poetics*, CH 6 [1450a33-35] 684d; CH 10-11 686d-687b; CH 14 [1453b22-1454a8] 688c-689a; CH 16 689d-690b
22 CHAUCER: *Monk's Prologue* [13,979-988] 433b
37 FIELDING: *Tom Jones*, 379b-c
54 FREUD: *Interpretation of Dreams*, 246b-c / *General Introduction*, 581d

8b. Critical standards and artistic rules with respect to the language of poetry: the distinction between prose and verse; the measure of excellence in style

5 ARISTOPHANES: *Knights* [1373-1383] 486d-487a / *Clouds* [331-340] 492a; [1351-1379] 504d-505b / *Peace* [734-818] 534c-535c / *Birds* [1372-1409] 559b-c / *Frogs* [758-1533] 573a-582a,c / *Thesmophoriazusae* [95-175] 601c-602b
7 PLATO: *Protagoras*, 52d-57a / *Republic*, BK III, 328b-333b; BK X, 430c
9 ARISTOTLE: *Ethics*, BK IV, CH 8 [1128a18-33] 375b-c / *Politics*, BK VIII, CH 7 [1342a32-b18] 548a,c / *Rhetoric*, BK III, CH 1-12 653b,d-667b passim / *Poetics*, CH 1 [1447a14-b23] 681a-c; CH 6 [1450b13-15] 685a; CH 19 [1456b 8-19] 692a-b; CH 22 694a-695a; CH 24 [1460a 32-b4] 696c-d; CH 25 [1461a9-b18] 697c-698b
18 AUGUSTINE: *Confessions*, BK III, par 14 16d-17a; BK XI, par 35-37 97c-98b / *City of God*, BK XI, CH 18 331d-332a / *Christian Doctrine*, BK II, CH 6 638a-d; BK IV, CH 17-26 686c-696a passim
21 DANTE: *Divine Comedy*, HELL, XXVIII [1-42] 41b-c; XXXII [1-12] 47c; PURGATORY, XXIV [49-63] 90a-b; XXVI [88-148] 93d-94c; XXXI [133-145] 102b; PARADISE, I [1-37] 106a-b; X [28-48] 120c-d; XXX [19-36] 152a; XXXIII 156b-157d
22 CHAUCER: *Troilus and Cressida*, BK II, STANZA 1-4 21b-22a; STANZA 37-38 26b; STANZA 147-149 40b-41a; BK V, STANZA 256-257 153b-154a / *Prologue* [725-746] 171b-172a / *Miller's Prologue* [3167-3186] 212a-b / *Clerk's Prologue* [7888-7932] 295a-296a / *Squire's Tale* [10,715-722] 345b / *Franklin's Prologue* 351a / *Prologue to Melibeus* 400b-401a / *Manciple's Tale* [17,154-186] 491a-b / *Parson's Prologue* [17,341-375] 494a-b
23 HOBBES: *Leviathan*, PART I, 67b
25 MONTAIGNE: *Essays*, 62b-c; 76b-c; 104d-105c; 195d-197a; 309a-310c; 422c-423c; 453d-454a; 455a-d; 482b-483b
26 SHAKESPEARE: *1st Henry IV*, ACT III, SC I [121-135] 451b-c
27 SHAKESPEARE: *Hamlet*, ACT II, SC II [85-125] 41c-d; [454-466] 45a / *Sonnets*, XXI 589b-c; LXXVI 597d-598a; LXXXII 598d; CXXX 606a-b
29 CERVANTES: *Don Quixote*, PART I, xia-xiiid; 1b-c; 13b-16c; 185a-b; PART II, 251a-252a
30 BACON: *Advancement of Learning*, 38c; 63b-c
31 DESCARTES: *Discourse*, PART I, 43b
32 MILTON: *Vacation Exercise* 59a-61b / *Sonnets*, XIII 65b-66a
33 PASCAL: *Pensées*, 14-16 174a-b; 22-35 175b-177a; 48 178b
36 STERNE: *Tristram Shandy*, 287b-289b
37 FIELDING: *Tom Jones*, 1a-2a; 49a-50c; 189c-d; 223a-225a; 246a-247a
40 GIBBON: *Decline and Fall*, 494d-495a,c
41 GIBBON: *Decline and Fall*, 300b; 327a-c; 573a
42 KANT: *Judgement*, 513d-514b; 524b
44 BOSWELL: *Johnson*, 59d-61d; 167d-170d passim; 180c; 202b; 284b; 307c; 381d-382c; 454a-b; 455b
47 GOETHE: *Faust*, PRELUDE [146-149] 4b
52 DOSTOEVSKY: *Brothers Karamazov*, BK V, 115a-c; 127b
53 JAMES: *Psychology*, 381a; 400b; 687a-688a
54 FREUD: *Interpretation of Dreams*, 277d

8c. The interpretation of poetry

NEW TESTAMENT: *Matthew*, 13:3-50; 18:23-35; 21:28-44 / *Mark*, 4:3-20 / *Luke*, 8:5-15; 15:4-10; 16:1-13; 18:2-8
7 PLATO: *Protagoras*, 52d-57c / *Ion* 142a-148a,c / *Apology*, 202c-d / *Republic*, BK II, 321b-d
9 ARISTOTLE: *Poetics*, CH 25 [1461a9-b25] 697c-698c
14 PLUTARCH: *Coriolanus*, 189b-c
18 AUGUSTINE: *Christian Doctrine*, BK II, CH 6 638a-d; CH 9-10 640c-641a; CH 12 641c-642b; CH 16 644b-645d; BK III, CH 5 659d-660a; CH 24-37 666d-674d
19 AQUINAS: *Summa Theologica*, PART I, Q I, AA 9-10 8d-10c
20 AQUINAS: *Summa Theologica*, PART I-II, Q 101, A 2, REP 2 267a-268a
21 DANTE: *Divine Comedy*, HELL, IX [61-63] 13a; PURGATORY, VIII [19-21] 64c; XXXIII [64-78] 104d-105a
24 RABELAIS: *Gargantua and Pantagruel*, BK I, 1b,d-3a,c; 66b-67d; BK III, 146a-150d
25 MONTAIGNE: *Essays*, 104d-105b; 285a-b; 362a-363b
40 GIBBON: *Decline and Fall*, 346a-b

46 HEGEL: *Philosophy of History*, PART II, 263d-265c
48 MELVILLE: *Moby Dick*, 151b-152a
51 TOLSTOY: *War and Peace*, BK VIII, 324b-d; BK XII, 533b-c; 534c-d
54 FREUD: *Interpretation of Dreams*, 246b-248c / *General Introduction*, 509a-513d passim / *New Introductory Lectures*, 816a-b

9. The moral and political significance of poetry

9a. The influence of poetry on mind and character: its role in education

5 ARISTOPHANES: *Acharnians* [497-508] 460d-461a; [628-675] 462b-463a / *Clouds* 488a-506d esp [575-594] 495c-d, [882-1104] 499b-502a / *Wasps* [1010-1070] 519d-520c / *Frogs* 564a-582a,c esp [1008-1098] 576b-577c, [1417-1533] 581a-582a,c / *Thesmophoriazusae* [330-567] 604b-606c
7 PLATO: *Protagoras*, 46b-c / *Phaedrus*, 140a-d / *Ion*, 144b-145c / *Symposium*, 156b-c / *Gorgias*, 280d-282b / *Republic*, BK II-III, 320c-339a; BK IV, 344b-d; BK VII, 391c-d; BK X, 427c-434c / *Timaeus*, 455b-c / *Laws*, BK II 653a-663d esp 654b-d; BK III, 675c-676b; BK VII, 724c-725b; 727c-728b
9 ARISTOTLE: *Politics*, BK VII, CH 17 [1336^{a}30-33] 541b; [1336^{b}12-35] 541c-d; BK VIII, CH 3 542d-543d; CH 5-7 544c-548a,c
12 AURELIUS: *Meditations*, BK I, SECT 7 253b-d
14 PLUTARCH: *Lycurgus*, 33d-34a; 43b-d / *Solon*, 76a-b / *Pericles*, 121a-122b
15 TACITUS: *Annals*, BK XIV, 146b-c
17 PLOTINUS: *First Ennead*, TR III, CH 1-2 10a-d / *Fourth Ennead*, TR IV, CH 40 180b-c
18 AUGUSTINE: *Confessions*, BK I, par 20-22 6a-c; par 25-27 7a-d; BK III, par 2-4 13c-14b; BK X, par 49-50 83c-84b / *City of God*, BK I, CH 31-33 147d-149a; BK II, CH 8-14 153d-157c; BK IV, CH 26-27 202a-203c / *Christian Doctrine*, BK II, CH 6 638a-d
21 DANTE: *Divine Comedy*, HELL, I [61-135] 1d-2c; PURGATORY, XXII [55-93] 87a-c; PARADISE, I [1-37] 106a-b; II [1-18] 107d; XVII [100-142] 133a-c
22 CHAUCER: *Intro. to Man of Law's Prologue* [4465-4510] 234b-235b / *Prologue to Melibeus* 400b-401a / *Nun's Priest's Tale* [15,444-452] 460a-b / *L'Envoi* 550a-b
23 HOBBES: *Leviathan*, PART I, 69c; PART III, 183b
24 RABELAIS: *Gargantua and Pantagruel*, BK III, 146a-150d
25 MONTAIGNE: *Essays*, 71c; 79a-80b
26 SHAKESPEARE: *Two Gentlemen of Verona*, ACT III, SC II [66-95] 245a-b
27 SHAKESPEARE: *Hamlet*, ACT II, SC II [616-633] 46c-d
29 CERVANTES: *Don Quixote* esp PART I, xiiic-d, 1a-3b, 13b-16c, 184a-187c, 189d-193c, PART II, 252a-b, 322a-c, 427c-429a
30 BACON: *Advancement of Learning*, 38d-39a; 78a-d; 79c-80a
31 DESCARTES: *Discourse*, PART I, 43b
32 MILTON: *Areopagitica*, 385a-386b
33 PASCAL: *Pensées*, II 173b-174a
35 HUME: *Human Understanding*, SECT I, DIV I 451a-b
39 SMITH: *Wealth of Nations*, BK V, 347d
40 GIBBON: *Decline and Fall*, 3a-b; 94a-b; 629a-b
41 GIBBON: *Decline and Fall*, 225c; 300a-b; 573a-574b passim
42 KANT: *Judgement*, 504a-b; 521b-523c; 586d-587a
44 BOSWELL: *Johnson*, 116b; 158a-b; 259b-c esp 259b [fn 2]; 308b-d
46 HEGEL: *Philosophy of History*, PART II, 259b-c; 263d-265c; 267a-268b; 276a-d; PART IV, 347b-d
51 TOLSTOY: *War and Peace*, BK VIII, 311a-313a; 324b-325d
54 FREUD: *General Introduction*, 582a-b / *War and Death*, 762c

9b. The issue concerning the censorship of poetry

5 ARISTOPHANES: *Acharnians* [366-384] 459c-d; [497-508] 460d-461a
6 HERODOTUS: *History*, BK V, 172d-173b; BK VI, 189c
7 PLATO: *Republic*, BK II-III, 320c-334b; BK IV, 344b-d; BK X, 427c-434c esp 432d-434c / *Laws*, BK II 653a-663d passim; BK III, 675c-676b; BK VII, 719d-721a; 724c-725b; 727c-728b; BK VIII, 732c; BK XI, 782d-783b
9 ARISTOTLE: *Politics*, BK VII, CH 17 [1336^{a}30-^{b}35] 541b-d; BK VIII, CH 3 542d-543d; CH 5-7 544c-548a,c
14 PLUTARCH: *Lycurgus*, 43b-d / *Solon*, 76a
15 TACITUS: *Annals*, BK I, 21b-22b; BK III, 56d-57b; BK IV, 67b-c; 72b-73a; BK XIV, 152d-153c
18 AUGUSTINE: *City of God*, BK II, CH 9 154a-c; CH 12 155c-d; CH 14 156c-157c; BK VIII, CH 13 273b-d
23 HOBBES: *Leviathan*, PART II, 102d-103a
25 MONTAIGNE: *Essays*, 79d-80b; 191d-192b
29 CERVANTES: *Don Quixote*, PART I, 13b-16c; 117d-119d; 185b-188c
32 MILTON: *Areopagitica* 381a-412b esp 384b-389a, 393a-394b
36 SWIFT: *Gulliver*, xviib
38 MONTESQUIEU: *Spirit of Laws*, BK XII, 90b-c
39 SMITH: *Wealth of Nations*, BK V, 347c-d
41 GIBBON: *Decline and Fall*, 300a-b
43 MILL: *Liberty*, 274b-293b passim
44 BOSWELL: *Johnson*, 259b-c

CROSS-REFERENCES

For: The comparison of poetry with history, philosophy, and science, *see* HISTORY 1; KNOWLEDGE 4c; PHILOSOPHY 1d; SCIENCE 2b; TRUTH 4b.

The consideration of the fine arts in general, *see* ART 7a; and for standards of critical judgment with respect to the beauty or excellence of works of fine art, *see* ART 7b; BEAUTY 2, 5.

Another discussion of the theory of art as imitation, and for related doctrines, *see* ART 3; FORM 1d(1).

The elements of inspiration, emotion, and tradition in the formation of poetry, *see* ART 8; MEMORY AND IMAGINATION 3d.

Other aspects of the distinction between tragedy and comedy, *see* HAPPINESS 4b.

Matters related to the theory of emotional purgation, *see* ART 8; DESIRE 4d.

The place of poetics among the sciences, *see* PHILOSOPHY 2c.

The discussion of poetic truth and probability, *see* MEMORY AND IMAGINATION 7b; TRUTH 4b.

Other considerations of the problem of style, *see* LANGUAGE 9; RHETORIC 2–2b.

Matters bearing on the interpretation of poetry, *see* RHETORIC 2d.

The role of poetry and other fine arts in education, *see* ART 10a; EDUCATION 4d; VIRTUE AND VICE 4d(4).

Other discussions of the problem of censorship, or of the political regulation of artistic expression, *see* ART 10b; EDUCATION 8c; EMOTION 5e; LIBERTY 2a.

ADDITIONAL READINGS

Listed below are works not included in *Great Books of the Western World*, but relevant to the idea and topics with which this chapter deals. These works are divided into two groups:

I. Works by authors represented in this collection.
II. Works by authors not represented in this collection.

For the date, place, and other facts concerning the publication of the works cited, consult the Bibliography of Additional Readings which follows the last chapter of *The Great Ideas.*

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TOLSTOY. *What Is Art?*
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II.

HORACE. *The Art of Poetry*
LONGINUS. *On the Sublime*
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BOCCACCIO. *On Poetry*
P. SIDNEY. *An Apology for Poetry*
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——. *Trois discours sur l'art dramatique*
MOLIÈRE. *La critique de l'école des femmes* (*The School for Wives Criticised*)
BOILEAU-DESPRÉAUX. *The Art of Poetry*
DRYDEN. *An Essay of Dramatic Poesy*
——. *Of Heroic Plays*
——. *A Discourse Concerning . . . Satire*
POPE. *Essay on Criticism*
VICO. *The New Science*, BK II–III
J. HARRIS. *Three Treatises. The First Concerning Art. The Second Concerning Music, Painting, and Poetry. The Third Concerning Happiness*
——. *Upon the Rise and Progress of Criticism*
BURKE. *Hints for an Essay on the Drama*
——. *A Philosophical Enquiry into the Origin of Our Ideas of the Sublime and Beautiful*, PART V
GRAY. *The Progress of Poesy*
KAMES. *Elements of Criticism*
VOLTAIRE. *Letters on the English*, XVIII–XX
——. "Art of Poetry," "Poets," in *A Philosophical Dictionary*

LESSING. *Laocoön*
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T. L. PEACOCK. *Four Ages of Poetry*
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KIERKEGAARD. *Either/Or*
——. *The Point of View*
POE. *The Poetic Principle*
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NIETZSCHE. *The Birth of Tragedy*
ARNOLD. *Essays in Criticism*
MEREDITH. *An Essay on Comedy and the Uses of the Comic Spirit*
FRAZER. *The Golden Bough*, PART III, CH 3
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Chapter 70: PRINCIPLE

INTRODUCTION

OF the three ways in which principles are considered in the tradition of the great books, the most familiar sense of the word is the one in which we speak of moral principles, principles of action, or political principles. The connotation of the word in this usage seems to be twofold. We think of principles as rules of conduct and we think of them as standards by which to measure and judge human acts or political events. Either conception attributes a certain generality to principles. Just as rules apply to an indefinite number of particular cases, so any principle we appeal to in order to decide a practical problem or to weigh the merits of an action undertaken, can be applied again and again in other circumstances.

In addition to this characteristic of generality, principles seem to have the quality of *underlying* or being the *source of* other things. In jurisprudence the search for principles consists in the attempt to discover those few most fundamental precepts from which the more detailed rules of law can be derived. The constitution of a state provides the principles which underlie its particular laws and sets the standards by which their legality is to be measured. Governments are judged by the principles they attempt to apply as well as by their success in putting these principles into practice. To say of a government that its acts are *unprincipled* is not to condemn the particular acts as wrong, but to accuse the government of having no uniform policy to serve as a foundation for its acts.

This aspect of the meaning of principle—as the source from which a set of consequences follows—seems to be more characteristic of the idea of principle than the aspect of generality. According to its Latin derivation and the equivalent root in Greek, "principle" means a beginning or a foundation. Sometimes it means that which comes first absolutely, in the sense of being before everything else; sometimes it means that which comes first only relatively, taking precedence over some things, but having others prior to itself. Since priority may be either absolute or relative—first without qualification or first only in a certain respect—the traditional phrase "first principle" does not have the redundancy of "first first" or "beginning beginning."

If there are absolutely first beginnings, to which nothing else can be prior, they can legitimately be called "first principles" to distinguish them from principles which come first only in a certain respect. Only if there are first principles can regression to infinity be avoided in the search for origins. The propositions which lie at the foundation of a science may, for example, constitute its principles, but they may also be derived in turn from some prior science. Only the principles of a science which is prior to or independent of all others can be truly first principles.

THE FOREGOING example brings us to the other meaning of principle that is popularly recognized. It is the sense in which men speak of principles in relation to conclusions, or of principles as the foundations of a science.

The priority which belongs to principles in the domain of thought need not be temporal. Principles may or may not be first in the order of learning. But if they are not first in the temporal order, they must be first logically, as premises are logically prior to a conclusion, or, as in Euclid's *Elements*, his principles—his definitions, postulates, and axioms—are logically prior to all the theorems he demonstrates by means of them.

It may be asked whether, among propositions related as premises and conclusions, the logical priority of one proposition to another

is sufficient to make the prior proposition a principle. Can a proposition be a principle if, even though it is used as a premise in reasoning, it lacks generality? For example, is the particular proposition—that this bottle contains poison—a principle underlying the practical conclusion that its contents should not be swallowed?

Aristotle answers affirmatively. In the order of practical thinking, he holds, we deliberate neither about the end to be sought nor about the particular facts on which a choice of the means depends. "The end cannot be a subject of deliberation," he writes, "but only the means; nor indeed can the particular facts be a subject of it, as whether this is bread or has been baked as it should; for these are matters of perception." The perceived particulars thus function as principles along with the most general of all practical propositions, namely, what the end should be. Calling the faculty which apprehends first principles "intuitive reason," Aristotle says that "the intuitive reason involved in practical reasonings grasps the last and variable fact, *i.e.*, the minor premise. For these variable facts are the starting-points for the apprehension of the end, since the universals are reached from the particulars; of these therefore we must have perception, and this perception is intuitive reason."

Perception, at least in the form of *sense*-perception, seems to be only one of the two ways in which we apprehend the particular facts which are principles in practical reasoning. Like Aristotle, Aquinas uses the judgment, that *this is bread or iron*, as an example of "facts received through the senses" which are "principles . . . accepted in the inquiry of counsel." But the moral quality inherent in particular acts does not seem to be perceptible by the senses alone; and such particular moral judgments are also involved in moral reasoning. Aristotle suggests that habit (*i.e.*, the moral habits or virtues) are the immediate source of such judgments, which can be called "perceptions of the particular" even though they are not simply sense-perceptions.

"Of first principles," Aristotle explains, "we see some by induction, some by perception, some by a certain habituation." By induction we see the general truths; by sense-perception, the sensible particulars; and by habituation, the moral particulars. Hence Aristotle insists that "anyone who is to listen intelligently to lectures about what is noble and just and, generally, about the subjects of political science must have been brought up in good habits. For the fact is the starting-point, and if this is sufficiently plain to him, he will not at the start need the reason as well; for the man who has been well brought up has or can easily get the starting-points."

The word "principle" is used by Kant in a much more restricted sense. He reserves the status of principle to the general propositions which serve as the major premises in reasoning. In both the theoretic and the practical sciences, principles express reason's understanding of universal and necessary relationships.

Kant differs from Aristotle in other respects. He differentiates between ordinary general propositions which merely serve as major premises in reasoning and the propositions he classifies as "synthetic judgements *a priori*." He regards the former as principles only in a relative sense and treats the latter alone as principles absolutely. He also distinguishes between those principles of the *understanding* which he thinks are "constitutive of experience," and those principles of the *reason* which should be used in what he calls a "regulative," not a constitutive manner. They determine the direction and goals of thought beyond experience. But such differences concerning the nature and kinds of principles do not affect the commonly accepted meaning of principle as that from which, in the temporal order of learning, knowledge develops or that upon which, in the logical order, knowledge rests.

THE THIRD AND relatively unfamiliar sense in which principles are discussed in the great books does not refer to the sources of man's moral decisions, political acts, or scientific conclusions. The discussion in question refers to reality apart from man. Just as men try to discover the elements of matter, or the causes of motion, so they try to discover the principles of existence and of change. The issues which arise from this concern with the principles of reality are discussed in such chapters as BEING, CAUSE, CHANGE, FORM, NATURE, and MATTER.

If the word "principle" always connotes a beginning, every special sense of principle should involve some kind of priority. As we have already observed, principles may be either prior in time or prior logically. But the principles of the universe or the principles of change are not usually thought to be prior in either of these ways. For them Aristotle specifies another kind of priority—priority in nature—to explain the primacy of those principles which constitute the nature of a thing. In his view, for example, matter and form are the principles of a physical substance. Since a substance composite of matter and form cannot exist until its matter and its form coexist, matter and form are not prior to the substance they compose. Their priority to substance consists only in the fact that that which has the nature of a composite substance *results* from the union of matter and form as its natural components. Because the substance is the *natural resultant*, matter and form can properly be called its *natural principles*.

This way of considering principles at once suggests a close relationship among principles, elements, and causes; and also indicates the connection between the present chapter and the chapters on CAUSE and ELEMENT. The ultimate parts into which a whole can be divided may be its principles as well as its elements. The form or matter of a substance may be, in Aristotle's theory, not only one of its principles, but also a cause—a formal or a material cause. Among the great authors Aristotle and Aquinas alone seem to dwell upon the relationship of these three terms. They give instances in which the same thing is principle, element, and cause, as well as instances in which a principle is neither a cause nor an element, *e.g.*, privation. In the sphere of human conduct, an end is both a principle and a final cause, but not an element. The last end is the highest final cause and the first principle—first in intention though last in attainment.

THE TRADITIONAL issues concerning this idea differ according to the general context in which the question of principles is raised. The main controversy, for example, with regard to principles in the order of reality is over their number and order.

Aristotle argues against an infinite number of principles as incompatible with the very notion of principle itself. In his analysis of change or motion, he tries to prove that no more than three principles are necessary, and no less will do. These are, as the chapter on CHANGE explains, matter, form, and privation. Considering the principles of the universe as a whole, Plotinus also enumerates three and tries to prove that none can be added or subtracted. But whereas Aristotle treats the three principles of change as coordinate, Plotinus places the cosmic principles in the absolute order of first, second, and third.

"We need not go seeking any other Principles," writes Plotinus. "This—the One and the Good—is our First, next to it follows the Intellectual Principle, the Primal Thinker, and upon this follows Soul. Such is the order in nature. The intellectual realm allows no more than these and no fewer. Those who hold to fewer Principles must hold the identity of either Intellectual Principle and Soul, or of Intellectual Principle and The First . . . To increase the Primals by making the Supreme Mind engender the Reason-Principle, and this again engender in the Soul a distinct power to act as mediator between Soul and the Supreme Mind, this is to deny intellection to the Soul, which would no longer derive its Reason from the Intellectual Principle, but from an intermediate. . . . Therefore, we must affirm no more than these three Primals."

In the sense in which Plotinus conceives the three primals, they are not only principles in the order of reality, but are themselves the ultimate grades or modes of reality. Similarly for Plato soul is not only the principle of life and thought in the universe, but it also has its own existence in the realm of being. For Aristotle, in contrast, the principles of change do not have existence in and of themselves. Matter, form, and privation are not substances, but aspects of substance. They are present in every changing substance and in every change, but they are only the principles *of* mutable being; they are not mutable beings in themselves.

Lucretius states two principles as the basic laws of nature. The first is that nothing comes into being out of nothing; the second, that nothing is ever completely reduced to nothing-

ness. The word "principle" is obviously not being used in the same sense here as when it designates The One for Plotinus, soul for Plato, matter for Aristotle, or the atoms which Lucretius calls the "first beginnings." Here it does not refer to an entity, or even to an aspect of some real being, but rather to a law—the statement of a universal and necessary condition which governs all that is or happens. It is in this sense that the proposition traditionally called "the law of contradiction"—that the same thing cannot both be and not be in the same respect at the same time—is said by Aristotle to be the first principle of being as well as of thought.

The conception of the law of contradiction and the related laws of identity and excluded middle as principles of thought raises problems about logical principles in general—whether they are axioms or postulates, whether they are merely rules of reasoning and demonstration or are themselves premises from which conclusions can be deduced. If, for example, the law of contradiction is *only* a rule of thought, which forbids the mind to affirm and deny the same proposition, then it is not a principle of knowledge in the sense in which the definitions and axioms of geometry function as premises in the demonstration of theorems. No conclusion can be drawn from it concerning the nature of things. But if, in addition to being a rule of thought, it is a metaphysical axiom, which states the most fundamental fact about existence, then like the axioms in geometry it may be the source of conclusions in metaphysics.

On this second point Locke seems to differ sharply from Aristotle and Aquinas. He denies that the laws of identity and contradiction are fruitful principles of knowledge. "These magnified maxims," he writes, "are not the principles and foundations of all our other knowledge." Nor have they been, he adds, "the foundations whereon any science hath been built. There is, I know, a great deal of talk, propagated from scholastic men, of sciences and the maxims on which they are built; but it has been my ill luck, never to meet with any such sciences, much less any one built upon these two maxims, 'what is, is' and 'it is impossible for the same thing to be and not to be.'"

WE SHALL PRESENTLY consider the issue concerning axioms or postulates—whether the principles of the sciences are self-evident truths or are only provisional assumptions. Those who are willing to admit the existence of axioms do not all agree, however, that such truths refer to reality. Hume, for example, limits the content of axioms to knowledge of the relations between our own ideas. They are not truths about real existence or matters of fact.

Locke also grants self-evidence only to perceptions of the agreement or disagreement between ideas. "Concerning the real existence of all other beings" except ourselves and God, we have, he writes, "not so much a demonstrative, much less a self-evident, knowledge; and therefore concerning these there are no maxims." But Locke does think that our demonstrative knowledge of God's existence depends upon an intuitive knowledge of our own existence; and in addition to knowing our own existence directly or without proof, he also thinks we have through our senses an equally direct knowledge of the existence of other things. Such intuitive and sensitive knowledge of particular existences is, like the truth of axioms, immediate—that is, something known directly or without proof, without any appeal to prior propositions. Hence Locke is not denying that we know some immediate truths about reality, but only that such truths consist exclusively of propositions about particular existences. Since axioms, or what Locke calls "maxims," are always general propositions, the self-evident truths which they express do not apply to reality.

William James uses the word "intuitive"—in a different sense from Locke—to characterize propositions that state "the necessary and eternal relations" which the mind "finds between certain of its ideal conceptions." Intuitive propositions are for him, therefore, what maxims are for Locke; and like Locke, James also denies that such axioms of reason hold for reality. "Only *hypothetically*," he says, "can we affirm intuitive truths of real things—by supposing, namely, that real things exist which correspond exactly with the ideal subject of the intuitive propositions . . . The intuitive propositions of Locke leave us as regards outer reality none the better for their possession. We

still have to 'go to our senses' to find what the reality is.

"The vindication of the intuitionist position," James continues, "is thus a barren victory. The eternal verities which the very structure of our mind lays hold of do not necessarily themselves lay hold on extramental being, nor have they, as Kant pretended later, a legislating character for all possible experience. They are primarily interesting only as subjective facts. They stand waiting in the mind, forming a beautiful ideal network; and the most we can say is that we *hope* to discover outer realities over which the network may be flung so that ideal and real may coincide."

The opposite view seems to be taken by Plato, Aristotle, Aquinas, Bacon, Descartes, Spinoza, and Kant. Though they are far from being in complete agreement concerning the principles of knowledge, the propositions which they call axiomatic, self-evident, intuitive, or *a priori* synthetic judgments, are not restricted by them to the mind's perception of the relations between *its own* ideas. There are self-evident or immediate truths in physics and metaphysics, as well as in mathematics and logic. Whether these are inductions from experience or innate possessions of the mind, whether they are intuitive apprehensions of intelligible being or *a priori* judgments having a transcendental origin, these propositions are held to describe the world of experience, or the nature and existence of things outside the human mind.

THERE SEEM TO BE two degrees of skepticism with regard to principles in the order of knowledge. Complete skepticism would consist in denying principles in every sense. That would be the same as denying any beginning or basis for even the opinions which men hold. No one seems to go that far.

The issue with respect to the foundations of knowledge or opinion is therefore not between those who affirm and those who deny principles, but between different views of what the starting points are. It is sometimes said, for example, that sensations are the principles or beginnings of all human learning. This view is shared both by those who think that all our ideas or concepts are abstracted from the materials provided by the senses and by those who account for all the other contents of the mind —its memories and imaginations, its complex formations—in terms of the simple impressions originally received by the senses.

Concepts, as distinct from sense-perceptions, are also sometimes regarded as principles of knowledge by those who think that concepts originate by abstraction from sensory materials, as well as by those who think that ideas are primary principles, *i.e.*, having no origin in any prior apprehensions. On either view, ideas or concepts function as principles insofar as they are the simples from which the more complex acts of the mind develop, such as the acts of judgment and reasoning. Just as on the level of language, words are the principles of all significant speech, out of which sentences and paragraphs are formed; just as, in the logical order, terms are said to be the principles of propositions and syllogisms; so concepts are the principles of judgments and reasonings. The definitions of Euclid, for example, state the notions of point, line, triangle, etc. which underlie his theorems and demonstrations.

One common characteristic of either sensations or concepts as principles of knowledge seems to be simplicity. Nothing more elementary, out of which they can be formed, is prior to them. Another characteristic is that they are principles of knowledge or opinion without being themselves acts of knowledge or opinion. This point is made by all who hold that only propositions—whether statements of opinion or of knowledge—can be true or false.

The terms which express the simple apprehensions of the mind—its sensations or concepts—cannot be true or false, because, unlike propositions, which are composed of terms, they do not assert anything. If sensations and concepts cannot be true or false in the sense in which propositions or judgments are, then they lack the distinctive property of knowledge or opinion. In contrast, propositions or judgments —which are supposed to be principles, whether axioms or assumptions—can be treated as themselves expressions of knowledge or opinion, not merely as its starting points or sources.

THE TWO DEGREES of skepticism previously mentioned apply only to those principles of

knowledge which are themselves capable of being regarded as knowledge or opinion and hence as either true or false.

We have already considered the skepticism of those who, admitting that the truth of some propositions can be immediately recognized by the mind, nevertheless deny that such self-evident truths describe reality. This may or may not be accompanied by a further depreciation of axioms on the ground that they are merely analytical propositions and hence trifling, uninstructive, or tautological.

The chapter on JUDGMENT considers the issue which revolves around the derogatory use of such words as "tautology" or "truism" to designate self-evident truths. Though the invidious connotation of the word "truism" does not make the truth to which this epithet is applied any less true, the dignity of a truth does seem to be affected by the refusal to regard it as a statement of reality. Furthermore, a certain degree of skepticism results from such refusal. Hume exemplifies this. He holds that self-evident truths are possible only in mathematics, which deals not with matters of fact, but with the relations between our own ideas. In consequence, he denies to the study of nature the certitude or demonstrative character which he finds in mathematical science. Since physics is concerned with real existences, no axioms or self-evident principles are available to it; and so, according to Hume, it cannot demonstrate its conclusions, but must advance them as probabilities.

A more thorough-going skepticism seems to consist in holding that there are absolutely no matters at all about which men have axiomatic knowledge. This appears to be the position of Montaigne. No truths are self-evident. None commands the universal assent of mankind; none belongs to the nature of the mind so that all men must agree to it. Montaigne almost holds it to be axiomatic that there are no axioms, for if there were, he says, "there would be some one thing to be found in the world . . . that would be believed by men with an universal consent; but this, that there is no one proposition that is not debated and controverted amongst us, or that may not be, makes it very manifest that our natural judgment does not very clearly comprehend what it embraces."

If it is objected that, in the absence of such principles, there is no starting point or foundation for science, Montaigne seems willing to accept the consequence. He does not flinch from an infinite regression of reasons. "No reason," he writes, "can be established but upon the foundation of another reason; and so run back to all infinity." To those who say that there is no disputing with persons who deny principles, he replies that "men can have no principles, if not revealed to them by the Divinity; of all the rest, the beginning, the middle, and the end are nothing but dream and vapor."

If, however, for practical purposes, a beginning must be made somewhere, Montaigne suggests that it can be done by taking things for granted and then getting others to grant our presuppositions. "It is very easy," he writes, "upon granted foundations to build whatever we please . . . By this way, we find our reason well-grounded and discourse at a venture; for our masters prepossess and gain beforehand as much room in our belief as is necessary for them towards concluding afterwards what they please, as geometers do by their postulates; the consent and approbation we allow them giving them power to draw us to the right and left, and to whirl us about at their own pleasure."

IF THE ONLY principles upon which reasoning can be based or from which conclusions can be drawn are assumptions, postulates, or hypotheses rather than axioms, then everything is a matter of opinion and probability; nothing can have the certitude of knowledge. As indicated in the chapters on KNOWLEDGE and OPINION, one theory of that distinction makes knowledge an act of the mind independent of our wishes or will and treats opinion as a judgment voluntarily accepted or rejected. Accordingly, assumptions or postulates are perfectly representative of opinion, and axioms express the very essence of knowledge. To assume or postulate anything is to take it for granted—voluntarily! A postulate neither compels assent, nor does it ever exclude the possibility of taking the opposite for granted. Where men make postulates, there dispute is possible. But to assert something as an axiom is to command assent on the ground that its opposite can be

immediately recognized as impossible. No proposition can be regarded as an axiom if its acceptance or rejection is in any way a matter of choice.

For Aristotle the area in which men can dispute with some reason on both sides belongs to what he calls "dialectic," whereas what he calls "science" is the area from which dispute is excluded by demonstrations which rest on self-evident truths. One is the area of probability and opinion; the other, of certainty and knowledge. Contrary assumptions are the starting point of dialectical argument, whereas science begins with axioms. These may be the first principles which Aristotle and Bacon call "common notions" because they are common to diverse sciences; or they may be the axioms peculiar to a single subject matter.

The word "dialectic" is used by Plato in a quite different sense. It names the highest science. Whereas the mathematical sciences start from hypotheses which require further support, dialectic—in the conception of Plato—rises to the first principles of all knowledge. In the hierarchical ordering of the sciences, Plato's dialectic, Aristotle's metaphysics, and Bacon's *philosophia prima* seem to occupy respectively the same primary position and to perform the same function in virtue of being the discipline which contemplates or considers the absolutely first or most universal principles. For Bacon, as for Aquinas, the only higher science is sacred theology, whose principles are articles of supernatural faith, not axioms of reason.

These matters are more fully discussed in the chapters on DIALECTIC, METAPHYSICS, and THEOLOGY; questions concerning different kinds of principles or the principles of different sciences are considered in HYPOTHESIS and LOGIC. The chapter on INDUCTION, furthermore, discusses the inductive origin of axioms, as well as the disagreement between Bacon and Aristotle on the point of whether the highest axioms or first principles are immediately intuited from the particulars of experience, or are reached only through intermediate stages of generalization.

Since axioms are indemonstrable, they cannot be derived by reasoning as conclusions from any truths prior to themselves. Their indemonstrability is regarded by Aristotle and Pascal as a virtue rather than a defect, for if they were demonstrable, they could not be the principles or starting points of demonstration. If there were no axioms, then nothing could be demonstrated, because everything in turn would require proof in an endless regression.

To the ancient counterparts of the skeptical Montaigne, Aristotle replies that unless the law of contradiction is an indisputable axiom, any form of reasoning, even probable reasoning from assumptions, is impossible. The principle which underlies all disputation cannot itself be disputed. To those who, with skeptical intent, insist upon having everything demonstrated before they will accept it, Aristotle offers an indirect defense of the law of contradiction by asking the questioner to try denying that self-evident principle without reducing himself to absurdity.

Those who acknowledge the existence of axioms generally agree that they are indemonstrable truths, but some, like Descartes and Kant, do not agree that they are inductions from experience. The alternatives seem to be that axioms are innate possessions of the intellect or that they are transcendental *a priori* principles of pure reason, independent of experience. Yet Locke, who denies innate ideas and principles, or anything prior to experience, does not treat what he calls self-evident maxims as inductions from experience. They are rather direct perceptions of agreement or disagreement among the ideas we have acquired through experience.

Aquinas, who, no less than Locke, denies innate ideas and insists upon sense-experience as the source of all human knowledge, refers to the assent we give first principles as a *natural habit* of the mind—the intellectual virtue he calls "understanding," equivalent to what Aristotle calls "intuitive reason." As the chapter on HABIT indicates, axioms are called "natural" truths, not in the sense of being innate, instinctive, or congenital, but only in the sense that if the human reason functions naturally or normally it will come to recognize these truths. Again, like Locke, Aquinas seems to be saying that the truth of axioms is perceived by the human understanding as soon as their terms are known, but he does not concur

with Locke in thinking that therefore such truths hold only for relations between our own ideas.

THE THEORY OF the possession of principles by natural habit has, for Aquinas, more than a verbal connection with the theory of natural law. Of the various meanings of the phrase "natural law" which are distinguished in the chapter on LAW, we are here concerned with what both Kant and Aquinas conceive as the moral law whose precepts are the fundamental principles of human conduct. Both also speak of the precepts of the natural law or the moral law as the first principles of man's practical reason.

For Aquinas, these principles are primary in the order of practical truth and the moral sciences, as metaphysical first principles are primary in the order of speculative truth and the theoretic sciences. "The precepts of the natural law," he writes, "are to the practical reason what the first principles of demonstration are to the speculative reason, because both are self-evident principles." As the proposition that "*the same thing cannot be affirmed and denied at the same time*" is the first principle of the speculative reason, so "the first precept of law, that *good is to be done, and evil is to be avoided*," is the first principle of the practical reason.

For Kant, the principles of the pure practical reason, which legislate *a priori* for the realm of freedom, play an analogous role to the principles of the pure speculative reason, which legislate *a priori* for the realm of nature or experience. It is this parallelism between the two sets of principles which Kant seems to have in mind when he conceives a *metaphysic of nature* and a *metaphysic of morals* as twin disciplines founded on the speculative and the practical employment of the transcendental principles of pure reason.

The same fundamental issues which we have considered in connection with the axioms of theoretic knowledge occur here in connection with the first principles of moral knowledge. Aquinas and Kant disagree, for example, about the way in which we come into possession of these principles. For Kant, the principles of mortality, like the principles of nature, belong to the transcendental structure of pure reason itself. For Aquinas, as already suggested, the precepts of the natural law are known in the same way as the axioms of the speculative reason. As the truth of the principle of contradiction is known when we understand the meaning of 'is' and 'not,' so the truth of the first command of natural law—'Seek the good'—is known when we understand the meaning of 'seek' and 'good.' We hold such truths by the natural habit of our minds, which in the case of the natural law is given the special name of *synderesis*.

Just as we find a certain skepticism with regard to the principle of contradiction and other axioms, so we find doubts about the existence of natural law, or about indisputable and universally acceptable principles of morality. Referring to those who think that there are some laws "first, perpetual, and immutable, which they call natural that are imprinted in mankind by the condition of their own proper being," Montaigne declares that "the only sign by which they can argue or infer some laws to be natural is the universality of approbation"; and he adds: "Let them produce me but one of this condition."

The consequences of skepticism are here the same as before. Without first principles, moral science either fails entirely or is reduced to systems of belief based upon one set of assumptions or another. In either case, moral judgments express, not knowledge, but opinion. As John Stuart Mill observes, the utilitarians must, despite all other differences, agree with Kant that if there is to be a science of ethics, "mortality must be deduced from principles," and ultimately from one first principle, for "if there be several, there should be a determinate order of precedence among them."

What Mill says concerning the self-evidence of the first principle of morality—which he formulates as a statement of the ultimate end of human conduct—closely resembles what Aristotle says about the self-evidence of the law of contradiction. "Questions of ultimate ends are not amenable to direct proof," Mill writes. "To be incapable of proof by reasoning is common to all first principles: to the first premises of our knowledge, as well as to those of our conduct."

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REFERENCES

To find the passages cited, use the numbers in heavy type, which are the volume and page numbers of the passages referred to. For example, in **4** HOMER: *Iliad*, BK II [265–283] **12d**, the number **4** is the number of the volume in the set; the number **12d** indicates that the passage is in section d of page 12.

PAGE SECTIONS: When the text is printed in one column, the letters **a** and **b** refer to the upper and lower halves of the page. For example, in **53** JAMES: *Psychology*, **116a-119b**, the passage begins in the upper half of page 116 and ends in the lower half of page 119. When the text is printed in two columns, the letters **a** and **b** refer to the upper and lower halves of the left-hand side of the page, the letters **c** and **d** to the upper and lower halves of the right-hand side of the page. For example, in **7** PLATO: *Symposium*, **163b-164c**, the passage begins in the lower half of the left-hand side of page 163 and ends in the upper half of the right-hand side of page 164.

AUTHOR'S DIVISIONS: One or more of the main divisions of a work (such as PART, BK, CH, SECT) are sometimes included in the reference; line numbers, in brackets, are given in certain cases; *e.g.*, *Iliad*, BK II [265–283] **12d**.

BIBLE REFERENCES: The references are to book, chapter, and verse. When the King James and Douay versions differ in title of books or in the numbering of chapters or verses, the King James version is cited first and the Douay, indicated by a (*D*), follows; *e.g.*, OLD TESTAMENT: *Nehemiah*, 7:45—(*D*) *II Esdras*, 7:46.

SYMBOLS: The abbreviation "esp" calls the reader's attention to one or more especially relevant parts of a whole reference; "passim" signifies that the topic is discussed intermittently rather than continuously in the work or passage cited.

For additional information concerning the style of the references, see the Explanation of Reference Style; for general guidance in the use of *The Great Ideas*, consult the Preface.

1. Principles in the order of reality

1*a*. The differentiation of principle, element, and cause

7 PLATO: *Timaeus*, 455d

8 ARISTOTLE: *Physics*, BK I, CH 1 [184^a10–16] 259a / *Generation and Corruption*, BK II, CH 1 [329^a24–$^b2$] 429a-b / *Metaphysics*, BK I, CH 6 [987^b19–23] 505d; BK III, CH 3 [998^a20–$^b13$] 517a-b; BK V, CH 1–3 533a-534d; CH 24 545a-b; BK VII, CH 16 [1040^b18–23] 564d; CH 17 565a-566a,c esp [1041^b26–33] 566a,c; BK VIII, CH 3 [1043^b5–14] 567d-568a; BK XII, CH 1 598a-c; CH 4–5 599d-601a esp CH 4 [1070^b 22–35] 600b

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31 DESCARTES: *Objections and Replies*, 159a

45 LAVOISIER: *Elements of Chemistry*, PREF, 3d-4a

1*b*. The being, number, and kinds of principles in the order of reality

7 PLATO: *Phaedo*, 240b-246c / *Republic*, BK III, 333c-d; BK VI, 383d-388a / *Timaeus*, 455c-458b / *Sophist*, 564d-574c / *Philebus*, 610d-613a; 615c-617d

8 ARISTOTLE: *Physics*, BK I 259a-268d; BK III, CH 4 [203^b2–14] 281b-c; BK IV, CH 1 [208^b8–209^a1] 287b-c; BK VI, CH 5 318a-319c / *Heavens*, BK I, CH 2 359d-360d; BK III, CH 3–5 393c-396a / *Metaphysics*, BK I, CH 3–10 501c-511d; BK II, CH 2 512b-513b; BK III, CH 1 [995^b13–996^a17] 514a-c; CH 2 [997^a34]-CH 6 [1003^a17] 516a-522a,c; BK V, CH 3–4 534c-535c; BK VII–XIV 550b,d-626d / *Soul*, BK I, CH 2 [404^b30–405^b31] 634a-635a

10 GALEN: *Natural Faculties*, BK I, CH 3 168c-169a

12 LUCRETIUS: *Nature of Things*, BK I [146–264] 2d-4b; [418–448] 6b-c

17 PLOTINUS: *Second Ennead*, TR IX, CH 1 65d-66d / *Fourth Ennead*, TR VII, CH 9 198b-d / *Fifth Ennead*, TR I, CH 4 209d-210c; TR II, CH 1 214c-215a; TR IV 226d-228b / *Sixth Ennead*, TR I–III 252a-297b; TR VIII, CH 7–8 345d-347a; TR IX 353d-360d passim

19 AQUINAS: *Summa Theologica*, PART I, Q 2, A 3 12c-14a; Q 3, A 5, ANS 17c-18b; A 6, ANS and REP 2 18c-19a; Q 14, A 11, REP 1 84c-85c; Q 25, A 1 143d-144c; Q 27 153a-157c; Q 33, A 1 180d-181c; A 3, REP 1 182c-183c; Q 42, AA 2–3 225d-227d; Q 44 238a-241d; Q 49 264d-268a,c esp A 3 266d-268a,c; Q 75, A 1, ANS 378b-379c; Q 77, A 5, REP 1–2 403d-404c; A 6 404c-405c; Q

(1. *Principles in the order of reality.* 1b. *The being, number, and kinds of principles in the order of reality.*)

84, A 2, ANS and REP 3 442b-443c; A 4, REP 1 444d-446b; Q 115, A 2 587c-588c

31 DESCARTES: *Discourse*, PART VI, 61d-62c

31 SPINOZA: *Ethics*, PART II, PROP 10, SCHOL 376d-377a

34 NEWTON: *Principles*, 1b-2a; LAW I-III 14a-b; BK III, GENERAL SCHOL, 371b-372a / *Optics*, BK III, 541b-542a

42 KANT: *Pure Reason*, 66d-93c esp 68a-74b, 85d-88a; 108a-112d esp 110a-d / *Judgement*, 467d-470b; 565b-d; 566d-567a; 575b-578a

45 LAVOISIER: *Elements of Chemistry*, PREF, 3b-4a

45 FOURIER: *Theory of Heat*, 169a-b

53 JAMES: *Psychology*, 882a-884b

1c. The metaphysical significance of the principles of thought

7 PLATO: *Euthydemus*, 72d-73b / *Republic*, BK IV, 350d-351b

8 ARISTOTLE: *Interpretation*, CH 13 [22^{b}28-23^{a}26] 34d-35c / *Metaphysics*, BK III, CH 1 [995^{b}6-10] 514a; CH 2 [996^{b}26-997^{a}15] 515b-d; BK IV, CH 3 524b-525a; BK XI, CH 1 [1059^{a}23-26] 587a

20 AQUINAS: *Summa Theologica*, PART I-II, Q 94, A 2, ANS 221d-223a

31 DESCARTES: *Discourse*, PART IV, 52a / *Objections and Replies*, DEF III 130b; AXIOM V 131d-132a

31 SPINOZA: *Ethics*, PART II, PROP 10, SCHOL 376d-377a; PROP 37-40 386b-388b; PROP 44, COROL 2 390a

35 LOCKE: *Human Understanding*, BK IV, CH VII, SECT 10-11 339b-342d

42 KANT: *Pure Reason*, 15c-16c; 59c-107b / *Pref. Metaphysical Elements of Ethics*, 367d-368a / *Judgement*, 543d-544a; 560c; 562a-d; 600d-601d; 603b-c

46 HEGEL: *Philosophy of Right*, PREF, 6c

53 JAMES: *Psychology*, 302a-b; 671a-672a; 852a; 862a-866a; 873a-874a; 881b-886a esp 881b-882a, 884b-886a; 890a

54 FREUD: *New Introductory Lectures*, 877b-c

2. The kinds of principles in the order of knowledge

2a. The origin of knowledge in simple apprehensions

2a(1) Sensations or ideas as principles

7 PLATO: *Symposium*, 167a-b / *Phaedo*, 228a-230c / *Republic*, BK VII, 392b-393b / *Theaetetus*, 517b-536b / *Seventh Letter*, 810d

8 ARISTOTLE: *Posterior Analytics*, BK I, CH 18 111b-c / *Metaphysics*, BK I, CH 1 [980^{a}28-^{b}24] 499a

12 LUCRETIUS: *Nature of Things*, BK I [422-425] 6b; [693-700] 9c; BK II [434-436] 20c; BK IV [353-521] 48d-51a esp [469-521] 50b-51a

19 AQUINAS: *Summa Theologica*, PART I, Q 12, A 12, ANS 60d-61c; Q 17, A 1, ANS 100d-101d; Q 18, A 2, ANS 105c-106b; Q 84, A 6 447c-449a; A 8, ANS and REP 1 450b-451b; PART I-II, Q 14, A 6, ANS 680c-681a

23 HOBBES: *Leviathan*, PART I, 49a

28 GILBERT: *Loadstone*, BK V, 105c

28 HARVEY: *On Animal Generation*, 332a-335c esp 334c-d

35 LOCKE: *Human Understanding*, BK I, CH I, SECT 15 98d-99a; BK II, CH I, SECT 1-8 121a-123a esp SECT 2 121b-c; SECT 23-25 127b-d esp SECT 24 127b-c; CH II, SECT 2 128a-b; CH VII, SECT 10 133a-b; CH XIII, SECT 1-6 148d-149d esp SECT 2 149a; CH XIV, SECT 2 155b-c; SECT 27 160d-161a; SECT 30-31 161c-162a; CH XV, SECT 2-3 162c-d; CH XVII, SECT 22-CH XVIII, SECT 1 173d-174a; CH XVIII, SECT 6 174c-d; CH XXII, SECT 9 202c-203a; BK III, CH I, SECT 5 252b-c; CH IV, SECT 12-14 262b-263a

35 BERKELEY: *Human Knowledge*, INTRO 405a-412a,c passim, esp SECT 4 405c-d, SECT 17 409d-410a

35 HUME: *Human Understanding*, SECT II 455b-457b; SECT VII, DIV 49 471c-d

42 KANT: *Pure Reason*, 14a-22a,c; 66d-72c esp 69c-72c; 101b-107b

53 JAMES: *Psychology*, 452a-459b esp 453b-454a, 455a-457a; 480a

54 FREUD: *Ego and Id*, 701d

2a(2) Definitions as principles

7 PLATO: *Phaedrus*, 134b-d; 140a-b / *Meno*, 174a-179b / *Theaetetus*, 544c-549d / *Seventh Letter*, 809c-810d

8 ARISTOTLE: *Posterior Analytics* 97a-137a,c passim, esp BK I, CH 3 [72^{b}18-24] 99b-c, CH 10 [76^{b}35-77^{a}4] 105c-d, CH 22 [84^{a}6-^{b}2] 114d-115b, CH 23 [84^{b}19-85^{a}3] 115c-116a, BK II, CH 3-10 123c-128d / *Topics*, BK VII, CH 3 [153^{a}6-11] 208a-b; BK VIII, CH 3 [158^{a}31-159^{a}2] 214d-215c / *Metaphysics*, BK III, CH 2 [996^{b}18-21] 515b; BK IV, CH 7 [1012^{a}18-24] 532a-b; CH 8 [1012^{b}5-8] 532c; BK VII, CH 10 [1036^{a}1-8] 559b-c; BK XIII, CH 4 [1078^{b}17-30] 610b-c / *Soul*, BK I, CH 1 [402^{b}15-403^{a}2] 631d-632a

19 AQUINAS: *Summa Theologica*, PART I, Q 2, A, 2 REP 2 11d-12c; Q 17, A 3, REP 1-2 102d-103c; Q 58, A 5 303c-304c; Q 85, A 6 458d-459c

20 AQUINAS: *Summa Theologica*, PART I-II, Q 94, A 2, ANS 221d-223a

23 HOBBES: *Leviathan*, PART I, 56b-d; 58d-59c; 65d; PART IV, 269b-c

31 DESCARTES: *Objections and Replies*, 128c

33 PASCAL: *Geometrical Demonstration*, 430b-431b

35 LOCKE: *Human Understanding*, BK III, CH IX, SECT 15-16 288d-289c; CH XI, SECT 15-17 303b-304a; BK IV, CH III, SECT 20, 319b

42 KANT: *Pure Reason*, 215b-217a
46 HEGEL: *Philosophy of Right*, INTRO, par 2 9b-10a
54 FREUD: *Instincts*, 412a-b

2a(3) Indefinables as principles of definition

7 PLATO: *Theaetetus*, 544c-547c
8 ARISTOTLE: *Metaphysics*, BK I, CH 9 [992^{b}24-993^{a}1] 511a-b; BK II, CH 2 [994^{b}16-27] 513a-b; BK V, CH 3 [1014^{b}3-13] 534d; BK VIII, CH 3 [1043^{b}28-33] 568b
33 PASCAL: *Geometrical Demonstration*, 431b-434a; 442a-443b
35 LOCKE: *Human Understanding*, BK II, CH II, SECT 2 128a-b; CH VII, SECT 10 133a-b; CH XII 147b-148d; CH XVIII, SECT 1 174a; SECT 6 174c-d; BK III, CH IV, SECT 12-14 262b-263a
42 KANT: *Pure Reason*, 215d-216c
44 BOSWELL: *Johnson*, 82b

2b. Propositions or judgments as principles

2b(1) Immediate truths of perception: direct sensitive knowledge of appearances; evident particular facts

8 ARISTOTLE: *Posterior Analytics*, BK I, CH 18 111b-c; CH 23 [84^{b}19-85^{a}1] 115c-116a; BK II, CH 2 [90^{a}24-30] 123b-c; CH 19 136a-137a,c / *Heavens*, BK III, CH 7 [306^{a}1-18] 397b-c / *Metaphysics*, BK I, CH 1 [981^{b}10-13] 499d-500a; CH 9 [992^{b}24-993^{a}1] 511a-b; BK IV, CH 5 [1010^{b}14-26] 530b-c; BK VII, CH 10 [1036^{a}1-8] 559b-c; BK XI, CH 6 [1062^{b}33-1063^{a}9] 591a-b
9 ARISTOTLE: *Ethics*, BK I, CH 4 [1095^{a}30-^{b}12] 340c-d; CH 7 [1098^{a}35-^{b}3] 343d; BK II, CH 9 [1109^{b}20-23] 355c; BK III, CH 3 [1112^{b}34-1113^{a}2] 358d-359a; BK VI, CH 11 [1143^{a}25-^{b}6] 392d-393a; BK VII, CH 3 [1147^{a}25-^{b}6] 397c-d; BK X, CH 1 [1172^{a}34-^{b}7] 426b-c; CH 8 [1179^{a}16-23] 433d-434a
12 LUCRETIUS: *Nature of Things*, BK I [693-700] 9c; BK IV [469-521] 50b-51a
19 AQUINAS: *Summa Theologica*, PART I-II, Q 14, A 6, ANS 680c-681a
28 HARVEY: *On Animal Generation*, 332a-335c
31 DESCARTES: *Objections and Replies*, 229d-230d
35 LOCKE: *Human Understanding*, BK I, CH I, SECT 15-19 98d-100c esp SECT 19 100b-c; SECT 23 101b-102a; BK IV, CH I, SECT 4 307b-c; CH II, SECT 1 309b-d; CH III, SECT 21 319c; CH VII, SECT 4 337b-338b; SECT 9-10 338d-340a; SECT 11, 342c-d; CH XI 354c-358c; CH XII, SECT 3 358d-359c
35 HUME: *Human Understanding*, SECT V, DIV 37 465c-466a
42 KANT: *Pure Reason*, 66d-72c esp 67d-68a / *Practical Reason*, 351c
43 MILL: *Utilitarianism*, 445d-446a; 461c
53 JAMES: *Psychology*, 867a-868b

2b(2) Immediate truths of understanding: axioms or self-evident truths; *a priori* judgments as principles

8 ARISTOTLE: *Posterior Analytics*, BK I, CH 2 [72^{a}7-9] 98c; [72^{a}15-19] 98c-d; CH 3 99b-100a; CH 15 109a-b; BK II, CH 9 128a-b / *Metaphysics*, BK III, CH 2 [996^{b}26-997^{a}14] 515b-d; BK IV, CH 3 [1005^{b}23-34] 524d-525a
9 ARISTOTLE: *Ethics*, BK VI, CH 6 389d; CH 8 [1142^{a}25-29] 391b-c; CH 11 [1143^{a}25-^{b}13] 392d-393a / *Rhetoric*, BK I, CH 2 [1356^{b}26-28] 596b
19 AQUINAS: *Summa Theologica*, PART I, Q 2, A 1, ANS 10d-11d; Q 17, A 3, REP 2 102d-103c; Q 84, A 3, REP 3 443d-444d; Q 85, A 6, ANS 458d-459c; Q 87, A 1, REP 1 465a-466c; Q 117, A 1, ANS and REP 1,3 595d-597c; PART I-II, Q 1, A 4, REP 2 612a-613a; A 5, ANS 613a-614a
20 AQUINAS: *Summa Theologica*, PART I-II, Q 57, A 2 36a-37b; Q 90, A 2, REP 3 206b-207a; Q 91, A 3, ANS 209d-210c; Q 94, A 2, ANS 221d-223a; A 4, ANS 223d-224d; PART II-II, Q 8, A 1, REP 2 417a-d
25 MONTAIGNE: *Essays*, 260c-261a
30 BACON: *Advancement of Learning*, 61d
31 DESCARTES: *Rules*, III, 4a-d; IV, 5c-d; 6d; VI, 8d-9a; VIII, 13c-d; XII, 23c / *Discourse*, PART IV, 51b-52a / *Meditations*, V, 95a-96a / *Objections and Replies*, 123a-b; 125a-b; 224b,d
33 PASCAL: *Pensées*, I 171a-172a
35 LOCKE: *Human Understanding*, BK I 95b,d-121a,c esp CH I, SECT 15-19 98d-100c, SECT 23 101b-102a, CH II, SECT 21-27 111a-112c, CH III, SECT 23 119b-120a; BK IV, CH I, SECT 4 307b-c; CH II, SECT 1 309b-d; SECT 7-8 310d-311a; CH VII 337a-344d esp SECT 1 337a, SECT 10-11 339b-342d; CH IX, SECT 2-3 349a-c; CH XII, SECT 1-6 358c-360a; SECT 12, 362b c; SECT 15 363a-b; CH XVII, SECT 14-17 378c-379c; CH XX, SECT 7-10 390d-392a
42 KANT: *Pure Reason*, 31a-d; 64d-93c esp 64d-66d, 68a-74b, 85d-88a; 211c-218d; 225a-227a / *Fund. Prin. Metaphysic of Morals*, 268b-d; 279c-d / *Practical Reason*, 295b-d; 329d-330c / *Judgement*, 542d-543a
43 DECLARATION OF INDEPENDENCE: [7-15] 1a-b
43 FEDERALIST: NUMBER 31, 103c-104a; NUMBER 83, 244b-c
43 MILL: *Utilitarianism*, 445d-447a; 458d-459c
53 JAMES: *Psychology*, 319b-320a; 869a-879b passim, esp 869a-870a, 872b

2b(3) Constitutive and regulative principles: the maxims of reason

42 KANT: *Pure Reason*, 72c-74b esp 73c-74a; 109d-112d; 194b-c; 199c-209d esp 199c-200c, 201d-202a, 206a-207b / *Practical Reason*, 343a; 349b-355d / *Intro. Metaphysic of Morals*, 390b; 392b-d / *Judgement*, 550a-551a,c; 562a-d; 570b-572c; 577b; 578a-d

3. First principles or axioms in philosophy, science, dialectic

3a. Principles and demonstration

3a(1) The indemonstrability of axioms: natural habits of the mind

8 ARISTOTLE: *Prior Analytics*, BK II, CH 16 [64b28–38] 85c / *Posterior Analytics*, BK I, CH 3 99b-100a / *Metaphysics*, BK III, CH 2 [996b 26–997a14] 515b-d; BK IV, CH 4 [1005b35–1006a12] 525a-b; BK XI, CH 5 [1061b34–1062a5] 590a-b / *Soul*, BK I, CH 3 [407a22–30] 636d-637a

9 ARISTOTLE: *Ethics*, BK VI, CH 3 388b-c; CH 6 389d; CH 11 [1143a25–b13] 392d-393a

19 AQUINAS: *Summa Theologica*, PART I, Q 14, A 1, REP 2 75d-76c; Q 16, A 6, REP 1 98b-d; Q 17, A 3, REP 2 102d-103c; Q 79, A 12 425c-426b; PART I-II, Q 1, A 4, REP 2 612a-613a; A 5, ANS 613a-614a

20 AQUINAS: *Summa Theologica*, PART I-II, Q 53, A 1, ANS 19d-21a; Q 57, A 2, ANS and REP 2 36a-37b; Q 94, A 1 221a-d

30 BACON: *Advancement of Learning*, 56c-59c

33 PASCAL: *Geometrical Demonstration*, 440b

35 LOCKE: *Human Understanding*, BK I, CH 1, SECT 10-11 97c-98a; CH III, SECT 23 119b-120a; BK IV, CH XI, SECT 1-10 354c-357b passim, esp SECT 10 357a-b

42 KANT: *Pure Reason*, 66d-72c esp 67c-69c; 211c-218d / *Judgement*, 542d-543a

43 FEDERALIST: NUMBER 31, 103c-104a

43 MILL: *Utilitarianism*, 445d-447a; 461c; 465a-b

53 JAMES: *Psychology*, 851a-890a esp 851a-852a, 879b-882a, 889a-b

3a(2) The indirect defense of axioms

8 ARISTOTLE: *Metaphysics*, BK IV, CH 4–8 525a-532d; BK XI, CH 5–6 590a-592b

3a(3) The dependence of demonstration on axioms: the critical application of the principles of identity and contradiction

7 PLATO: *Euthydemus*, 72d-73b / *Cratylus*, 112a / *Republic*, BK IV, 350d-351b

8 ARISTOTLE: *Posterior Analytics*, BK I, CH 1–3 97a-100a; CH 7 [75a38–b7] 103c; CH II 105d-106b; CH 19–23 111c-116a; CH 32 [88a36–b4] 120d / *Topics*, BK VIII, CH 3 [158a31–b4] 214d-215a / *Metaphysics*, BK III, CH 2 [996b26–997a 14] 515b-d; BK IV, CH 3 [1005a18–27] 524b; CH 4 [1005b35–1006a12] 525a-b; CH 6 [1011a3–14] 530d; BK V, CH 5 [1015b6–9] 535d-536a; BK XI, CH 6 [1063b7–12] 591d

9 ARISTOTLE: *Ethics*, BK VI, CH 3 388b-c; CH 6 389d; CH II [1143a25–b13] 392d-393a / *Rhetoric*, BK I, CH 2 [1356b26–28] 596b

11 EUCLID: *Elements*, BK I, COMMON NOTIONS 2a

19 AQUINAS: *Summa Theologica*, PART I, Q 14, A 7 81d-82b; Q 17, A 3, REP 1-2 102d-103c; Q 36, A 3, REP 4 194c-195d; Q 84, A 3, REP 3 443d-444d; Q 85, A 6 458d-459c; PART I-II, Q 1, A 4, REP 2 612a-613a

20 AQUINAS: *Summa Theologica*, PART I-II, Q 90, A 2, REP 3 206b-207a; Q 94, A 2, ANS 221d-223a

28 HARVEY: *On Animal Generation*, 333d-334d esp 334a

30 BACON: *Advancement of Learning*, 56c-59d

31 DESCARTES: *Discourse*, PART II, 46c-47a / *Meditations*, III, 82b-d; V, 95b-96a / *Objections and Replies*, 123a-b; 125a-b; 224b,d

31 SPINOZA: *Ethics*, PART II, PROP 37–47 386b-391a esp PROP 40, SCHOL 1-2 387b-388b

35 LOCKE: *Human Understanding*, BK IV, CH II, SECT 1, 309d; SECT 7-8 310d-311a; CH VII 337a-344d esp SECT 10-11 339b-342d

42 KANT: *Pure Reason*, 17d-18d; 64d-65c; 68a-69c; 174b-d; 211c-218d

43 FEDERALIST: NUMBER 31, 103c-104a

44 BOSWELL: *Johnson*, 82b

46 HEGEL: *Philosophy of Right*, ADDITIONS, 3 116a

3b. Principles and induction: axioms as intuitive inductions from experience; stages of inductive generalization

8 ARISTOTLE: *Prior Analytics*, BK II, CH 23 90a-c / *Posterior Analytics*, BK I, CH 18 111b-c; BK II, CH 2 [90a24–30] 123b-c; CH 7 [92a34–b1] 126b; CH 19 136a-137a,c

9 ARISTOTLE: *Ethics*, BK VI, CH 3 388b-c; CH 6 389d; CH II [1143a25–b13] 392d-393a

28 HARVEY: *On Animal Generation*, 333d-334d esp 334c-d

30 BACON: *Advancement of Learning*, 56c-59c; 96d-97a / *Novum Organum* 105a-195d esp PREF 105a-106d, BK I, APH 11-26 107d-108d, APH 36-38 109b-c, APH 63 113d-114a, APH 66 114d-115c, APH 69-70 116a-117a, APH 94 126a-b, APH 103-106 127d-128c, BK II, APH 1-10 137a-140d, APH 15-16 149a-b, APH 20-22 150d-153c, APH 52 194c-195d

31 DESCARTES: *Objections and Replies*, 123a-b; 167c-d

35 LOCKE: *Human Understanding*, BK I, CH III, SECT 25, 120d

35 HUME: *Human Understanding*, SECT I, DIV 2 451b-c; DIV 9, 454d; SECT IV, DIV 26 460b-c

42 KANT: *Pure Reason*, 66d-72c; 217a-c

43 MILL: *Utilitarianism*, 446a; 475b,d [fn 1]

46 HEGEL: *Philosophy of History*, PART IV, 361a-b

3c. Axioms in relation to postulates, hypotheses, or assumptions

3c(1) The distinction between first principles in general, or common notions, and the principles of a particular subject matter or science

7 PLATO: *Republic*, BK VI, 383d-388a esp 386d-388a

8 ARISTOTLE: *Posterior Analytics*, BK I, CH 10 104d-105d; CH 11 [77^{a}26-35] 106b; CH 32 120c-121b / *Topics*, BK I, CH 2 [101^{a}37-^{b}4] 144a / *Heavens*, BK III, CH 7 [306^{a}1-18] 397b-c / *Metaphysics*, BK IV, CH 3 [1005^{b}15-18] 524d / *Soul*, BK I, CH 1 [402^{a}17-23] 631b

9 ARISTOTLE: *Rhetoric*, BK I, CH 2 [1358^{a}3-33] 597d-598b

30 BACON: *Advancement of Learning*, 40a-48d esp 40a-41b, 43a-c, 44c-45a

35 BERKELEY: *Human Knowledge*, SECT 118 436b-c

43 MILL: *Utilitarianism*, 445b-c

3c(2) The difference between axioms and assumptions, hypotheses and principles, as a basis for the distinction between knowledge and opinion, or science and dialectic

7 PLATO: *Republic*, BK VI-VII, 383d-398c esp BK VII, 396d-398c

8 ARISTOTLE: *Posterior Analytics*, BK I, CH 2 97d-99a; CH 11 [77^{a}22-35] 106b / *Topics*, BK VIII, CH 3 [158^{a}31-^{b}4] 214d-215a / *Physics*, BK VIII, CH 1 [252^{a}23-^{b}7] 336a-b / *Metaphysics*, BK IV, CH 2 [1004^{b}18-27] 523d

9 ARISTOTLE: *Ethics*, BK I, CH 3 [1094^{b}11-28] 339d-340a / *Rhetoric*, BK I, CH 2 [1358^{a}3-33] 597d-598b

19 AQUINAS: *Summa Theologica*, PART I, Q 12, A 7, ANS and REP 2 56a-57b; A 13, REP 3 61c-62b; Q 47, A 1, REP 3 256a-257b; Q 82, A 2, ANS 432d-433c; Q 83, A 1, ANS 436d-438a

20 AQUINAS: *Summa Theologica*, PART I-II, Q 51, A 3 14b-15a; Q 67, A 3, ANS 83b-84d; PART II-II, Q 1, A 4, ANS 382c-383b; PART III, Q 9, A 3, REP 2 765b-766b

23 HOBBES: *Leviathan*, PART I, 65b-d

25 MONTAIGNE: *Essays*, 260c-261a

30 BACON: *Advancement of Learning*, 56c-59b

31 DESCARTES: *Rules*, II 2a-3b

34 HUYGENS: *Light*, PREF, 551b-552a

35 LOCKE: *Human Understanding*, BK IV, CH XVII, SECT 2 371d-372b; SECT 15-17 378d-379c

42 KANT: *Pure Reason*, 217a-218c; 240b-243c / *Judgement*, 600d-604b

3c(3) The distinction and order of the sciences according to the character of their principles

7 PLATO: *Republic*, BK VI, 386d-388a; BK VII, 391b-398c

8 ARISTOTLE: *Metaphysics*, BK VI, CH 1 [1025^{b}1-18] 547b,d; BK XI, CH 3 [1061^{a}29-^{b}4] 589c; CH 4 [1061^{b}17-28] 589d-590a; CH 7 [1063^{b}36-1064^{a}9] 592b; BK XIII, CH 2 [1077^{b}11]-CH 3 [1078^{a}31] 609a-d

9 ARISTOTLE: *Ethics*, BK I, CH 7 [1098^{a}20-^{b}8] 343c-344a / *Rhetoric*, BK I, CH 2 [1358^{a}3-33] 597d-598b

19 AQUINAS: *Summa Theologica*, PART I, Q 1, A 2, ANS and REP 1 4a-c; A 5 5c-6a; A 6, REP 1-2 6b-7a

23 HOBBES: *Leviathan*, PART I, 71c-d; 72a-d; PART II, 163a-b

30 BACON: *Advancement of Learning*, 39d-41b

31 DESCARTES: *Rules*, II 2a-3b / *Discourse*, PART I, 43d-44a / *Meditations*, I, 76c / *Objections and Replies*, 128d-129a / *Geometry*, BK II, 304a-b

35 HUME: *Human Understanding*, SECT IV, DIV 20-21 458a-c; DIV 30, 462a

42 KANT: *Pure Reason*, 15c-16c; 17d-19a; 64d-65c; 68a-69c; 215d-217c / *Fund. Prin. Metaphysic of Morals*, 253a-d / *Practical Reason*, 351b-352c / *Intro. Metaphysic of Morals*, 388a-c / *Judgement*, 578a-b

43 FEDERALIST: NUMBER 31, 103c-104a

43 MILL: *Utilitarianism*, 445b-c

53 JAMES: *Psychology*, xiiib-xiva; 884b-886a

54 FREUD: *Narcissism*, 400d-401a / *Instincts*, 412a-b

4. First principles in the practical order: the principles of action or morality; the principles of the practical reason

7 PLATO: *Gorgias*, 262a-263c; 280c-d

9 ARISTOTLE: *Ethics*, BK I, CH 3 339d-340b passim; CH 7 [1098^{a}25-^{b}8] 343d-344a; BK VI, CH 5 389a-c passim; CH 11 [1143^{a}25-^{b}13] 392d-393a; BK VII, CH 8 [1151^{a}11-19] 401d-402a

12 EPICTETUS: *Discourses*, BK I, CH 22 127c-128c; BK III, CH 2 177c-178d; CH 10 185d-187a

12 AURELIUS: *Meditations*, BK VIII, SECT 1 285a-b

18 AUGUSTINE: *City of God*, BK VIII, CH 8 270a-d; BK XIX 507a-530a,c passim

20 AQUINAS: *Summa Theologica*, PART I-II, Q 91, A 3, ANS 209d-210c

23 HOBBES: *Leviathan*, PART I, 86c-96b; PART II, 140b; 153c-154a

31 SPINOZA: *Ethics*, PART IV, PROP 18, SCHOL 429a-d

35 LOCKE: *Human Understanding*, BK I, CH II-III 103d-121a,c esp CH II, SECT 3 104b-d, SECT 21-27 111a-112c

38 ROUSSEAU: *Inequality*, 330d-331b; 343d-345c

42 KANT: *Pure Reason*, 190c-d; 234c-240b esp 235a-b, 238c-239a / *Fund. Prin. Metaphysic of Morals* 253a-287d esp 253d-254d, 256c-257d, 258d-259a, 260a-261d, 262a-265a, 266b-268a, 268d [fn 2], 269c, 270d-271a, 273d-280b, 280d-281a, 282b-283d, 286a-287d / *Practical Reason* 291a-361d esp 291b-293b, 293c-d [fn 3], 298a-300a, 304d-307d, 310b-311d, 318c-321b, 325a-328a, 329a-331a, 338c-355d / *Pref. Metaphysical Elements of Ethics*, 365b-366d; 367c; 369c-373b / *Intro. Metaphysic of Morals* 383a-394a,c esp 386d-

(4. First principles in the practical order: the principles of action or morality; the principles of the practical reason.)

388a, 392b / *Science of Right*, 397a-402a / *Judgement*, 463a-467a; 478a-479d; 584d-587a; 588b [fn 2]; 594c-596c

43 FEDERALIST: NUMBER 31, 103c-104a

43 MILL: *Utilitarianism* 445a-476a,c passim, esp 445a-447b

49 DARWIN: *Descent of Man*, 316a-317a; 592d

53 JAMES: *Psychology*, 886b-888a

54 FREUD: *General Introduction*, 592d-593a / *Beyond the Pleasure Principle*, 639a-640c; 662c-663b esp 663a / *Civilization and Its Discontents*, 772a-b

4a. Ends as principles, and last ends as first principles: right appetite as a principle in the practical order

7 PLATO: *Gorgias*, 262a-263c; 280c-d / *Republic*, BK VI-VII, 383d-398c esp BK VII, 397a-398c

8 ARISTOTLE: *Metaphysics*, BK I, CH 2 [982^{b}4-7] 500d; BK II, CH 2 [994^{a}8-10] 512b; [994^{b}9-16] 512d-513a; BK III, CH 2 [996^{a}21-^{b}13] 514d-515a; BK V, CH 1 [1013^{a}20-24] 533b; BK VII, CH 7 [1032^{a}28-^{b}29] 555b-d; BK IX, CH 8 [1050^{a}3-^{b}6] 575d-576b; BK XII, CH 10 [1075^{a}12-24] 605d-606a

9 ARISTOTLE: *Parts of Animals*, BK I, CH 1 [639^{b}10-640^{a}12] 161d-162b / *Motion of Animals*, CH 6 [700^{b}4]-CH 7 [701^{a}39] 235d-236d / *Ethics*, BK I, CH 1-4 339a-340d esp CH 4 [1095^{a}30-^{b}12] 340c-d; CH 7 [1098^{a}35-^{b}8] 343d-344a; CH 12 [1101^{b}34-1102^{a}4] 347b; BK II, CH 9 [1109^{b}20-23] 355c; BK III, CH 3 [1112^{b}12-1113^{a}2] 358c-359a; BK VI, CH 2 387d-388b; CH 5 389a-c passim; CH 8 [1142^{a}12-31] 391b-c; CH 9 [1142^{b}17-35] 391d-392b; CH 11 [1143^{a}25-^{b}13] 392d-393a; CH 12 [1144^{a}31-37] 394a; CH 13 [1144^{b}30-1145^{a}6] 394c-d; BK VII, CH 3 [1147^{a}25-^{b}6] 397c-d; CH 8 [1151^{a}15-19] 402a; BK X, CH 6-8 430d-434a / *Politics*, BK VII, CH 13 [1331^{b}24-37] 536b-c / *Rhetoric*, BK I, CH 6-7 602d-607d

12 EPICTETUS: *Discourses*, BK III, CH 13-14 188b-190a

18 AUGUSTINE: *City of God*, BK X, CH 1, 298b,d / *Christian Doctrine*, BK I, CH 3-4 625b-c; CH 35 634c-d

19 AQUINAS: *Summa Theologica*, PART I, Q 18, A 3, ANS 106b-107c; Q 19, A 2, REP 2 109c-110b; A 5, ANS 112d-113c; Q 22, A 1, REP 3 127d-128d; Q 25, A 5, ANS 147d-149a; Q 60, A 2, ANS 311a-d; Q 82, AA 1-2 431d-433c; Q 113, A 1, REP 2 576a-d; PART I-II, Q 1 609a-615c; Q 8, A 2, ANS 656a-d; Q 9, A 3, ANS 659c-660a; Q 11, A 3 667d-668d; Q 12, AA 2-4 670b-672a; Q 13, A 3, ANS 674c-675a; A 6, REP 1 676c-677b; Q 14, A 2 678b-c; A 6, ANS 680c-681a; Q 15, A 3 682c-683b; Q 16, A 3 685b-686a; Q 34, AA 3-4 770c-772b

20 AQUINAS: *Summa Theologica*, PART I-II, Q 56, A 2, REP 3 30c-31a; A 3, ANS 31a-32b; A 4, REP 4 32b-33c; Q 57, A 4, ANS 38a-39a; A 5, ANS and REP 3 39a-40a; Q 58, A 3, REP 2 43b-44a; A 4, ANS and REP 1 44a-d; A 5 44d-45c; Q 65, A 1, ANS and REP 3-4 70b-72a; A 2, ANS and REP 3 72a-d; A 3, ANS and REP 1 72d-73d; Q 90, A 2, REP 3 206b-207a; Q 91, A 3, ANS 209d-210c; PART II-II, Q 26, A 1, ANS and REP 1 510c-511a; Q 27, A 6, ANS 524c-525c; Q 181, A 2 617d-618c

23 HOBBES: *Leviathan*, PART I, 76c-d; PART IV, 272c

30 BACON: *Advancement of Learning*, 69d-70a

31 SPINOZA: *Ethics*, PART I, APPENDIX 369b-372d; PART IV, PREF 422b,d-424a; DEF 7 424b

33 PASCAL: *Pensées*, 98 190b / *Geometrical Demonstration*, 440b

35 LOCKE: *Human Understanding*, BK II, CH XXI, SECT 52-53 191d-192b; SECT 62 194c-d

42 KANT: *Pure Reason*, 234c-240b esp 235a-b, 236d-237a, 238c-239a / *Fund. Prin. Metaphysic of Morals*, 253d-254d; 256a-b; 257c-d; 260a-c; 266a-267d; 271d-279d esp 274d-275b; 282b-283d; 286c-287d / *Practical Reason*, 318c-321b esp 320c-321b; 327d-329a; 338c-355d / *Pref. Metaphysical Elements of Ethics*, 367c / *Judgement*, 477b-c; 478a-479d; 584d-587a; 588b [fn 2]; 591b-592a; 594b-595c

43 MILL: *Utilitarianism*, 445a-447b; 456a-457b; 461c-464d; 475b,d [fn 1]

51 TOLSTOY: *War and Peace*, BK XIII, 586d-587a

53 JAMES: *Psychology*, 796a-b

4b. The natural moral law and the categorical imperative

12 AURELIUS: *Meditations*, BK III, SECT 11 262a-b; BK IV, SECT 4 264a; BK VII, SECT 55 283b-c

19 AQUINAS: *Summa Theologica*, PART I, Q 79, A 12 425c-426b

20 AQUINAS: *Summa Theologica*, PART I-II, Q 91, A 2 208d-209d; A 3, ANS 209d-210c; Q 94 220d-226b; Q 95, A 2 227c-228c; A 4 229b-230c

23 HOBBES: *Leviathan*, PART I, 86b-87a; 91a; 95c-96b; PART II, 134c; PART III, 165a; CONCLUSION, 282a; 283c

30 BACON: *Advancement of Learning*, 96a-c

38 ROUSSEAU: *Inequality*, 330d-331b; 343d-345c

42 KANT: *Pure Reason*, 190c-d; 235a-b / *Fund. Prin. Metaphysic of Morals*, 253d-254d; 260a-261d; 265c-266d; 268c-270c esp 269c; 273d-287d esp 277d-279d, 282a-287b / *Practical Reason*, 297a-314d esp 307d-314d; 321b-329a esp 327a-329a / *Pref. Metaphysical Elements of Ethics*, 373d / *Intro. Metaphysic of Morals*, 386b-387a,c; 388b-c; 390b,d-391c; 392b-393a / *Science of Right*, 400b,d-402a; 416b-417b / *Judgement*, 571c-572a; 594b-595c; 604d-606d esp 605d-606b [fn 2], 606a-d

43 MILL: *Utilitarianism*, 445d-446d; 458b-459c; 464d-465b; 469d-470b
46 HEGEL: *Philosophy of Right*, INTRO, par 29 19a-b; PART II, par 135 47b-d; ADDITIONS, 84 129b; 86 129c
49 DARWIN: *Descent of Man*, 304a

5. The skeptical denial of first principles or axioms: the denial that any propositions elicit the universal assent of mankind

7 PLATO: *Euthydemus*, 72d-73a / *Theaetetus*, 532b-c
8 ARISTOTLE: *Posterior Analytics*, BK I, CH 3 [72^{b}5-18] 99b / *Metaphysics*, BK IV, CH 5-6 528c-531c; BK X, CH 1 [1053^{a}31-^{b}3] 580a; CH 6 [1057^{a}7-11] 584b; BK XI, CH 6 [1062^{b}12-1063^{b} 14] 590d-592a
12 LUCRETIUS: *Nature of Things*, BK IV [469-477] 50b
12 EPICTETUS: *Discourses*, BK II, CH 20, 164c
18 AUGUSTINE: *City of God*, BK XIX, CH 18 523a-b
25 MONTAIGNE: *Essays*, 259d-261a; 271b-272d; 281a-284c
30 BACON: *Advancement of Learning*, 57d-58b
35 BERKELEY: *Human Knowledge*, INTRO, SECT 1-3 405a-c
35 HUME: *Human Understanding*, SECT IV, DIV 26 460b-c; SECT XII 503c-509d
42 KANT: *Pure Reason*, 224a-227a / *Practical Reason*, 294c-295d

CROSS-REFERENCES

For: Another discussion of principle in relation to element and cause, *see* ELEMENT 2.

The consideration of the laws of identity and contradiction as both logical and metaphysical principles, *see* LOGIC 1a; METAPHYSICS 3c; OPPOSITION 2a; TRUTH 3c; and for the treatment of contraries as principles, *see* CHANGE 2b; DIALECTIC 3d; OPPOSITION 2b, 3a.

Discussions bearing on sensations, ideas, and definitions as principles of knowledge, *see* DEFINITION 1c, 5; IDEA 1c, 2f; KNOWLEDGE 3; MEMORY AND IMAGINATION 1a; SENSE 5a.

The analysis of evident or self-evident truths, or of immediate as opposed to demonstrated propositions, *see* JUDGMENT 8a; KNOWLEDGE 6c(2); SENSE 4b; TRUTH 3b(3); and for the distinction between analytic and synthetic judgments *a priori*, and between constitutive and regulative principles, *see* IDEA 1d; JUDGMENT 8b-8d.

The conception of axiomatic knowledge as a natural habit of the mind and as one of the intellectual virtues, *see* HABIT 5c; VIRTUE AND VICE 2a(2).

The dependence of demonstration on axioms or self-evident truths, *see* INFINITY 2c; REASONING 5b(1); TRUTH 3c; and for the nature of *reductio ad absurdum* arguments in defense of axioms, *see* REASONING 4d.

Induction as the source of axioms, *see* INDUCTION 3.

Other discussions of the distinction between axioms and postulates, hypotheses, or assumptions, and for the bearing of this distinction on the difference between knowledge and opinion, or science and dialectic, *see* DIALECTIC 2a(2), 4; HYPOTHESIS 3-4; KNOWLEDGE 4b; MATHEMATICS 3a; OPINION 2c; TRUTH 4c; WILL 3b(1).

The principles of the several theoretic sciences, *see* ASTRONOMY 2b; DEFINITION 6a; LOGIC 1a; MATHEMATICS 3a; MECHANICS 2b; METAPHYSICS 2b, 3c; PHILOSOPHY 3b; PHYSICS 1b, 2a; TRUTH 4c.

The consideration of ends as principles in the practical order or in moral and political science, *see* GOOD AND EVIL 5c; GOVERNMENT 1c; HAPPINESS 3; MIND 9a; NECESSITY AND CONTINGENCY 5a(2); ONE AND MANY 5b; RELATION 5a(2); TRUTH 2c; and for other discussions of the natural moral law or the categorical imperative as the first principle of the practical reason, *see* DUTY 5; LAW 4b-4c; MIND 9a; NECESSITY AND CONTINGENCY 5a(2); PRUDENCE 2c, 3a; WILL 8d.

Other statements of the skepticism which results from denying first principles or axioms, *see* OPINION 3c; TRUTH 7a.

ADDITIONAL READINGS

Listed below are works not included in *Great Books of the Western World*, but relevant to the idea and topics with which this chapter deals. These works are divided into two groups:

I. Works by authors represented in this collection.
II. Works by authors not represented in this collection.

For the date, place, and other facts concerning the publication of the works cited, consult the Bibliography of Additional Readings which follows the last chapter of *The Great Ideas.*

I.

AUGUSTINE. *Answer to Skeptics*
AQUINAS. *Super Boethium de Hebdomadibus*
DESCARTES. *The Principles of Philosophy*, PREF
HEGEL. *Science of Logic*, VOL I, BK II, SECT I, CH 2
J. S. MILL. *A System of Logic*, BK II, CH 6

II.

SEXTUS EMPIRICUS. *Outlines of Pyrrhonism*
DUNS SCOTUS. *Tractatus de Primo Principio* (*A Tract Concerning the First Principle*)
BRUNO. *De la causa, principio, e uno*
SUÁREZ. *Disputationes Metaphysicae*, XII (1), XXII (2)
ARNAULD. *Logic or the Art of Thinking*, CH 6–7
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——. *New Essays Concerning Human Understanding*, BK IV, CH 7–8
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WHEWELL. *The Philosophy of the Inductive Sciences*, VOL I, BK I, CH 4, 6
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HELMHOLTZ. *Popular Lectures on Scientific Subjects*, II
J. H. NEWMAN. *An Essay in Aid of a Grammar of Assent*, CH 4
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——. *Human Knowledge, Its Scope and Limits*, PART VI

Chapter 71: PROGRESS

INTRODUCTION

LIKE the idea of evolution, with which it has some affinity, the idea of progress seems to be typically modern. Anticipations of it may be found in ancient and mediaeval thought, sometimes in the form of implicit denials of the idea. But in explicit formulation, in emphasis and importance, progress, like evolution, is almost a new idea in modern times. It is not merely more prominent in modern discussion; it affects the significance of many other ideas, and so gives a characteristic color or tendency to modern thought.

The idea of evolution affects our conceptions of nature and man. But the theory of evolution is itself affected by the idea of progress. Since it was a major theme at least two centuries before Darwin, progress does not depend for its significance upon the theory of biological evolution. The reverse relationship seems to obtain. The idea of evolution gets some of its moral, social, even cosmic significance from its implication that the general motion in the world of living things, perhaps in the universe, is a progress from lower to higher forms.

Darwin thinks "Von Baer has defined advancement or progress in the organic scale better than anyone else, as resting on the amount of differentiation and specialization of the several parts of a being"—to which Darwin adds the qualification that the organisms must be judged when they have arrived at maturity. "As organisms have become slowly adapted to diversified lines of life, their parts will have become more and more differentiated and specialized for various functions from the advantage gained by the division of physiological labor. The same part appears often to have been modified first for one purpose, and then long afterwards for some other and quite distinct purpose; and thus all the parts are rendered more and more complex. . . . In accordance with this view," Darwin writes, "it seems, if we turn to geological evidence, that organization on the whole has advanced throughout the world by slow and interrupted steps. In the kingdom of the Vertebrata it has culminated in man."

Whether strictly biological evolution has a single or uniform direction may be disputed in the light of evidences of regression and the multiplication of lower as well as higher forms. But Darwin seems to think that since "natural selection works solely by and for the good of each being, all corporeal and mental endowments will tend to progress toward perfection." Whatever the evidence may be, the popular notion of evolution, especially when applied by writers like Herbert Spencer to human society or civilization, connotes progress—the gradual yet steady march toward perfection.

APART FROM THIS APPLICATION of the idea of evolution to man's world, progress seems to be the central thesis in the modern philosophy of history. In the minds of some, the philosophy of history is so intimately connected with a theory of progress that the philosophy of history is itself regarded as a modern development. There seems to be some justification for this view in modern works on the tendency of history which have no ancient counterparts, such as the writings of Vico, Condorcet, Kant, Proudhon, Comte, J. S. Mill, Hegel, and Marx.

These writers do not all define or explain progress in the same way. Nor do they all subscribe to an inviolable and irresistible law of progress which has the character of a divine ordinance, replacing or transforming less optimistic views of providence. But for the most part the moderns are optimists. They either believe in man's perfectibility and in his approach to perfection through his own efforts freely

turned toward the realization of ideals; or they see in the forces of history—whether the manifestations of a world spirit or the pressure of material (*i.e.*, economic) conditions—an inevitable development from less to more advanced stages of civilization, according to a dialectical pattern of conflict and resolution, each resolution necessarily rising to a higher level.

As opposed to the optimism of expecting a continual improvement in all things or an irreversible ascent to new heights, the pessimistic view denies that progress is either the law or the hope of history. It believes rather that everything which goes up must come down. As indicated in the chapter on HISTORY, the theory of cycle after cycle of rise and decline—or even the notion that the golden age is past, that it is never to be regained, and that things are steadily getting worse—prevails more in the ancient than in the modern world.

The modern exceptions to optimism in the philosophy of history are notably Spengler and, to a much less extent, Toynbee. But modern pessimism never seems to reach the intensity of the Preacher's reiteration in Ecclesiastes that "there is no new thing under the sun" and that "all is vanity and vexation of spirit." Nor does the modern theory of cycles of civilization, even in Vico, seem to be as radical as that of the ancients. In his vision of cosmic cycles Lucretius sees the whole world crumbling into atomic dust to be reborn again. Herodotus does not relieve the gloom of his observation that, in the life of cities, prosperity "never continues long in one stay." The eternity of the world means for Aristotle that "probably each art and each science has often been developed as far as possible and has again perished."

LEAVING TO THE chapter on HISTORY the discussion of progress so far as it concerns an explicit philosophy of history, we shall here deal with considerations of progress as they occur in economics, in political theory, in the history of philosophy and the whole intellectual tradition of the arts and sciences.

In this last connection, the great books play a dual role. They provide the major evidence which, on different interpretations, points toward opposite answers to the question whether or not there has been progress in the tradition of western thought. Whatever their readers may think on this subject, the great authors, having read the works of their predecessors, offer their own interpretations of the intellectual tradition. In many cases, especially among the modern writers, their point of departure—even the conception they entertain of the originality and worth of their own contribution—stems from their concern with a deplorable lack of progress, for which they offer new methods as remedies.

Before we enter upon the discussion of economic, political, or intellectual progress, it seems useful to distinguish between the *fact* and the *idea* of progress. When men examine the fact of progress, they look to the past and find there evidence for or against the assertion that a change for the better has taken place in this or that respect. Two things are involved: a study of the changes which have occurred and the judgment—based on some standard of appraisal—that the changes have been for the better. But when men entertain the idea of progress, they turn from the past and present and look to the future. They regard the past merely as a basis for prophecy, and the present as an occasion for making plans to fulfill their prophecies or hopes. The fact of progress belongs to the record of achievement; the idea of progress sets a goal to be achieved.

This distinction seems to be exemplified by the difference between ancient and modern considerations of progress. The ancients observe the *fact* of progress in some particulars—almost never universally. Thucydides, for example, in the opening chapters of his *History*, contrasts the power and wealth of the modern city-states of Greece with "the weakness of ancient times." "Without commerce, without freedom of communication either by land or sea, cultivating no more of their territory than the exigencies of life required, destitute of capital, never planting their land (for they could not tell when an invader might not come and take it all away, and when he did come they had no walls to stop him), thinking that the necessities of daily sustenance could be supplied at one place as well as another, they cared little for shifting their habitation, and consequently neither built large cities nor attained to any other form of greatness."

But Thucydides does not seem to draw from these observations any general idea of progress. He does not concretely imagine a future excelling the Periclean age in the magnitude of its wars and the magnificence of its wealth, as that period dwarfs antiquity. He does not infer that whatever factors worked to cause the advance from past to present may continue to operate with similar results. It might almost be said that he does not think about the future; certainly he does not think of it as rich in promise. "Knowledge of the past," he writes, is "an aid to the interpretation of the future, which in the course of human things must resemble if it does not reflect it."

Adam Smith's thinking about economic progress represents the contrasting modern emphasis upon the future. In one sense, both Thucydides and Smith measure economic progress in the same way, though one writes of the wealth of cities, the other of the wealth of nations. Both Smith and Thucydides judge economic improvement in terms of increasing opulence, the growth of capital reserves, the expansion of commerce, and the enlarged power in war or peace which greater wealth bestows. But Smith, in the spirit of Francis Bacon, seeks to analyze the causes of prosperity in order to make them work for further progress. He is the promoter of progress, not merely the historian who witnesses the beneficial effect on productivity of an increasingly refined division of labor and of the multiplication of machinery.

To know how these things have operated to bring about the opulence of modern nations as compared with the miserable poverty of primitive tribes or even the limited property of ancient cities is to know how to formulate policies which shall still further expand the wealth of nations. For Smith the study of the means and methods by which economic progress has been made serves to determine the policy which is most likely to ensure even greater increments of progress in the future.

MARX APPEARS TO measure economic progress by a different standard. The transition from the slave economies of antiquity through feudal serfdom to what he calls the "wage-slavery" of the industrial proletariat may be accompanied by greater productivity and vaster accumulations of capital stock. But the essential point for him about these successive systems of production is their effect upon the status and conditions of labor. The *Communist Manifesto* notes respects in which, under the capitalist system, the supposedly free workingman is worse off than were his servile ancestors. But if economic progress is conceived as the historically determined approach to the final liberation of labor from its oppressors, then capitalism represents both an advance over feudalism and a stage in the march to communism.

Each successive economic revolution brings mankind nearer to the goal of the ideal or classless economy. Capitalism creates the proletariat—the revolutionary class which is to be that system's own undoing. The overthrow of the landed aristocracy by the bourgeoisie thus prepares the way for the dictatorship of the proletariat, as that in turn liquidates the obstacles to the realization of the perfect communist democracy.

We are not here concerned with the details of this history and prophecy but only with the theory of progress which it involves. In the first place, it seems to set an ultimate goal to progress, while at the same time it makes progress a necessary feature of what is for Marx, as it is for Hegel, the "dialectic of history." Those who think that the inevitability of progress ought to render progress as interminable as history itself, find some inconsistency in this tenet of dialectical materialism, as well as in Hegel's notion of the necessary dialectical stages by which the Absolute Idea reaches perfect realization in the German state. *Can progress be the inner law of history and yet reach its goal before the end of time?*

There may be some answer to this question in a second aspect of the theory of progress which goes with a dialectic of history. The progress which the successive stages of history represent resides in the quality of human institutions rather than in the nature of man. If more economic justice or greater political liberty is achieved, it is not because the later generations of men are born with a nature more disposed to goodness or virtue, but because better institutions have evolved from the conflict of historical forces. Furthermore, according to Marx, man's nature is only partly de-

termined at birth. Part remains to be determined by the social and economic circumstances of his life—by the system of production under which he lives. Hence though institutional progress may arrive at its historical goal with the establishment of the ideal economy, it may be possible for further progress to be made throughout the rest of time by the improvement of men themselves, when at last their natures can develop under ideal circumstances.

WE HAVE NOTED TWO great issues in the characteristically modern discussion of progress. Is the goal of progress definitely attainable, or is its goal an ideal progressively approximated but never realized? Is progress accomplished by the betterment of human institutions or by improvements in the nature of man?

The second question has a critical bearing on the first, especially for those who conceive man as infinitely perfectible. It also relates to the problem of the evolutionist: whether a higher form of life on earth will evolve from man or whether the future belongs to the progressive development of human nature—biologically or culturally. Darwin is unwilling to admit that "man alone is capable of progressive improvement," but he does affirm that man "is capable of incomparably greater and more rapid improvement than is any other animal."

Rousseau, on the other hand, claims that "the faculty of self-improvement" is one distinction between man and brute "which will admit of no dispute." But he also thinks that this faculty is the cause of human decline as well as progress. "A brute, at the end of a few months," he writes, "is all he will ever be during his whole life, and his species, at the end of a thousand years, exactly what it was the first year of that thousand . . . .While the brute, which has acquired nothing and has therefore nothing to lose, still retains the force of instinct, man, who loses, by age or accident, all that his *perfectibility* had enabled him to gain, falls by this means lower than the brutes themselves."

One other issue concerning progress remains to be stated. It raises the question of freedom or necessity in history. Is progress inevitable in the very nature of the case, or does it occur only when men plan wisely and choose well in their efforts to better themselves or the conditions of their lives?

In his *Idea of a Universal History* and his *Principle of Progress*, Kant finds the possibility of progress in man's potentialities for improvement. He regards the realization of this possibility as a work of freedom rather than a manifestation of historical necessity. Political progress may have an ultimate goal—the world republic or federation of states. But this, according to Kant's conclusion in the *Science of Right*, is an impracticable idea, and serves only the regulative purpose of "promoting a continuous *approximation* to Perpetual Peace." Hegel's theory of the progressive realization of the idea of the state in history seems to represent the contrary position on both points. Progress is an historical necessity, and it reaches an historic consummation.

THE CONTRAST BETWEEN ancients and moderns with respect to political progress seems to be the same as that which we observed between Thucydides and Adam Smith with regard to wealth. The ancients assert the superiority of the present over the past, and even trace the stages by which advances have been made from primitive to civilized conditions. But they do not extend the motion they observe into the future. The moderns look to the future as to a fulfillment without which present political activity would be undirected.

According to Aristotle, for example, the state is the last stage in the development of social life which begins with the family. "When several families are united, and the association aims at something more than the supply of daily needs, the first society to be formed is the village." The village or tribal community, in turn, becomes the unit out of which a larger and more truly political community is formed. "When several villages are united in a single complete community, large enough to be nearly or quite self-sufficing, the state comes into existence."

Aristotle sees this development not merely as a progress from smaller and weaker societies to larger and more powerful ones, but also as an advance toward the realization of man's political nature. Absolute or despotic government by the eldest, natural to the family, still persists in the tribe. "This is the reason why the Hellenic

states were originally governed by kings; because the Hellenes were under royal rule before they came together, as the barbarians still are." Not until the domestic or tribal form of government is replaced by political or constitutional government—not until kings and subjects are replaced by statesmen and citizens—is the state or political community fully realized.

But Aristotle does not conceive the development he describes as one continuing into the future. He does not imagine a larger political unity than the city-state, as Kant is able to envisage a world state as the ultimate formation toward which the progressive political unification of mankind should tend. Though Aristotle recognizes that new institutions have been invented and old ones perfected, his political theory, unlike Mill's, does not seem to measure the goodness of the best existing institutions by their devotion to further progress.

Considering the criterion of a good form of government, Mill criticizes those who separate the maintenance of order, or the preservation of existing institutions, from the cultivation of progress. "Progress includes Order," he writes, "but Order does not include Progress." Order "is not an additional end to be reconciled with Progress, but a part and means of Progress itself. If a gain in one respect is purchased by a more than equivalent loss in the same or in any other, there is not Progress. Conduciveness to Progress, thus understood, includes the whole excellence of government."

Progress fails to define good government, Mill adds, unless we understand by the term not merely "the idea of moving onward," but "quite as much the prevention of falling back. The very same social causes . . . are as much required to prevent society from retrograding, as to produce a further advance. Were there no improvement to be hoped for, life would not be the less an unceasing struggle against causes of deterioration; as it even now is. Politics, as conceived by the ancients, consisted wholly in this . . . Though we no longer hold this opinion; though most men in the present age profess a contrary creed, believing that the tendency of things, on the whole, is toward improvement; we ought not to forget that there is an incessant and everflowing current of human affairs toward the worse."

According to Mill, the ideally best polity is representative government on democratic principles. By a just distribution of political rights and by the fullest grant of liberties, it serves better than any other form of government "to promote the virtue and intelligence of the people themselves." This is the ultimate end of political progress. Inferior forms of government, such as despotic monarchy, may be justified for people as yet unfit for self-government, but only if they also work for progress, *i.e.*, "if they carry those communities through the intermediate stages which they must traverse before they can become fit for the best form of government."

The whole theory of good government is thus for Mill a theory of progress in which we must take "into account, not only the next step, but all the steps which society has yet to make; both those which can be foreseen and the far wider indefinite range which is at present out of sight." We must judge the merits of diverse forms of government by that ideal form "which, if the necessary conditions existed for giving effect to its beneficial tendencies, would, more than all others, favour and promote not some one improvement, but all forms and degrees of it."

IN THE FIELD OF THE ARTS and sciences or culture generally, the modern emphasis upon progress seems to be even more pronounced than in the spheres of economics and politics. Lack of progress in a science is taken to indicate that it has not yet been established on the right foundations or that the right method for discovering the truth has not yet been found. Lack of agreement in a particular field is the chief symptom of these defects.

The fact that philosophy "has been cultivated for many centuries by the best minds that have ever lived, and that nevertheless no single thing is to be found in it which is not a subject of dispute, and in consequence which is not dubious," leads Descartes to propose his new method. He hopes this may ensure progress in philosophy, of the same sort which the new method has, in his view, accomplished in mathematics. The *Novum Organum* of Bacon seems to be dedicated to the same end of progressively augmenting knowledge in all those

fields in which, according to the inventory made in the *Advancement of Learning* of the present state of the sciences, no or little progress has been made since antiquity. Similarly, Locke, Hume, and Kant insist that a study of the human mind should precede all other studies in order to save men from fruitless disputes concerning matters beyond their capacities for knowledge; they hope thereby to encourage research in areas where progress can be made.

The comparison of different disciplines or subject matters with respect to their progress leads to the condemnation of those which lag behind. The great scientific advances of the 17th century tend to intensify the complaint about philosophy, especially metaphysics. The progress which has been made from the beginning in mathematics and more recently in physics means to Kant that each of these disciplines has found the "safe way" or the "secure path" of a science. By comparison, metaphysics has not yet even made a beginning. A hundred years later, William James is still to say that, by comparison with the progress of knowledge in the natural sciences, metaphysics belongs to the future.

The notion that any field of learning has attained its full maturity seems to Bacon to be the presumption of those philosophers who, seeking "to acquire the reputation of perfection for their own art," try to instill the "belief that whatever has not yet been invented and understood can never be so hereafter." Whenever such belief prevails, learning languishes. "By far the greatest obstacle to the advancement of the sciences, and the undertaking of any new attempt or departure, is to be found in men's despair and the idea of impossibility."

THOUGH THE ANCIENTS do not evidence this presumption of perfection in their arts and sciences, neither do they fret about lack of progress. Nor does the disagreement of minds seem to them to signify an unhealthy condition which requires new and special methods to cure.

"The investigation of the truth is in one way hard, in another easy," writes Aristotle. "An indication of this is found in the fact that no one is able to attain the truth adequately, while, on the other hand, we do not collectively fail, but everyone says something true about the nature of things, and while individually we contribute little or nothing to the truth, by the union of all a considerable amount is amassed." Aristotle puts the intellectual tradition to use by adopting the policy of calling "into council the views of those of our predecessors who have declared any opinion" on whatever subject is being considered, "in order that we may profit by whatever is sound in their suggestions and avoid their errors."

But, in the opinion of the moderns, the intellectual tradition can also be the greatest impediment to the advancement of learning if it is received uncritically and with undue reverence for the authority of the ancients. "The respect in which antiquity is held today," Pascal says, "has reached such extremes in those matters in which it should have the least preponderance, that one can no longer present innovations without danger." This is the common complaint of Hobbes, Bacon, Descartes, and Harvey. "The reverence for antiquity and the authority of men who have been esteemed great in philosophy have," according to Bacon, "retarded men from advancing in science, and almost enchanted them."

Harvey agrees with Bacon that philosophers or scientists should not "swear such fealty to their mistress Antiquity, that they openly, and even in sight of all, deny and desert their friend Truth." Harvey has a much higher opinion than Bacon of the achievements of antiquity. "The ancient philosophers," he writes, "whose industry even we admire, went a different way to work, and by their unwearied labor and variety of experiments, searching into the nature of things, have left us no doubtful light to guide us in our studies. In this way it is that almost everything we yet possess of note or credit in philosophy, has been transmitted to us through the industry of ancient Greece."

His admiration for the ancients does not, however, lead Harvey to rest on their achievements. "When we acquiesce in the discoveries of the ancients, and believe (which we are apt to do through indolence) that nothing farther remains to be known," then, in his opinion, "we suffer the edge of our ingenuity to be taken off, and the lamp which they delivered us to be

extinguished. No one of a surety," he continues, "will allow that all truth was engrossed by the ancients, unless he be utterly ignorant (to pass by other arts for the present) of the many remarkable discoveries that have lately been made in anatomy."

In his own anatomical researches, Harvey adopts an attitude toward the work of his predecessors, both ancient and recent, which remarkably resembles the attitude expressed by Aristotle toward his scientific forebears. "As we are about to discuss the motion, action, and use of the heart and arteries, it is imperative on us," Harvey declares, "first to state what has been thought of these things by others in their writings, and what has been held by the vulgar and by tradition, in order that what is true may be confirmed, and what is false set right by dissection, multiplied experience, and accurate observation." It is precisely this attitude which Bacon expressly condemns.

Bacon sees no genuine method of science, but merely a cultivation of opinion, in those who prepare themselves for discovery by first obtaining "a full account of all that has been said on the subject by others." Those who begin in this way, it is the judgment of Descartes, seldom go further. Particularly the followers of Aristotle "would think themselves happy," he says, "if they had as much knowledge of nature as he had, even if this were on the condition that they should never attain to any more. They are like the ivy that never tries to mount above the trees which give it support, and which often even descends again after it has reached the summit; for it appears to me that such men also sink again—that is to say, somehow render themselves more ingnorant than they would have been had they abstained from study altogether. For, not content with knowing all that is intelligibly explained in their author, they wish in addition to find in him the solution of many difficulties of which he says nothing, and in regard to which he possibly had no thought at all."

Pascal takes a more moderate view. We can profit, he thinks, from a limited respect for the ancients. "Just as they made use of those discoveries which have been handed down to them only as a means for making new ones and this happy audacity opened the road to great things, so," Pascal suggests, "must we accept those which they found for us and follow their example by making them the means and not the end of our study, and thus try to surpass them by imitating them. For what would be more wrong than to treat the ancients with more caution than they did those who preceded them, and to have for them this inviolable respect which they only deserve from us because they did not feel a similar respect for those who had the same advantage over them?"

MODERN WRITERS SEEM to conceive the law of intellectual progress by an analogy between the mind of the race and the individual mind. Where Aquinas says merely that "it seems natural to human reason to advance gradually from the imperfect to the perfect," adding, in the past tense, that hence the imperfect teaching of early philosophers "was afterwards perfected by those who succeeded them," Pascal generalizes the insight and gives it future significance. "Not only does each man progress from day to day in the sciences, but all men combined make constant progress as the universe ages, because the same thing happens in the succeeding generations of men as in the different ages of each particular man. So that the whole succession of men, in the course of so many centuries, should be regarded as the same man who exists always and learns continually."

At this point Pascal applies his metaphor to effect a reversal of the relation between the moderns and the ancients. "Since old age is the time of life most distant from childhood, who does not realize that old age in this universal man should not be sought in the times closest to his birth, but in those which are farthest away from it? Those whom we call ancients were really novices in all things, and actually belonged to the childhood of man; and as we have added to their knowledge the experience of the centuries which followed them, it is in ourselves that may be found this antiquity which we revere in others."

Whether by accident or borrowing, this characteristically modern view of the advantage progress confers upon modernity is expressed in similar language by Hobbes and Bacon. "Though I reverence those men of ancient times," writes Hobbes, "who either have

written truth perspicuously or have set us in a better way to find it out for ourselves; yet to the antiquity itself I think nothing due; for if we will reverence age, the present is the oldest." "Antiquity, as we call it," writes Bacon, "is the young state of the world; for those times are ancient when the world is ancient; and not those we vulgarly account ancient by computing backwards; so that the present time is the real antiquity."

To secure a sound, not specious, progress in all things of the mind, Bacon recommends the avoidance of two extremes, the affectations of antiquity and novelty, for "antiquity envies new improvements, and novelty is not content to add without defacing." Since "antiquity deserves that men should stand awhile upon it, to view around which is the best way," the great books of the past can lay the foundations for progress, but only if they are properly read. "Let great authors, therefore, have their due," Bacon declares, "but so as not to defraud time, which is the author of authors, and the parent of truth."

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REFERENCES

To find the passages cited, use the numbers in heavy type, which are the volume and page numbers of the passages referred to. For example, in 4 HOMER: *Iliad*, BK II [265-283] 12d, the number 4 is the number of the volume in the set; the number 12d indicates that the passage is in section d of page 12.

PAGE SECTIONS: When the text is printed in one column, the letters a and b refer to the upper and lower halves of the page. For example, in 53 JAMES: *Psychology*, 116a-119b, the passage begins in the upper half of page 116 and ends in the lower half of page 119. When the text is printed in two columns, the letters a and b refer to the upper and lower halves of the left-hand side of the page, the letters c and d to the upper and lower halves of the right-hand side of the page. For example, in 7 PLATO: *Symposium*, 163b-164c, the passage begins in the lower half of the left-hand side of page 163 and ends in the upper half of the right-hand side of page 164.

AUTHOR'S DIVISIONS: One or more of the main divisions of a work (such as PART, BK, CH, SECT) are sometimes included in the reference; line numbers, in brackets, are given in certain cases; *e.g.*, *Iliad*, BK II [265-283] 12d.

BIBLE REFERENCES: The references are to book, chapter, and verse. When the King James and Douay versions differ in title of books or in the numbering of chapters or verses, the King James version is cited first and the Douay, indicated by a (*D*), follows; *e.g.*, OLD TESTAMENT: *Nehemiah*, 7:45—(*D*) *II Esdras*, 7:46.

SYMBOLS: The abbreviation "esp" calls the reader's attention to one or more especially relevant parts of a whole reference; "passim" signifies that the topic is discussed intermittently rather than continuously in the work or passage cited.

For additional information concerning the style of the references, see the Explanation of Reference Style; for general guidance in the use of *The Great Ideas*, consult the Preface.

1. The idea of progress in the philosophy of history

1*a*. Providence and necessity in the theory of progress: the dialectical development of Spirit or matter; conflict as a source of progress

5 AESCHYLUS: *Prometheus Bound* [436-525] 44c-45b
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38 ROUSSEAU: *Inequality*, 338c-339b
43 MILL: *Representative Government*, 376a-c; 387c-d
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49 DARWIN: *Descent of Man*, 320d; 321c; 322d-323a; 328b-c; 596c
50 MARX: *Capital*, 6c-7d; 10a-11d esp 11b-d
50 MARX-ENGELS: *Communist Manifesto*, 419b,d-425b
51 TOLSTOY: *War and Peace*, EPILOGUE I, 645a-650c esp 646b-c; EPILOGUE II, 675b-d; 676d-677b; 679b-680b
54 FREUD: *Beyond the Pleasure Principle*, 654a-c / *Civilization and Its Discontents*, 801d-802a,c / *New Introductory Lectures*, 882b-883c

1*b*. Optimism or meliorism: the doctrine of human perfectibility

38 ROUSSEAU: *Inequality*, 338b-c; 347d-348a / *Social Contract*, BK III, 420a-b
40 GIBBON: *Decline and Fall*, 633c-634a,c
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(1. *The idea of progress in the philosophy of history.* 1b. *Optimism or meliorism: the doctrine of human perfectibility.*)

47 GOETHE: *Faust*, PART I [570–573] 16a
49 DARWIN: *Descent of Man*, 294d-295a; 317c-319a esp 318d; 328d-330a,c esp 329d-330a,c; 596b-597a,c esp 596d-597a,c
54 FREUD: *Beyond the Pleasure Principle*, 654a-c / *War and Death*, 759d / *Civilization and Its Discontents*, 781a; 801c-802a,c

1c. Skeptical or pessimistic denials of progress: the golden age as past; the cyclical motion of history

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6 HERODOTUS: *History*, BK I, 2b
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2. The idea of progress in the theory of biological evolution

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3. Economic progress

3a. The increase of opulence: the division of labor as a factor in progress

5 ARISTOPHANES: *Plutus* 629a-642d esp [489–534] 634c-635b
6 THUCYDIDES: *Peloponnesian War*, BK I, 350d; 352c-d
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3b. The improvement of the status and conditions of labor: the goals of revolution and reform

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3c. Man's progressive conquest of the forces of nature through science and invention

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43 MILL: *Utilitarianism*, 452a-b
45 FOURIER: *Theory of Heat*, 170a-172a; 183b-184a
46 HEGEL: *Philosophy of History*, INTRO, 195b-d; PART I, 243d-244c; PART II, 267a-b; PART IV, 347d-348a
47 GOETHE: *Faust*, PART II [6835-6860] 167b-168a
48 MELVILLE: *Moby Dick*, 204a-b
50 MARX: *Capital*, 86a-c; 170a-c; 180d-188c esp 181c-184b, 187d-188a; 239c-d; 253a-255a esp 253d-254b; 299b-d
50 MARX-ENGELS: *Communist Manifesto*, 420d-421a; 421d
54 FREUD: *Civilization and Its Discontents*, 777a-c; 778b-779a; 802a,c / *New Introductory Lectures*, 882d 883a

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5 SOPHOCLES: *Antigone* [332-375] 134a-b
6 THUCYDIDES: *Peloponnesian War*, BK I, 366d-367a
7 PLATO: *Republic*, BK II, 316c-318a; BK IV, 344b-d / *Laws*, BK III, 663d-666d
9 ARISTOTLE: *Politics*, BK I, CH 2 445b-446d esp [1252^{b}27-1253^{a}1] 446a-b; BK II, CH 8 [1268^{b}23 1269^{a}28] 464d-465b; BK VII, CH 10 [1329^{a}40-^{b}35] 533d-534b / *Athenian Constitution* 553a-584a,c passim, esp CH 41 571c-572a
12 LUCRETIUS: *Nature of Things*, BK V [1011-1027] 74b-c; [1105-1160] 75c-76b
13 VIRGIL: *Aeneid*, BK I [254-296] 110a-111a; BK VI [845-853] 233b-234a
14 PLUTARCH: *Lycurgus* 32a-48d / *Solon* 64b,d-77a,c
15 TACITUS: *Annals*, BK III, 51b-c
20 AQUINAS: *Summa Theologica*, PART I-II, Q 97, A 1, ANS 236a-d
23 MACHIAVELLI: *Prince*, CH XXVI 36b-37d
23 HOBBES: *Leviathan*, PART II, 153c-154a; 164a,c
35 LOCKE: *Civil Government*, CH XIII, SECT 157-158 61c-62b
35 HUME: *Human Understanding*, SECT I, DIV 5, 453a-b
38 MONTESQUIEU: *Spirit of Laws*, BK III, 9c-d; BK IV, 16a-17a; BK X, 62b-c; BK XI, 75b-d; BK XIV, 107d; BK XIX, 140d-141a; BK XXI, 170a; BK XXIV, 201b-c
38 ROUSSEAU: *Inequality*, 323a-325b esp 324d; 354d 355b; 356a-b / *Political Economy* 367a-385a,c / *Social Contract*, BK I, 391b-392a; BK II, 400c-406a; BK III, 420a-c; 423a-424a
40 GIBBON: *Decline and Fall*, 617a
41 GIBBON: *Decline and Fall*, 71d-80b; 202a-d; 218c-219a; 403b-404d
42 KANT: *Science of Right*, 438d-439a; 450d-452a; 456b-458a,c / *Judgement*, 586b-c
43 FEDERALIST: NUMBER 9 47a-49c; NUMBER 14, 60c-d; 62a-d; NUMBER 37-38 117d-125a:

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NUMBER 47–51 153c-165a passim; NUMBER 52, 165d-167b; NUMBER 63, 193c-194a; NUMBER 65, 200b-c; NUMBER 78, 230a-b

43 MILL: *Liberty*, 272a; 289c-d; 300d-302c / *Representative Government*, 327a-336c; 350b-355b passim; 370a-380b passim, esp 376a-c; 387c-d / *Utilitarianism*, 460a-461a; 475c-d

44 BOSWELL: *Johnson*, 172b-d; 204c-205b

46 HEGEL: *Philosophy of Right*, PART III, par 298 99c; ADDITIONS, 176 147c-d / *Philosophy of History*, INTRO, 203b-206a,c; PART I, 208b-d; 258b-d; PART II, 263b-d; PART IV, 318b; 335a-336c; 342a-343a; 346a-c

51 TOLSTOY: *War and Peace*, BK VI, 238c-243d

54 FREUD: *Civilization and Its Discontents*, 780b-781a

4b. The progressive realization of the idea of the state

46 HEGEL: *Philosophy of Right*, PART III, par 256 79d-80a; par 259-260 82a-83a; par 270 84d-89c; par 340-360 110b-114a,c esp par 349 111d-112a; ADDITIONS, 19-20 119c-120b; 152 141c-d; 164 144c-145a / *Philosophy of History*, INTRO, 170c-178a; 180c-183c; 203b-206a,c; PART I, 230a-231b; PART IV, 315a; 333b-c; 342d 343a

4c. The growth of political freedom: the achievement of citizenship and civil rights

6 HERODOTUS: *History*, BK V, 171c-175b

6 THUCYDIDES: *Peloponnesian War*, BK II, 396b-397d; BK VIII, 590a-c

9 ARISTOTLE: *Politics*, BK II, CH 12 470b-471d; BK III, CH 15 [1286^{b}8–21] 484d-485a; BK IV, CH 13 [1297^{b}16–28] 498a; BK V, CH 4 [1304^{a} 18–38] 505d-506a / *Athenian Constitution*, CH 1–41 553a-572a passim, esp CH 41 571c-572a

13 VIRGIL: *Aeneid*, BK VI [756-853] 231a-234a; BK VIII [626–731] 275b-278b

14 PLUTARCH: *Theseus*, 9c-d / *Romulus*, 22c / *Poplicola*, 79d-80a

15 TACITUS: *Annals*, BK III, 51b-52a; BK XI, 106a-d

35 LOCKE: *Civil Government*, CH VII, SECT 94 46b-c; CH VIII, SECT 100–111 47c-51a; CH XIV, SECT 162–166 63a-64a

38 MONTESQUIEU: *Spirit of Laws*, BK XI, 75b-78a

39 SMITH: *Wealth of Nations*, BK III, 170c-173b; BK IV, 269d-271d

40 GIBBON: *Decline and Fall*, 14a-d; 15c; 521a-523a,c

41 GIBBON: *Decline and Fall*, 403b-404d

43 FEDERALIST: NUMBER 9, 47a-c; NUMBER 14, 62b-d; NUMBER 26, 92a-94b passim; NUMBER 84, 252b-c

43 MILL: *Liberty*, 267b,d-268c / *Representative Government*, 328d-332d esp 331a; 352a-b; 367b-c; 381b-382c; 394a-396d

46 HEGEL: *Philosophy of History*, PART II, 275b-276a; PART III, 288c; 295d-296c; PART IV, 342a-346c

50 MARX-ENGELS: *Communist Manifesto*, 423d-425b

51 TOLSTOY: *War and Peace*, BK I, 10a-b

5. Forces operating against social progress: emotional opposition to change or novelty; political conservatism

5 ARISTOPHANES: *Birds* 542a-563d esp [904–1057] 554a-555d / *Ecclesiazusae* [730–876] 623c-625b

7 PLATO: *Republic*, BK IV, 344b-d / *Laws*, BK II, 654c-655b; BK IV, 678c-679a; BK VII, 717d-718d

14 PLUTARCH: *Agis* 648b,d-656d

15 TACITUS: *Annals*, BK XIV, 151d-152b

20 AQUINAS: *Summa Theologica*, PART I-II, Q 97, A 2 236d-237b

21 DANTE: *Divine Comedy*, PURGATORY, XIV [91–126] 74c-75a; PARADISE, XV–XVI 128b-132a

23 MACHIAVELLI: *Prince*, CH VI, 9b-c

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25 MONTAIGNE: *Essays*, 47a-51a; 131b-132a; 208b-c; 281a-282a; 318c-319b; 458b-c; 462c-465c; 504c-506a

27 SHAKESPEARE: *Coriolanus*, ACT II, SC III [119–128] 367b

30 BACON: *Advancement of Learning*, 15a-b; 61b; 90b-d / *Novum Organum*, BK I, APH 39–43 109c-110a; APH 90 124d-125a / *New Atlantis*, 205d-207b

31 DESCARTES: *Discourse*, PART II, 45c-d; PART VI, 61a

33 PASCAL: *Pensées*, 294 225b-226b; 325 230b-231a

35 LOCKE: *Civil Government*, CH XIII, SECT 157–158 61c-62b; CH XIX, SECT 223–224 76c-77a

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38 MONTESQUIEU: *Spirit of Laws*, BK V, 22a-b; BK XIV, 104c; BK XIX, 137c-140c passim

38 ROUSSEAU: *Inequality*, 324a-b / *Social Contract*, BK II, 401c-403a; 404c-405a; BK III, 419c-420a; BK IV, 437d-438b

39 SMITH: *Wealth of Nations*, BK I, 27b-37b esp 27b-28d, 33c-34b; 40b-c; 55b-d; 80c; 96d-97b; 109d-110d; BK IV, 201b-c

40 GIBBON: *Decline and Fall*, 459a-c

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43 FEDERALIST: NUMBER 14, 62a-d; NUMBER 37–38 117d-125a passim; NUMBER 70, 211d-212a

43 MILL: *Liberty*, 293b-302c passim / *Representative Government*, 327b,d-332d; 335d-336c; 344a-b; 346c-348c passim; 350b-355b passim; 357c; 376a-c; 377b-378a; 387c-d

44 BOSWELL: *Johnson*, 189d-190b

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47 GOETHE: *Faust*, PART I [1972–1979] 46b-47a; PART II [7963-7964] 194a
48 MELVILLE: *Moby Dick*, 228b-229b
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50 MARX-ENGELS: *Communist Manifesto*, 424b-c; 426b-428d passim; 429c-433d passim, esp 433c-d
51 TOLSTOY: *War and Peace*, BK VI, 239a-240a; 240b-d; BK VIII, 303a-305b; BK IX, 354b-c; BK X, 403a-c; EPILOGUE I, 645a-646c; 647b-c; 666c-669d
53 JAMES: *Psychology*, 79b
54 FREUD: *War and Death*, 759c-761c esp 759c-d / *Civilization and Its Discontents*, 776c-777c; 780d-781d esp 781c; 783c-791d esp 785c, 791b-d; 799a-802a,c esp 800c-801c / *New Introductory Lectures*, 834c; 853a-b

6. Intellectual or cultural progress: its sources and impediments

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20 AQUINAS: *Summa Theologica*, PART I-II, Q 97, A 1, ANS 236a-d
23 HOBBES: *Leviathan*, PART IV, 274c-d
24 RABELAIS: *Gargantua and Pantagruel*, BK II, 81d-82b
25 MONTAIGNE: *Essays*, 271b-c
28 GALILEO: *Two New Sciences*, THIRD DAY, 166c-d; 203c-d
28 HARVEY: *Motion of the Heart*, 268a-c; 285b-c
30 BACON: *Advancement of Learning* 1a-101d esp 1a-15a, 20b-25c, 29a-32c, 33d-34a, 35b-36c, 38d-39a, 51d-54b / *Novum Organum*, BK I, APH 38-46 109c-110c; APH 85 121d-122d; APH 129 134d-135d / *New Atlantis*, 203d-207b
31 DESCARTES: *Discourse*, PART II, 45b-46a
32 MILTON: *Areopagitica*, 384a-b
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35 LOCKE: *Human Understanding*, BK III, CH X, SECT 6-13 293a-294d passim
38 ROUSSEAU: *Inequality*, 336a-337a; 337d-348a; 348d-353c; 362a-363a,c / *Social Contract*, BK I, 393b-c
40 GIBBON: *Decline and Fall*, 21c-24a,c; 88d-90d; 158d-159c; 601b-d; 627d-630a passim, esp 627d-628b; 633c-634a,c
41 GIBBON: *Decline and Fall*, 161c-162b; 225a-b; 298a-300c esp 300a-b; 326b-328a,c; 347a,c; 451c-453a,c; 522b-528a,c esp 523a-b, 527d-528a,c
42 KANT: *Pure Reason*, 222a-c / *Judgement*, 504a-b; 586a-587a
43 MILL: *Liberty*, 274b-302c; 311d-312a / *Representative Government*, 336c-341d passim; 346c-348c passim; 387c-d / *Utilitarianism*, 452a-b
44 BOSWELL: *Johnson*, 211b-c; 297b; 307c-d; 380d-381a; 512d-513a
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46 HEGEL: *Philosophy of Right*, PART III, par 247 78a-b / *Philosophy of History* 153a-369a,c esp INTRO, 182b-c, 185a-186a, PART I, 217c-219c, 235d-236a, 248a-c, 251a-b, 253b-c, PART II, 277d-278a, PART III, 300d-301a, PART IV, 318a, 346c-348a, 351b-353a, 361a-362b
47 GOETHE: *Faust*, PART I [570–573] 16a
49 DARWIN: *Descent of Man*, 320a-330a,c esp 323a-324b, 327b-330a,c; 596c
51 TOLSTOY: *War and Peace*, BK V, 196b; BK XI, 498b-d; EPILOGUE II, 695d-696d
54 FREUD: *Psycho-Analytic Therapy*, 125d-126a / *Civilization and Its Discontents*, 776d-780b; 781a-d; 801c-802a,c / *New Introductory Lectures*, 849d

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6 HERODOTUS: *History*, BK II, 49d-50a
6 THUCYDIDES: *Peloponnesian War*, BK I, 350b-351a
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8 ARISTOTLE: *Sophistical Refutations*, CH 34 [183^b16–184^b8] 253a-d / *Metaphysics*, BK I, CH 1 [981^b13–24] 500a; BK XII, CH 8 [1074^b8–13] 605a
9 ARISTOTLE: *Ethics*, BK I, CH 7 [1098^a21-25] 343c-d / *Politics*, BK II, CH 8 [1268^b35–38] 464d / *Rhetoric*, BK III, CH 1 [1403^b15–1404^a39] 653b,d-654c / *Poetics*, CH 4-5 682c-684a
10 HIPPOCRATES: *Ancient Medicine*, par 1-4 1a-2c; par 12 4b-c
12 LUCRETIUS: *Nature of Things*, BK V [330–337] 65b-c; [925–1160] 73b-76b; [1241–1457] 77b-80a,c
13 VIRGIL: *Georgics*, I [121–146] 40b-41a
14 PLUTARCH: *Marcellus*, 252a-255a
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19 AQUINAS: *Summa Theologica*, PART I, Q 46, A 2, REP 4 253a-255a
23 HOBBES: *Leviathan*, PART I, 85c; PART II, 153d; PART IV, 267c-269b passim
24 RABELAIS: *Gargantua and Pantagruel*, BK II, 81d-82b
30 BACON: *Novum Organum*, BK I, APH 85 121d-122d; APH 129 134d-135d
31 DESCARTES: *Discourse*, PART VI, 61a-c
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36 STERNE: *Tristram Shandy*, 224b-225a
38 ROUSSEAU: *Inequality*, 336a-337a; 338d-339a; 339d-342c; 346d-347a; 348d-353c; 365b-366b
39 SMITH: *Wealth of Nations*, BK IV, 190d-191a; BK V, 308c-309a,c

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40 GIBBON: *Decline and Fall*, 18b-24a,c; 158d-159a; 171c; 237d-238b; 633c-634a,c
41 GIBBON: *Decline and Fall*, 291d-292c; 327a-328a,c; 451d-452a; 509d-510a,c
42 KANT: *Judgement*, 586a-587a
43 CONSTITUTION OF THE U.S.: ARTICLE I, SECT 8 [214-217] 13b
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44 BOSWELL: *Johnson*, 70d-71b; 195d; 406c
46 HEGEL: *Philosophy of Right*, PART I, par 69, 30b / *Philosophy of History*, INTRO, 182b-c; 185a-186a; PART I, 229b-d; 247c-248d; 251a-b; 253b-c; PART II, 261b; 267b-268b; 276a-d; PART III, 312c-d; PART IV, 323c-d; 335a-336c; 346c-348a
49 DARWIN: *Origin of Species*, 13c / *Descent of Man*, 278a-279a; 320a-321a passim; 329a-330a; 349b-d
50 MARX: *Capital*, 86b-c
50 MARX-ENGELS: *Communist Manifesto*, 420d-421a; 421d
53 JAMES: *Psychology*, 727b
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6b. Progress in philosophy and in the sciences

7 PLATO: *Statesman*, 601b-603a
8 ARISTOTLE: *Sophistical Refutations*, CH 34 [183^b16-184^b8] 253a-d
9 ARISTOTLE: *Parts of Animals*, BK I, CH 1 [642^a 25-30] 165b-c / *Generation of Animals*, BK V, CH 1 [778^b7-10] 320d / *Ethics*, BK I, CH 7 [1098^a22-25] 343c-d
10 GALEN: *Natural Faculties*, BK II, CH 8, 193b-c; BK III, CH 10 207b-d
12 LUCRETIUS: *Nature of Things*, BK I [62-79] 1d-2a; [1114-1117] 14d; BK III [1-30] 30a-b; BK V [1-54] 61a-d; [1448-1457] 79d-80a,c; BK VI [1-41] 80a-d
12 EPICTETUS: *Discourses*, BK III, CH 6, 181d-182a
18 AUGUSTINE: *City of God*, BK XXII, CH 24, 610a-c
20 AQUINAS: *Summa Theologica*, PART I-II, Q 97, A 1, ANS 236a-d
23 HOBBES: *Leviathan*, PART II, 153d; 164a,c; PART IV, 258c; 267c-269b
24 RABELAIS: *Gargantua and Pantagruel*, BK II, 81d-82b
25 MONTAIGNE: *Essays*, 271b-c; 276b-279c
28 HARVEY: *Motion of the Heart*, 285b-c / *On Animal Generation*, 336d-337a,c; 433c
30 BACON: *Advancement of Learning*, 2b-c; 14c-15a; 18b; 29b-c; 30d-31a; 32a-c; 33b-d; 34b; 51d-53d / *Novum Organum*, BK I, APH 30-31 109a; APH 70-115 116b-130d
31 DESCARTES: *Rules*, IV 5a-7d / *Discourse* 41a-67a,c esp PART IV-VI 51b-67a,c
33 PASCAL: *Vacuum*, 355a-358b
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35 HUME: *Human Understanding*, SECT I, DIV 5, 453a-b; DIV 8-9, 454b-455a; SECT VII, DIV 48, 471b-c; SECT X, DIV 94, 492d-493a
36 SWIFT: *Gulliver*, PART III, 118a-119a
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40 GIBBON: *Decline and Fall*, 148a-b; 158d-159d; 601b-c; 658b-c
41 GIBBON: *Decline and Fall*, 298a-300a; 326b-327d; 452a-b; 509d-510a,c
42 KANT: *Pure Reason*, 1d-2b [fn 2]; 5a-8b; 248d-250a,c / *Practical Reason*, 299d; 317b-318b; 335b-c; 336d-337a,c; 339b-c / *Judgement*, 513d-514b; 586a-587a
43 CONSTITUTION OF THE U.S.: ARTICLE I, SECT 8 [214-217] 13b
43 FEDERALIST: NUMBER 9, 47c-d; NUMBER 43, 139d-140a
43 MILL: *Liberty*, 287c-288a / *Utilitarianism*, 445a-447b passim; 452a-b
45 LAVOISIER: *Elements of Chemistry*, PREF, 7c
45 FOURIER: *Theory of Heat*, 173a; 175b
45 FARADAY: *Researches in Electricity*, 391b-c
46 HEGEL: *Philosophy of Right*, ADDITIONS, 136 138c-d / *Philosophy of History*, INTRO, 185a-186a; PART I, 217c-219c; 229b-d; 251a-b; 253b-c; PART III, 312c-d; PART IV, 323c-d; 335a-b; 343d-344a; 346c-348a; 361a-362b
48 MELVILLE: *Moby Dick*, 105b; 204a
49 DARWIN: *Descent of Man*, 590a
50 MARX: *Capital*, 170b-c
51 TOLSTOY: *War and Peace*, BK XI, 469a-d; BK XIII, 563a-b; EPILOGUE II, 694d-696d
53 JAMES: *Psychology*, 37b; 125b-127b passim
54 FREUD: *Psycho-Analytic Therapy* 123a-127a,c passim / *Interpretation of Dreams*, 137b-139a esp 138d-139a / *Civilization and Its Discontents*, 777a-c / *New Introductory Lectures*, 880d-881c

6c. The use and criticism of the intellectual tradition: the sifting of truth from error; the reaction against the authority of the past

6 THUCYDIDES: *Peloponnesian War*, BK I, 353d-354b
7 PLATO: *Phaedo*, 240d-242b / *Sophist*, 564d-569a
8 ARISTOTLE: *Sophistical Refutations*, CH 34 [183^b16-184^b8] 253a-d / *Physics*, BK I, CH 2-9 259b-268d / *Heavens*, BK I, CH 10 [279^b4-12] 370d; BK III, CH 7 [306^a6-18] 397b-c; BK IV, CH 1 [307^b28-308^a8] 399a-b / *Metaphysics*, BK I, CH 3-10 501c-511d; BK II, CH 1 [993^a30-$^b19$] 511b,d-512a; BK III 513b,d-522a,c; BK IV, CH 4-8 525a-532d; BK V 533a-547d; BK XI,

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9 ARISTOTLE: *History of Animals*, BK III, CH 3 [513a7-11] 36c-d / *Parts of Animals*, BK I, CH 1 [642a25-30] 165b-c / *Ethics*, BK I, CH 6 341b-342c esp [1096a11-16] 341b

10 HIPPOCRATES: *Ancient Medicine*, par 12 4b-c / *Regimen in Acute Diseases*, par 1 26a-d

10 GALEN: *Natural Faculties*, BK I, CH 14, 178d-179a; CH 16 180c-182b esp 181d-182b; BK II, CH 8, 192a-b; CH 9, 198d-199a,c; BK III, CH 10 207b-d

16 PTOLEMY: *Almagest*, BK I, 6b

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18 AUGUSTINE: *Confessions*, BK VII, par 13-15 47c-48c / *City of God*, BK VIII-X 264b,d-322a,c passim; BK XIX, CH 1-5 507a-514b / *Christian Doctrine*, BK II, CH 40 655b-656a

19 AQUINAS: *Summa Theologica*, PART I, Q 22, A 2, ANS 128d-130d; Q 44, A 2, ANS 239b-240a; Q 65, A 4, ANS 342b-343c; Q 66, A 1 343d-345c; A 2, ANS 345d-347b; Q 75, A 1, ANS and REP 1-2 378b-379c; Q 76, A 1, ANS 385d-388c; A 3, ANS 391a-393a; A 4, REP 4 393a-394c; Q 79, A 4, ANS 417a-418c; Q 84, A 1, ANS 440d-442a; A 2, ANS 442b-443c; A 4, ANS 444d-446b; A 5, ANS 446c-447c; A 6, ANS 447c-449a; Q 85, A 2, ANS 453d-455b; Q 88, A 1, ANS 469a-471c

20 AQUINAS: *Summa Theologica*, PART I-II, Q 95, A 3 228c-229b; Q 97, A 1, ANS 236a-d; PART II-II, Q 1, A 7, REP 2 385c-387a

21 DANTE: *Divine Comedy*, HELL, I [61-87] 1d-2a; IV 5c-7a; PURGATORY, XXI [76]-XXII [129] 85d-87d; XXVI [88-148] 93d-94c

23 HOBBES: *Leviathan*, PART I, 49d; 56b-d; 58d-61a passim; 71a-b; PART II, 114d-115a; 150c-151a; PART IV, 247a-248a; 267a-274d; 276c; CONCLUSION, 282b-283a

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6d. Plans for the advancement of learning and the improvement of method in the arts and sciences

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10 HIPPOCRATES: *Ancient Medicine*, par 1-8 1a-3b / *The Law* 144a-d

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For: The general discussion of the philosophy of history, *see* DIALECTIC 2d; HISTORY 4a(2)–4a(3), 4b; and for the consideration of fate, fortune, and freedom in relation to progress, *see* CHANCE 2b; FATE 3; HISTORY 4a(1); LIBERTY 4a; NECESSITY AND CONTINGENCY 3.

The religious aspects of optimism and pessimism, *see* GOD 7h, 8e, 9f; HISTORY 5a; PROPHECY 4c–4d.

The notion of progress in the theory of biological evolution, *see* EVOLUTION 4d.

Other discussions of the myth of a golden age, *see* LABOR 1a; MAN 9a; TIME 8b.

Discussions relevant to the theme of economic progress, *see* LABOR 4a, 5a–5d, 7c(2), 7f; LIBERTY 6b; REVOLUTION 4a, 5c; SLAVERY 3c, 5b; WEALTH 9b, 12.

Discussions relevant to the theme of political progress, *see* CONSTITUTION 10; DEMOCRACY 4d, 7; GOVERNMENT 6; LIBERTY 6a–6c; MONARCHY 4e(2); SLAVERY 5b; STATE 2a(3); TYRANNY 8; and for the distinction between utopian and practical ideals as goals of political progress, *see* CITIZEN 8; STATE 6, 10f; WAR AND PEACE 11d.

Attitudes toward change which have a bearing on progress, *see* CHANGE 12b; CUSTOM AND CONVENTION 8; TIME 7.

Evidences of progress in the arts and sciences, and for the comparative progress of different fields of learning, *see* ART 12; KNOWLEDGE 10; PHILOSOPHY 7.

The conditions on which intellectual progress depends, *see* KNOWLEDGE 9b; LANGUAGE 6; OPINION 5b; SCIENCE 6a–6b; SIGN AND SYMBOL 4c; TRUTH 6, 8d.

ADDITIONAL READINGS

Listed below are works not included in *Great Books of the Western World*, but relevant to the idea and topics with which this chapter deals. These works are divided into two groups:

I. Works by authors represented in this collection.
II. Works by authors not represented in this collection.

For the date, place, and other facts concerning the publication of the works cited, consult the Bibliography of Additional Readings which follows the last chapter of *The Great Ideas*.

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Chapter 72: PROPHECY

INTRODUCTION

THE name of prophet signifies, throughout a great part of the western tradition, an eminence and dignity not shared by the scientist, the philosopher, the statesman, or even the sage. The soothsayer and the seer in pagan antiquity and the prophet of the Lord in Israel do not claim to speak from a merely human wisdom or to declare truths they have learned by inquiry or reflection. Nor are their utterances concerned with the nature of things. The prophet claims to know what men cannot know by any exercise of human powers. He enjoys special gifts. He is divinely inspired. He is instructed by God or has in some way been admitted to the secrets of the gods. His knowledge is not only of supernatural origin; it deals with supernatural matters.

Prophecy is more than a prediction of the future. It unveils what Fate holds in store for men; it foretells the course of providence. In most cases, the future predicted has deep moral significance, expressing the pleasure or displeasure of the gods with individuals or nations, or manifesting God's justice in the rewards promised those who keep His commandments, and the punishments awaiting those who break them. The prophet's foresight discerns more than the future; it discovers what men can hope for or must fear according to their merits, not in the eyes of men but in the sight of God.

This understanding of prophecy seems to be involved in the major issues which the great books raise about prophets. For example, the problem of distinguishing between true and false prophets goes beyond the mere truth or falsity of a prophet's utterances to the validity of his claim to special sources of knowledge or a supernaturally inspired understanding of dreams and visions, omens and portents. The false prophet is not like the mistaken scientist or philosopher—just a person in error. He is either a deceiving impostor or a self-deceived victim of his own pathology.

Similarly, the Christian theologians who criticize the pagan cult of oracles and all forms of divination which seek to pry into divine mysteries, seem to imply that the seers and soothsayers of Greece and Rome, unlike the Hebrew prophets, did not have the gift of prophecy. The acceptance or rejection of prophets and of ways of foreseeing what has been planned in Heaven cannot, it seems, be separated from a whole system of religious beliefs. In this respect, prophets are like miracles. Without faith, both are incredible. "There be two marks," writes Hobbes, "by which together, not asunder, a true Prophet is to be known. One is the doing of miracles; the other is the not teaching any other religion than that which is already established." In Hobbes' view, that there be a religion already established among a people is the one indispensable condition for their reception of prophets or their experience of miracles.

Issues concerning prophecy may, therefore, occur within a single religious community, or be relative to differences between religious communities, as, for example, the opposition between the Jewish and Christian interpretation of the messianic prophecies in the Old Testament. Necessarily, then, there is an issue between the unbelievers and the religious of any faith. Those who deny the existence of God or the gods, or divine agency in the temporal affairs of men, and certainly those who deny the credentials of revelation, cannot but regard prophets as misled and misleading and those who accept prophecy as gullible or superstitious. In the pagan tradition, a philosopher like Aristotle may, however, be critical of divination, and an historian like Thucydides may cast doubt on oracles, without discredit-

ing all other religious beliefs or being themselves atheists.

Some who reject religious prophecy do not concede that man's natural desire to peer into the future need be completely balked. But the secular substitutes for religious prophecy appear to alter the meaning of prophecy. Scientific predictions of the future of the world or of life on this planet (as, for example, those which occur in the writings of Lucretius or Darwin) may be accompanied by attributions of moral qualities to Nature, but usually they connote Nature's sublime indifference to man's welfare. They are seldom, if ever, read as promises or threats of what man deserves to have befall him.

Similarly, historians turned prophets, or philosophers of history who, like Spengler, prophesy decline and doom, do not exhort men to avert disaster, as do the prophets of the Old Testament. Nor do those who, like Hegel and Marx, foresee the ultimate goal toward which events inevitably march, urge men to prepare themselves for it as do the prophecies of the New Testament, which speak of the second coming of Christ. Secular prophecies which bespeak the inevitable operation of necessary causes are, in this respect, like pagan previsions of Fate. At most, they leave man only the illusion of free choice. Jewish and Christian prophecy, in contrast, addresses man as a responsible agent, who, even when he knows something of God's will, remains free to will good or evil for himself. If, according to the theologians, divine providence or predestination does not abolish human freedom, neither does prophetic knowledge of the divine plan.

These matters are discussed elsewhere—secular prophecy in the chapters on HISTORY and PROGRESS, and the problem of foreknowledge and freedom in the chapters on FATE and NECESSITY AND CONTINGENCY.

IN PAGAN ANTIQUITY, prophecy does not seem to be confined to men especially appointed by the gods. The gods themselves foretell the future to men. When people wish to know the future, they go or send emissaries to the temple at Delphi over which a goddess, the Pythoness, presides. The institution of the oracles, of which Delphi is perhaps the most illustrious example, leaves foresight in the hands of the gods; for, as most of the anecdotes in Herodotus and Thucydides show, only the Pythoness herself knows unequivocally the meaning of her oracular utterances.

To men is left the task of interpreting what the oracle means. The pagan unlike the Hebrew prophet seems to be a man of skill in penetrating the secrets of the gods—a skill which may itself be divinely bestowed—but he is not a man to whom the gods have spoken plainly, so that he may in turn unerringly advise others. "No man, when in his wits," according to Plato, "attains prophetic truth and inspiration."

There are passages in the Greek poets and historians which seem to suggest that the gods begrudge men too clear a vision of the future, and may even on occasion mislead them or at least permit them to be misled. In Aeschylus' play, Prometheus declares that "because he gave to men gifts claimed by the gods," he is "bound in durance here." He gave them radiant fire, the mechanical arts; he "took from men the expectancy of Death"; he gave them medicines and healing drugs. Last in his own enumeration and in a sense most significant, he endowed men with the divine gift of foresight.

"I drew clear lines for divination," Prometheus says, "and discerned (before all others) what from dreams is sure to come to pass in waking. I disclosed the mysteries of omen-bringing words, and pathway tokens, and made plain the flight of taloned birds, both of good augury and adverse . . . I cleared the way for mortals to an art hard of discernment, and made bright and clear fire-auguries, heretofore obscure and blind." The chorus questions whether "the power of creatures creeping for an hour" shall by wisdom overpass the bounds set for their little lives by "the mind of Zeus." Does the wisdom of foreknowledge, gained through the arts of divination, give men strength to resist the will of the gods or to struggle against them?

Prometheus himself is the answer to the question. The power he wields over Zeus, which Zeus tries to wrest from him by bribes and threats and by the infliction of titanic pain, is the foreknowledge which Prometheus possesses of the doom to befall the son of Kronos. No threat of Zeus will get him to divulge it,

Prometheus says, because "nought can surprise me who foreknow ... Nought in his power shall bend me to reveal whom Fate prepares to work his overthrow."

A myth which Socrates relates in the *Gorgias* appears to contain a sequel to the legend as told by Aeschylus. It also seems to confirm the point that foresight is a divine privilege in which men should not share, lest they become too god-like. According to the myth, Zeus, in order to prevent men from evading the divine judgment, says: "In the first place, I will deprive men of the foreknowledge of death; this power which they have, Prometheus has already received my orders to take from them."

The oracles never make the future so plain that men can act with a foreknowledge equal to that possessed by the gods, but sometimes oracular utterances seem to be contrived not merely to veil the future, but to lead men astray. Herodotus tells the story of Miltiades who, on the advice of Timo, a priestess of the goddesses of the underworld, acted in a way which brought him to grief. When the Parians sent to Delphi to ask whether Timo should be punished for this, the Pythoness forbade them, saying, "Timo was not at fault; 'twas decreed that Miltiades should come to an unhappy end; and she was sent to lure him to his destruction."

There is also the story, told by Thucydides, of Cyclon who, inquiring at Delphi, was told to seize the Acropolis of Athens on the grand festival of Zeus. This, too, turned into a disastrous misadventure, apparently because, as Thucydides observes, "whether the grand festival that was meant was in Attica or elsewhere was a question he never thought of, and which the oracle did not offer to solve."

For the most part, however, the calamities which befall men who seek guidance from the oracle seem to be due to their own misinterpretation of the Delphic deliverance, itself always admittedly difficult to understand. Herodotus and Thucydides abound with such stories, and also with instances in which the same oracular statement is given conflicting interpretations, one of which must be wrong. Nevertheless, Herodotus declares himself unwilling "to say that there is no truth in prophecies," and he is certainly not willing to question "those which speak with clearness." Giving an example of a clear prediction, he adds, "When I look to this, and perceive how clearly Bacis spoke, I neither venture myself to say anything against prophecies, nor do I approve of others impugning them."

Thucydides appears to take a contrary view. He singles out one example as "an instance of faith in oracles being for once justified by the event." He puts into the speech of the Athenians at the Melian Conference the warning not to "be like the vulgar, who, abandoning such security as human means may still afford, when visible hopes fail them in extremity, turn to invisible, to prophecies and oracles, and other such inventions that delude men with hopes to their destruction."

THE PROBLEM OF THE reliability of prophecies, and of the faith or credulity of those who rely upon them, applies not only to oracles, but also to dreams or visions, and to omens and portents of all sorts. Two stories about Croesus, told by Herodotus, show that oracles and dreams can be equally ambiguous and are equally liable to misinterpretation. Croesus dreamed that his son Atys would die by the blow of an iron weapon. Subsequently when Atys wished to go boar hunting with Adrastus, he persuaded Croesus that the dream could not have been a warning against this undertaking because a boar does not have hands to strike with, nor does it wield iron weapons. But during the hunt Atys was killed by the spear which Adrastus intended for the boar.

On another occasion, Croesus inquired of Delphi how long his kingdom would last. The Pythoness answered, in effect, until "a mule is monarch in Media." This not only pleased him because "it seemed incredible to him that a mule should ever become king of the Medes," but also gave him confidence when he engaged in war with the Medes and Persians, led by Cyrus. The war ended in his defeat and capture but, according to Herodotus, he had no right to complain of the oracle because "he had misunderstood the answer which had been given him about the mule. Cyrus was that mule; for the parents of Cyrus were of different races and of different kinds"—his mother a Median princess, his father a Persian subject.

The attitude of the ancients toward these

various instruments of prophecy or divination does not seem to be consistent or constant. Herodotus reports at one place how Xerxes, "despising the omens," carried out his plans against their forebodings; and at another how an eclipse of the moon, being interpreted as of good omen, rejoiced Xerxes who, "thus instructed, proceeded on his way with great gladness of heart." And again, when Xerxes reports to Artabanus the advice—concerning his war against the Greeks—which he received from a dream apparition, Artabanus scoffs, saying, "Such things, my son, have of truth nothing divine in them . . . Whatever a man has been thinking of during the day, is wont to hover round him in the visions of his dreams at night." But when Artabanus himself experiences the same apparition which had occurred to Xerxes in his dream and, in addition to giving the same advice, the vision threatens him, Artabanus changes his mind about dreams and reverses his policy with regard to the expedition against Greece.

"As to the divination which takes place in sleep, and is said to be based on dreams," Aristotle writes, "we cannot lightly either dismiss it with contempt or give it implicit confidence." Nevertheless, he himself seems to conclude that most so-called prophetic dreams are "to be classed as mere coincidences"; and that "dreams are not sent by God, nor are they designed for this purpose," *i.e.*, foretelling the future. One proof that they are not sent by God is, in his opinion, the fact that the persons having them "are not the best and wisest but merely commonplace persons." The fact that "the power of foreseeing the future and of having vivid dreams is found in persons of inferior type implies that God does not send them."

THE CHRISTIAN THEOLOGIANS, distinguishing between prophecy and divination, condemn the latter as a kind of presumption or impiety. Though their criticism seems to be directed especially against astrology, it applies to the interpretation of terrestrial as well as celestial signs. Augustine refers to "the lying divinations and impious dotages of the astrologers," and Aquinas explains how the astrologers are able to foretell things in a general way without attributing to them any genuinely prophetic power.

In his consideration of the difference between true and false religion, Hobbes goes further than the theologians in condemning "the innumerable other superstitious ways of divination," such as "the ambiguous or senseless answers of the priests at Delphi, Delos, Ammon, and other famous oracles," or "the prediction of witches that pretended conference with the dead, which is called necromancy, conjuring, and witchcraft, and is but juggling and confederate knavery," or, in general, the recourse to omens, portents, and dreams for purposes of prognostication.

That the things Hobbes calls superstitious are not confined to pagan antiquity is manifest in Shakespeare's *Macbeth*. The witches and the omens there are like the soothsayers and the portents in *Julius Caesar;* and Macbeth's misunderstanding of "'til Birnam Forest come to Dunsinane" is as fatal as Croesus' reliance on "until a mule is monarch in Media."

In one other respect, pagan and Christian cultures seem to exhibit a certain parallelism with regard to the belief in supernatural foreknowledge. The spirits of the departed, in the *Odyssey* and the *Aeneid*, are able to inform the visitor to the underworld of coming events on earth. They speak plainly and with perfect prescience. The veil which hides the future from mortal eyes has been lifted. So, too, the damned souls and the blessed foretell future things to Dante, no less accurately though less extensively than, in *Paradise Lost*, the archangel Michael unfolds to Adam the whole future history of mankind.

But so far as the foreknowledge of mortal men is concerned, the Hebrew prophets seem to be unique. Unlike pagan diviners or soothsayers, they do not probe the future in order to help men anticipate the turns of fortune or the lines of fate. They do not have to employ arts or devices for penetrating divine secrets. God speaks to them directly and, through them, to the Chosen People. For the most part their prophetic speeches, unlike those of the oracles, seem to be unambiguous. At least the intention seems to be to reveal, not to conceal, God's plan on such matters as He Himself wishes men to foresee the course of providence.

Where pagan prognosticators may claim to be divinely inspired in the sense of having special powers of interpretation, the Hebrew prophets speak from a different kind of supernatural inspiration. They are the vessels through which the Lord Himself speaks. They are interpreters only in that they make known to others what God has made known to them.

The content of the divine communication is seldom exclusively a foretelling of the future. It is often accompanied by instruction concerning the actions to be performed by the Jewish people—the direction of their conduct toward the Promised Land or the rebuilding of the Temple. Sometimes when the prophecy is one of doom rather than of hope, as in the case of the destruction of Jerusalem, the Babylonian captivity, or the dispersion of Israel, the prediction of the future is accompanied by moral instruction of another sort—the lessons of the Law which the Jews have forsaken, meriting thereby the punishments the prophets foresee.

Mere prognostication does not seem to be the chief purpose of Hebrew prophecy. Just as the Covenant which God makes with Abraham, Isaac, and Jacob consecrates the Jewish people to a special mission; just as the Law which God hands down through Moses sets them apart from the Gentiles and prescribes for them the way of righteousness and sanctity; so the revelations of God's providence through the prophets tend to remind the Chosen People of the meaning of the Covenant and the Law as well as to disclose their destiny as a nation.

The prophets speak not only of the future, but of the present and the past. They are divinely appointed teachers, no less than the patriarchs and Moses. Yet they may rank below Moses (who is sometimes also regarded as a prophet) by reason of the manner in which they are addressed by God. As Hobbes points out, "God himself in express words declareth that to other prophets he spake in dreams and visions, but to his servant Moses, in such manner as a man speaketh to his friend"—face to face.

The content of Hebrew prophecy, in short, seems to be continuous with the rest of God's revelation of Himself to His Chosen People. The difference between the prophets as the instruments of God's teaching and the pagan philosophers as merely human teachers seems to Augustine plainly shown by the agreement of the prophets with one another and by their continuity with Moses and the patriarchs; whereas Augustine can find nothing but disagreement and dissension among even the best teachers of the pagans. Among them, false teachers or prophets seem to be accorded the same recognition and to attract the same following as true.

"But that nation," Augustine writes, "that people, that city, that republic, these Israelites, to whom the oracles of God were entrusted, by no means confounded with similar license false prophets with the true prophets; but, agreeing together, and differing in nothing, acknowledged and upheld the authentic authors of their sacred books. These were their philosophers, these were their sages, divines, prophets, and teachers of probity and piety. Whoever was wise and lived according to them was wise and lived, not according to men, but according to God who hath spoken to them."

Hobbes also conceives the prophets of the Old Testament as more than foretellers of the future. "The name of prophet," he writes, "signifies in Scripture sometimes *prolocutor*; that is, he that speaketh from God to man, or from man to God; and sometimes *predictor*, or a foreteller of things to come." In addition to their being divinely appointed teachers, the prophets, according to Hobbes, seem to perform a political function. They check the power of the kings, or seek to awaken their consciences to the dictates of justice and mercy. "Through the whole history of the kings, as well of Judah as of Israel, there were prophets that always controlled the kings for transgressing the religion; and sometimes also for errors of state."

A secular view of the Hebrew prophets seems to give prominence to their political role in the theocratic community of the Jews. Comparing the Jewish state with other sacerdotal societies, Mill observes that "neither their kings nor their priests ever obtained, as in those other countries, the exclusive moulding of their character. Their religion . . . gave existence to an inestimably precious unorganized institution—the Order (if it may be so termed) of the Prophets. Under the protection, generally though not always effectual, of their sacred character, the Prophets were a power in the nation, often

more than a match for kings and priests, and kept up, in that little corner of the earth, the antagonism of influences which is the only real security for continued progress."

AS THERE IS A BODY of prophetic doctrine in the Old Testament, so the religion of the Gospels contains a number of prophetic beliefs peculiar to Christian doctrine. Such, for example, is the prophecy of the second coming of Christ, the prophecy of the Last Judgment on that occasion, and the prophecy of a final conflagration to cleanse the world, which will precede the resurrection of the body as that in turn precedes the general judgment of souls.

Aquinas discusses the various signs which will foretell the imminence of these events. He also raises the question whether the time of the end of the world and of the resurrection can be known exactly. On this he agrees with Augustine that "that time is hidden from men." It cannot be calculated by natural reason, nor is it revealed. "Of that day and hour," it is written in Matthew, "no one knoweth, no, not the angels of heaven." When the apostles asked Christ about His second coming, He answered, according to Saint Paul, "It is not for you to know the times or moments which the Father hath put in His own power."

What Christ refused to tell the apostles, Aquinas adds, "He will not reveal to others. Wherefore all those who have been misled to reckon the aforesaid time have so far proved to be untruthful; for some, as Augustine says, stated from our Lord's ascension to His last coming 400 years would elapse, others 500, others 1,000. The falseness of these calculators is evident, as will likewise be the falseness of those who even now cease not to calculate."

The single greatest prophecy in the Judaeo-Christian tradition is, perhaps, the messianic prophecy—the foretelling of a Messiah or of a messianic age. The prediction of a Messiah or Saviour, who shall be born of the house of David and shall be king of the Jews, runs throughout the prophetic books of the Old Testament, though with different degrees of explicitness and varying imagery in Daniel and Jeremiah, in Isaiah and Ezekiel.

"The Lord himself shall give you a sign," says Isaiah. "Behold a virgin shall conceive and bear a son, and shall call his name Immanuel. . . . For unto us a child is born, unto us a son is given," Isaiah goes on, "and the government shall be upon his shoulder, and his name shall be called Wonderful, Counsellor, The mighty God, The Everlasting Father, The Prince of Peace. Of the increase of his government and peace, there shall be no end, upon the throne of David and upon his kingdom, to order it and to establish it with justice from henceforth even for ever." And Jeremiah tells his people, "Behold the days come, saith the Lord, that I will raise unto David a righteous Branch and a King shall reign and prosper and shall execute judgment and justice in the earth. In his days, Judah shall be saved, and Israel shall dwell safely."

Two of the great issues between the Jewish and Christian faiths concern these messianic prophecies in the Old Testament. One arises from opposite interpretations of the event predicted—a messianic age in which the kingdom of the Jews will be established on earth in perpetual righteousness and glory, or the coming to earth of God's only begotten son, incarnate in human form, for the salvation of all mankind. The other arises from opposite answers to the question whether the prediction—on either interpretation—has been fulfilled.

It is, of course, the Christian view that the prophets foretold the coming of Christ and that their prophecy has been fulfilled. But more than that, Christian apologists and theologians seem to make the fulfillment of Hebrew prophecies, interpreted as foreshadowing the truths of the Christian religion, a source of verification for these truths.

The difference between Jesus Christ and Mahomet, according to Pascal, is that "Mahomet was not foretold; Jesus Christ was foretold. I see many contradictory religions, and consequently all false save one," he writes. "Each wants to be believed on its own authority, and threatens unbelievers. I do not therefore believe them. Everyone can say this; everyone can call himself a prophet. But I see the Christian religion wherein prophecies are fulfilled; and that is what everyone cannot do."

And in another place Pascal declares that "the prophecies are the strongest proof of Jesus Christ. . . . If one man alone had made a book of predictions about Jesus Christ, as to the time

and manner, and Jesus Christ had come in conformity to these prophecies, this fact would have infinite weight. But there is much more here. Here is a succession of men during four thousand years, who, consequently and without variation, come, one after another, to foretell this same event."

Centuries earlier Augustine writes in a similar vein. The Hebrew people as a whole are chosen to perform this prophetic function—to foretell, "sometimes through men who understood what they spake, and sometimes through men who understood not, all that has transpired since the advent of Christ until now, and all that will transpire." Not only the explicit "prophecies which are contained in words," but all the rituals and ceremonies, the offices and institutions, of the Jewish religion prefigure Christianity, signifying and fore-announcing "those things which we who believe in Jesus Christ unto eternal life believe to have been fulfilled, or behold in process of fulfillment, or confidently believe shall yet be fulfilled."

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REFERENCES

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PAGE SECTIONS: When the text is printed in one column, the letters **a** and **b** refer to the upper and lower halves of the page. For example, in **53** JAMES: *Psychology*, **116a-119b**, the passage begins in the upper half of page 116 and ends in the lower half of page 119. When the text is printed in two columns, the letters **a** and **b** refer to the upper and lower halves of the left-hand side of the page, the letters **c** and **d** to the upper and lower halves of the right-hand side of the page. For example, in **7** PLATO: *Symposium*, 163b-164c, the passage begins in the lower half of the left-hand side of page 163 and ends in the upper half of the right-hand side of page 164.

AUTHOR'S DIVISIONS: One or more of the main divisions of a work (such as PART, BK, CH, SECT) are sometimes included in the reference; line numbers, in brackets, are given in certain cases; *e.g.*, *Iliad*, BK II [265–283] **12d**.

BIBLE REFERENCES: The references are to book, chapter, and verse. When the King James and Douay versions differ in title of books or in the numbering of chapters or verses, the King James version is cited first and the Douay, indicated by a *(D)*, follows; *e.g.*, OLD TESTAMENT: *Nehemiah*, 7:45—*(D) II Esdras*, 7:46.

SYMBOLS: The abbreviation "esp" calls the reader's attention to one or more especially relevant parts of a whole reference; "passim" signifies that the topic is discussed intermittently rather than continuously in the work or passage cited.

For additional information concerning the style of the references, see the Explanation of Reference Style; for general guidance in the use of *The Great Ideas*, consult the Preface.

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1*a*. Prophecy as the reading of fate, the foretelling of fortune, the beholding of the future

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47 GOETHE: *Faust*, PART II [8094-8133] 197a-198a

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1*c*. Prophecy as the instrument of providence: prophets as moral teachers and political reformers

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32 MILTON: *Christs Nativity* [1–7] 1a / *Paradise Lost*, BK III [167–193] 139a-b; BK XI [656–749] 313b-315b; [802–834] 316b-317b; BK XII [235–248] 324b; [315–330] 326a-b

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41 GIBBON: *Decline and Fall*, 230c-231a

52 DOSTOEVSKY: *Brothers Karamazov*, BK V, 127b-137c passim

2. The vocation of prophecy: the possession of foreknowledge

2*a*. The foreknowledge possessed by the spirits in the afterworld

OLD TESTAMENT: *I Samuel*, 28:6–20—(*D*) *I Kings*, 28:6–20

4 HOMER: *Iliad*, BK XXIII [54–81] 161d-162a / *Odyssey*, BK X [487–540] 241a-c; BK XI [90–137] 244a-c

5 AESCHYLUS: *Persians* [739–842] 23a-24b

5 SOPHOCLES: *Philoctetes* [1408–1444] 194d-195a,c

6 HERODOTUS: *History*, BK V, 178a-180a

13 VIRGIL: *Aeneid*, BK VI [756–892] 231a-235a

19 AQUINAS: *Summa Theologica*, PART I, Q 89, A 3, REP 3 475d-476c

21 DANTE: *Divine Comedy*, HELL, VI [37–93] 8d-9b; X [1–114] 13d-14d; XV [1–99] 21a-22a; XXIV [121–151] 35d-36a; PURGATORY, XI [109–142] 69d-70b; XIV [27–72] 73d-74c; XX [34–96] 83c-84a; XXIV [37–93] 90a-c; XXXIII [22–90] 104b-105a; PARADISE, IX 118c-120a esp [61–63] 119b; XVII [1–99] 132a-133a; XIX [97–148] 136a-c; XXI [103]-XXII [18] 139b-d; XXVII [10–66] 147b-148a; [121–148] 148c-d; XXX [127–148] 153a-b

(2. *The vocation of prophecy: the possession of foreknowledge.*)

2b. The political office of prophecy: priests, soothsayers, oracles

4 HOMER: *Iliad*, BK I [59–100] 3d-4b / *Odyssey*, BK II [146–207] 189c-190b

5 AESCHYLUS: *Seven Against Thebes* [1–38] 27a-c / *Agamemnon* [104–159] 53a-d

5 SOPHOCLES: *Oedipus the King* [300–512] 102a-103d / *Oedipus at Colonus* [1348–1555] 126c-128b / *Antigone* [988–1114] 139c-140c / *Ajax* [745–783] 149c-d / *Philoctetes* [604–619] 187c; [1326–1347] 194a

5 EURIPIDES: *Helen* [744–760] 305b / *Phoenician Maidens* [834–1018] 385c-387b

5 ARISTOPHANES: *Knights* [108–233] 471b-472d; [941–1099] 481d-483d / *Peace* [1039–1126] 537d-539a / *Birds* [959–991] 554c-555a / *Lysistrata* [762–780] 593a-b

6 HERODOTUS: *History*, BK I, 13c-d; 19d-20a; BK II, 83b-c; BK IV, 135b-136a; 150b-d; 151b-153a; BK V, 160a-b; 167d-168b; 171d-172a; 177b-d; BK VI, 191d-192b; 194d-195b; 197d-198a; BK VII, 241c-242a; 246b-c; BK VIII, 281a; 284d-285b; BK IX, 295d-297a; 302b-c

6 THUCYDIDES: *Peloponnesian War*, BK I, 355b-c; 378a-b

7 PLATO: *Meno*, 189d / *Republic*, BK IV, 345d-346a / *Statesman*, 597d-598a

9 ARISTOTLE: *Rhetoric*, BK I, CH 15 [1375^{b}35–1376^{a}2] 620c

13 VIRGIL: *Aeneid*, BK III [356–462] 157a-160a

14 PLUTARCH: *Numa Pompilius*, 52b-c / *Poplicola*, 82a-b / *Camillus*, 103b-104a / *Pericles*, 123c-124a / *Timoleon*, 207c-d / *Aemilius Paulus*, 214b-d / *Marcellus*, 259c-260c / *Aristides*, 268a-d; 271a-c / *Caius Marius*, 339b-c; 351d-352a / *Cimon*, 398d-399b / *Nicias*, 424d / *Alexander*, 541a-542a; 552b-c / *Caesar*, 594b-c / *Dion*, 789b-790a; 791a-792a

15 TACITUS: *Annals*, BK II, 30d-31a; 37b; BK VI, 91b; BK XI, 103d-104a; BK XII, 121d / *Histories*, BK I, 195b-c; BK II, 214d-215c; 235a-c; BK IV, 285d-286a; 287b

22 CHAUCER: *Troilus and Cressida*, BK IV, STANZA 196–202 114a-115a; BK V, STANZA 208–218 147b-148b

23 HOBBES: *Leviathan*, PART I, 83d-84a; PART III, 183b-d; 185a-188a; 199b-204a

26 SHAKESPEARE: *Julius Caesar*, ACT I, SC II [12–24] 569c; ACT II, SC IV [21–38] 580a-b

27 SHAKESPEARE: *Antony and Cleopatra*, ACT I, SC II [1–82] 312b-313a

38 ROUSSEAU: *Social Contract*, BK II, 401c-402a

40 GIBBON: *Decline and Fall*, 121a; 194d; 390d; 457d-458a; 734c [n 137]

43 MILL: *Representative Government*, 341a-c

46 HEGEL: *Philosophy of History*, PART I, 217b-c; 235b; PART II, 273b-c; PART III, 292b-d

54 FREUD: *General Introduction*, 477c

2c. The Hebraic conception of the prophetic vocation: the law and the prophets; Christ as prophet

OLD TESTAMENT: *Exodus*, 3:1–4:17; 6:13,28–30; 7:1–2; 19:9,19–24; 20:18–21; 24:1–2,9–18; 33:9–11,17–23; 34:1–4 / *Numbers*, 11:11–17,24–29; 12:1–9 / *Deuteronomy*, 13:1–11; 34:10–12 / *Joshua*, 3:7–8; 4:14—(*D*) *Josue*, 3:7–8; 4:14 / *Judges*, 4 / *I Samuel*, 8:10–18,22; 10:1–13,24—(*D*) *I Kings*, 8:10–18,22; 10:1–13,24 / *II Samuel*, 12:1–14—(*D*) *II Kings*, 12:1–14 / *I Kings*, 14:5–16; 17–18; 19:16–21; 20:13–14,22,37–42; 21:17–24; 22:14–22—(*D*) *III Kings*, 14:5–16; 17–18; 19:16–21; 20:13–14,22,37–42; 21:17–24; 22:14–22 / *II Kings*, 1–2 esp 2:9–15; 3:9–20; 4–6; 8:1–15; 9:1–10; 13:14–21; 19:1–7,20–34; 20; 22:8–20—(*D*) *IV Kings*, 1–2 esp 2:9–15; 3:9–20; 4–6; 8:1–15; 9:1–10; 13:14–21; 19:1–7,20–34; 20; 22:8–20 / *II Chronicles*, 18:4–26; 34:14–28; 36:15–16—(*D*) *II Paralipomenon*, 18:4–26; 34:14–28; 36:15–16 / *Isaiah*, 6:8–12; 8:11–18; 20; 37:6–7,21–35; 38:4–8; 49:1–12; 61:1–3—(*D*) *Isaias*, 6:8–12; 8:11–18; 20; 37:6–7,21–35; 38:4–8; 49:1–12; 61:1–3 / *Jeremiah*, 1; 5:14; 6:27; 7:25–26; 9:12; 18:18–23; 20; 25:4–7,15–30; 26; 28; 35:15; 36–38; 42:1–43:3; 44:4—(*D*) *Jeremias*, 1; 5:14; 6:27; 7:25–26; 9:12; 18:18–23; 20; 25:4–7,15–30; 26; 28; 35:15; 36–38; 42:1–43:3; 44:4 / *Ezekiel*, 2:1–5:4; 12; 33:30–33—(*D*) *Ezechiel*, 2:1–5:4; 12; 33:30–33 / *Daniel*, 2; 4–6—(*D*) *Daniel*, 2; 3:98–6:28 / *Amos*, 7:14–17 / *Jonah*—(*D*) *Jonas*

APOCRYPHA: *Ecclesiasticus*, 39:1–11; 45–46; 48–49—(*D*) OT, *Ecclesiasticus*, 39:1–15; 45–46; 48–49 / *Bel and Dragon*, 33–39—(*D*) OT, *Daniel*, 14:32–38 / *II Maccabees*, 2:1–7—(*D*) OT, *II Machabees*, 2:1–7

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18 AUGUSTINE: *City of God*, BK VII, CH 32 262a-b; BK XVII, CH 1–3 449a-451c; BK XVIII, CH 27, 486c

20 AQUINAS: *Summa Theologica*, PART III, Q 7, A 8 750d-751d

23 HOBBES: *Leviathan*, PART I, 69d-70c; PART II, 160b-c; PART III, 169d-170a; 182d-188a; 201b-c; 204a; 205a-d; PART IV, 269a

32 MILTON: *Paradise Lost*, BK XII [101–269] 321b-325a esp [173–269] 323a-325a

33 PASCAL: *Pensées*, 732–733 317a

38 ROUSSEAU: *Social Contract*, BK II, 401d-402a

40 GIBBON: *Decline and Fall*, 181b

41 GIBBON: *Decline and Fall*, 230c-231a

43 MILL: *Representative Government*, 341a-c

54 FREUD: *Civilization and Its Discontents*, 793c

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3a. The institution of oracles: the interpretation of oracular or prophetic utterances

4 HOMER: *Odyssey*, BK XIV [321–336] 263b-c; BK XIX [291–307] 292b
5 AESCHYLUS: *Seven Against Thebes* [742–777] 35b-c / *Prometheus Bound* [484–499] 45a; [640–682] 46d-47b / *Choephoroe* [269–305] 72d-73a; [1021–1076] 80a-d / *Eumenides* [1–33] 81a-b
5 SOPHOCLES: *Oedipus the King* [1–1185] 99a-110b / *Oedipus at Colonus* [386–419] 117d-118a / *Trachiniae* [155–177] 171c; [821–830] 177b
5 EURIPIDES: *Iphigenia Among the Tauri* [1234–1283] 422b-c / *Iphigenia at Aulis* [872–883] 433a
5 ARISTOPHANES: *Knights* [108–233] 471b-472d; [941–1099] 481d-483d / *Peace* [1039–1126] 537d-539a / *Birds* [959–991] 554c-555a / *Lysistrata* [762–780] 593a-b / *Plutus* [1–78] 629a-630a
6 HERODOTUS: *History*, BK I, 4d; 10a-c; 11b-d; 14a-15b; 20a-d; 21b-22a; 37c-d; 38a b; 39c-d; BK II, 60d-61b; 70d-71a; 77a-b; 80c; 81d-82b; 83b-c; BK III, 101d-102b; 103b-d; BK IV, 126d-127a; 150b-d; 151b-153d; BK V, 160a-b; 178a-180a; 183d-184a; BK VI, 189a-b; 191d-192b; 194d-195b; 197d-198a; 199d-201a; 201d-202c; 211b-d; 212d-213a,c; BK VII, 215a-c; 234d; 239a-240d; 241c-242a; 246b-c; 248b-c; 250b; 255c-d; BK VIII, 263b-c; 268b-d; 269c-270a; 273b-c; 276d-277a; 281a; 284d-285b; BK IX, 295d-298c; 302b-c; 308a-c
6 THUCYDIDES: *Peloponnesian War*, BK I, 355b-c; 378a-b; 380a-d; BK II, 392a-b; 401a-b; 415d-416c; BK III, 442c-443a; BK V, 489a-b
7 PLATO: *Apology*, 201d-203a / *Timaeus*, 467b-c
9 ARISTOTLE: *Rhetoric*, BK I, CH 15 [1375^b35–1376^a2] 620c
12 EPICTETUS: *Discourses*, BK I, CH 17 122d-124a; BK III, CH 1, 175d-176a
13 VIRGIL: *Aeneid*, BK II [108–136] 127a-b; BK III [84–120] 149b-150a; [132–191] 150b-152b; [356–462] 157a-160a; BK VI [42–101] 212a-213b; BK VII [81–106] 238a-239a
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15 TACITUS: *Annals*, BK II, 37a-b / *Histories*, BK I, 196b-c; BK II, 214d-215c; 235a-c
18 AUGUSTINE: *Confessions*, BK VI, par 6 36c-d / *City of God*, BK III, CH 17, 180b; BK VIII, CH 16 275c-276a; BK XVII, CH 3 450c-451c; BK XVIII, CH 23 483d-485a; BK XX, CH 21, 549d; CH 28 556c-557a / *Christian Doctrine*, BK III, CH 33 670b-c
23 HOBBES: *Leviathan*, PART I, 81d-82a; PART III, 183c-d
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25 MONTAIGNE: *Essays*, 18d-20d
27 SHAKESPEARE: *Cymbeline*, ACT V, SC V [426–475] 488b-d / *Winter's Tale*, ACT II, SC I 495b-497c esp [172–198] 497b-c
33 PASCAL: *Pensées*, 607 280a; 659 293a; 672 296a; 678 297a-b; 683–692 298b-301a
38 ROUSSEAU: *Social Contract*, BK II, 401d-402a
40 GIBBON: *Decline and Fall*, 121a; 170c; 225c-d
46 HEGEL: *Philosophy of History*, PART I, 252d-253a; PART II, 264d-265c; 273b-c; PART III, 311a-b

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NEW TESTAMENT: *Matthew*, 12:38–40; 16:1–4; 24 / *Mark*, 8:11–12; 13:4–30 / *Luke*, 1:39–44; 2:11–12; 11:16,29; 21:7–13 / *John*, 2:18–22; 6:30–31 / *Acts*, 2:16–22 / *I Corinthians*, 1:22–24
4 HOMER: *Iliad*, BK II [301–332] 13a-b; BK VIII [130–183] 52c-53a; [245–252] 53c-d; BK XII [195–250] 84a-d / *Odyssey*, BK II [146–207] 189c-190b; BK XV [160–181] 267c-d; [525–538] 271c; BK XVII [541–550] 282d; BK XX [91–121] 297a-b; [240–246] 298c; [345–357] 299d
5 AESCHYLUS: *Persians* [176–230] 17a-d / *Prometheus Bound* [484–499] 45a / *Agamemnon* [104–159] 53a-d
5 SOPHOCLES: *Oedipus at Colonus* [1447–1555] 127b-128b / *Antigone* [988–1114] 139c-140c / *Trachiniae* [663–718] 175d-176b
5 EURIPIDES: *Phoenician Maidens* [834–840] 385c
5 ARISTOPHANES: *Birds* [708–726] 551d-552a
6 HERODOTUS: *History*, BK I, 12b-d; 17a-b; 18b; 39c-40a; BK II, 65b; 86c-87a; BK III, 106c-d; BK IV, 124d-125a; 135b-136a; 138a-c; BK V, 183d-184a; BK VI, 190c-d; 199d-200a; 200d-201a; 204b-c; 212d-213a,c; BK VII,

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6 THUCYDIDES: *Peloponnesian War*, BK II, 389a-b; BK VII, 552c; 560d

9 ARISTOTLE: *History of Animals*, BK III, CH II [518^{a}32-36] 43a; CH 20 [522^{a}13-20] 47a-b; BK VI, CH 2 [559^{b}16-20] 86b; CH 22 [576^{a}1-4] 101c

12 LUCRETIUS: *Nature of Things*, BK VI [43-55] 80d-81a; [379-422] 85b-d

12 EPICTETUS: *Discourses*, BK I, CH 17, 122d-123c

13 VIRGIL: *Aeneid*, BK I [387-401] 113b-114a; BK II [162-233] 128b-130b; [679-704] 143b-144a; BK III [388-393] 157b-158a; [523-547] 161b-162a; BK VI [185-211] 216a-b; BK VII [59-80] 237b-238a; BK VIII [520-540] 273a-b; BK XII [245-265] 360b-361a

14 PLUTARCH: *Romulus*, 19b-20c / *Numa Pompilius*, 52b-c / *Poplicola*, 80b-d; 82a-b / *Themistocles*, 94d / *Camillus*, 103b-104a / *Pericles*, 123c-124a; 138d / *Fabius*, 141d-142a / *Timoleon*, 198c-d; 207c-d / *Aemilius Paulus*, 214b-d / *Marcellus*, 248c-d; 259c-260c / *Aristides*, 271a-c / *Caius Marius*, 339c-d / *Sulla*, 371d-372c / *Lucullus*, 403d-404a; 404d-405a; 411d-412a / *Nicias*, 429d-430b; 435b-d / *Crassus*, 447c-d / *Agesilaus*, 483a-b / *Alexander*, 568a-b; 575a-576a / *Phocion*, 615b-d / *Caius Gracchus*, 685c-d / *Dion*, 789b-790a / *Marcus Brutus*, 818a-b; 822b / *Galba*, 866d-867d / *Otho*, 871b-c

15 TACITUS: *Annals*, BK I, 9a-b; 9d; BK II, 27b; BK IV, 79b; BK VI, 95d-96a; BK XI, 103b; BK XII, 119b; 124b; BK XIII, 141a-b; BK XIV, 144c; 147a; 149b-c; BK XV, 159b-c; 168d-169a / *Histories*, BK I, 189d-190a; 206a; 212d-213a; BK II, 228a-b; 235a-c; BK III, 256d; BK V, 298b-c

17 PLOTINUS: *Second Ennead*, TR III, CH 7 44c-45a / *Third Ennead*, TR I, CH 5-6 80a-81b

18 AUGUSTINE: *Confessions*, BK IV, par 4-6 20a-d; BK VII, par 8-10 45d-47a / *City of God*, BK V, CH 1-7 207d-212c; CH 9, 213b-c; BK VII, CH 35 263c-264a,c / *Christian Doctrine*, BK II, CH 21-24 647a-649a

19 AQUINAS: *Summa Theologica*, PART I, Q 70, A 2, REP 1 364b-365a

23 HOBBES: *Leviathan*, PART I, 80c-d; 81d-82b; PART III, 188a; 188d-189c

24 RABELAIS: *Gargantua and Pantagruel*, BK III, 146a-150d; 175c-178a; BK IV, 268b-269c; 277d-279b

25 MONTAIGNE: *Essays*, 18d-20d; 223d-224a

26 SHAKESPEARE: *3rd Henry VI*, ACT V, SC VI [34-93] 103c-104a / *Richard II*, ACT II, SC IV [7-17] 334c-d / *Julius Caesar*, ACT I, SC III 572c-574b; ACT V, SC I [71-88] 592d

27 SHAKESPEARE: *King Lear*, ACT I, SC II [112-166] 249a-c / *Macbeth*, ACT II, SC IV [1-18] 294a-b

29 CERVANTES: *Don Quixote*, PART II, 381a-b

30 BACON: *Advancement of Learning*, 14b-c; 54c-55a

32 MILTON: *Paradise Lost*, BK I [594-599] 106b; BK VIII [511-514] 243b

33 PASCAL: *Pensées*, 173 203b-204a

35 LOCKE: *Human Understanding*, BK IV, CH XIX, SECT 15 388a-c

36 STERNE: *Tristram Shandy*, 332a-334b

40 GIBBON: *Decline and Fall*, 3c; 457d; 547a-b; 571a; 614b-c

41 GIBBON: *Decline and Fall*, 232a-c

46 HEGEL: *Philosophy of History*, PART II, 263d-265c; PART III, 292b-d

47 GOETHE: *Faust*, PART II [4947-4976] 122b-123a

48 MELVILLE: *Moby Dick*, 121a; 175b-176a; 409b-410b; 413b-414a

51 TOLSTOY: *War and Peace*, BK VI, 259c-d; BK VII, 292d-293b; 298d-300a; BK VIII, 340d-341a,c; BK IX, 377b-379a; BK X, 428a-429a

54 FREUD: *General Introduction*, 467a-b

3c. Dreams, visions, visitations

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4 HOMER: *Iliad*, BK I [59–67] 3d; BK II [1–83] 10a-d / *Odyssey*, BK IV [787–841] 207a-d; BK XIX [509–581] 294c-295a,c
5 AESCHYLUS: *Persians* [176–230] 17a-d / *Seven Against Thebes* [24–29] 27b / *Prometheus Bound* [484–499] 45a; [640–682] 46d-47b / *Agamemnon* [1072–1342] 63c-66b / *Choephoroe* [514–552] 75a-c
5 SOPHOCLES: *Electra* [405–515] 159b-160a; [634–659] 161a-b
5 EURIPIDES: *Trojan Women* [308–461] 272d-274a / *Hecuba* [59–97] 353d / *Iphigenia Among the Tauri* [42–66] 411c-d; [1234–1283] 422b-c
5 ARISTOPHANES: *Knights* [1090–1095] 483c-d
6 HERODOTUS: *History*, BK I, 8a-10a; 25b-31a; 47a-c; BK II, 78d-79c; BK III, 95d; 103b-104b; 116a-b; BK IV, 126d-127a; 154c-d; 155b-c; BK V, 170c-d; BK VI, 196d-197a; 205d-206a; 208b; 211a; BK VII, 218b-220b; BK VIII, 274b-c; 276b-c
7 PLATO: *Euthydemus*, 66a-b / *Apology*, 207b-c; 211a-b / *Crito*, 213b-d / *Timaeus*, 466d-467c
8 ARISTOTLE: *Prophesying* 707a-709a,c
12 LUCRETIUS: *Nature of Things*, BK I [102–126] 2b-c
13 VIRGIL: *Aeneid*, BK III [132–191] 150b-152b; BK IV [450–473] 179b-180a; [554–570] 182b-183a; BK VI [76–97] 213a-b; BK VII [323–474] 245a-249a; BK VIII [18–89] 259b-261b
14 PLUTARCH: *Themistocles*, 98d-99a / *Alcibiades*, 174a-d / *Coriolanus*, 185b-186a / *Pelopidas*, 239d-240c / *Aristides*, 268a-d / *Pyrrhus*, 329c-d / *Cimon*, 392b-c; 398d-399b / *Lucullus*, 405c; 411a-b / *Eumenes*, 473a-b / *Agesilaus*, 483a-b / *Pompey*, 514d-515a; 532b; 534d-535a / *Alexander*, 548d-549a / *Caesar*, 601d-604d / *Demosthenes*, 702c-703b / *Cicero*, 721c-722a / *Demetrius*, 727b-d / *Dion*, 781d-782a; 801b / *Marcus Brutus*, 816d-817c
15 TACITUS: *Annals*, BK II, 26c; BK XI, 101b-c; 105c; BK XII, 112d-113a; BK XVI, 176b-c / *Histories*, BK IV, 293a-294a
18 AUGUSTINE: *Confessions*, BK III, par 19–20 18b-19a / *City of God*, BK VIII, CH 16 275c-276a; BK XI, CH 2 323a-c
19 AQUINAS: *Summa Theologica*, PART I, Q 12, A 11, ANS 59d-60d; Q 86, A 4, REP 2 463d-464d
20 AQUINAS: *Summa Theologica*, PART III, Q 7, A 8, REP 1 750d-751d
21 DANTE: *Divine Comedy*, HELL, XXXIII [13–75] 49c-50b; PURGATORY, IX [13–69] 66a-c; XIX [1–63] 81c-82a; XXVII [91–117] 95c-d
22 CHAUCER: *Troilus and Cressida*, BK V, STANZA 46–56 126a-127b; STANZA 177–186 143b-144b; STANZA 207–219 147a-149a; STANZA 245 152a / *Nun's Priest's Tale* [14,976–15,162] 452b-455b
23 HOBBES: *Leviathan*, PART I, 51d-52a; 69d-70c; PART III, 173c; 176d-177b; 184a-187a; CONCLUSION, 281d-282a
24 RABELAIS: *Gargantua and Pantagruel*, BK III, 150d-156c; BK IV, 278d
26 SHAKESPEARE: *2nd Henry VI*, ACT I, SC II [17–55] 36c-37a; SC IV 40a-41a / *Romeo and Juliet*, ACT I, SC IV [44–114] 291a-d / *Midsummer-Night's Dream*, ACT II, SC II [145–156] 360b-c / *Julius Caesar*, ACT II, SC II [75–90] 578d-579a; ACT IV, SC III [275–289] 591c; ACT V, SC V [16–19] 595b
27 SHAKESPEARE: *Hamlet*, ACT I, SC I 29a-31c / *Macbeth*, ACT I, SC III 285b-287b; ACT III, SC V 299b-d; ACT IV, SC I 300b-302b; ACT V, SC VIII [16–22] 310b / *Cymbeline*, ACT V, SC IV [30–122] 481c-482b; SC V [426–465] 488b-d
30 BACON: *Advancement of Learning*, 8c; 54d-55a; 55c
32 MILTON: *Paradise Lost*, BK V [28–128] 176a-178a; [469–505] 185b-186a; BK VIII [283–336] 238b-239b; BK XI [193]–BK XII [649] 303b-333a / *Areopagitica*, 389a-b
37 FIELDING: *Tom Jones*, 162b-163a
40 GIBBON: *Decline and Fall*, 189b-c; 294d-296b
46 HEGEL: *Philosophy of History*, PART I, 244d; PART II, 264d-265b
47 GOETHE: *Faust*, PART II [11,384–401] 277a-b
51 TOLSTOY: *War and Peace*, BK VII, 300c-301b; BK XII, 546a-d; 561b-562a
52 DOSTOEVSKY: *Brothers Karamazov*, BK V, 127b-137c passim
54 FREUD: *Origin and Development of Psycho-Analysis*, 11c / *Interpretation of Dreams*, 137c; 138a-b; 178b-c; 179d [fn 2]; 387a,c / *General Introduction*, 477b-d

3*d*. Prophecy by the direct word of God

OLD TESTAMENT: *Genesis*, 2:16–17; 3:8–19; 4:6–15; 6:3,7,13–21; 7:1–4; 8:21–22; 9:1–17; 11:6–7; 12:1–8; 13:14–18; 15; 17; 18:17–21; 21:12–13; 26:1–5,24; 35:9–13 / *Exodus*, 3:4–22; 6:1–8,28–30; 7–12 passim; 16:4–5,11–12; 17:5–6,14; 19:3–20:22; 32:9–14,30–34; 33:1–34:27 / *Numbers*, 12:5–8,14; 14:11–12,20–35 / *Deuteronomy*, 4:10–15,36; 5; 31:14–21 / *Joshua*, 1:1–9; 3:7–8; 4:1–3; 6:1–5; 8:1–2; 10:8—(*D*) *Josue*, 1:1–9; 3:7–8; 4:1–3; 6:1–5; 8:1–2; 10:8 / *I Samuel*, 3; 16:1–13—(*D*) *I Kings*, 3; 16:1–13 / *I Kings*, 19:9–18—(*D*) *III Kings*, 19:9–18 / *Isaiah*, 6; 48:2–5—(*D*) *Isaias*, 6; 48:2–5 / *Jeremiah*, 1—(*D*) *Jeremias*, 1 / *Ezekiel*, 1–39 passim, esp 1–2—(*D*) *Ezechiel*, 1–39 passim, esp 1–2 / *Hosea*, 1–3—(*D*) *Osee*, 1–3 / *Amos*, 7–9
NEW TESTAMENT: *Matthew*, 17:1–9 / *Acts*, 26:13–18
18 AUGUSTINE: *City of God*, BK XI, CH 3 323d; BK XVI, CH 16–29 433c-441a; CH 36 443d-444b; CH 38 445a-446a
19 AQUINAS: *Summa Theologica*, PART I, Q 12, A 11, ANS and REP 1 59d-60d
23 HOBBES: *Leviathan*, PART III, 165d-166a; 183d-184a; CONCLUSION, 281d-282a
32 MILTON: *Paradise Lost*, BK XII [106–151] 321b-322b; [173–269] 323a-325a
52 DOSTOEVSKY: *Brothers Karamazov*, BK V, 127b-137c

4. Particular prophecies of hope and doom

4a. The Covenant and the Promised Land

OLD TESTAMENT: *Genesis*, 9:8–17; 12:1–7; 13:14–18; 15; 17–18; 22:1–19; 26:1–6,24–25; 28:11–22; 35:9–13 / *Exodus*, 2:23–3:22; 6:2–8; 19:4–6; 20:1–17; 32:11–14; 33:1–3; 34:10–11 / *Leviticus*, 26:40–45 / *Numbers*, 14:6–9; 32; 34:1–12 / *Deuteronomy*, 1:7–8,19–31; 3:16–23; 4:12–13,23–40; 5; 6:1–3,10–11,18–19; 7:12–13; 8:7–10,18–20; 9:1–6,23–29; 10:11; 11; 26:1–11; 27–32 esp 27:1–3, 28:1–14, 29:1–29, 31:16–20; 34:1–4 / *Joshua* esp 1, 23:1–24:13—(*D*) *Josue* esp 1, 23:1–24:13 / *Judges*, 2:1–6 / *I Kings*, 8:56—(*D*) *III Kings*, 8:56 / *I Chronicles*, 16:13–22—(*D*) *I Paralipomenon*, 16:13–22 / *Nehemiah*, 9—(*D*) *II Esdras*, 9 / *Psalms*, 74:19–20; 78:1–7,52–55; 105:6–44; 111; 132—(*D*) *Psalms*, 73:19–20; 77:1–7,52–55; 104:6–44; 110; 131 / *Isaiah*, 54:1–10; 56:4–6; 59:20–21; 61:7–9—(*D*) *Isaius*, 54:1–10; 56:4–6; 59:20–21; 61:7–9 / *Jeremiah*, 11:1–10; 31:31–34; 34:12–18—(*D*) *Jeremias*, 11:1–10; 31:31–34; 34:12–18 / *Ezekiel*, 16:60–63; 37:26–28—(*D*) *Ezechiel*, 16:60–63; 37:26–28 / *Hosea*, 2:16–18; 6:4–7—(*D*) *Osee*, 2:16–18; 6:4–7

APOCRYPHA: *Ecclesiasticus*, 44:19–23—(*D*) OT, *Ecclesiasticus*, 44:20–26

NEW TESTAMENT: *Luke*, 1:71–75 / *Acts*, 3:25; 7:1–8 / *Romans*, 9:1–9; 11:25–27 / *Galatians*, 3:13–18; 4:22–31 / *Ephesians*, 2:11–13 / *Hebrews*, 8:6–9:28; 10:14–17

18 AUGUSTINE: *City of God*, BK XVI, CH 16–29 433c-441a; CH 32 441c-442c; CH 36 443d-444b; CH 38, 445a-d; BK XVII, CH 7 458c-459d; BK XXII, CH 3 588a-b

23 HOBBES: *Leviathan*, PART III, 177c-180a

32 MILTON: *Paradise Lost*, BK XI [880–897] 318b; BK XII [101–126] 321b-322a; [151–172] 322b-323a; [259–269] 324b-325a

33 PASCAL: *Pensées*, 637–640 289b-290a; 675 296b-297a; 713 304b-308a; 717–719 308b-309a

4b. The destruction of Jerusalem and the dispersion of Israel: the restoration of Israel and the rebuilding of the Temple

OLD TESTAMENT: *Leviticus*, 26:27–39 / *Deuteronomy*, 4:25–31; 28:15–30:10; 31:16–18 / *Joshua*, 23:12–16—(*D*) *Josue*, 23:12–16 / *II Kings*, 17; 20:12–21; 21:10–15; 22:12–20; 23:26–27; 24:1–4,10–20; 25—(*D*) *IV Kings*, 17; 20:12–21; 21:10–15; 22:12–20; 23:26–27; 24:1–4,10–20; 25 / *II Chronicles*, 7:19–22; 34:21–33; 36:15–23—(*D*) *II Paralipomenon*, 7:19–22; 34:21–33; 36:15–23 / *Psalms*, 14:7; 53:6; 78:58–72; 79; 85:1–3; 126; 137—(*D*) *Psalms*, 13:7; 52:7; 77:58–72; 78; 84:2–4; 125; 136 / *Isaiah*, 1–10; 14:1–3; 22; 28; 32; 36–37; 39; 42–43; 49; 51–52; 60–63; 65:8–10,17–25; 66—(*D*) *Isaias*, 1–10; 14:1–3; 22; 28; 32; 36–37; 39; 42–43; 49; 51–52; 60–63; 65:8–10,17–25; 66 / *Jeremiah*, 1–45 passim; 49–52 passim—(*D*) *Jeremias*, 1–45 passim; 49–52 passim / *Lamentations* / *Ezekiel*, 4–7; 9; 11–24; 28:20–26; 33–48 passim, esp 33:23–29, 36:1–37:28, 39:22–40:2, 43:1–10, 47:1–23—(*D*) *Ezechiel*, 4–7; 9; 11–24; 28:20–26; 33–48 passim, esp 33:23–29, 36:1–37:28, 39:22–40:2, 43:1–10, 47:1–23 / *Hosea*, 2; 3:4–5; 5–11—(*D*) *Osee*, 2; 3:4–5; 5–11 / *Joel*, 2–3 / *Amos* passim / *Obadiah* passim—(*D*) *Abdias* passim / *Micah*—(*D*) *Micheas* / *Nahum* passim / *Habakkuk*—(*D*) *Habacuc* / *Zephaniah*—(*D*) *Sophonias* / *Zechariah* passim—(*D*) *Zacharias* passim

APOCRYPHA: *Tobit*, 14:4–5—(*D*) OT, *Tobias*, 14:6–7 / *Ecclesiasticus*, 49:4–50:2—(*D*) OT, *Ecclesiasticus*, 49:5–50:2 / *Baruch*, 5—(*D*) OT, *Baruch*, 5

NEW TESTAMENT: *Matthew*, 24:1–2 / *Mark*, 13:1–2 / *Luke*, 21:5–6; 19:41–44

18 AUGUSTINE: *City of God*, BK XVII, CH 7 458c-459d; BK XVIII, CH 46 500a-d; CH 48, 501b-c

23 HOBBES: *Leviathan*, PART III, 179a-b; 244b-c

33 PASCAL: *Pensées*, 638–641 289b-290a; 713–719 304b-309a; 722 309a-312a; 726 313a-315b

4c. The coming of a Messiah: Hebraic and Christian readings of messianic prophecy

OLD TESTAMENT: *Genesis*, 3:15; 12:3; 18:18; 21:12; 22:18; 26:4; 28:14; 49:10–12,22–26 / *Numbers*, 24:15–25 / *Deuteronomy*, 18:15–19 / *I Chronicles*, 17:11–14—(*D*) *I Paralipomenon*, 17:11–14 / *Job*, 19:25–27 / *Psalms*, 2:7; 8:5–6; 14:7; 16:10; 19:4–5; 21–22; 40:1–8; 45:7; 50:1–3; 68; 72; 80:16–18; 85; 89:19–29,36–37; 110; 118:22,26—(*D*) *Psalms*, 2:7; 8:5–6; 13:7; 15:10; 18:6; 20–21; 39:1–8; 44:7; 49:1–3; 67; 71; 79:16–18; 84; 88:19–29,36–37; 109; 117:22,26 / *Isaiah*, 7:10–16; 8:3–4; 9:6–7; 11:1–5; 16:1; 22:20–25; 28:16–29; 32; 35:4; 40:1–11; 41:2–3,8–14,25; 42:1–7; 45; 46:11–12; 49:1–13,22–23; 52–55; 59–66 passim, esp 59:16–21, 61:1–3, 62:11–63:14, 64:1–5—(*D*) *Isaias*, 7:10–16; 8:3–4; 9:6–7; 11:1–5; 16:1; 22:20–25; 28:16–29; 32; 35:4; 40:1–11; 41:2–3,8–14,25; 42:1–7; 45; 46:11–12; 49:1–13,22–23; 52–55; 59–66 passim, esp 59:16–21, 61:1–3, 62:11–63:14, 64:1–5 / *Jeremiah*, 23:5–6; 30:7–9; 31:31–33; 33:10–18—(*D*) *Jeremias*, 23:5–6; 30:7–9; 31:31–33; 33:10–18 / *Ezekiel*, 17:22–24; 34; 37:21–26—(*D*) *Ezechiel*, 17:22–24; 34; 37:21–26 / *Daniel*, 2:44; 7:13–14; 9:24–27 / *Hosea*, 1:11; 3:5; 13:14; 14:5–7—(*D*) *Osee*, 1:11; 3:5; 13:14; 14:6–8 / *Micah*, 5:2–5; 7—(*D*) *Micheas*, 5:2–5; 7 / *Zechariah*, 2:10; 3:8–9; 6:12–14; 9:9–11; 11:16; 13—(*D*) *Zacharias*, 2:10; 3:8–9; 6:12–14; 9:9–11; 11:16; 13 / *Malachi*, 3:1–3; 4:5–6—(*D*) *Malachias*, 3:1–3; 4:5–6

APOCRYPHA: *Wisdom of Solomon*, 2:12-22—(*D*) OT, *Book of Wisdom*, 2:12-22 / *Baruch*, 3:36-38—(*D*) OT, *Baruch*, 3:36-38

NEW TESTAMENT: *Matthew*, 3:1-12 / *Mark*, 1:4-8 / *Luke*, 2:25-34; 3:1-6 / *John*, 1:19-25,40-45; 7:26-31 / *Acts*, 2:29-36; 3:18-26 / *Romans*, 11:25-27

18 AUGUSTINE: *City of God*, BK VII, CH 32 262a-b; BK X, CH 32 319d-322a,c; BK XV, CH 26 419b-420a; BK XVI, CH 2 422b-423d; CH 37 444b-445a; BK XVII 449a-472a,c passim; BK XVIII, CH 11 477c-d; CH 23 483d-485a; CH 28 486c-487a; CH 30, 487c-d; CH 33-34 490c-491c; CH 44 498a-d; CH 46 500a-d; BK XIX, CH 22 525b-c

20 AQUINAS: *Summa Theologica*, PART I-II, Q 100, A 12, ANS 264d-265d; Q 103, A 2, ANS and REP 1-2 299b-300d; Q 107, A 2 327b-329a; PART III, Q 26, A 1, REP 1 845b-846a

21 DANTE: *Divine Comedy*, PURGATORY, XXII [55-93] 87a-c

23 HOBBES: *Leviathan*, PART III, 179d; 187b-c; 204a-207b passim; 229c; 242b; 243a-b

32 MILTON: *Upon the Circumcision* 12b-13a / *Paradise Lost*, BK XI [22-44] 299b-300a; BK XII [227-244] 324a-b; [284-330] 325b-326b esp [307-314] 326a

33 PASCAL: *Pensées*, 607-609 280a-b; 613 282b-283a; 616-619 283b-285a; 662-664 293b-294a; 673 296a; 675 296b-297a; 692-741 300b-319a; 747-749 319b-320a; 751-761 320a-322a

40 GIBBON: *Decline and Fall*, 181b; 206a-b; 207d; 308a

41 GIBBON: *Decline and Fall*, 134b

4*d*. The second coming of the Lord: the Day of Judgment, the end of the world, and the millenium

OLD TESTAMENT: *Job*, 19:25-29; 21 esp 21:30-32 / *Psalms*, 50; 72; 96:10-13; 97-98—(*D*) *Psalms*, 49; 71; 95:10-13; 96-97 / *Ecclesiastes*, 3:16-17; 11:9-10; 12:14 / *Isaiah*, 2-4; 11; 24; 26:1-28:15; 30; 34-35; 65:17-25; 66—(*D*) *Isaias*, 2-4; 11; 24; 26:1-28:15; 30; 34-35; 65:17-25; 66 / *Daniel*, 7:21-27; 11-12 / *Joel*, 1:14-2:11; 2:27-32; 3 / *Micah*, 4—(*D*) *Micheas*, 4 / *Zephaniah*—(*D*) *Sophonias* / *Zechariah*, 14—(*D*) *Zacharias*, 14 / *Malachi*, 3-4—(*D*) *Malachias*, 3-4

APOCRYPHA: *Tobit*, 13:9-14:15—(*D*) OT, *Tobias*, 13:11-14:17 / *Judith*, 16:17—(*D*) OT, *Judith*, 16:20-21

NEW TESTAMENT: *Matthew*, 10:14-15; 11:20-24; 12:34-36; 13:24-50; 24-25 / *Mark*, 13:4-37 / *Luke*, 17:20-37; 19:11-28; 21 / *John*, 12:48; 14:3-4 / *Acts*, 1:9-11; 2:17-21; 17:31 / *Romans*, 2:5-11 / *I Corinthians*, 15:23-28 / *Philippians*, 3:20-21 / *I Thessalonians*, 1:9-10; 2:19; 4:12-5:11 / *II Thessalonians*, 1-2 / *II Timothy*, 3; 4:1,8 / *Hebrews*, 9:26-28 / *James*, 5:7-9 / *I Peter*, 4:5-7 / *II Peter*, 2:9; 3 / *I John*, 2:18-29; 4:17 / *Jude*, 14-25 / *Revelation* esp 1:4-20, 14:15-16:21, 20:1-22:21—(*D*) *Apocalypse* esp 1:4-20, 14:15-16:21, 20:1-22:21

16 KEPLER: *Epitome*, BK IV, 848b

18 AUGUSTINE: *City of God*, BK XVIII, CH 53 504d-505c; BK XX 530a-560a,c / *Christian Doctrine*, BK I, CH 15 628b-c

20 AQUINAS: *Summa Theologica*, PART III SUPPL, Q 73 922b-925b; Q 74, A 1 925c-926c; Q 77, A 2 945a-946b; Q 88, A 1 1000d-1001d; A 3 1002d-1004b; Q 91, A 1 1016b-1017c

21 DANTE: *Divine Comedy*, HELL, VI [94-115] 9b-c; PARADISE, XIX [100-148] 136a-c

22 CHAUCER: *Parson's Tale*, par 10, 498b-499b

23 HOBBES: *Leviathan*, PART III, 179d; 197c; 230a; 244b-c; PART IV, 248a-b; 251c-252b; 254b-c

32 MILTON: *Christs Nativity* [125-172] 4b-5b / *At a Solemn Musick* 13a-b / *Paradise Lost*, BK III [274-343] 141b-143a; BK VII [139-173] 220a-221a; BK XI [45-83] 300a-301a; BK XII [451-465] 329a; [537-557] 331a / *Areopagitica*, 404a-b

33 PASCAL: *Pensées*, 757 321a

35 LOCKE: *Toleration*, 17a-b

40 GIBBON: *Decline and Fall*, 187c-188c

41 GIBBON: *Decline and Fall*, 233c-234d

52 DOSTOEVSKY: *Brothers Karamazov*, BK I, 13c-d; BK V, 127b-137c

5. The criticism and rejection of prophecy: the distinction between true and false prophecy; the condemnation of astrology and divination as impiety or superstition

OLD TESTAMENT: *Exodus*, 7:10-13,22 / *Deuteronomy*, 13:1-5; 18:15-22 / *I Samuel*, 28:1-10—(*D*) *I Kings*, 28:1-10 / *I Kings*, 13:11-34; 18:17-40; 22:5-25—(*D*) *III Kings*, 13:11-34; 18:17-40; 22:5-25 / *II Kings*, 17:17—(*D*) *IV Kings*, 17:17 / *I Chronicles*, 10:13-14—(*D*) *I Paralipomenon*, 10:13-14 / *II Chronicles*, 18—(*D*) *II Paralipomenon*, 18 / *Isaiah*, 8:18-22; 30:9-11; 41:21-29; 47:12-13—(*D*) *Isaias*, 8:18-22; 30:9-11; 41:21-29; 47:12-13 / *Jeremiah*, 2:8; 5:12-14,31; 14:13-16; 23:9-40; 27:9-18; 28; 29:8-9,29-32; 36-38 esp 37:18-20—(*D*) *Jeremias*, 2:8; 5:12-14,31; 14:13-16; 23:9-40; 27:9-18; 28; 29:8-9,29-32; 36-38 esp 37:17-19 / *Ezekiel*, 13; 14:9; 21:21-23; 22:23-31—(*D*) *Ezechiel*, 13; 14:9; 21:21-23; 22:23-31 / *Daniel*, 1:19-20; 2:1-23; 4:1-27; 5:5-17 / *Micah*, 3:5-12—(*D*) *Micheas*, 3:5-12 / *Zechariah*, 10:2; 13:2-6—(*D*) *Zacharias*, 10:2; 13:2-6

APOCRYPHA: *Wisdom of Solomon*, 14:27-29—(*D*) OT, *Book of Wisdom*, 14:27-29 / *Ecclesiasticus*, 34:1-7—(*D*) OT, *Ecclesiasticus*, 34:1-7

NEW TESTAMENT: *Matthew*, 7:15-23; 12:38-40; 13:54-57; 16:1-4; 23:29-39; 24:11,23-28 / *Mark*, 6:1-5; 8:11-12; 13:21-22 / *Luke*, 6:26; 11:16,29 / *John*, 4:44 / *II Peter*, 2:1-3 / *I John*, 4:1-6

(5. *The criticism and rejection of prophecy: the distinction between true and false prophecy; the condemnation of astrology and divination as impiety or superstition.*)

4 HOMER: *Iliad*, BK XII [195–250] 84a-d / *Odyssey*, BK II, [146–207] 189c-190b
5 AESCHYLUS: *Agamemnon* [248–254] 54d; [1178–1213] 64c-65a
5 SOPHOCLES: *Oedipus the King* [300–512] 102a-103d; [702–725] 105d-106a / *Antigone* [1155–1171] 140d-141a
5 EURIPIDES: *Helen* [744–760] 305b / *Iphigenia Among the Tauri* [570–575] 416a / *Iphigenia at Aulis* [948–960] 433d-434a
5 ARISTOPHANES: *Knights* [108–233] 471b-472d; [941–1099] 481d-483d / *Peace* [1039–1126] 537d-539a / *Birds* [959–991] 554c-555a
6 HERODOTUS: *History*, BK I, 10a-c; BK II, 86c; BK III, 116a-b; BK VIII, 273b-c
6 THUCYDIDES: *Peloponnesian War*, BK II, 389a-b; BK V, 489a-b; 506b
7 PLATO: *Timaeus*, 466d-467b
8 ARISTOTLE: *Prophesying* 707a-709a,c
12 LUCRETIUS: *Nature of Things*, BK I [80–135] 2a-d
12 EPICTETUS: *Discourses*, BK II, CH 7 145b-146a
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33 PASCAL: *Pensées*, 173 203b-204a; 597–598 278b-279a; 817–818 330b-331b; 835 334b
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CROSS-REFERENCES

For: Other discussions of man's knowledge of the future by natural or supernatural means, *see* FATE 5–6; KNOWLEDGE 5a(5); NECESSITY AND CONTINGENCY 4c; TIME 6f; TRUTH 3b(2).

Another consideration of the religious significance of prophecy and its fulfillment, *see* RELIGION 1b(3).

Other discussions of the interpretation of oracles, omens, portents, and visions, *see* LANGUAGE 10; MEMORY AND IMAGINATION 8a; SIGN AND SYMBOL 5b; and for other treatments of dreams and their meaning, *see* LANGUAGE 10; MEMORY AND IMAGINATION 8d–8d(2); SIGN AND SYMBOL 6a.

The religious dogmas related to particular prophecies in Judaism and Christianity, *see* GOD 7h, 8b, 8e, 9f; WORLD 8.

ADDITIONAL READINGS

Listed below are works not included in *Great Books of the Western World*, but relevant to the idea and topics with which this chapter deals. These works are divided into two groups:

I. Works by authors represented in this collection.
II. Works by authors not represented in this collection.

For the date, place, and other facts concerning the publication of the works cited, consult the Bibliography of Additional Readings which follows the last chapter of *The Great Ideas.*

I.

PLUTARCH. "Wherefore the Pythian Priestess Now Ceases to Deliver Her Oracles in Verse," "Why the Oracles Cease to Give Answers," in *Moralia*
AUGUSTINE. *De Genesi ad Litteram*, BK XII, CH 9
——. *On the Spirit and the Letter*
AQUINAS. *Quaestiones Disputatae*, *De Veritate*, Q 12
——. *Summa Theologica*, PART II–II, QQ 171–175
F. BACON. "Of Prophecies," in *Essays*
SPINOZA. *Tractatus Theologico-Politicus* (*Theological-Political Treatise*), CH 1–3, 11
NEWTON. *Daniel and the Apocalypse*

II.

CICERO. *De Divinatione* (*On Divination*)
TERTULLIAN. *The Prescription Against Heretics*
SAADIA GAON. *The Book of Beliefs and Opinions*, TREATISE III, VIII
MAIMONIDES. *Eight Chapters on Ethics*, CH 7
——. *The Guide for the Perplexed*, PART II, CH 32–47
CALDERÓN. *Life Is a Dream*
J. TAYLOR. *A Discourse of the Liberty of Prophesying*
FONTENELLE. *Histoire des oracles*
LEIBNITZ. *New Essays Concerning Human Understanding*, BK IV, CH 19
VOLTAIRE. "Prophecies," "Prophets," in *A Philosophical Dictionary*
PAINE. *The Age of Reason*, PART I
J. H. NEWMAN. *Lectures on the Prophetical Office of the Church*
KIERKEGAARD. *Of the Difference Between a Genius and an Apostle*
COMTE. *System of Positive Polity*, VOL IV, *Theory of the Future of Man*
W. R. SMITH. *The Prophets of Israel and Their Place in History*
FRAZER. *Psyche's Task*
LODS. *The Prophets and the Rise of Judaism*

Chapter 73: PRUDENCE

INTRODUCTION

OF the qualities or virtues attributed to the intellect, prudence seems to be least concerned with knowledge and most concerned with action. When we call a man a scientist or an artist, or praise the clarity of his understanding, we imply only that he has a certain kind of knowledge. We admire his mind, but we do not necessarily admire him as a man. We may not even know what kind of man he is or what kind of life he leads. It is significant that our language does not contain a noun like "scientist" or "artist" to describe the man who possesses prudence. We must use the adjective and speak of a prudent man, which seems to suggest that prudence belongs to the whole man, rather than just to his mind.

Prudence seems to be almost as much a moral as an intellectual quality. We would hardly call a man prudent without knowing his manner of life. Whether he behaved temperately would probably be much more relevant to our judgment of his prudence than whether he had a cultivated mind. The extent of his education or the depth of his learning might not affect our judgment at all, but we probably would consider whether he was old enough to have learned anything from experience and whether he had actually profited from experience to become wise.

These observations not only express the ordinary sense of the word "prudence," but also give a summary indication of the idea for which that word stands in the great books. Like other fundamental traits of mind or character, prudence is considered by the poets and historians in terms of precept and example. For the definition of the term or for an analysis of its relation to other fundamental ideas, such as virtue and happiness, desire and duty, one must go to the great works of moral and political theory or of theology.

Even there, however, the conception of prudence is used more frequently than it is expounded. Plato, Aristotle, Aquinas, Hobbes, and Kant seem to be the exceptions, and of these only Aristotle and Aquinas offer an extended analysis—Aristotle in his book on intellectual virtue in the *Ethics*, Aquinas in certain questions of his Treatise on Habits in the *Summa Theologica*, but more extensively in his Treatise on Prudence (see the questions from the *Summa Theologica* cited in the list of Additional Readings).

THAT PRUDENCE IS NOT knowledge in the ordinary sense of the term—that it is a product of experience and a possession of reason which, unlike science or art, cannot be expressed in propositions—seems to be clearly implied by Hobbes. "When the thoughts of a man, that has a design in hand, running over a multitude of things, observes how they conduce to that design, or what design they may conduce to; if his observations are such as are not easy or usual; this wit of his is called Prudence, and depends on much experience and memory of the like things, and their consequences heretofore."

Whereas science can achieve some certainty, the judgments of prudence are, according to Hobbes, all uncertain, "because to observe by experience and remember all circumstances that may alter the success, is impossible." It is the opposition between experience and science which seems to lead Hobbes to distinguish prudence from wisdom. "As much experience is prudence, so is much science sapience. For though we usually have one name of wisdom for them both, yet the Latins did always distinguish between *prudentia* and *sapientia*, ascribing the former to experience, the latter to science."

The Greeks also had two words—*phronesis*

and *sophia*—both of which are sometimes translated in English by "wisdom." But Aristotle, like Hobbes, insists upon the distinction between the wisdom which is the ultimate fruit of the speculative sciences or philosophy and the wisdom which belongs to the sphere of moral and political action. Wishing to preserve Aristotle's sense that *phronesis* and *sophia* have something in common which deserves the eulogistic connotation of "wisdom," his translators usually render these words in English by the phrases "practical wisdom" or "political wisdom" (for *phronesis*), and "speculative wisdom" or "philosophical wisdom" (for *sophia*). The English rendering of Aquinas, on the other hand, usually translates his *prudentia* by "prudence," and his *sapientia* by "wisdom."

Whether it is permissible to use "prudence" and "practical wisdom" as synonyms may be more than a question of verbal equivalence; for there is a fundamental issue in theory concerning the unity of wisdom, on which Plato differs from both Aristotle and Aquinas. The question about the relation of knowledge and virtue may be differently answered according to the view of wisdom which denies its division into speculative and practical, and according to the view which conceives the possibility that a man may be wise in one way without being wise in the other. In the language of Aquinas, a man may have acquired wisdom through science and understanding without having the moral character of a prudent man.

"That practical wisdom is not scientific knowledge is evident," Aristotle declares. This is confirmed, he adds, "by the fact that while young men become geometricians and mathematicians and wise in matters like these, it is thought that a young man of practical wisdom cannot be found. The reason is that such wisdom is concerned not only with universals but with particulars, which become familiar from experience, but a young man has no experience, for it is length of time that gives experience."

Hobbes and Aristotle seem to agree that experience is important for the development of prudence or practical wisdom precisely because "it is practical and practice is concerned with particulars." But though both also agree that this explains the distinction between prudence and scientific knowledge—which is concerned not with action but with the nature of things—Aristotle alone raises a further question about the distinction between practical wisdom and art.

In making something, the artist also deals with particulars. In this sense, art is also practical. But, according to Aristotle, the word "productive" should be used in distinction from "practical" to signify the difference between making and doing—two kinds of human activity which, though alike as compared with scientific knowing, represent knowledge differently applied. The knowledge which the artist possesses can, furthermore, be formulated in a set of rules. An individual can acquire the skill of an art by practicing according to its rules. What a man knows when he is prudent seems to be much less capable of being communicated by precept or rule. What he knows is how to deliberate or calculate well about things to be done.

This, in Aristotle's view, marks prudence off from all other virtues. That prudence is a quality of mind seems to follow from the fact that it involves deliberation, a kind of thinking about variable and contingent particulars of the same sort which belong to the realm of opinion. That prudence is also a moral quality, an aspect of character, seems to follow no less from Aristotle's statement that prudence is not deliberation about the means to any sort of end, but only about those "which conduce to the good life in general."

PRUDENCE IS NOT ALWAYS described as skill of mind in deliberating about alternative courses of action, nor is it always regarded as entirely praiseworthy or admirable—inseparable from virtue and the good life.

It is, for example, sometimes identified with foresight or even conjecturing about the future. So conceived, prudence does not seem to require rational power so much as memory and imagination, in order to project past experience into the future. In this sense, Aristotle admits it may be said that "even some of the lower animals have practical wisdom, *viz.*, those which are found to have a power of foresight with regard to their own life."

Identifying prudence with foresight, Hobbes conceives perfect prudence as belonging only

to God. When the event answers expectations, the prediction is attributed to prudence, yet human foresight being fallible, "it is but presumption. For the foresight of things to come, which is Providence, belongs only to him by whose will they are to come." Aquinas gives a quite different reason for saying that "prudence or providence may suitably be attributed to God." It is that the ordering of things toward their ultimate end is "the chief part of prudence, to which two other parts are directed —namely, remembrance of the past, and understanding of the present; inasmuch from the remembrance of what is past and the understanding of what is present, we gather how to provide for the future."

Prudence is sometimes described, not as a virtue of the mind, or even as the power of foresight, but as a temperamental trait, an emotional disposition. It is associated with timidity or caution in those who are fearful of risks or unwilling to take chances. It is in this sense that Bacon seems to oppose hopefulness to prudence, "which is diffident upon principle and in all human matters augurs the worst." The cautiousness of the over-deliberate man may involve thought as well as fear. Hamlet thinks too much and on too many sides of every action. His action being "sicklied o'er by the pale cast of thought," he is irresolute. He laments his misuse of reason. "Whether it be bestial oblivion, or some craven scruple of thinking too precisely on the event—a thought, which quartered, hath but one part wisdom and ever three parts coward—I do not know why yet I live to say 'this thing's to do,' since I have cause, and will, and strength, and means to do it."

When prudence is conceived as excessive caution, its opposite is usually described as rashness, precipitateness, or impetuosity. Thucydides portrays these opposites in the persons of Nicias and Alcibiades. Their speeches to the Athenian assembly on the question of the Sicilian expedition do not merely present an opposition of reasons for and against the undertaking, but also represent an opposition of types of human character. Both come to grief: Nicias, the overcautious leader of the expedition, who earns a not inevitable defeat by his ever-delaying tactics, and Alcibiades, who does not stop at treachery or treason when the moment seems ripe for action which, if quickly taken, may succeed.

Aristotle and Aquinas would use such facts to argue against what, in their view, is the misconception of the prudent man as the opposite of the impetuous. The prudent man, in their opinion, does not stand at the other extreme of undue caution. In their theory of the virtues as means between extremes of excess and defect, prudence, like courage or temperance, represents a mean consisting in neither too much nor too little. As cowardice and foolhardiness are the opposite vices of too much and too little fear—and as both are opposed to the mean of courage which involves a moderation of fear—so excessive caution and impetuosity are the vices opposed to prudence as well as to each other.

Nor are prudence and imprudence simply matters of temperament. Men may differ in their temperamental dispositions; but, according to Aristotle and Aquinas, these are not to be confused with virtues and vices. One man may be by nature more fearful or fearless than another, but regardless of these differences in emotional endowment, either may become courageous, by forming the habit of controlling fear for the right reasons. So, too, one man may be naturally more impulsive or more circumspect than another, but either can acquire prudence through learning to take sufficient counsel and to deliberate enough before action, while also forming the habit of resolving thought into action by reaching decisions and commanding their execution. Failing to satisfy these conditions of prudence, either may develop the vices of imprudence, becoming, like Hamlet or Nicias, irresolute; or, like Alcibiades, impatient of counsel or ill advised, lacking care in deliberation and soundness in judgment.

THE CONCEPTION OF prudence as itself the extreme of caution, whether temperamental or habitual, is not the only challenge to the Aristotelian theory of prudence as a virtue. Other moralists, especially those who take a different view of virtue generally, do not seem to look upon prudence as wholly admirable. Even when they do not condemn prudence as an indisposition to act promptly or decisively

enough, they seem to give prudent deliberation the invidious connotation of cold and selfish calculation.

A suggestion of this appears in Mill's contrast between duties to ourselves and duties to others, wherein he remarks that "the term duty to oneself, when it means anything more than prudence, means self-respect and self-development." It would seem to be implied that prudence means something less—something more selfish—than a proper and justifiable self-interest, the violation of which involves "a breach of duty to others, for whose sake the individual is bound to have care for himself."

Kant, more explicitly than Mill, associates prudence with expediency and self-seeking, and separates it from action in accordance with duty under the categorical imperative of the moral law. Prudence has meaning only in relation to a hypothetical imperative "which expresses the practical necessity of an action as a means to the advancement of happiness." Granted that a man seeks his individual happiness, then "skill in the choice of means to his own greatest well-being may be called *prudence*." Consequently, "the imperative which refers to the choice of means to one's happiness, *i.e.*, the precept of prudence, is still always hypothetical; the action is not commanded absolutely, but only as a means to another purpose," or, as Kant says elsewhere, "the maxim of self-love (prudence) only *advises*; the law of morality *commands*." Furthermore, he holds that "what *duty* is, is plain of itself to everyone; but what it is to bring true durable advantage, such as will extend to the whole of one's existence, is always veiled in impenetrable obscurity, and much prudence is required to adapt the practical rule founded on it to the ends of life, even tolerably, by making exceptions."

In terms of Kant's division of the imperatives of conduct into the pragmatic and the moral, according as they refer to welfare and happiness or duty and law, prudence is merely pragmatic. It does not belong to morality. The pragmatic imperative of prudence is more like the technical imperative of art, which is also conditional and concerned with determining means to an end—in this case, the thing to be produced by skill. "If it were only equally easy to give a definite conception of happiness, the imperatives of prudence would correspond exactly with those of skill."

As Kant sees it, "the sole business of reason in the moral philosophy of prudence is to bring about a union of all the ends, which are aimed at by our inclinations, into one ultimate end—that of *happiness*, and to show the agreement which should exist among the means of attaining that end. In this sphere, accordingly, reason cannot present to us any more than *pragmatical* laws of free action, for our guidance towards the aims set up by the senses, and is incompetent to give us the laws which are pure and determined completely *a priori*." Hence the precepts of prudence "are used by reason only as counsels, and by way of counterpoise against seductions to an opposite course."

The issue between Kant and Aristotle (or Aquinas) with respect to prudence thus appears to be part of the larger issue between them on the fundamental principles of morality, discussed in the chapters on DUTY and HAPPINESS. In Kant's view, Aristotle and Aquinas, no less than Mill, are pragmatists rather than moralists. They are all utilitarians in the sense that they regard happiness as the first principle of human conduct and concern themselves with the ordering of means to this end. Since the consideration of means necessarily involves the weighing of alternatives as more or less expedient, prudence becomes indispensable to the pursuit of happiness. The choice of the best means is second in importance only to the election of the right end.

Kant admits that those who live for happiness require a great deal of prudence, in order to adapt practical rules to variable circumstances and to make the proper exceptions in applying them. None is required by those who live according to the moral law. "The moral law commands the most punctual obedience from everyone; it must, therefore, not be so difficult to judge what it requires to be done, that the commonest unpracticed understanding, even without worldly prudence, should fail to apply it rightly." That "the principle of *private* happiness" is "the direct opposite of the principle of morality" Kant seems to think is evident from the questionable worth of prudence; "for a man must have a different crite-

rion when he is compelled to say to himself: I am a *worthless* fellow, though I have filled my purse; and when he approves himself, and says: I am a *prudent* man, for I have enriched my treasure."

Kant does not limit his criticism of prudence as pragmatic—or practical rather than moral—to the fact that it serves what he calls "private happiness." It may serve the public welfare. "A history is composed pragmatically," he writes, "when it teaches *prudence, i.e.*, instructs the world how it can provide for its interests better." But he also distinguishes between worldly and private prudence. "The former is a man's ability to influence others so as to use them for his own purposes. The latter is the sagacity to combine all these purposes for his own lasting benefit." Nevertheless, the prudence which aims at individual happiness is primary, for "when a man is prudent in the former sense, but not in the latter, we might better say of him that he is clever and cunning, but, on the whole, imprudent."

THOSE WHO TAKE THE view that happiness is the first principle of morality would still agree with Kant that the man who is skillful in exercising an influence over other men so as to *use* them for his own purposes, is clever or cunning rather than prudent. Hobbes, for example, says that if you permit to prudence "the use of unjust or dishonest means . . . you have that Crooked Wisdom, which is called Craft." Aristotle goes even further in his insistence that "it is impossible to be practically wise without being good," or, as the same point is made in the language of Aquinas, "one cannot have prudence unless one has the moral virtues; since prudence is right reason about things to be done, to which end man is rightly disposed by moral virtue."

"To be able to do the things that tend towards the mark we have set before ourselves" is, according to Aristotle, to be clever. "If the mark be noble, the cleverness is laudable, but if the mark be bad, the cleverness is mere smartness." Hence the man of prudence has a certain cleverness, but the clever man who is merely smart cannot be called practically wise. By this criterion the clever thief who plans and executes a successful robbery, the shrewd businessman who, without regard to justice, calculates well how to maximize his profits, or Machiavelli's prince who exercises cunning to get or keep his power, exhibits, not prudence, but its counterfeits. In some cases, the cleverness or shrewdness may simulate prudence without involving the knavery of craft or cunning. Some men have what Aquinas conceives as artistic (or technical) rather than moral prudence. Those who are "good counsellors in matters of warfare or seamanship are said to be prudent officers or pilots, but not simply prudent. Only those are simply prudent who give good counsel about all the concerns of life."

Aristotle and Aquinas make the relation between prudence and moral virtue reciprocal. The moral virtues depend, for their formation and endurance, as much upon prudence as prudence depends upon them. "Virtue makes us aim at the right end," Aristotle writes, "and practical wisdom makes us take the right means." The rightness of the means requires not merely that they be adapted to an end, but that the end itself be right. The right end cannot be achieved unless the means to it be rightly chosen. Hence no skill of mind in deliberating about and choosing means is truly the intellectual virtue of prudence unless the man who habitually calculates well is also habitually inclined by the moral virtues to choose things for the right end, whether that be happiness or the common good of society.

Conversely, the moral virtues depend upon prudence because, in Aristotle's view, they are formed by the making of right choices. His definition of moral virtue names prudence as an indispensable cause. Since the mean between extremes, in which the virtues consist, is in most cases subjective or relative to the individual, it cannot be determined by objective measurements. Reason must determine it by a prudent consideration of the relevant circumstances.

The interdependence of prudence and the moral virtues seems to be the basis, for both Aristotle and Aquinas, of the insight that it is impossible to have one moral virtue without having all. On this basis, Aristotle says, we can "refute the dialectical argument . . . that the virtues exist in separation from one another."

As no moral virtue can exist apart from practical wisdom, so with it, all must be present.

Aquinas mentions another intellectual virtue as indispensable to the moral virtues, namely, the virtue of understanding which consists in knowing the first principles in practical as well as speculative matters. The first principles of the practical reason (*i.e.*, the precepts of the natural law) underlie prudence as well as the moral virtues. Just as sound reasoning in speculative matters "proceeds from naturally known principles . . . so also does prudence which is right reason about things to be done." Nevertheless, though prudence and the moral virtues depend upon it, Aquinas does not include understanding—as he does not include art, science, and wisdom—in his enumeration of the four cardinal virtues, cardinal in the sense of being the virtues indispensable to a good human life.

THESE MATTERS, especially the interconnection of the virtues and the theory of the cardinal virtues, are discussed in the chapter on VIRTUE. The problem of the relative worth of the moral and the intellectual virtues is also considered there and in the chapter on WISDOM, where the contributions to happiness of prudence and wisdom—or of practical and speculative wisdom—are specifically compared.

Here there remains to be considered the Socratic conception of the relation between knowledge and virtue, for there seems to be an issue between his theory of this matter and the foregoing view of the relation between prudence and the moral virtues.

In the *Meno*, Socrates argues that whatever a man desires or chooses he either knows or deems to be good. The man who chooses something evil for himself does not do so knowingly, but only through the mistake of deeming that which is in fact evil to be advantageous or good. Except for such mistakes, "no man," says Socrates, "wills or chooses anything evil." Apart from error or ignorance, evil is never voluntarily chosen. Hence, if virtue consists "in willing or desiring things which are good, and in having the power to gain them," it would seem to follow that knowledge of the good is closely related to its practice.

Subsequently, Socrates suggests that "if there be any sort of good which is distinct from knowledge, virtue may be that good; but if knowledge embraces all good, then we shall be right in thinking that virtue is knowledge." To test these hypotheses, he proceeds to consider the various things which—whether or not they are the same as virtue—are like virtue in being advantageous to men. None of these things, such as courage or temperance, seems to profit men unless accompanied by what, in English translations, is sometimes called "wisdom" and sometimes "prudence."

Socrates points out that "everything the soul attempts, when under the guidance of wisdom"—or prudence—"ends in happiness; but in the opposite when under the guidance of folly"—or imprudence. "If then," he says, "virtue is a quality of the soul, and if it be of necessity always advantageous, then virtue must be wisdom or prudence, since none of the things of the soul are either advantageous or hurtful in themselves, but they are all made advantageous or hurtful by the addition to them of prudence or imprudence"—wisdom or folly. From this, says Socrates, we can conclude that "prudence is virtue, either the whole of virtue or some part of it at least"—or, as this is sometimes translated, "virtue is either wholly or partly wisdom."

In the light of his own view that all the moral virtues depend on practical wisdom, Aristotle criticizes the Socratic position. "Socrates in one respect was on the right track while in another he went astray. In thinking that all the virtues were forms of practical wisdom he was wrong, but in saying that they implied practical wisdom he was right . . . Socrates thought the virtues were rules or rational principles . . . while we think they involve a rational principle." Similarly, in considering the question whether there can be moral without intellectual virtue, Aquinas writes: "Although virtue be not right reason, as Socrates held, yet not only is it *according to right reason*, insofar as it inclines a man to do that which is in accord with right reason as the Platonists maintained; but it also needs to be *joined with right reason*, as Aristotle declares."

Aquinas furthermore interprets the opinion that "every virtue is a kind of prudence," which he attributes to Socrates, as meaning

that when "a man is in possession of knowledge, he cannot sin, and that everyone who sins does so through ignorance." This, he says, "is based on a false supposition, because the appetitive faculty obeys the reason, not blindly, but with a certain power of opposition." Nevertheless, "there is some truth in the saying of Socrates that so long as a man is in possession of knowledge he does not sin; provided that this knowledge involves the use of reason in the individual act of choice."

Whether those who criticize the position of Socrates accurately perceive his intention and state the issue fairly are problems of interpretation as difficult as the question of where in this matter the truth lies. If Socrates is saying that a man will do good if he knows the good, what sort of knowledge is implied—knowledge of the good in general or knowledge of what is good in a particular case? Do both types of knowledge of the good lead as readily or surely to good or virtuous action?

Whether or not, in addition to knowledge, a good will or right desire is essential, it may be held that prudence is required to apply moral principles—aiming at the good in general—to particular cases. "There exists no moral system," writes Mill, "under which there do not arise unequivocal cases of conflicting obligation. These are the real difficulties, the knotty points, both in the theory of ethics and in the conscientious guidance of personal conduct. They are overcome practically, with great or less success, according to the intellect and virtue of the individual." Mill seems to imply that both prudence and virtue are essential to good action on the level of particulars, and that without them the kind of knowledge which is expressed in moral principles does not necessarily lead a man to act well.

ONE OTHER PROBLEM OF INTERPRETATION must be mentioned. It occurs with respect to Aristotle's statement concerning diverse modes of prudence.

"Political wisdom and practical wisdom are the same state of mind," he writes, "but their essence is not the same. Of the wisdom concerned with the city, the practical wisdom which plays a controlling part is legislative wisdom, while that which is related to this as particulars to their universal is known by the general name of 'political wisdom' . . . Practical wisdom also is identified especially with that form of it which is concerned with the individual man, and this is known by the general name 'practical wisdom.' Of the other kinds, one is called domestic, another legislative, a third political; and of this last, one part is called deliberative and the other judicial."

Does this mean that skill of mind in determining the best means to an end is different according to differences in the end—whether the happiness of an individual or the common good of a society? Does it mean, furthermore, that the prudence involved in managing a household is different from the prudence concerned with political affairs; and that, in the state, the prudence of the ruler (prince or statesman) is different from the prudence of the ruled (subject or citizen), because the one moves on the level of general laws, the other on the level of particular acts in compliance with law? Within the sphere of jurisprudence, or the prudence of laws, is the prudence of the legislator or lawmaker different from the prudence of the judge who applies the law?

In his Treatise on Prudence, Aquinas answers these questions affirmatively. He distinguishes between private, domestic, and political prudence, and within the political sphere places special emphasis upon what he calls "reignative prudence," the sort of prudence Dante calls "a kingly prudence," which sets the prince apart from ordinary men. Hobbes, on the other hand, asserts that "to govern well a family and a kingdom, are not different degrees of prudence, but different sorts of business; no more than to draw a picture in little, or as great, or greater than life, are different degrees of art."

This issue is intimately connected with the problem of the forms of government. If only a few men are fitted by nature to acquire the special mode of prudence which is reignative or legislative, would not government by the few or by the one seem to be naturally best? If, however, in a republic, those who are citizens rule and are ruled in turn, should not each citizen have the prudence requisite for both tasks, whether it be the same or different? Finally, if the democratic theory is that all men

are capable of being citizens—though not all, perhaps, are equally eligible for the highest public offices—must not political prudence be conceived as attainable by all men?

The question remains open whether those who deserve the highest magistracies have a special mode of reignative prudence; or merely a higher degree of the same prudence by which they govern their private lives and their domestic establishments; or, as Hobbes suggests, have other abilities whereby they can apply the same prudence to a different kind of business.

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To find the passages cited, use the numbers in heavy type, which are the volume and page numbers of the passages referred to. For example, in **4** HOMER: *Iliad*, BK II [265-283] **12d**, the number **4** is the number of the volume in the set; the number **12d** indicates that the passage is in section d of page 12.

PAGE SECTIONS: When the text is printed in one column, the letters **a** and **b** refer to the upper and lower halves of the page. For example, in **53** JAMES: *Psychology*, **116a-119b**, the passage begins in the upper half of page 116 and ends in the lower half of page 119. When the text is printed in two columns, the letters **a** and **b** refer to the upper and lower halves of the left-hand side of the page, the letters **c** and **d** to the upper and lower halves of the right-hand side of the page. For example, in **7** PLATO: *Symposium*, **163b-164c**, the passage begins in the lower half of the left-hand side of page 163 and ends in the upper half of the right-hand side of page 164.

AUTHOR'S DIVISIONS: One or more of the main divisions of a work (such as PART, BK, CH, SECT) are sometimes included in the reference; line numbers, in brackets, are given in certain cases; *e.g.*, *Iliad*, BK II [265-283] **12d**.

BIBLE REFERENCES: The references are to book, chapter, and verse. When the King James and Douay versions differ in title of books or in the numbering of chapters or verses, the King James version is cited first and the Douay, indicated by a (*D*), follows; *e.g.*, OLD TESTAMENT: *Nehemiah*, 7:45—(*D*) *II Esdras*, 7:46.

SYMBOLS: The abbreviation "esp" calls the reader's attention to one or more especially relevant parts of a whole reference; "passim" signifies that the topic is discussed intermittently rather than continuously in the work or passage cited.

For additional information concerning the style of the references, see the Explanation of Reference Style; for general guidance in the use of *The Great Ideas*, consult the Preface.

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APOCRYPHA: *Ecclesiasticus*, 1:4; 19:22; 34:9-10 —(*D*) OT, *Ecclesiasticus*, 1:4; 19:19; 34:9-10

6 THUCYDIDES: *Peloponnesian War*, BK I, **383d-384a**

7 PLATO: *Charmides*, **7b-c** / *Protagoras*, **43a-b** / *Meno*, **183d-184c**; **188b-189d**

8 ARISTOTLE: *Topics*, BK IV, CH 2 [121^b24-122^a2] **169d-170a**

9 ARISTOTLE: *Ethics*, BK I, CH 13 [1103^a4-10] **348c-d**; BK VI, CH 5 **389a-c**; CH 7 **390a-d** esp [1141^b8-23] **390c-d** / *Rhetoric*, BK I, CH 9 [1366^b20-23] **609a-b**

12 EPICTETUS: *Discourses*, BK I, CH 1 **105a-106c**; BK II, CH 5 **142c-144a**; CH 23 **170a-172d**; BK III, CH 2 **177c-178d**; CH 10 **185d-187a**; BK IV, CH 5 **228a-230b**

12 AURELIUS: *Meditations*, BK II, SECT 11 **258a-b**; BK V, SECT 9 **270b-c**; SECT 34 **273c**; BK VI, SECT 12 **274c**; BK VIII, SECT 16-17 **286d**; SECT 48 **289c**

18 AUGUSTINE: *City of God*, BK XIX, CH 4, **512a** / *Christian Doctrine*, BK III, CH 10, **662a**

20 AQUINAS: *Summa Theologica*, PART I-II, Q 56, A 3, ANS **31a-32b**; Q 57, AA 4-5 **38a-40a**; Q 58, A 2, REP 1 **42a-43a**; A 3, REP 1 **43b-44a**; Q 65, A 1 **70b-72a**; PART II-II, Q 181, A 2 **617d-618c**

22 CHAUCER: *Tale of Melibeus* **401a-432a**

23 HOBBES: *Leviathan*, PART I, **53c-54a**; **60c**; **67d-68a**; **84c-d**

24 RABELAIS: *Gargantua and Pantagruel*, BK III, **201b-c**

25 MONTAIGNE: *Essays*, **520b-c**

30 BACON: *Advancement of Learning*, **42a-c**; **81d-95b**

37 FIELDING: *Tom Jones*, **395a-396a**

38 ROUSSEAU: *Inequality*, **349b**

42 KANT: *Fund. Prin. Metaphysic of Morals*, **261c-d**; **266b-c** esp **266b,d** [fn 1]; **267b-d** / *Practical Reason*, **305d**; **339b-d**; **361c-d** / *Pref. Metaphysical Elements of Ethics*, **376c-377d**

46 HEGEL: *Philosophy of Right*, PART III, par 191 **66b**

49 DARWIN: *Descent of Man*, **315b-c**

51 TOLSTOY: *War and Peace*, BK X, **424a-c**

53 JAMES: *Psychology*, **13a-15a** passim

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7 PLATO: *Statesman*, 581c-582a / *Philebus*, 633a-635b
9 ARISTOTLE: *Ethics*, BK I, CH 8 [1098b24-26] 344b; BK VI, CH 1 [1138b17]-CH 3 [1139b18] 387a-388b; CH 7-8 390a-391c; CH 11 [1143b14]-CH 12 [1144a36] 393b-394a; CH 13 [1145a6-12] 394d / *Rhetoric*, BK I, CH 11 [1371b26-28] 615b
19 AQUINAS: *Summa Theologica*, PART I, Q 1, A 6, ANS 6b-7a
20 AQUINAS: *Summa Theologica*, PART I-II, Q 66, A 5, REP 1-2 79b-80c
21 DANTE: *Divine Comedy*, PARADISE, XIII [88-104] 126b-c
23 HOBBES: *Leviathan*, PART I, 60c-61a; 84c-d; PART IV, 267a-b
25 MONTAIGNE: *Essays*, 327b-d; 520b-c
30 BACON: *Advancement of Learning*, 4c-6c; 16d-17a; 42a-c; 55b-d; 65d-66a; 86b-c
31 DESCARTES: *Discourse*, PART I, 44a-b; PART III, 48b-c
34 NEWTON: *Optics*, BK III, 543b-544a
35 LOCKE: *Human Understanding*, INTRO, SECT 5-6 94b-95a
35 HUME: *Human Understanding*, SECT I, DIV 1-5 451a-453b
38 ROUSSEAU: *Political Economy*, 373c-374a
42 KANT: *Pure Reason*, 60b-c; 190c-191a / *Fund. Prin. Metaphysic of Morals*, 260d-261d; 266c-d; 271a-c / *Practical Reason*, 291a-296d; 319c-321b; 329a-330c / *Intro. Metaphysic of Morals*, 388a-d; 390b,d 391a / *Judgement*, 461a-475d esp 463a-464c, 474b-475d
43 MILL: *Representative Government*, 346c-347a
46 HEGEL: *Philosophy of Right*, PREF, 4b-7a

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7 PLATO: *Charmides*, 5c-6d / *Philebus*, 633a-635b
9 ARISTOTLE: *Ethics*, BK VI, CH 2 [1139a32-b5] 388a; CH 4 [1140a1]-CH 6 [1141a1] 388d-389d; CH 12 [1143b17-1144a6] 393b-c
19 AQUINAS: *Summa Theologica*, PART I-II, Q 34, A 1, REP 3 768c-769d
20 AQUINAS: *Summa Theologica*, PART I-II, Q 56, A 3, ANS 31a-32b; Q 57, A 4 38a-39a; A 5, REP 1,3 39a-40a; Q 58, A 2, REP 1 42a-43a; A 5, REP 2 44d-45c; Q 65, A 1, REP 4 70b-72a
30 BACON: *Advancement of Learning*, 42a-c
42 KANT: *Fund. Prin. Metaphysic of Morals*, 266c-d / *Intro. Metaphysic of Morals*, 388a-d / *Judgement*, 515b-c; 523d-524a

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9 ARISTOTLE: *Ethics*, BK I, CH 4 [1095a30-b12] 340c-d; CH 7 [1098a35-b8] 343d-344a; BK II, CH 9 [1109b20-23] 355c; BK III, CH 3 [1112b34-1113a2] 358d-359a; BK VI, CH 5-6 389a-d; CH 8 [1142a12-31] 391b-c; CH 11 [1143a25-b5] 392d-393a; BK VII, CH 3 [1147a25-b6] 397c-d
20 AQUINAS: *Summa Theologica*, PART I-II, Q 56, A 3, ANS 31a-32b; Q 57, A 4, ANS and REP 2 38a-39a; A 5, REP 3 39a-40a; A 6, ANS and REP 3 40a-41a; Q 58, A 4, ANS 44a-d; A 5, ANS and REP 1 44d-45c

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4 HOMER: *Odyssey* 183a-322d esp BK IV [265-295] 201d-202a, BK V [282-493] 210d-213a,c, BK XII 250a-254d, BK XIII [185-440] 257a-259d, BK XVI 272a-276d
5 AESCHYLUS: *Prometheus Bound* 40a-51d esp [259-398] 42d-44a, [930-1093] 50a-51d
5 SOPHOCLES: *Philoctetes* 182a-195a,c esp [50-134] 182d-183c
5 EURIPIDES: *Hippolytus* [373-387] 228b-c / *Phoenician Maidens* [697-747] 384a-d
6 HERODOTUS: *History*, BK VIII, 269c-270a
6 THUCYDIDES: *Peloponnesian War*, BK I, 370a-c; BK II, 389d-390b; BK IV, 474a-c
7 PLATO: *Protagoras*, 48a-50d; 58a-64d / *Meno*, 174d-176a; 183d-184d
9 ARISTOTLE: *Ethics*, BK II, CH 2 [1103b27-1104a9] 349b-c; CH 6 351c-352d passim; BK VI, CH 12-13 393b-394d; BK VII, CH 9 [1151a29]-CH 10 [1152a24] 402b-403b; BK X, CH 8 [1178a16-19] 432d
12 AURELIUS: *Meditations*, BK II, SECT 5 257b-c
13 VIRGIL: *Aeneid*, BK VIII [18-25] 259b
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20 AQUINAS: *Summa Theologica*, PART I-II, Q 57, A 4, ANS 38a-39a; A 5, ANS 39a-40a; Q 58, AA 4-5 44a-45c; Q 61 54d-59d
23 HOBBES: *Leviathan*, PART I, 64a-c; 65b-c
25 MONTAIGNE: *Essays*, 20d-22a; 159a-162c
26 SHAKESPEARE: *Julius Caesar*, ACT II, SC I [60-69] 575a
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29 CERVANTES: *Don Quixote*, PART II, 256c-d; 291d
30 BACON: *Advancement of Learning*, 86c-95b
31 DESCARTES: *Discourse*, PART III 48b-51b
35 LOCKE: *Human Understanding*, BK II, CH XXI, SECT 46-54 189d-192c; SECT 69 196d-197a
37 FIELDING: *Tom Jones*, 45b-c; 395a-396a
42 KANT: *Fund. Prin. Metaphysic of Morals*, 260a-c; 261c-d; 266a-267d / *Practical Reason*, 305d-

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46 HEGEL: *Philosophy of Right*, PART II, par 114 42a-b / *Philosophy of History*, INTRO, 165a-166b

49 DARWIN: *Descent of Man*, 310c-313a esp 311b-d

51 TOLSTOY: *War and Peace*, BK V, 211a-213a; BK VI, 235a

53 JAMES: *Psychology*, 13a-15a passim, esp 14b-15a; 794a-808a passim

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8 ARISTOTLE: *Topics*, BK III, CH 1 [116^{b}22-26] 163b

9 ARISTOTLE: *Ethics*, BK II, CH 2 [1103^{b}27-1104^{a}9] 349b-c; BK VI, CH 2 387d-388b; CH 5 [1140^{b}4-19] 389b-c; CH 9 [1142^{b}17-34] 391d-392b; CH 12 [1144^{a}6-37] 393d-394a; CH 13 [1144^{b}30-1145^{a}6] 394c-d / *Politics*, BK VII, CH 13 [1331^{b}24-38] 536b-c

14 PLUTARCH: *Pericles*, 121a-122b

19 AQUINAS: *Summa Theologica*, PART I, Q 113, A 1, REP 2 576a-d

20 AQUINAS: *Summa Theologica*, PART I-II, Q 56, A 2, REP 3 30c-31a; A 3, ANS 31a-32b; A 4, REP 4 32b-33c; Q 57, A 4, ANS 38a-39a; A 5, ANS and REP 3 39a-40a; Q 58, A 3, REP 2 43b-44a; A 4, ANS and REP 1 44a-d; A 5 44d-45c; Q 65, A 1, ANS and REP 3-4 70b-72a; A 2, ANS and REP 3 72a-d; A 3, ANS and REP 1 72d-73d; PART II-II, Q 181, A 2 617d-618c

25 MONTAIGNE: *Essays*, 52c-53c

42 KANT: *Pure Reason*, 235a-b / *Fund. Prin. Metaphysic of Morals*, 256a-b; 259c-260c; 266b-267d; 268b; 271d-279d esp 271d-272b, 274d-275b / *Practical Reason*, 305d-307d; 318c-d; 357c-360d / *Pref. Metaphysical Elements of Ethics*, 376c-377d / *Intro. Metaphysic of Morals*, 387d-388a

43 MILL: *Utilitarianism*, 456d-457b passim

46 HEGEL: *Philosophy of Right*, PART II, par 122 44a; par 140 49b-54a

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7 PLATO: *Protagoras*, 61c-62a / *Meno*, 183d-184c / *Phaedo*, 226a-b / *Republic*, BK X, 439b-d / *Laws*, BK I, 643c-d

9 ARISTOTLE: *Ethics*, BK II, CH 2 [1103^{b}27-1104^{a}9] 349b-c; CH 6 351c-352d passim, esp [1106^{b}36-1107^{a}2] 352c; CH 9 354d-355a,c; BK V, CH 9 [1137^{a}5-26] 385b-c; BK VI, CH 5 389a-c; CH 9 [1142^{b}17-34] 391d-392b; CH 12-13 393b-394d; BK X, CH 8 [1178^{a}16-19] 432d

12 EPICTETUS: *Discourses*, BK III, CH 12 187b-188b

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18 AUGUSTINE: *City of God*, BK IX, CH 4 287a-288b

19 AQUINAS: *Summa Theologica*, PART I, Q 113, A 1, REP 2 576a-d

20 AQUINAS: *Summa Theologica*, PART I-II, Q 56, A 2, REP 2 30c-31a; Q 57, A 5 39a-40a; Q 58, A 2 42a-43a; A 4 44a-d; Q 65, A 1 70b-72a

29 CERVANTES: *Don Quixote*, PART II, 256c-d; 291d

30 BACON: *Advancement of Learning*, 79b-c; 86b-95b

31 DESCARTES: *Discourse*, PART III 48b-51b

33 PASCAL: *Pensées*, 359 235a; 378-381 238a-b

37 FIELDING: *Tom Jones*, 45b c

42 KANT: *Practical Reason*, 305d-307d / *Pref. Metaphysical Elements of Ethics*, 365b-d; 376c-377d / *Intro. Metaphysic of Morals*, 387d-388a

46 HEGEL: *Philosophy of Right*, PART II, par 140 49b-54a

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5 ARISTOPHANES: *Frogs* [534-541] 570b

6 HERODOTUS: *History*, BK III, 95d-96b; BK VIII, 279d-280b

6 THUCYDIDES: *Peloponnesian War*, BK VIII, 575b-d; 584b-585a

9 ARISTOTLE: *Ethics*, BK VI, CH 12 [1144^{a}12]-CH 13 [1144^{b}16] 393d-394b; BK VII, CH 10 [1152^{a}8-15] 403a

14 PLUTARCH: *Aratus*, 829b-d

20 AQUINAS: *Summa Theologica*, PART I-II, Q 58, A 4, REP 2 44a-d; Q 93, A 6, REP 2 219d-220d

21 DANTE: *Divine Comedy*, HELL, XXVII [55-136] 40a-41b

23 MACHIAVELLI: *Prince*, CH XVIII, 25a-b

23 HOBBES: *Leviathan*, PART I, 68a

27 SHAKESPEARE: *Othello*, ACT I, SC III [302-410] 212b-213a

33 PASCAL: *Provincial Letters*, 27a-127a

36 SWIFT: *Gulliver*, PART II, 75b-76a

40 GIBBON: *Decline and Fall*, 142c

41 GIBBON: *Decline and Fall*, 532d-533a

51 TOLSTOY: *War and Peace*, BK V, 204c-206a; 228b-230c; BK X, 424a-c; BK XI, 476c-480a

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7 PLATO: *Charmides*, 7a-c / *Protagoras*, 59b-62b / *Meno*, 183d-184c

9 ARISTOTLE: *Ethics*, BK I, CH 13 [1103^{a}3-10] 348c-d; BK III, CH 12 [1119^{a}35-^{b}19] 366a,c; BK VI, CH 5 [1140^{b}11-19] 389b-c; CH 9 [1142^{b}17-34] 391d-392b; BK VII, CH 1 [1145^{b}17-19] 395c; CH 2-3 395c-398a esp CH 2 [1145^{b}21-

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18 AUGUSTINE: *City of God*, BK XIX, CH 4, 512a

20 AQUINAS: *Summa Theologica*, PART I-II, Q 58, A 2, ANS 42a-43a; A 3, REP 2 43b-44a; Q 65, A 1 70b-72a

25 MONTAIGNE: *Essays*, 312c-314b

32 MILTON: *Paradise Lost*, BK XI [334-369] 306b-307a; [527-551] 310b-311a / *Samson Agonistes* [38-59] 340b

38 MONTESQUIEU: *Spirit of Laws*, BK XXVIII, 259b

3e. The vices of imprudence: precipitance and undue caution

OLD TESTAMENT: *Genesis*, 25:29-34 / *Proverbs*, 7:6-27; 14:16,29; 18:13; 19:2; 20:21; 25:8; 29:11 / *Ecclesiastes*, 5:2-3; 7:9—(*D*) *Ecclesiastes*, 5:1-2; 7:10

APOCRYPHA: *Ecclesiasticus*, 2:2; 4:29; 6:7-8; 8:19; 9:18; 19:4,8-9; 20:8; 21:25-26; 28:11; 30:24—(*D*) OT, *Ecclesiasticus*, 2:2; 4:34; 6:7-8; 8:22; 9:25; 19:4,8-9; 20:8; 21:28-29; 28:13; 30:26

NEW TESTAMENT: *Matthew*, 13:19-23 / *Mark*, 4:3-20 / *Luke*, 8:5-15 / *Acts*, 19:36

4 HOMER: *Iliad*, BK I [1-492] 3a-8a; BK IX [1-172] 57a-58d / *Odyssey*, BK IX [461-542] 234a-d; BK XII [260-419] 252d-254c

5 AESCHYLUS: *Persians* 15a-26d esp [739-786] 23a-c / *Seven Against Thebes* 27a-39a,c esp [631-719] 34a-35a / *Prometheus Bound* 40a-51d esp [259-398] 42d-44a, [930-1093] 50a-51d

5 SOPHOCLES: *Oedipus the King* 99a-113a,c / *Antigone* 131a-142d esp [633-767] 136c-137d / *Ajax* 143a-155a,c esp [654-683] 148d-149a, [748-783] 149c-d / *Electra* 156a-169a,c esp [121-403] 157b-159b, [938-1057] 163c-164d / *Philoctetes* 182a-195a,c

5 EURIPIDES: *Rhesus* 203a-211d esp [1-148] 203a-204c / *Suppliants* [465-510] 262b-d / *Bacchantes* 340a-352a,c esp [215-433] 341d-343b / *Phoenician Maidens* [443-593] 381d-383a

6 HERODOTUS: *History*, BK III, 94c-d; 97b-c; BK VII, 216d-218b; 225c-d

6 THUCYDIDES: *Peloponnesian War*, BK I, 370a-c; BK II, 393a-c; 402a-404d esp 402c-d, 403b-c; BK IV, 449b-c; 462d-463a; BK V, 507a-c; BK VII, 545b-c

7 PLATO: *Protagoras*, 62b-64a

9 ARISTOTLE: *Ethics*, BK II, CH 2 [1104a10-26] 349c-d; BK VI, CH 5 [1140b13-19] 389b-c; CH 9 [1142b17-34] 391d-392b; BK VII, CH 6 399d-400c; CH 9 [1151a28-b16] 402b-c / *Rhetoric*, BK II, CH 12 [1389a2]-CH 14 [1390b11] 636b-638a

13 VIRGIL: *Aeneid*, BK VII [572-600] 252a-b; BK XI [376-444] 338b-340a

14 PLUTARCH: *Fabius-Pericles*, 154d / *Pelopidas*, 232a-233a; 244c-245a / *Marcellus-Pelopidas*, 262c / *Nicias* 423a-438d / *Alexander*, 547b-548a / *Caius and Tiberius Gracchus-Agis and Cleomenes*, 690c-691a,c

15 TACITUS: *Annals*, BK III, 61b / *Histories*, BK I, 205d-206a; BK III, 252c

20 AQUINAS: *Summa Theologica*, PART I-II, Q 108, A 3, REP 5 334a-336b

21 DANTE: *Divine Comedy*, HELL, XXVI [49-142] 38c-39c

22 CHAUCER: *Troilus and Cressida*, BK III, STANZA 42-47 60a-b; STANZA 129 71a-b / *Nun's Priest's Tale* 450a-460b esp [15,273-452] 457b-460b / *Manciple's Tale* [17,206-311] 491b-493b

23 MACHIAVELLI: *Prince*, CH XXV, 36b

23 HOBBES: *Leviathan*, PART I, 77d; 79c-d

25 MONTAIGNE: *Essays*, 22d-23b; 53c-55d; 174a-d

26 SHAKESPEARE: *Romeo and Juliet*, ACT III, SC III 304d-306d / *1st Henry IV*, ACT I, SC III 437d-440d; ACT II, SC III 443b-444b; ACT III, SC I [147-190] 451c-452a; ACT IV, SC III [1-29] 459b-c

27 SHAKESPEARE: *Hamlet* 29a-72a,c esp ACT IV, SC IV [33-66] 59a-c / *Troilus and Cressida*, ACT III, SC III [184-241] 124b-125a / *Othello* 205a-243a,c esp ACT V, SC II [338-356] 242d-243a / *King Lear* 244a-283a,c / *Coriolanus* 351a-392a,c esp ACT III, SC II-III 373c-377a / *Timon of Athens* 393a-420d esp ACT II, SC II 400c-403b / *Henry VIII*, ACT I, SC I [122-149] 551b-c; SC II [68-88] 553c-d

29 CERVANTES: *Don Quixote*, PART I, 8c-10a; 116a-117b; PART II, 252c-257a; 291d

30 BACON: *Novum Organum*, BK I, APH 92 125b-d

33 PASCAL: *Pensées*, 172 203b

36 STERNE: *Tristram Shandy*, 203a-207b

44 BOSWELL: *Johnson*, 149b-c

48 MELVILLE: *Moby Dick* esp 148b-150a

51 TOLSTOY: *War and Peace*, BK I, 15d-18b; BK III, 139a-c; BK V, 211a-213a; BK VIII, 321d-322d; 328c-333a; 334d-335a; 336b-337d; BK IX, 344b-346a; 366d-367b; BK X, 426b; BK XIII, 569d-570b; BK XIV, 596c-d; 603a-604b; EPILOGUE I, 655c-656b

52 DOSTOEVSKY: *Brothers Karamazov*, BK X, 273a-d

53 JAMES: *Psychology*, 799b-807a passim, esp 800a-801a, 806b-807a

4. The sphere of prudence

4a. The confinement of prudence to the things within our power: the relation of prudence to free will, choice, and deliberation

9 ARISTOTLE: *Ethics*, BK III, CH 2-3 357b-359a; BK VI, CH 2 [1139a32-b11] 388a-b; CH 5 [1140a31-b5] 389a-b; CH 7 [1141b8-14] 390c

12 EPICTETUS: *Discourses*, BK I, CH 1 105a-106c; CH 18 124a-125a; CH 29 134d-138a; BK II, CH

(4. The sphere of prudence. 4a. The confinement of prudence to the things within our power: the relation of prudence to free will, choice, and deliberation.)

5 142c-144a; CH 10 148c-150a; CH 23 170a-172d; BK III, CH 2 177c-178d; CH 10 185d-187a; CH 18 192a-c; BK IV, CH 1 213a-223d
12 AURELIUS: *Meditations*, BK II, SECT 6 257c; SECT 9 257d; SECT 11 258a-b; SECT 16 259a; BK V, SECT 19 272a; SECT 34 273c; BK VI, SECT 16 275b-d; SECT 22 276a; BK VII, SECT 16 280d; BK VIII, SECT 16-17 286d; SECT 28 287c; SECT 48 289c; BK IX, SECT 7 292b; BK X, SECT 34-35 301a-b; BK XII, SECT 3 307b-d
19 AQUINAS: *Summa Theologica*, PART I-II, Q 13, AA 4-6 675a-677b; Q 14, AA 3-6 678c-681a
20 AQUINAS: *Summa Theologica*, PART I-II, Q 57, AA 4-6 38a-41a
23 MACHIAVELLI: *Prince*, CH XXV, 35a-b
23 HOBBES: *Leviathan*, PART I, 53c-d
25 MONTAIGNE: *Essays*, 52c-53c; 100a-101c; 136b 139b; 393b-394a; 451d-452d; 514d-515a
30 BACON: *Advancement of Learning*, 76d-78a
31 DESCARTES: *Discourse*, PART III 48b-51b
35 LOCKE: *Human Understanding*, BK II, CH XXI, SECT 48-54 190c-192c passim; SECT 57 193b-c
42 KANT: *Fund. Prin. Metaphysic of Morals*, 266c-267d / *Practical Reason*, 318c-321b esp 320c-321b; 357c-360d
53 JAMES: *Psychology*, 199b-201b

4b. The restriction of prudence to the consideration of means rather than ends

9 ARISTOTLE: *Ethics*, BK V, CH 9 [1137^{a}5-26] 385b-c; BK VI, CH 5 389a-c; CH 9 [1142^{b}17-34] 391d-392b; CH 12 [1144^{a}6-37] 393d-394a; CH 13 [1144^{b}30-1145^{a}6] 394c-d / *Rhetoric*, BK I, CH 9 [1366^{b}20-22] 609a
19 AQUINAS: *Summa Theologica*, PART I-II, Q 14, A 2 678b-c; Q 15, A 3 682c-683b
20 AQUINAS: *Summa Theologica*, PART I-II, Q 57, A 5, ANS 39a-40a; Q 58, A 4, ANS 44a-d; A 5, REP 1 44d-45c
42 KANT: *Fund. Prin. Metaphysic of Morals*, 266b-267d
53 JAMES: *Psychology*, 796a-b

5. The nature of a prudent judgment

5a. The conditions of prudent choice: counsel, deliberation, judgment

OLD TESTAMENT: *Proverbs*, 11:14; 12:15; 13:10,16; 14:18; 15:22; 19:20; 20:5,18; 24:6
APOCRYPHA: *Tobit*, 4:18—(*D*) OT, *Tobias*, 4:19 / *Ecclesiasticus* passim, esp 6:6, 8:17, 25:4-5, 32:18, 34:9-11, 37:7-16—(*D*) OT, *Ecclesiasticus* passim, esp 6:6, 8:20, 25:6-7, 32:22-23, 34:9-12, 37:7-20
5 AESCHYLUS: *Suppliant Maidens* [333-523] 5a-7c / *Persians* [739-786] 23a-c
5 SOPHOCLES: *Antigone* [633-767] 136c-137d
5 EURIPIDES: *Rhesus* [1-148] 203a-204c / *Suppliants* [465-510] 262b-d / *Phoenician Maidens* [443-593] 381d-383a; [697-747] 384a-d / *Iphigenia at Aulis* [378-414] 428b-c
5 ARISTOPHANES: *Birds* [366-382] 546d-547a
6 HERODOTUS: *History*, BK I, 31c-d; 46c-d; BK VII, 217a; 218c; 219a-c; 258d; BK VIII, 269c-270a
6 THUCYDIDES: *Peloponnesian War*, BK I, 383d-384a; BK II, 397b-c; BK III, 427a-c
7 PLATO: *Meno*, 183d-184c; 188b-189a / *Republic*, BK III, 337b-338a; BK X, 439b-441a,c
9 ARISTOTLE: *Ethics*, BK I, CH 3 [1094^{b}29-1095^{a}12] 340a-b; CH 4 [1095^{a}30-^{b}12] 340c-d; BK III, CH 2-3 357b-359a; BK V, CH 9 [1137^{a}5-26] 385b-c; BK VI, CH 5 389a-c; CH 7 [1141^{b}8-23] 390c-d; CH 8 [1142^{a}13-22] 391b; CH 9-11 391c-393b
12 EPICTETUS: *Discourses*, BK III, CH 6 181d-182b
12 AURELIUS: *Meditations*, BK IV, SECT 12 264c
14 PLUTARCH: *Timoleon*, 197c-198a
15 TACITUS: *Histories*, BK II, 234b
19 AQUINAS: *Summa Theologica*, PART I, Q 22, A 1 127d-128d; Q 83, A 1, ANS 436d-438a; A 3, ANS and REP 2-3 438d-439c; PART I-II, Q 13, A 1 672d-673c; A 3, ANS 674c-675a; Q 14 677b-681a; Q 44, A 2 808b-d; A 4, ANS 809c-810a
20 AQUINAS: *Summa Theologica*, PART I-II, Q 57, A 4, REP 3 38a-39a; A 5, ANS and REP 2 39a-40a; A 6 40a-41a
22 CHAUCER: *Troilus and Cressida*, BK I, STANZA 90-93 12b-13a / *Tale of Melibeus* 401a-432a esp par 7-13 402b-405a, par 17-31, 407b-414a, par 59-78 427a-432a
23 HOBBES: *Leviathan*, PART I, 53a; 53c d; 60c-d; 64a-c; 65a-c; 66c-68a; 77d
25 MONTAIGNE: *Essays*, 393b-394a; 450d-451a; 520b-522d
26 SHAKESPEARE: *Comedy of Errors*, ACT III, SC I [85-106] 157b
27 SHAKESPEARE: *Troilus and Cressida*, ACT II, SC II 113c-115d
29 CERVANTES: *Don Quixote*, PART II, 235d-237a
30 BACON: *Advancement of Learning*, 86c-95b
33 PASCAL: *Provincial Letters*, 39a / *Pensées*, 381-383 238b
35 LOCKE: *Human Understanding*, BK II, CH XXI, SECT 48 190c-d; SECT 53 191d-192b; SECT 57 193b-c
35 HUME: *Human Understanding*, SECT V, DIV 36, 465a-d [fn 1]
42 KANT: *Fund. Prin. Metaphysic of Morals*, 266b-c / *Practical Reason*, 318c-321b; 357c-360d
43 FEDERALIST: NUMBER 2, 32b-d; NUMBER 8, 46d-47a
43 MILL: *Liberty*, 276b-277a; 287b-c; 295a / *Representative Government*, 410c-d / *Utilitarianism*, 456a-457b
44 BOSWELL: *Johnson*, 149b-c

46 HEGEL: *Philosophy of Right*, PART III, par 227 74b-d
51 TOLSTOY: *War and Peace*, BK V, 211a-213a; BK VI, 235a
53 JAMES: *Psychology*, 13a-15a; 794a-798b esp 796a-b, 797b-798a
54 FREUD: *General Introduction*, 624d-625b

5b. The acts of the practical reason in matters open to choice: decision and command, leading to execution or use

8 ARISTOTLE: *Soul*, BK III, CH 10 [433a13-31] 665d-666a
9 ARISTOTLE: *Ethics*, BK II, CH 2 [1103b27-1104a9] 349b-c; BK III, CH 2-3 357b-359a; BK VI, CH 2 387d-388b; CH 7 [1141b8-23] 390c-d; CH 10 [1143a4-10] 392b-c; CH 12-13 393b-394d; BK VII, CH 2 395c-396c esp [1145b 20-1146a8] 395c-396a; CH 10 [1152a8-24] 403a-b
19 AQUINAS: *Summa Theologica*, PART I, Q 22, A 1, ANS and REP 1-2 127d-128d; PART I-II, Q 17 686b,d-693d
20 AQUINAS: *Summa Theologica*, PART I-II, Q 57, A 6, ANS and REP 2 40a-41a; Q 61, A 3, ANS 56b-57a
27 SHAKESPEARE: *Hamlet*, ACT IV, SC IV [33-66] 59a-c
38 ROUSSEAU: *Social Contract*, BK III, 409d
42 KANT: *Fund. Prin. Metaphysic of Morals*, 260a-c; 265c-267d esp 266c-267d / *Practical Reason*, 305d-307d; 314d-321b
46 HEGEL: *Philosophy of Right*, PART I, par 38 21d; PART III, par 214 71a-c
51 TOLSTOY: *War and Peace*, BK VI, 235a; BK X, 411c-412d; 421c-426a; 440c-442c; 459d-461d; BK XI, 488c-489c; BK XII, 536b; BK XIII, 584c-585c; 586d-587d; EPILOGUE I, 654a-655c; EPILOGUE II, 685a
53 JAMES: *Psychology*, 794a-798b esp 797b-798a

5c. The maxims of prudence

OLD TESTAMENT: *Proverbs* passim / *Ecclesiastes* passim
APOCRYPHA: *Ecclesiasticus*, 1-43 passim—(*D*) OT, *Ecclesiasticus*, 1-43 passim
NEW TESTAMENT: *Matthew*, 6:19-34 / *Luke*, 12:13-32 / *Acts*, 19:36 / *I Corinthians*, 7:29-35 / *Ephesians*, 5:15-16 / *Philippians*, 4:6 / *I Peter*, 5:7
5 AESCHYLUS: *Seven Against Thebes* [631-719] 34a-35a / *Prometheus Bound* [259-398] 42d-44a; [887-906] 49c-d; [930-1093] 50a-51d
5 SOPHOCLES: *Antigone* [1-99] 131a-132a / *Electra* [121-403] 157b-159b; [938-1057] 163c-164d
6 HERODOTUS: *History*, BK VII, 225b-226a; BK VIII, 269c-270a
6 THUCYDIDES: *Peloponnesian War*, BK I, 370a-c; BK V, 507a-c
14 PLUTARCH: *Pericles*, 131b-c
22 CHAUCER: *Troilus and Cressida*, BK I, STANZA 101-118 14a-16b; STANZA 136-139 18b-19a; BK III, STANZA 233-236 85a-b
23 HOBBES: *Leviathan*, PART I, 53a
25 MONTAIGNE: *Essays*, 51a-55d esp 52c-53c; 136b-139b; 174a-d
26 SHAKESPEARE: *Henry V*, ACT I, SC II [183-220] 535d-536b
27 SHAKESPEARE: *Hamlet*, ACT I, SC III [59-80] 35a
29 CERVANTES: *Don Quixote*, PART II, 331d-333b
30 BACON: *Advancement of Learning*, 81d-95b
31 DESCARTES: *Discourse*, PART III 48b-51b
31 SPINOZA: *Ethics*, PART IV, PROP 45, SCHOL 438b-c
35 HUME: *Human Understanding*, SECT V, DIV 36, 465d [fn 1]
43 MILL: *Representative Government*, 345b; 410c-d

6. Prudence in relation to the common good of the community

6a. Political prudence: the prudence of the prince or statesman, of the subject or citizen

OLD TESTAMENT: *Genesis*, 41:33-41 / *I Kings*, 3:16-28—(*D*) *III Kings*, 3:16-28 / *Proverbs*, 11:14; 20:18,28; 23:1-3; 24:6; 25:6-7; 29:12; 31:4-5 / *Ecclesiastes*, 8:2-4
APOCRYPHA: *Tobit*, 12:7—(*D*) OT, *Tobias*, 12:7 / *Ecclesiasticus*, 10:1-3—(*D*) OT, *Ecclesiasticus*, 10:1-3
4 HOMER: *Iliad*, BK I [1-492] 3a-8a; BK IX [1-172] 57a-58d
5 AESCHYLUS: *Suppliant Maidens* [333-523] 5a-7c / *Persians* 15a-26d esp [739-786] 23a-c
5 SOPHOCLES: *Oedipus the King* [1-512] 99a-103d / *Antigone* [1-99] 131a-132a; [633-767] 136c-137d / *Philoctetes* 182a-195a,c esp [50-134] 182d-183c
5 EURIPIDES: *Rhesus* 203a-211d esp [1-148] 203a-204c / *Suppliants* [103-597] 259a-263c / *Bacchantes* [266-271] 342a-b / *Phoenician Maidens* [443-593] 381d-383a; [697-747] 384a-d / *Orestes* [682-716] 400d-401a / *Iphigenia at Aulis* 425a-439d esp [1-542] 425a-429d
5 ARISTOPHANES: *Acharnians* [480-571] 460d-461c; [971-999] 466c-d / *Knights* 470a-487a,c esp [1316-1408] 486a-487a,c / *Frogs* [686-737] 572a-d; [1417-1514] 581a-582a,c / *Lysistrata* [541-602] 590a-591a
6 HERODOTUS: *History*, BK I, 6a-b; 41c-d; BK III, 97b-c; BK VII, 216d-218a; 225a-226b; 242a-b; 245d-246b
6 THUCYDIDES: *Peloponnesian War*, BK I, 365c-367a; 370a-c; 383d-384a; BK II, 389d-391b; 393a-c; 397b-c; BK III, 427a-c; 436d-438b; BK IV, 451a-c; 462d-463a; 474a-c; BK V, 483c-485b; 507a-c; BK VI, 511c-516a; BK VII, 545b-c; BK VIII, 564a-c; 569c-570a; 574d-575d

(6. Prudence in relation to the common good of the community. 6a. Political prudence: the prudence of the prince or statesman, of the subject or citizen.)

7 PLATO: *Protagoras*, 43a-b / *Meno*, 174d-176a / *Statesman*, 604c-608d / *Laws*, BK III, 669b-670c; BK IX, 754a-b; BK XII, 785d-786b / *Seventh Letter*, 806d-807b; 813d-814d

9 ARISTOTLE: *Ethics*, BK VI, CH 5 [1140^{b}4-11] 389b; CH 8 [1141^{b}23-1142^{a}12] 390d-391a; BK X, CH 9 434a-436a,c / *Politics*, BK III, CH 4 473c-475a; CH 11 479b-480c; BK IV, CH 14 498b-499c; BK V, CH 8-11 509d-518c; BK VII, CH 2-3 528a-530a

12 EPICTETUS: *Discourses*, BK III, CH 7 182b-184a

12 AURELIUS: *Meditations*, BK III, SECT 5 261a; BK IV, SECT 4 264a; BK V, SECT 16 271c-d; BK VII, SECT 5 280a-b; BK IX, SECT 23 293c; BK X, SECT 6 297a-b; BK XI, SECT 8 303a-b

13 VIRGIL: *Aeneid*, BK XI [296-444] 336a-340a

14 PLUTARCH: *Pericles*, 129a-141a,c / *Alcibiades*, 167c-168a / *Alexander* 540b,d-576d passim / *Phocion*, 604b,d-605d / *Caius and Tiberius Gracchus-Agis and Cleomenes* 689b,d-691a,c / *Demetrius*, 736c-737b / *Dion*, 781b,d / *Brutus-Dion* 824b,d-826a,c

15 TACITUS: *Annals*, BK IV, 72b-73a; BK XVI, 176b-d / *Histories*, BK I, 193d; 211c-212b; BK III, 247a

19 AQUINAS: *Summa Theologica*, PART I, Q 22, A 1, ANS 127d-128d

21 DANTE: *Divine Comedy*, HELL, XXVII [55-136] 40a 41b; PARADISE, XIII [88-111] 126b-c

23 MACHIAVELLI: *Prince* 1a-37d

23 HOBBES: *Leviathan*, PART I, 60d-61a; 67d-68a

25 MONTAIGNE: *Essays*, 51a-55d; 381a-388c; 451d-452d; 488b-489b; 490d-491d

26 SHAKESPEARE: *1st Henry IV*, ACT III, SC II [29-84] 453b-d / *2nd Henry IV*, ACT I, SC III 472d-474a / *Julius Caesar*, ACT II, SC I [154-191] 576a-c; ACT IV, SC I 587a-c

27 SHAKESPEARE: *Antony and Cleopatra*, ACT II, SC II [1-27] 318c-d / *Coriolanus* 351a-392a,c esp ACT II, SC III [53-160] 366c-367c, ACT III, SC II [28-92] 373d-374c

29 CERVANTES: *Don Quixote*, PART II, 331a-333b; 340d-343a; 353b-356d; 361a-d

30 BACON: *Advancement of Learning*, 4c-6c; 20d-26a; 74b-c; 81d-82a; 94b-95b

35 LOCKE: *Civil Government*, CH XIII, SECT 156-158 61a-62b

36 SWIFT: *Gulliver*, PART I, 7b-8a; 28b-29b; PART III, 112a-115b

38 MONTESQUIEU: *Spirit of Laws*, BK VI, 39b

38 ROUSSEAU: *Political Economy*, 368b-c; 373c-374a / *Social Contract*, BK III, 409d

39 SMITH: *Wealth of Nations*, BK I, 109d-110d; BK II, 126a

40 GIBBON: *Decline and Fall*, 1b-2a passim; 50a; 331b-332d; 609d-610a; 645a

41 GIBBON: *Decline and Fall*, 168c

43 FEDERALIST: NUMBER 5, 37d; NUMBER 27, 96b; NUMBER 31, 105b-c; NUMBER 40, 130c-132a; NUMBER 62, 190d-191a; NUMBER 74, 222b-d

43 MILL: *Representative Government*, 334b-c

44 BOSWELL: *Johnson*, 255a-256a

46 HEGEL: *Philosophy of Right*, PART III, par 274 92a; ADDITIONS, 166 145b-c / *Philosophy of History*, PART II, 271d-272a; PART IV, 361d-362a

49 DARWIN: *Descent of Man*, 315b-c

51 TOLSTOY: *War and Peace*, BK I, 9c-10d; BK II, 65d-66d; BK X, 421c-426a; 440c-442c; 459d-461d; BK XIII, 570a-b; 584c-585c

***6b.* Jurisprudence: prudence in the determination of laws and the adjudication of cases**

5 AESCHYLUS: *Eumenides* [397-777] 85c-89a

5 ARISTOPHANES: *Wasps* 507a-525d

6 HERODOTUS: *History*, BK I, 32b-c; BK III, 95d-96b

7 PLATO: *Apology* 200a-212a,c / *Republic*, BK III, 337b-338a / *Theaetetus*, 544a-c / *Statesman*, 599c-603a / *Laws*, BK IX, 744b-c; BK XI, 782a-b; 784a-b; BK XII, 792a-c

9 ARISTOTLE: *Ethics*, BK V, CH 10 385c-386b; BK VI, CH 8 [1141^{b}23-33] 390d-391a / *Politics*, BK II, CH 8 [1268^{b}5-23] 464c; BK III, CH 11 [1282^{b}1-14] 480b-c; CH 15 [1286^{a}10-30] 484b-c; CH 16 [1287^{a}24-28] 485d; [1287^{b}15-25] 486a-b / *Rhetoric*, BK I, CH 1 [1354^{a}32-^{b}15] 593c-d

14 PLUTARCH: *Solon*, 70d-71b

15 TACITUS: *Annals*, BK III, 61c-62a

18 AUGUSTINE: *City of God*, BK XIX, CH 6 514b-515a

20 AQUINAS: *Summa Theologica*, PART I-II, Q 91, A 3, REP 3 209d-210c; Q 94, A 4, ANS 223d-224d; A 5, 224d-225d; Q 95, A 1, REP 2-3 226c-227c; AA 2-3 227c-229b; Q 96, A 1, REP 2 230d-231c; A 6 235a-d; Q 97, AA 1-2 236a-237b; A 4 238b-239b; Q 105, A 2, ANS and REP 7-8 309d-316a

22 CHAUCER: *Tale of Melibeus*, par 11 403b-404a

23 HOBBES: *Leviathan*, PART I, 58b; 78b-c; PART II, 123b-d; 134a-136b; 136d; PART III, 234d

24 RABELAIS: *Gargantua and Pantagruel*, BK II, 85c-92c

25 MONTAIGNE: *Essays*, 283a; 516c-517a

26 SHAKESPEARE: *Merchant of Venice*, ACT IV, SC I 425c-430b

27 SHAKESPEARE: *Measure for Measure*, ACT II, SC I-II 178d-184a

29 CERVANTES: *Don Quixote*, PART II, 332d-333b; 340d-343a; 353b-356d; 360d-361d

30 BACON: *Advancement of Learning*, 94d-95b

33 PASCAL: *Provincial Letters*, 27a-62a; 90a-99a; 102a-117b

36 SWIFT: *Gulliver*, PART IV, 152b-154a

38 MONTESQUIEU: *Spirit of Laws*, BK VI, 33a-35c; 39b; 42c-d; BK XXVI, 214b,d-215a; BK XXIX, 262a-b

38 ROUSSEAU: *Social Contract*, BK IV, 433a-b

40 GIBBON: *Decline and Fall*, 244d-245b; 343b-c
41 GIBBON: *Decline and Fall*, 75d-78b
42 KANT: *Pure Reason*, 60a-c / *Science of Right*, 397a-b; 399c-400d
43 FEDERALIST: NUMBER 65 198a-200c passim; NUMBER 78, 231c-232a
46 HEGEL: *Philosophy of Right*, PART III, par 214 71a-c; par 222-223 73b-d; par 225-229 73d-75b; ADDITIONS, 134 138b-c
48 MELVILLE: *Moby Dick*, 292a-295a
52 DOSTOEVSKY: *Brothers Karamazov*, BK XII 348b,d-401d passim

CROSS-REFERENCES

For: The distinction between prudence and wisdom, or between practical and speculative wisdom, *see* KNOWLEDGE 6e(1); MIND 9a; PHILOSOPHY 2a; WISDOM 1b.

The relation of prudence to the other intellectual virtues, *see* ART 1; HABIT 5d; KNOWLEDGE 6e(2), 8b(3); LAW 4a; SCIENCE 1a(1); VIRTUE AND VICE 2a(2); WISDOM 2a.

The relation of prudence to the moral virtues, *see* COURAGE 4; KNOWLEDGE 8b(1); PRINCIPLE 4a; TEMPERANCE 1b; TRUTH 2c; VIRTUE AND VICE 1c, 3b, 5b.

The relevance of freedom and of the distinction between means and ends to the operations of prudence, *see* GOOD AND EVIL 5c; NECESSITY AND CONTINGENCY 5a(1)-5a(2); WILL 2c(1)-2c(3), 5b(2).

The elements which enter into the making of a prudent judgment, *see* EXPERIENCE 6a; JUDGMENT 3; OPINION 6b; REASONING 5c(3); WILL 2c(3), 5b(2).

Considerations of the prudence of the statesman or citizen, and of the legislator or jurist, *see* CITIZEN 5; GOVERNMENT 3d; LAW 5d, 5g; MONARCHY 3a; STATE 8d.

ADDITIONAL READINGS

Listed below are works not included in *Great Books of the Western World*, but relevant to the idea and topics with which this chapter deals. These works are divided into two groups:

I. Works by authors represented in this collection.
II. Works by authors not represented in this collection.

For the date, place, and other facts concerning the publication of the works cited, consult the Bibliography of Additional Readings which follows the last chapter of *The Great Ideas*.

I.

AUGUSTINE. *On the Morals of the Catholic Church*, CH I, XXIV
AQUINAS. *Summa Theologica*, PART II-II, QQ 47-56, 155-156
F. BACON. "Of Counsel," in *Essays*
A. SMITH. *The Theory of Moral Sentiments*, PART VI, SECT I
KANT. *Lectures on Ethics*
J. S. MILL. *A System of Logic*, BK VI, CH 12

II.

HORACE. *Epistles*
PERKINS. *The Whole Treatise of the Cases of Conscience*
GRÁCIAN Y MORALES. *The Art of Worldly Wisdom*
SANDERSON. *De Obligatione Conscientiae* (*On the Obligations of Conscience*)
J. TAYLOR. *Ductor Dubitantium*
MOLIÈRE. *L'école des femmes* (*The School for Wives*)
SHAFTESBURY. *Characteristics of Men, Manners, Opinions, Times*, TREATISE IV
J. BUTLER. *Fifteen Sermons upon Human Nature*
CHESTERFIELD. *Letters to His Son*
S. JOHNSON. *History of Rasselas*
BENTHAM. *An Introduction to the Principles of Morals and Legislation*
EMERSON. *The Conduct of Life*
MAURICE. *The Conscience*
HODGSON. *The Theory of Practice*
H. SIDGWICK. *The Methods of Ethics*, BK II
SPENCER. *The Principles of Ethics*, PART I, CH 1, 13
L. STEPHEN. *The Science of Ethics*, CH 6 (4), 9 (5)
BONAR. *The Intellectual Virtues*
DEWEY. *The Study of Ethics*, CH 5-6
LECKY. *The Map of Life*, CH 6, 8-9, 11
SANTAYANA. *Reason in Common Sense*, CH 9
ADLER. *Art and Prudence*, PART III, CH 12

Chapter 74: PUNISHMENT

INTRODUCTION

THE problem of punishment divides into a number of questions. In what does punishment consist? What purpose should punishment serve, or what should be its principle or reason? Who has the authority to punish and under what conditions shall this authority be exercised? Who shall be punished and who shall be exempt from punishment? What are the forms or kinds of punishment? Are any of these reprehensible either in principle or for their consequences? Should there be a proportion between the severity of punishment and the gravity of the offense? Can a person punish himself? Do men desire to be punished?

These questions apply, though not with equal emphasis, to the three major types of wrongdoing in relation to which men discuss the nature and the need of punishment, its justice or its expediency. Punishment is traditionally considered in relation to vice, to crime, and to sin. According to the type of wrongdoing being considered, the punitive agent may be the wrongful individual himself or his family, his state, his church or God.

The lines which separate these areas of the problem of punishment cannot be sharply drawn in all cases, for as certain acts simultaneously violate the moral, the civil, and the divine law, they may also cause a person to be simultaneously subject to punishment from diverse sources. The wrong or injury which punishment is supposed to redress may in some cases fall under none of these headings, as, for example, acts of war or rebellion. It is sometimes questioned whether the theory of punishment remains the same when punitive steps are taken by one state against some or all the people of another; or again, when a government applies penalties for a rebellion engaged in by members of its own community.

In this chapter, we shall deal with the problem of punishment in its most general terms, for the most part considering the foregoing questions without regard to the distinction of sin, crime, and vice; or to the differences between divine and human punishment, or between punishment by the state and in the family (*i.e.*, punishment as involved in the enforcement of law and punishment as an instrument of education or training). These more specialized topics belong to other chapters: *e.g.*, punishment as affecting the formation of character to the chapters on EDUCATION and VIRTUE AND VICE; punishment as administered by parents to the chapter on FAMILY; divine rewards and punishments to the chapters on IMMORTALITY and SIN.

The basic ideas in terms of which any discussion of punishment proceeds are, of course, the subjects of the chapters on JUSTICE and LAW. One other chapter—PLEASURE AND PAIN—is of peculiar relevance to the question about the nature of punishment. Concerning the nature of punishment there seems to be no great difference of opinion in the tradition of western thought. Punishment is generally conceived as the infliction of pain, though some writers distinguish between corporeal and spiritual punishment according as the pain inflicted is the pain of sense or the pain of deprivation and loss. Imprisonment, for example, always entails the pain of loss—the loss of freedom—but it may also carry with it the suffering of physical hardships or even tortures. The torment of the damned is, according to some theologians, both corporeal and spiritual—the agony of hell-fire and the anguish of the soul deprived of God's love and presence.

IF THERE IS LITTLE DISPUTE about the nature of punishment, the opposite situation prevails concerning its purpose. Why men should be

punished is one of the most controversial questions in the field of moral and political thought, and in psychology and theology as well.

The major opposition in the tradition of the great books is between those who think that punishment need only be inherently just, and those who think it cannot be justified without reference to its utility or expediency. While this debate goes on, for more than twenty centuries, punishments in actual practice—whether in accordance with the law or uncontrolled by it—tend generally to be severe and often fiendish or ferocious. Not until Beccaria in the 18th, and Bentham in the 19th century, does the discussion of punishment lead to major reforms in the spirit and provisions of the penal codes. But the opposite positions in the debate across the centuries are never without practical significance for penal institutions and punitive measures, even when theory is not immediately reflected in practice. The speculative significance of the issue is, however, always immediately apparent. Although justice and law are more fundamental and comprehensive ideas than punishment, this one problem of punishment—the question of its purpose—critically tests the meaning of anyone's theory of law and justice.

It may be that the issue cannot be fairly stated in terms of *purpose*. To use that word may beg the question, since one of the basic positions in the controversy appears to be that punishment has no purpose in the sense of *serving some end beyond itself*, or producing some desired consequence *in the future*. This is the theory—shared by Kant and Hegel—that punishment should be purely retributive.

According to this view the effect of the punishment upon the wrongdoer, or upon others whose conduct may be affected by punishments meted out or threatened, must not be taken into account at all. Nothing should be sought except the preservation of the balance sheet of justice, by seeing that every wrong is duly requited by a proportionate measure of punishment. Nor is the requital purely retributive if it considers any person except the wrongdoer himself. That punishment of the transgressor may assuage the feelings of those he has injured, or even satisfy a desire for revenge, should have no motivating force. The only pleasure the spectacle of punishment should yield, the only desire it should satisfy, is that of seeing the moral law upheld. We should punish only because we have, under the moral law, a duty to do so.

Kant castigates as utilitarian every theory of punishment which directs it to the service of anything besides strict justice—such as the reformation of the criminal, the deterrence of others, the welfare of society, or the slaking of the thirst for vengeance. "Juridical punishment," he says, "can never be administered merely as a means for promoting another good, either with regard to the Criminal himself, or to Civil Society, but must in all cases be imposed only because the individual on whom it is inflicted *has committed a Crime*. . . . The Penal Law is a Categorical Imperative; and woe to him who creeps through the serpent-windings of Utilitarianism to discover some advantage that may discharge him from the Justice of Punishment, or even from the due measure of it."

What shall determine the mode and measure of punishment? Kant answers: "It is just the Principle of Equality by which the pointer of the Scale of Justice is made to incline no more to one side than the other. It may be rendered by saying that the undeserved evil which anyone commits on another, is to be regarded as perpetrated on himself. . . . This is the Right of Retaliation (*ius talionis*); and properly understood it is the only Principle which . . . can definitely assign both the quality and the quantity of a just penalty. All other standards are wavering and uncertain; and on account of other considerations involved in them, they contain no principle conformable to the sentence of pure and strict Justice."

RETRIBUTIVE PUNISHMENT or retaliation seems to express the principle of justice or fairness in exchange. The Mosaic injunction that "thou shalt give life for life, eye for eye, tooth for tooth, burning for burning, wound for wound, stripe for stripe," occurs in the context of other passages which declare the compensation in goods which an injured party shall receive for the loss of or damage to his chattel. But it is also accompanied by ordinances which impose the death penalty for wrongs other than the taking of a life.

"You have heard," Christ declares in the Sermon on the Mount, "that it hath been said, An eye for an eye, and a tooth for a tooth. But I say unto you, That ye shall resist not evil; but whosoever shall smite thee on thy right cheek, turn to him the other also. And if any man will sue thee at the law, and take away thy coat, let him have thy cloak also." This passage has sometimes been taken to mean that all punishment is simply vengeance; and that instead of returning injury for injury, the Christian should love his enemies and forgive them. "If you think someone has wronged you," Princess Mary says to Prince Andrew in *War and Peace*, "forget it and forgive! We have no right to punish."

But the Christian view of punishment may not be the same when the punishment of the evildoer is a question for the state rather than for the individual. "Avenge not yourselves," St. Paul commands; "for it is written, Vengeance is mine, I will repay, saith the Lord." The individual need not avenge himself, for God punishes the wicked; not only God, but the ruler of the earthly state who, St. Paul says, "is the minister of God to thee for good. But if thou do that which is evil, be afraid; for he beareth not the sword in vain; for he is the minister of God, a revenger to execute wrath upon him that doeth evil."

A life for a life appears to be the symbolic statement of the *lex talionis* in the Greek as well as the Hebrew tradition. "Justice claims aloud her debt," the Chorus explains in the *Choephoroe* of Aeschylus. "Who in blood hath dipped the steel, deep in blood her meed shall feel. . . . Whoso'er shall take the sword, shall perish by the sword." But as Aristotle points out—and similarly Aquinas in his comment on the *lex talionis* of the Old Testament—simple reciprocity does not determine the mode of retribution. "People *want* even the justice of Rhadamanthus to mean this: Should a man suffer what he did, right justice would be done." Yet, Aristotle points out, "in many cases, reciprocity and rectificatory justice are not in accord, *e.g.*, if an official has inflicted a wound, he should not be wounded in return, and if someone has wounded an official, he ought not to be wounded only but punished in addition." Retaliation consists in reciprocity only if it is "in accordance with a proportion, and not on the basis of a precisely equal return."

Punishment as retaliation may seem to be inseparable from revenge. Yet, according to Lucretius, the surrender of primitive freedom for the restrictions of civilized life is motivated by the desire to substitute equitable retribution for unlimited vengeance. "Mankind, tired out with a life of brute force, lay exhausted from its feuds; and therefore the more readily it submitted of its own free will to laws and stringent codes. As each man moved by anger took measures to avenge himself with more severity than is now permitted by equitable laws, for this reason men grew sick of the life of brute force."

Hegel tries to clarify what he regards as a popular confusion of retribution with revenge. "In that condition of society," he writes, "when there are neither magistrates nor laws, punishment always takes the form of revenge; revenge remains defective inasmuch as it is the act of a subjective will." It is understandable that retribution should be objected to on the ground that "it looks like something immoral, *i.e.*, like revenge, and that thus it may pass for something personal. Yet it is not something personal but the concept itself which carries out retribution. 'Vengeance is mine, saith the Lord,' as the Bible says. . . . The Eumenides sleep, but crime awakens them, and hence it is the very act of crime itself which vindicates itself."

The apparent contradiction in the identity and difference of retribution and revenge can, in Hegel's opinion, be resolved. On the one hand, it can be said that "the annulment of crime is retribution insofar as retribution in *conception* is an 'injury of the injury.'" On the other hand, it can be said that "the annuling of crime in this sphere where right is immediate is principally revenge, which is just in its content insofar as it is retributive." The demand that this contradiction be resolved "is the demand for justice not as revenge but as punishment."

Hegel's resolution seems to be in terms of a distinction between the particular and the universal. "When the right against crime has the form of revenge, it is only right implicit, not right in the form of right, *i.e.*, no *act* of revenge is justified. Instead of the injured party, the injured *universal* now comes on the scene, and this

has its proper actuality in the court of law. It takes over the pursuit and the avenging of crime, and this pursuit consequently ceases to be the subjective and contingent retribution of revenge, and is transformed into the genuine reconciliation of right with itself, *i.e.*, into punishment."

On this conception of punishment, Hegel like Kant decries every utilitarian purpose for punishment. Such misconceptions of punishment arise, he says, from the supposition that both crime and its annulment are "unqualified evils," which makes it seem "quite unreasonable to will an evil merely because 'another evil is there already.' To give punishment this superficial character of an evil is, amongst the various theories of punishment, the fundamental presupposition of those which regard it as a preventive, a deterrent, a threat, as reformative, etc., and what on these theories is supposed to result from punishment is characterized equally superficially as a good. But . . . the precise point at issue is wrong and the righting of it. If you adopt that superficial attitude toward punishment, you brush aside the objective treatment of the righting of wrong."

THE ISSUE WOULD SEEM to be a conflict between justice and expediency, with the utilitarians identifying retribution with revenge and demanding that punishment serve some good or mitigate some evil. But sometimes the question is whether justice and expediency are compatible.

In the debate on the treatment of the Mytilenians, which Thucydides reports, Cleon calls upon the Athenians to show no mercy to their rebellious subjects. "Their offence," he says, "was not involuntary, but of malice and deliberate," and they deserve to be punished. "If you follow my advice, you will do what is just towards the Mytilenians, and at the same time expedient. . . . For if they were right in rebelling, you must be wrong in ruling. However, if, right or wrong, you determine to rule, you must carry out your principle and punish the Mytilenians as your interest requires."

Diodotus objects to the policy of putting the Mytilenians to death on the ground that it is not a question of justice but of expediency. "We are not in a court of justice," he says, "but in a political assembly; and the question is not justice, but how to make the Mytilenians useful to Athens. . . . I consider it far more useful for the preservation of our empire to put up with injustice, than to put to death, however justly, those whom it is our interest to keep alive. As for Cleon's idea that in punishment the claims of justice and expediency can both be satisfied, facts do not confirm the possibility of such a combination."

In the chapter on justice in *Utilitarianism*, Mill seems to place justice above expediency, but he also seems to reduce retribution to revenge and call it just. "The sentiment of justice," which includes as "one of its elements . . . the desire to punish," Mill identifies with "the natural feeling of retaliation or vengeance." Retribution, or the giving of "evil for evil," he says, "becomes closely connected with the sentiment of justice and is universally included in the idea." The principle of "giving to each what they deserve," he adds, "that is, good for good as well as evil for evil, is not only included within the idea of Justice as we have defined it, but is a proper object of that intensity of sentiment, which places the Just, in human estimation, above the simply Expedient."

Other writers seem to think that the utility of punishment is not incompatible with its retributive justice. The great theologians, for example, considering the difference between the eternal punishment of the damned in Hell, and the cleansing punishment of the repentant in Purgatory, do not find it impossible for divine justice to include both absolute retribution and punishment which may be remedial as well as retributive. Purely retributive punishment seems justifiable to them, but they do not think that punishment can ever be justified simply by its utility—by the good it achieves—without any reference to the retaliation of evil for evil.

In the context of saying that the institution of slavery among men is a just punishment for Adam's sin, and that "God knows how to award fit punishments for every variety of offence," Augustine observes that "we must not only do harm to no man, but also restrain him from sin or punish his sin, so that either the man himself who is punished may profit by his experience or others be warned of his example." Here there

seems to be no thought that retribution excludes a reformative or deterrent use of punishment. Aquinas even more explicitly combines the remedial and the deterrent utility of punishment with the function of punishment to preserve the order of justice by meting out an equitable retribution.

In willing justice, God wills punishment, according to Aquinas. "The order of justice belongs to the order of the universe; and this requires that penalty should be dealt out to sinners." But just retribution is not the only reason for punishment. Sometimes it is "for the good of those who are punished," sometimes "for the amendment of others." These reasons for punishment apply to human as well as to divine law. "When a thief is hanged, this is not for his own amendment, but for the sake of others, who at least may be deterred from crime through fear of punishment." Punishment is a proper effect of human law, not merely because justice requires it, but because "the law makes use of the fear of punishment in order to ensure obedience."

In discussing the proportion between the severity of the penalty and the gravity of the fault in the punishment of sin under the Mosaic law, Aquinas explains that in addition to the reason of justice (that "a greater sin, other things being equal, deserves a greater punishment"), there is the purpose of reformation ("since men are not easily cured of habitual sin except by severe punishments") and the purpose of prevention ("for men are not easily deterred from such sins unless they be severely punished"). Here three reasons for punishment are stated side by side. But in the opinion of Aquinas retribution is more than the primary, it is the one indispensable reason; for punishment cannot be justified except as doing the work of justice.

THE VIEW OF KANT AND Hegel that retribution or retaliation is *the only basis* for punishment—not merely the primary or the indispensable reason—meets its exact opposite in what appears to be the completely utilitarian theory of punishment to be found in the writings of Plato, Hobbes, Locke, and Rousseau.

In the *Protagoras*, arguing for the proposition that virtue can be taught, Protagoras insists that "no one punishes the evil-doer for the reason that he has done wrong—only the unreasonable fury of a beast acts in that manner. But he who desires to inflict rational punishment does not retaliate for a past wrong which cannot be undone. He has regard to the future, and is desirous that the man who is punished, and he who sees him punished, may be deterred from doing wrong again. He punishes for the sake of prevention, thus clearly implying that virtue is capable of being taught."

Plato himself seems to adopt the opinion of Protagoras. In the *Laws*—wherein he sets forth the provisions of a penal code in a detail equalled, in the tradition of the great books, only by the proposals of Hobbes—Plato says no man is to be punished "because he did wrong, for that which is done can never be undone, but in order that, in the future times, he, and those who see him corrected, may utterly hate injustice, or at any rate abate much of their evil-doing." Yet he also goes on to say that the law "should aim at the right measure of punishment, and in all cases at the deserved punishment." This qualification seems, in turn, to be balanced by his remarks on the death penalty which he thinks should be imposed only on the incurable who cannot profit from punishment and whose execution "would be an example to other men not to offend."

The notion of desert in Plato's theory of punishment appeals to justice without implying any separation between retribution and reform. In the *Gorgias*, Socrates says that "to suffer punishment is another name for being justly corrected when you do wrong." A wrongdoer who escapes punishment suffers a greater evil than one who is punished, for he "who is punished and suffers retribution, suffers justly." Thereby justice is restored to his soul. The judge who prescribes just punishments cures the soul, as the physician who prescribes the right remedies cures the body. The criminal who, having been unjust, goes unpunished "has no deliverance from injustice."

The fact that just punishments are deserved does not seem to be the reason why men should be punished. Considering the penalties imposed by gods and men, in the next world or in this, Socrates summarizes his argument by saying that "the proper office of punishment is two-

fold: he who is rightly punished ought either to become better and profit by it, or he ought to be made an example to his fellows, that they may see what he suffers, and fear and become better. Those who are improved when they are punished by gods and men, are those whose sins are curable; and they are improved, as in this world so also in another, by pain and suffering."

Like Plato, Hobbes places the reason for punishment in the future rather than in the past—in its utility to procure certain effects rather than in its effecting retaliation. He states it as a law of nature that "in revenges (that is, retribution of evil for evil), *men look not at the greatness of the evil past, but the greatness of the good to follow.* Whereby we are forbidden to inflict punishment with any other design than for the correction of the offender, or the direction of others." Anything else he calls "an act of hostility."

The chief aim of punishment, in securing the reformation and the deterrence of criminals, Hobbes thinks, is to maintain public peace. "A punishment is an evil inflicted by public authority" on those who have transgressed the law, "to the end that the will of men may thereby the better be disposed to obedience." A law, without a penalty attached, is "not a law, but vain words." It fails to achieve the end of law, which is the same as the end of punishment. The worst offenses—those to be prevented by the most severe penalties—are crimes, not against individuals, but those that "are of most danger to the public."

Locke also derives from natural law the right to punish those who transgress that law, "for restraint and preventing the like offence," to which he adds that "each transgression may be punished to that degree, and with so much severity as to make it an ill bargain to the offender, give him cause to repent, and terrify others from doing the like." This theory of punishment applies not only to man living in a state of nature, but in civil society as well.

Though Rousseau describes the wise statesman as one who knows how, by punishing crimes, to prevent them, he lays greater emphasis on the other motive for punishment—the reformation of the criminal. "There is not a single ill-doer who could not be turned to some good. The State has no right to put to death, even for the sake of making an example, anyone whom it can leave alive without danger." Or, as Fetyukovitch says in his address to the jury in the *Brothers Karamazov*: "The Russian court does not exist for punishment only, but also for the salvation of the criminal. Let other nations think of retribution and the letter of the law, we will cling to the spirit and the meaning—the salvation and the reformation of the lost."

THIS GREAT ISSUE CONCERNING the reason for or purpose of punishment seems to affect most of the other questions which men raise about the penalties to be imposed for wrongdoing—whether the wrong is a sin, a crime, or a vicious act, and whether it is God or the state, nature or the individual himself, who inflicts the pain. The reverse also seems to be true. These other questions raise difficulties or issues which test the conflicting theories that punishment should be a just retaliation *exclusively*, or should be justified *only* by its consequences, or should somehow be a *combination* of awarding just deserts and securing good effects.

For example, the question of how the various modes and measures of punishment should be determined and assigned to diverse acts of wrongdoing does not seem to be answerable in the same way when the principle is simply retribution and when the purpose of punishment is reformation and deterrence. On the principle of retribution the gravity of the offence appears to be the only determinant of the severity of the punishment. The punishment should fit the crime, not the nature of the criminal as someone capable of being benefitted by punishment.

Kant and Hegel do not think that the justification of the death penalty, for example, depends on the curability or incurability of the offender. Nor do they think that the taking of the criminal's life should be motivated, as Aquinas and Locke seem to suggest, by the desire to protect society from his future depredations. It is sufficient that he has taken a life, or committed some equally serious injury, which ought to be repaid by a proportionate requital.

"What is involved in the action of the criminal," Hegel writes, "is not only the concept of crime, the rational aspect in crime as such

whether the individual wills it or not, the aspect which the state has to vindicate, but also the abstract rationality of the individual's *volition.* Since that is so," Hegel argues, "punishment is regarded as containing the criminal's right and hence by being punished he is as honored as a rational being. He does not receive this due of honor unless the concept and measure of his punishment are derived from his own act. Still less does he receive it if he is treated either as a harmful animal who has to be made harmless, or with a view to deterring or reforming him."

On these grounds, Hegel criticizes Beccaria's unqualified opposition to the death penalty. In addition, he rejects Beccaria's theory that "it could not be presumed that the readiness of individuals to allow themselves to be executed was included in the social contract." Rousseau takes the diametrically opposite view. He argues for the death penalty on the ground that "we consent to die if we ourselves turn assassins" in order to protect ourselves from falling victims to assassins. In making this consent a part of the social contract, Rousseau holds that "we think only of securing [our own lives], and it is not to be assumed that any of the parties then expects to get hanged."

Hegel disagrees with both Beccaria and Rousseau. According to him, the state is not based upon a social contract; nor does he admit that "its fundamental essence [involves] the unconditional protection and guarantee of the life and property of members of the public as individuals. On the contrary," he holds, "it is that higher entity"—the state—"which even lays claim to this very life and property and demands its sacrifice."

The state, therefore, according to Hegel, cannot be denied the right of inflicting capital punishment. Hegel admits that "Beccaria's requirement that men should give their consent to being punished is right enough," but he adds that "the criminal gives his consent already by his very act. The nature of the crime, no less than the private will of the individual, requires that the injury initiated by the criminal should be annulled. However that may be," he continues, "Beccaria's endeavor to have capital punishment abolished has had beneficial effects." Because of the efforts made by Joseph II and Napoleon to abolish it, "we have begun to see," Hegel thinks, "which crimes deserve the death penalty and which do not. Capital punishment has in consequence become rare, as in fact should be the case with this most extreme punishment."

The attitude toward the death penalty as well as toward all other punishments is different when the *only* purpose of punishment is the welfare of society and the improvement of individuals, whether they are actual or potential offenders. The modes and degrees of punishment must then be determined by considering their effectiveness as means to the ends in view. Montesquieu discusses the penal codes in various systems of law entirely in terms of their success in preventing crime. Though he does not seem to think that punishment can improve the character of the individual, he believes that a certain proportion between the penalty and the offense may tend to reduce the extent and gravity of crimes. "In Russia," he says, "where the punishment of robbery and murder is the same, they always murder."

In general, Montesquieu is opposed to unduly severe punishments, and especially to cruel and unusual punishments, not so much on the grounds of injustice as for the protection of liberty and public morals. Hobbes, Locke, and Rousseau similarly discuss the severity of punishment with reference to its utility, and, like Montesquieu, they face the problem that the same measure or degree of punishment may not be equally effective for the purposes of reformation and deterrence. Severe penalties, for example, may have a greater deterrent effect upon potential offenders than milder forms of punishment, but they may also tend to harden criminals instead of reforming them.

The conflict of principles in the determination of punishments seems to be even more marked in the case of those who try to combine retribution with utility. If, for example, the death penalty is the just desert for murder, should it be applied on the grounds of retribution, even though a particular murderer can be reformed by milder treatment? If heavy penalties were to prove highly effective as deterrents, should they be applied to minor offenses, which deserve less severe retaliations, in order to reduce the amount of crime?

THERE SEEMS TO BE AGREEMENT for the most part on who shall have the authority to punish and who shall be subject to punishment, in the relation of men to one another, to the state, and to God. Punishment seems to be annexed to law, as indispensable for its enforcement, so that whoever has the authority to set rules of conduct for another also has the authority to impose penalties for their violation. Yet the notion that punishment is a necessary sanction for law—which is apparently shared by those who take the retributive and those who take the utilitarian view of punishment—does not seem to fit both views equally well, at least not to the extent that the end of law and its enforcement is the common good or the public welfare.

Again, it seems to be generally agreed that moral responsibility on the part of offenders is an indispensable condition of just punishment for their misdeeds. Unless the sinful or the criminal act is voluntary, unless it is intentional rather than accidental—or if negligent, capable of being attributed to a willful error of judgment—the act is without fault and the agent without guilt. But although those who make punishment retributive and those who make it reformative or deterrent seem to agree upon responsibility as prerequisite, this principle does not seem to be equally consistent with both theories—at least not to the extent that the exemplary punishment may deter others quite apart from the responsibility of the person punished.

The question of responsibility raises other difficulties, *e.g.*, the metaphysical issue about personal identity, on which Locke takes the stand that unless the human individual is an enduring substance, he cannot deserve subsequent punishment for his prior acts; and the issue of free will and causality, on which Hume's position seems to be that unless human actions are subject to causal necessity, a man cannot be blamed for his acts or "become the object of punishment or vengeance."

Finally, there is the problem of a natural need for punishment and of the penalties which nature itself imposes for wrongdoing to fulfill this need. The familiar statement that virtue is its own reward and vice its own punishment, is sometimes interpreted to mean that virtue and vice are intrinsically good and evil, and sometimes to mean that through their natural consequences they heap benefit or injury on their possessor.

Augustine, for example, says that by the sins which he committed God did justly punish him, for "every disorder in the soul is its own punishment"; and Kant distinguishes juridical from natural punishment "in which Crime as Vice punishes itself, and does not as such come within the cognizance of the Legislator." The other interpretation seems to be represented by Hobbes' theory that "intemperance is naturally punished with diseases . . . injustice with the violence of enemies . . . cowardice with oppression." In the chain of consequences started by any action, he discerns the pains which are "the natural punishments of those actions that are the beginning of more harm than good."

But according to Freud it is the craving for punishment rather than the punishment which is natural, *i.e.*, psychologically determined. Individuals punish themselves or seek to be punished for what is either real or fancied guilt. "The unconscious need for punishment plays a part in every neurotic disease," Freud writes. "It behaves like a part of the conscience, like the prolongation of conscience into the unconscious; and it must have the same origin as conscience; that is to say, it will correspond to a piece of aggressiveness which has been internalized and taken over by the super-ego. If only the words were less incongruous, we should be justified . . . in calling it 'an unconscious sense of guilt.' "

Whatever its psychological validity, Freud's theory does not resolve the moral issue concerning the justice or utility of punishment. Nor does it eliminate the possibility of other motives for submitting to punishment voluntarily. Socrates in the *Crito* explains that he refuses to escape from the death penalty he thinks he does not deserve, in order to uphold the law which is itself just even though in his own case it has been unjustly applied by men. Thoreau and Gandhi refuse to obey laws their consciences cannot approve, but do not resist the state's demand that they be punished for the law's infraction. In an unjust society, going to prison is for them the necessary fulfillment of the revolution begun by civil disobedience.

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REFERENCES

To find the passages cited, use the numbers in heavy type, which are the volume and page numbers of the passages referred to. For example, in **4** HOMER: *Iliad*, BK II [265-283] **12d**, the number **4** is the number of the volume in the set; the number **12d** indicates that the passage is in section d of page 12.

PAGE SECTIONS: When the text is printed in one column, the letters **a** and **b** refer to the upper and lower halves of the page. For example, in **53** JAMES: *Psychology*, **116a-119b**, the passage begins in the upper half of page 116 and ends in the lower half of page 119. When the text is printed in two columns, the letters **a** and **b** refer to the upper and lower halves of the left-hand side of the page, the letters **c** and **d** to the upper and lower halves of the right-hand side of the page. For example, in **7** PLATO: *Symposium*, **163b-164c**, the passage begins in the lower half of the left-hand side of page 163 and ends in the upper half of the right-hand side of page 164.

AUTHOR'S DIVISIONS: One or more of the main divisions of a work (such as PART, BK, CH, SECT) are sometimes included in the reference; line numbers, in brackets, are given in certain cases; *e.g.*, *Iliad*, BK II [265-283] **12d**.

BIBLE REFERENCES: The references are to book, chapter, and verse. When the King James and Douay versions differ in title of books or in the numbering of chapters or verses, the King James version is cited first and the Douay, indicated by a (*D*), follows; *e.g.*, OLD TESTAMENT: *Nehemiah*, 7:45—(*D*) *II Esdras*, 7:46.

SYMBOLS: The abbreviation "esp" calls the reader's attention to one or more especially relevant parts of a whole reference; "passim" signifies that the topic is discussed intermittently rather than continuously in the work or passage cited.

For additional information concerning the style of the references, see the Explanation of Reference Style; for general guidance in the use of *The Great Ideas*, consult the Preface.

1. The general theory of punishment

1*a*. The nature of punishment: the pain of sense and the pain of loss

4 HOMER: *Odyssey*, BK XI [568-600] **248d-249a**
7 PLATO: *Protagoras*, **45b-d**
9 ARISTOTLE: *Ethics*, BK VII, CH 13 [1153^{b}14-20] **405a**
12 LUCRETIUS: *Nature of Things*, BK III [978-1023] **42d-43b**
13 VIRGIL: *Aeneid*, BK VI [594-627] **227a-b**
18 AUGUSTINE: *City of God*, BK XIX, CH 13 **519a-520a**
19 AQUINAS: *Summa Theologica*, PART I, Q 48, AA 5-6 **263a-264d**; Q 64, A 3 **337a-c**; PART I-II, Q 39, A 4, CONTRARY **792a-d**; Q 46, A 6, REP 2 **816d-817d**
20 AQUINAS: *Summa Theologica*, PART I-II, Q 87, A 2, ANS **186c-187b**; A 4, ANS **188b-d**; A 6 **189c-190c**; PART II-II, Q 19, A 1 **465b-d**
21 DANTE: *Divine Comedy*, HELL, III [1-18] **4a-b**; IV [13-45] **5c-d**; V **7a-8b** esp [121-123] **8b**; PURGATORY, VII [1-36] **62c-d**; XXIII [1-75] **88b-89a**
23 HOBBES: *Leviathan*, PART II, **145a-147b**
25 MONTAIGNE: *Essays*, **90d-91b**
29 CERVANTES: *Don Quixote*, PART II, **333b**
35 LOCKE: *Civil Government*, CH II, SECT 7-13 **26c-28b** esp SECT 8 **26d-27a**
42 KANT: *Practical Reason*, **306b-c** / *Intro. Metaphysic of Morals*, **393d** / *Science of Right*, **446b**
46 HEGEL: *Philosophy of Right*, PART I, par 99-100 **37b-38a**; ADDITIONS, 56 **125b-c**

1*b*. The retributive purpose of punishment: the *lex talionis*; retaliation and revenge; the righting of a wrong

OLD TESTAMENT: *Genesis*, 4:15,24; 9:6; 34 / *Exodus*, 21:12-34 esp 21:24-25 / *Leviticus*, 19:18; 24:16-21 / *Numbers*, 35:10-34 / *Deuteronomy*, 19:11-13,21; 32:35,41-43 / *Judges*, 15:1-8; 16:21-30 / *I Samuel*, 24:12—(*D*) *I Kings*, 24:13 / *II Samuel*, 13:22-29; 22:48—(*D*) *II Kings*, 13:22-29; 22:48 / *II Kings*, 9:4-10—(*D*) *IV Kings*, 9:4-10 / *Psalms*, 58; 79:10-12; 94:1; 149—(*D*) *Psalms*, 57; 78:10-12; 93:1; 149 / *Proverbs*, 6:34-35; 20:22; 24:29 / *Isaiah*, 59:17-19—(*D*) *Isaias*, 59:17-19 / *Jeremiah*, 5; 9:1-11; 46:10; 50:15,28; 51:11—(*D*) *Jeremias*, 5; 9:1-11; 46:10; 50:15,28; 51:11 / *Ezekiel*, 25 esp 25:12-15—(*D*) *Ezechiel*, 25 esp 25:12-15 / *Micah*, 5:15—(*D*) *Micheas*, 5:14 / *Nahum*, 1:2-3
APOCRYPHA: *Judith*, 2:1-12; 9:1-4; 16:17—(*D*)

(1. ***The general theory of punishment.*** **1b. *The retributive purpose of punishment: the* lex talionis*; retaliation and revenge; the righting of a wrong.***)

OT, *Judith*, 2:1-6; 9:1-3; 16:20-21 / *Rest of Esther*, 16:18—(*D*) OT, *Esther*, 16:18 / *Wisdom of Solomon*, 1:8; 5:17-23; 11:15-20—(*D*) OT, *Book of Wisdom*, 1:8; 5:18-24; 11:16-21 / *Ecclesiasticus*, 5:1-7; 7:17; 12:6; 18:23-24; 25:14; 27:28; 28:1-8; 35:18-19; 39:28-30; 48:7-8—(*D*) OT, *Ecclesiasticus*, 5:1-9; 7:19; 12:7; 18:23-24; 25:20-21; 27:31; 28:1-11; 35:22-25; 39:33-36; 48:7-8 / *I Maccabees*, 2:67-68; 9:33-42; 13:1-6; 15:2-4—(*D*) OT, *I Machabees*, 2:67-68; 9:33-42; 13:1-6; 15:2-4 / *II Maccabees*, 6:14-15—(*D*) OT, *II Machabees*, 6:14-15

NEW TESTAMENT: *Matthew*, 5:38-48; 7:2 / *Luke*, 6:27-30; 17:3-4; 18:1-8 / *Romans*, 3:5-6; 12:17-21; 13:4 / *II Corinthians*, 10:6 / *I Thessalonians*, 5:15 / *II Thessalonians*, 1:7-9 / *Hebrews*, 10:29-30 / *I Peter*, 3:8-9 / *Jude*, 7 / *Revelation*, 18:1-19:2—(*D*) *Apocalypse*, 18:1-19:2

4 HOMER: *Iliad*, BK IX [620-643] 63b-c; BK XVIII [497-508] 135b / *Odyssey*, BK I [32-43] 183b-c; BK III [195-209] 195a-b; BK XXI-XXII 301a-311a,c

5 AESCHYLUS: *Agamemnon* [1577-1611] 68d-69a / *Choephoroe* 70a-80d esp [306-314] 73a-b, [400-404] 74a / *Eumenides* 81a-91d esp [490-565] 86b-87a

5 SOPHOCLES: *Oedipus at Colonus* [229-233] 116b / *Ajax* 143a-155a,c esp [430-456] 146d-147a / *Electra* 156a-169a,c esp [516-633] 160a-161a, [1384-1510] 167d-169a,c

5 EURIPIDES: *Medea* 212a-224a,c esp [764-810] 218d-219a / *Electra* 327a-339a,c esp [112-167] 328a-c, [880-1180] 335a-337d / *Hecuba* 353a-364a,c esp [1109-1295] 362b-364a,c / *Heracles Mad* [726-814] 371b-d / *Orestes* 394a-410d esp [478-606] 398d-400a, [1098-1176] 405a-d

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6 THUCYDIDES: *Peloponnesian War*, BK II, 405a-b; BK III, 424d-429a; 429c-434c; BK VII, 556d-557a

7 PLATO: *Protagoras*, 45c-d / *Gorgias*, 293d-294c / *Republic*, BK X, 437c-438c / *Laws*, BK X, 769d-770c

9 ARISTOTLE: *Ethics*, BK III, CH 5 [1113^b21-1114^a2] 359d-360a; BK V, CH 4 379b-380b esp [1132^a7-19] 379c-d; CH 5 [1132^b21-1133^a3] 380b-c; CH 11 [1138^a7-10] 386b; [1138^a20-23] 386c / *Rhetoric*, BK I, CH 10 [1369^b12-14] 612d

12 LUCRETIUS: *Nature of Things*, BK III [978-1023] 42d-43b

14 PLUTARCH: *Theseus*, 4a-b / *Solon*, 70d / *Dion*, 798d

15 TACITUS: *Histories*, BK IV, 267d

18 AUGUSTINE: *Confessions*, BK III, par 16 17c-d / *City of God*, BK XII, CH 3, 344b; BK XIV, CH 15 388d-390a; BK XIX, CH 13 519a-520a; BK XXI, CH 11-12 570b-571c

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21 DANTE: *Divine Comedy*, HELL, VII [100-130] 10c-d; XX [1-39] 28b-d; XXVIII 41b-43a esp [130-142] 42d-43a; PURGATORY, X [73-93] 68a-b; XIX [70-145] 82b-83a; XXIII [1-75] 88b-89a

22 CHAUCER: *Reeve's Tale* 225a-232a esp [4311-4322] 231b-232a / *Tale of Melibeus*, par 30-49 413b-422b

23 HOBBES: *Leviathan*, PART I, 94a; PART II, 147b-c

25 MONTAIGNE: *Essays*, 334d-335a

26 SHAKESPEARE: *3rd Henry VI*, ACT I, SC IV [27-180] 74d-76b; ACT II, SC II [1-55] 78d-79b / *Richard III*, ACT I, SC II [49-109] 108a-d / *Titus Andronicus* 170a-198d / *Richard II*, ACT I, SC II 322d-323c / *Merchant of Venice*, ACT III, SC I [46-76] 419a-b; ACT IV, SC I [1-400] 425c-429d

27 SHAKESPEARE: *Hamlet*, ACT I, SC V [74-88] 37d; ACT III, SC III [73-98] 54a-b; ACT IV, SC V [115-220] 60d-62a / *Othello*, ACT I, SC I [6-65] 205a-206a; ACT II, SC I [300-311] 216c; ACT III, SC III [442-479] 226d-227b; ACT V, SC II 238d-243a,c / *Timon of Athens*, ACT V, SC IV 419d-420d

29 CERVANTES: *Don Quixote*, PART I, 68b-73a

31 SPINOZA: *Ethics*, PART IV, PROP 51, SCHOL 439d; PROP 63, SCHOL 444a

35 LOCKE: *Civil Government*, CH II, SECT 7-13 26c-28b passim

36 SWIFT: *Gulliver*, PART I, 10b-11a; 28a-b

37 FIELDING: *Tom Jones*, 20b-21a

38 MONTESQUIEU: *Spirit of Laws*, BK VI, 43a-b; BK XII, 86c-d

38 ROUSSEAU: *Inequality*, 351b-d

40 GIBBON: *Decline and Fall*, 617b-c

41 GIBBON: *Decline and Fall*, 91a-93a; 224c-225a; 404a

42 KANT: *Science of Right*, 446a-449c esp 446b-447c

43 MILL: *Utilitarianism*, 467d-468c; 469c-470c; 472c-d; 474b-d

46 HEGEL: *Philosophy of Right*, PART I, par 93 36a-b; par 99-100 37b-38a; par 103 39b; PART III, par 220 73a-b; par 319, 106a; ADDITIONS, 63-65 126a-c; 74 127d-128a / *Philosophy of History*, PART I, 214d-216a

48 MELVILLE: *Moby Dick* esp 118a-122b

51 TOLSTOY: *War and Peace*, BK II, 95c; BK IX, 357d-358b; BK XI, 505a-511b
52 DOSTOEVSKY: *Brothers Karamazov*, BK XII, 398c-399c
53 JAMES: *Psychology*, 225a
54 FREUD: *Interpretation of Dreams*, 247d-248a

1c. Punishment for the sake of reforming the wrongdoer

OLD TESTAMENT: *Leviticus*, 26:14-46—(*D*) *Leviticus*, 26:14-45 / *II Samuel*, 7:14-15—(*D*) *II Kings*, 7:14-15 / *Job*, 5:17-18 / *Psalms*, 39:10-11; 141:5—(*D*) *Psalms*, 38:11-12; 140:5 / *Proverbs*, 3:11-12; 13:24; 15:10; 17:10; 19:18,25; 20:30; 22:15; 23:13-14; 29:15,17 / *Isaiah*, 4:4; 27:7-9—(*D*) *Isaias*, 4:4; 27:7-9 / *Jeremiah*, 2:30; 5:3—(*D*) *Jeremias*, 2:30; 5:3 / *Ezekiel*, 14:9-11—(*D*) *Ezechiel*, 14:9-11 / *Zephaniah*, 3:1-13—(*D*) *Sophonias*, 3:1-13 / *Malachi*, 3—(*D*) *Malachias*, 3
APOCRYPHA: *Judith*, 8:25-27—(*D*) OT, *Judith*, 8:21-27 / *Wisdom of Solomon*, 3:1-6; 11:5-16; 12 esp 12:25-26; 16:2-12,24-28—(*D*) OT, *Book of Wisdom*, 3:1-6; 11:5-17; 12 esp 12:25-26; 16:2-12,24-28 / *Ecclesiasticus*, 7:23; 22:6; 30:1-2,12-13—(*D*) OT, *Ecclesiasticus*, 7:25; 22:6; 30:1-2,12-13 / *Baruch*, 2:21-33; 3:7; 4 esp 4:29—(*D*) OT, *Baruch*, 2:21-33; 3:7; 4 esp 4:29 / *II Maccabees*, 6:12-17; 7:33; 10:4—(*D*) OT, *II Machabees*, 6:12-17; 7:33; 10:4
NEW TESTAMENT: *I Corinthians*, 11:32 / *Hebrews*, 12:5-11 / *Revelation*, 3:19—(*D*) *Apocalypse*, 3:19
5 SOPHOCLES: *Antigone* [1348-1353] 142d
5 EURIPIDES: *Orestes* [491-525] 399a-b
5 ARISTOPHANES: *Clouds* [1303-1464] 504b-506c
7 PLATO: *Protagoras*, 45b-d / *Gorgias*, 267c-270c; 293d-294c / *Republic*, BK II, 321d-322d; BK IX, 426d-427a / *Critias*, 485b-d / *Laws*, BK V, 688d-689a; 690d-691b; BK IX, 743c-744a; 747d; BK X, 769d-770c; BK XI, 782a-b; BK XII, 785c-786a
9 ARISTOTLE: *Ethics*, BK II, CH 3 [1104^{b}14-18] 350a; BK X, CH 9 [1180^{a}5-13] 434d
10 HIPPOCRATES: *The Law*, par 1 144a-b
18 AUGUSTINE: *Confessions*, BK I, par 14-16 4c-5b; par 19-23 5d-7a / *City of God*, BK XIX, CH 16 521d-522a; BK XXI, CH 13 571c-572a / *Christian Doctrine*, BK I, CH 16 628c-d
19 AQUINAS: *Summa Theologica*, PART I, Q 21, A 4, REP 3 126c-127c
20 AQUINAS: *Summa Theologica*, PART I-II, Q 79, A 4 158d-159c; Q 87, A 2, REP 1 186c-187b; AA 6-8 189c-192d; Q 105, A 2, REP 9 309d-316a; PART II-II, Q 33 550a-558d; PART III SUPPL, Q 99, A 1, REP 3 1078c-1081a
23 HOBBES: *Leviathan*, PART I, 94a; PART II, 141b; 147a-b; 157d-158a
35 LOCKE: *Toleration*, 1c-2c passim
37 FIELDING: *Tom Jones*, 267b-268b; 380c-381a
38 MONTESQUIEU: *Spirit of Laws*, BK VI, 39d-40b
42 KANT: *Practical Reason*, 306b-c / *Science of Right*, 446b-447c
43 MILL: *Liberty*, 271c-272d; 302d-312a passim / *Utilitarianism*, 471d-472d
44 BOSWELL: *Johnson*, 7d-8a; 199c-200d
46 HEGEL: *Philosophy of Right*, PART I, par 99 37b-d / *Philosophy of History*, PART I, 214d-216a
52 DOSTOEVSKY: *Brothers Karamazov*, BK II, 30b-32a; BK XII, 395a-401d

1d. The preventive use of punishment: the deterrence of wrongdoing

OLD TESTAMENT: *Deuteronomy*, 13:10-11; 19:19-20 / *Proverbs*, 19:25; 21:11
APOCRYPHA: *Ecclesiasticus*, 23:22-27—(*D*) OT, *Ecclesiasticus*, 23:32-37
NEW TESTAMENT: *I Corinthians*, 10:5-11 / *II Peter*, 2:6 / *Jude*, 7
5 AESCHYLUS: *Persians* [739-842] 23a-24b / *Agamemnon* [681-781] 59b-60b / *Eumenides* 81a-91d esp [490-565] 86b-87a
5 SOPHOCLES: *Oedipus the King* [882-895] 107b / *Ajax* [118-133] 144c / *Electra* [121-250] 157b-158a; [1501-1510] 169a,c
5 EURIPIDES: *Medea* [271-356] 214b-215b / *Orestes* [478-606] 398d-400a; [917-945] 403b-c
6 HERODOTUS: *History*, BK II, 87a-b; BK V, 164c
6 THUCYDIDES: *Peloponnesian War*, BK II, 400d-401a; BK III, 426b-d; 427d-428a
7 PLATO: *Protagoras*, 45b-d / *Gorgias*, 293d-294c / *Laws*, BK V, 690d-691b; BK IX, 743c-744a; 747d; 757a; BK X, 769d-770c; BK XI, 782a-b
9 ARISTOTLE: *Ethics*, BK III, CH 5 [1113^{b}21-1114^{a}2] 359d-360a; BK X, CH 9 [1179^{a}33-1180^{a}32] 434a-435a / *Rhetoric*, BK I, CH 14 [1375^{a}1-20] 619b-c
10 HIPPOCRATES: *The Law*, par 1 144a-b
15 TACITUS: *Annals*, BK III, 49d-50a; 57a; 61c-d; BK XIV, 151d-152b / *Histories*, BK I, 200d
18 AUGUSTINE: *City of God*, BK XIX, CH 16 521d-522a
20 AQUINAS: *Summa Theologica*, PART I-II, Q 87, A 2, REP 1 186c-187b; A 3, REP 2 187b-188b
23 HOBBES: *Leviathan*, PART II, 140a; 141b; 143b-d; 145c-d; 157d-158a
25 MONTAIGNE: *Essays*, 446a-b
27 SHAKESPEARE: *Measure for Measure*, ACT I, SC III 177b-d; ACT II, SC I-II 178d-184a; ACT V, SC I [318-324] 202b
31 SPINOZA: *Ethics*, PART IV, PROP 63, SCHOL 444a
35 LOCKE: *Toleration*, 3a / *Civil Government*, CH II, SECT 7-13 26c-28b passim; CH XIV, SECT 159 62b-c; CH XV, SECT 171 65a-b / *Human Understanding*, BK I, CH II, SECT 13 107d-108c
35 HUME: *Human Understanding*, SECT VIII, DIV 76, 485a
37 FIELDING: *Tom Jones*, 150b

(1. *The general theory of punishment.* 1*d. The preventive use of punishment: the deterrence of wrongdoing.*)

38 MONTESQUIEU: *Spirit of Laws*, BK VI, 37d-38a; 38d-40a; BK XIX, 139c
38 ROUSSEAU: *Political Economy*, 371a-c; 372c / *Social Contract*, BK II, 399a
39 SMITH: *Wealth of Nations*, BK V, 309a-c
40 GIBBON: *Decline and Fall*, 175c-d; 199b
41 GIBBON: *Decline and Fall*, 83b-c; 92b-c
42 KANT: *Science of Right*, 446b; 448a-b
43 MILL: *Liberty*, 271c-272d; 313a-316b / *Representative Government*, 334d-335a / *Utilitarianism*, 471d-472d
44 BOSWELL: *Johnson*, 204b; 301c-d; 335c; 344a-b; 363a-b; 482a-d
46 HEGEL: *Philosophy of Right*, PART I, par 99-100 37b-38a; PART III, par 232 75c-d; par 319, 106a; ADDITIONS, 138 139a-b / *Philosophy of History*, PART I, 214d-216a
49 DARWIN: *Descent of Man*, 314b
52 DOSTOEVSKY: *Brothers Karamazov*, BK XII, 398d-401d
54 FREUD: *Civilization and Its Discontents*, 787c

2. Personal responsibility as a condition of just punishment: the problem of collective responsibility

OLD TESTAMENT: *Genesis*, 3:16-19 / *Exodus*, 20:5-6; 34:7 / *Numbers*, 14:18 / *Deuteronomy*, 5:9-10; 24:16 / *II Samuel*, 21:1-9—(*D*) *II Kings*, 21:1-9 / *II Kings*, 14:5-6—(*D*) *IV Kings*, 14:5-6 / *II Chronicles*, 25:3-4—(*D*) *II Paralipomenon*, 25:3-4 / *Jeremiah*, 31:29-30—(*D*) *Jeremias*, 31:29-30 / *Ezekiel*, 18—(*D*) *Ezechiel*, 18
APOCRYPHA: *Wisdom of Solomon*, 3:11-13—(*D*) OT, *Book of Wisdom*, 3:11-13 / *Ecclesiasticus*, 41:5—(*D*) OT, *Ecclesiasticus*, 41:8 / *Baruch*, 3:7-8—(*D*) OT, *Baruch*, 3:7-8
NEW TESTAMENT: *Romans*, 5:12-19 / *I Corinthians*, 51:21 22
5 AESCHYLUS: *Seven Against Thebes* 27a-39a,c esp [597 614] 33c-d, [653-956] 34b-37d / *Agamemnon* 52a-69d / *Choephoroe* 70a-80d / *Eumenides* 81a-91d
5 SOPHOCLES: *Oedipus the King* 99a-113a,c / *Oedipus at Colonus* 114a-130a,c / *Antigone* 131a-142d esp [582-626] 136b-c / *Electra* 156a-169a,c
5 EURIPIDES: *Suppliants* [214-228] 260b / *Phoenician Maidens* 378a-393d / *Orestes* 394a-410d
6 HERODOTUS: *History*, BK VII, 223c-d; 238d-239a; BK IX, 306c-307a
7 PLATO: *Protagoras*, 45b-d / *Laws*, BK IX, 746a-751d esp 746a-748c; BK XII, 785c-786a
9 ARISTOTLE: *Ethics*, BK III, CH 5 359c-361a
12 EPICTETUS: *Discourses*, BK I, CH 18 124a-125a
13 VIRGIL: *Georgics*, I [501-502] 51a
14 PLUTARCH: *Camillus*, 107b-d
15 TACITUS: *Annals*, BK XIV, 152b
18 AUGUSTINE: *City of God*, BK XIII, CH 13-14 366a-c; BK XIV, CH I 376b,d-377a; CH 20, 392b; BK XXI, CH 12 571a-c
20 AQUINAS: *Summa Theologica*, PART I-II, Q 81 162d-167d
21 DANTE: *Divine Comedy*, PURGATORY, XVI [52-84] 77b-d; XVIII [19-75] 80a-c
22 CHAUCER: *Parson's Tale*, par 18 506b-507b
23 HOBBES: *Leviathan*, PART II, 118a-b; 147c
26 SHAKESPEARE: *3rd Henry VI*, ACT II, SC II [32-50] 79a-b / *Henry V*, ACT IV, SC I [136-202] 553a-c
32 MILTON: *Paradise Lost*, BK III [80-134] 137a-138a; [167-216] 139a-140a; [274-343] 141b-143a; BK X [615-640] 287b-288b
33 PASCAL: *Pensées*, 434, 249b
35 LOCKE: *Human Understanding*, BK II, CH XXVII, SECT 18-22 225b-226b
35 HUME: *Human Understanding*, SECT VIII, DIV 76 485a-c
40 GIBBON: *Decline and Fall*, 451b-c
41 GIBBON: *Decline and Fall*, 95d
42 KANT: *Pure Reason*, 169c-170a / *Intro. Metaphysic of Morals*, 391d-392a / *Science of Right*, 447b-c
43 CONSTITUTION OF THE U.S.: ARTICLE III, SECT 3 [507-511] 16a
43 FEDERALIST: NUMBER 43, 140c-d; NUMBER 66, 202c-203a
43 MILL: *Utilitarianism*, 471b-472a
46 HEGEL: *Philosophy of Right*, PART II, par 115-118 42b-43b; par 132 46b-47a; ADDITIONS, 74 127d-128a / *Philosophy of History*, PART I, 215b-216a
51 TOLSTOY: *War and Peace*, BK VII, 275a; BK XIV, 606b-607a; EPILOGUE II, 688a-694d
52 DOSTOEVSKY: *Brothers Karamazov*, BK IV, 83c-84a; BK VI, 168c-169c
53 JAMES: *Psychology*, 225a

2*a*. Free will in relation to responsibility and punishment: voluntariness in relation to guilt or fault; the accidental, the negligent, and the intentional

NEW TESTAMENT: *I Timothy*, 1:12-13
5 AESCHYLUS: *Agamemnon* [1372-1616] 66d-69a / *Choephoroe* [269-305] 72d-73a; [1021-1064] 80a-c / *Eumenides* [436-469] 86a-b; [574-777] 87b-89a
5 SOPHOCLES: *Oedipus the King* [1297-1415] 111b-112b / *Oedipus at Colonus* [939-999] 123a-c / *Trachiniae* [672-730] 176a-c
5 EURIPIDES: *Heracles Mad* [1255-1357] 376a-d
6 HERODOTUS: *History*, BK I, 8b-10a
6 THUCYDIDES: *Peloponnesian War*, BK III, 426b-d; 430c; 432b-c
7 PLATO: *Protagoras*, 45b-d / *Apology*, 204b-c / *Timaeus*, 474b-d / *Sophist*, 557b-558a / *Laws*, BK V, 688d-689a; BK IX, 746a-751d; 754b-756a

9 ARISTOTLE: *Ethics*, BK III, CH 1 355b,d-357b; CH 5 359c-361a esp [1113b21-1114a2] 359d-360a; BK V, CH 5 [1132b21-31] 380b-c; CH 8 [1135a15]-CH 9 [1136b14] 383a-384d; CH 11 386b-387a,c; BK VII, CH 6 399d-400c; CH 8 401c-402a passim
12 EPICTETUS: *Discourses*, BK I, CH 18 124a-125a
12 AURELIUS: *Meditations*, BK II, SECT 10 257d-258a; BK IV, SECT 3, 263b; BK XII, SECT 12 308b-c
18 AUGUSTINE: *City of God*, BK XII, CH 3, 344b; BK XIV, CH 11-15 385d-390a passim
19 AQUINAS: *Summa Theologica*, PART I, Q 64, A 2 335d-336d; PART I-II, Q 21, A 2 718a-d
20 AQUINAS: *Summa Theologica*, PART I-II, Q 73, A 5 123a-d; Q 74, AA 1-2 129a-130a; Q 75 137c-140d; Q 76, AA 3-4 142d-144d; Q 78 152b-156a; QQ 80-81 159d-167d; Q 83, A 3 173a-c; Q 105, A 2, REP 9 309d-316a
21 DANTE: *Divine Comedy*, HELL, XI 15a-16b; XXVII [55-136] 40a-41b; PURGATORY, XVI [52-84] 77b-d; XVIII [19-75] 80a-c; XXI [34-75] 85b-d; PARADISE, IV [64-114] 111b-d
23 HOBBES: *Leviathan*, PART II, 139d-140a; 143b; 157d-158a
32 MILTON: *Paradise Lost*, BK III [80-134] 137a-138a; BK V [224-245] 180a-b / *Samson Agonistes* [373-419] 347b-348b
35 LOCKE: *Human Understanding*, BK II, CH XXI, SECT 57 193b-c; CH XXVII, SECT 18-22 225b-226b; SECT 26 227c-d; BK IV, CH XVII, SECT 4, 373c-374a
35 HUME: *Human Understanding*, SECT VIII, DIV 76 485a-c
37 FIELDING: *Tom Jones*, 399c-d
42 KANT: *Pure Reason*, 169b [fn 1]; 169c-170a / *Intro. Metaphysic of Morals*, 391c-392a; 393d
43 MILL: *Utilitarianism*, 471d-472a; 474d
46 HEGEL: *Philosophy of Right*, PART I, par 96 36c-37a; par 100 37d-38a; PART II, par 115-118 42b-43b; par 132 46b-47a; ADDITIONS, 56 125b-c; 62 126a; 74-75 127d-128a / *Philosophy of History*, INTRO, 165c-166a; 168d; PART I, 207b-c; 215b-216a
51 TOLSTOY: *War and Peace*, BK VII, 275a; BK IX, 357d-358b; BK XII, 548d-549d; EPILOGUE II, 686c-687a; 688a-694d

2b. Sanity, maturity, and moral competence in relation to responsibility

7 PLATO: *Protagoras*, 45b-d
18 AUGUSTINE: *City of God*, BK XXI, CH 16 573b-574a
21 DANTE: *Divine Comedy*, HELL, XXXIII [1-90] 49c-50c
23 HOBBES: *Leviathan*, PART II, 132b-c; 142a-b
27 SHAKESPEARE: *Hamlet*, ACT V, SC II [236-263] 70b-c
35 LOCKE: *Civil Government*, CH VI, SECT 54-63 36c-38c passim
42 KANT: *Pure Reason*, 169c-170a
43 MILL: *Liberty*, 302d-312a passim
46 HEGEL: *Philosophy of Right*, PART II, par 132 46b-47a
51 TOLSTOY: *War and Peace*, EPILOGUE II, 690c-d
52 DOSTOEVSKY: *Brothers Karamazov*, BK XII 348b,d-401d passim, esp 395a-398d
54 FREUD: *Interpretation of Dreams*, 241b-c

3. Punishment in relation to virtue and vice

3a. Rewards and punishments as factors in the formation of moral character

OLD TESTAMENT: *Proverbs*, 4:1-4; 13:24; 22:15; 23:13-14; 29:15
APOCRYPHA: *Ecclesiasticus*, 30:1-13—(*D*) OT, *Ecclesiasticus*, 30:1-13
NEW TESTAMENT: *Hebrews*, 12:5-11
5 AESCHYLUS: *Eumenides* [681-710] 88b-c
5 SOPHOCLES: *Antigone* [1348-1353] 142d
5 ARISTOPHANES: *Clouds* [1303-1464] 504b-506c
7 PLATO: *Protagoras*, 45b-d; 46b / *Gorgias*, 283b-285a / *Republic*, BK II, 313b-d; BK IX, 426d-427a / *Sophist*, 556d-557a / *Laws*, BK I, 643d; BK II, 653a-b; BK X, 760c-761a
9 ARISTOTLE: *Ethics*, BK II, CH 3 [1104b14-18] 350a; BK III, CH 5 [1113b21-1114a2] 359d-360a; BK X, CH 1 [1172a18-23] 426a; CH 9 [1179a33-1180a32] 434a-435a
14 PLUTARCH: *Lycurgus*, 41a-42b
18 AUGUSTINE: *Confessions*, BK I, par 14-16 4c-5b; par 19-23 5d-7a / *City of God*, BK XIX, CH 15-16 521a-522a
19 AQUINAS: *Summa Theologica*, PART I, Q 48, A 6, CONTRARY and REP 1 264a-d
20 AQUINAS: *Summa Theologica*, PART I-II, Q 87, A 2, REP 1 186c-187b; Q 95, A 1, ANS 226c-227c
23 HOBBES: *Leviathan*, PART II, 141a-b
25 MONTAIGNE: *Essays*, 16c-d; 66c; 73c-74a; 185c-d
30 BACON: *Advancement of Learning*, 69d-70a
31 SPINOZA: *Ethics*, PART III, DEF 27, EXPL 419a-b
35 LOCKE: *Human Understanding*, BK I, CH II, SECT 5-6 105a-c passim; SECT 12-13 107b-108c
35 HUME: *Human Understanding*, SECT VIII, DIV 76, 485a
36 SWIFT: *Gulliver*, PART I, 28a-b
37 FIELDING: *Tom Jones*, 41a-c; 380c-381a
38 MONTESQUIEU: *Spirit of Laws*, BK VI, 37d-38b; 39d-40d passim; BK XII, 86b; BK XIX, 139c
42 KANT: *Fund. Prin. Metaphysic of Morals*, 270d-271a / *Practical Reason*, 306b-c / *Intro. Metaphysic of Morals*, 383a-b
43 MILL: *Liberty*, 302d-312a passim, esp 306c-307a / *Utilitarianism*, 458a-b; 464b-c
44 BOSWELL: *Johnson*, 191b-c; 199c-200d; 363a-b
52 DOSTOEVSKY: *Brothers Karamazov*, BK II, 30b-32a
54 FREUD: *War and Death*, 758c-759b / *Civilization and Its Discontents*, 792b-795b / *New Introductory Lectures*, 876c-d

(3. *Punishment in relation to virtue and vice.*)

3b. Vice its own punishment

APOCRYPHA: *Ecclesiasticus*, 14:5-10—(*D*) OT, *Ecclesiasticus*, 14:5-10
7 PLATO: *Gorgias*, 262a-267c / *Republic*, BK IX, 417b-418d; BK X, 436c-441a,c / *Theaetetus*, 530d / *Laws*, BK II, 656d-658b; BK V, 689d-690c
12 LUCRETIUS: *Nature of Things*, BK III [1014-1023] 43a-b
12 EPICTETUS: *Discourses*, BK I, CH 28, 134b-c; BK II, CH 10, 149c-d; BK III, CH 24, 206b-208a; BK IV, CH 5 228a-230b
12 AURELIUS: *Meditations*, BK II, SECT 16 259a; BK VIII, SECT 55 290b; BK IX, SECT 4 292a; SECT 42 295c-296a,c
18 AUGUSTINE: *Confessions*, BK I, par 19 5d; BK III, par 16 17c-d
20 AQUINAS: *Summa Theologica*, PART I-II, QQ 85-86 178b-185c; Q 87, A 1, ANS and REP 3 185d-186c; Q 89, A 1 199a-c
23 HOBBES: *Leviathan*, PART II, 163d-164a
25 MONTAIGNE: *Essays*, 174d-176c; 389c-d
26 SHAKESPEARE: *Richard III*, ACT I, SC IV [1-75] 114d-115b
35 LOCKE: *Human Understanding*, BK I, CH II, SECT 5 6 105a-c passim
38 MONTESQUIEU: *Spirit of Laws*, BK VI, 39b
42 KANT: *Pref. Metaphysical Elements of Ethics*, 374a-c
52 DOSTOEVSKY: *Brothers Karamazov*, BK XII, 381c-d; 398a-b
53 JAMES: *Psychology*, 83a-b
54 FREUD: *Civilization and Its Discontents*, 793a-794a

3c. Guilt, repentance, and the moral need for punishment

OLD TESTAMENT: *Leviticus*, 26:40-43 / *I Kings*, 8:46-51—(*D*) *III Kings*, 8:46-51 / *Psalms*, 6; 32; 38; 51; 102; 130; 143—(*D*) *Psalms*, 6; 31; 37; 50; 101; 129; 142
APOCRYPHA: *Wisdom of Solomon*, 12:10—(*D*) OT, *Book of Wisdom*, 12:10 / *Ecclesiasticus*, 20:3; 21:6—(*D*) OT, *Ecclesiasticus*, 20:4; 21:7
NEW TESTAMENT: *Luke*, 16:27-31 / *Revelation*, 2:5,16-22—(*D*) *Apocalypse*, 2:5,16-22
6 HERODOTUS: *History*, BK I, 9c-10a
7 PLATO: *Gorgias*, 267c-270c; 293d-294c
15 TACITUS: *Annals*, BK I, 14d / *Histories*, BK III, 255b-c
18 AUGUSTINE: *City of God*, BK XII, CH 3 343d-344b; BK XIX, CH 13 519a-520a
20 AQUINAS: *Summa Theologica*, PART I-II, Q 87, A 1, ANS and REP 3 185d-186c; PART II-II, Q 33 550a-558d
25 MONTAIGNE: *Essays*, 388c-395b passim
27 SHAKESPEARE: *Measure for Measure*, ACT II, SC III [19-42] 184b-c / *Cymbeline*, ACT V, SC IV [1-29] 481a-b
32 MILTON: *Samson Agonistes* 339a-378a esp [1-46] 339b-340b, [356-380] 347b-348a, [667-709] 354a-355a, [1156-1177] 364b-365a
38 ROUSSEAU: *Political Economy*, 372c
40 GIBBON: *Decline and Fall*, 54c-55a
43 MILL: *Utilitarianism*, 458b-459b
46 HEGEL: *Philosophy of Right*, PART I, par 100 37d-38a; PART III, par 220 73a-b
51 TOLSTOY: *War and Peace*, BK V, 221d; BK IX, 373b-374d
52 DOSTOEVSKY: *Brothers Karamazov*, BK II, 30c-32a; BK III, 50c-54b; BK XII, 369a-373c; 380c-386a; EPILOGUE, 404c-408a passim
54 FREUD: *Civilization and Its Discontents*, 792b-793d esp 792d-793a, 793d; 795d-796a; 797c-798c / *New Introductory Lectures*, 831b

4. Crime and punishment: punishment as a political instrument

6 HERODOTUS: *History*, BK VI, 191a-b
6 THUCYDIDES: *Peloponnesian War*, BK III, 424d-428d
7 PLATO: *Laws*, BK IX 743a-757d
9 ARISTOTLE: *Ethics*, BK V, CH 4 [1131^{b}25]-CH 5 [1133^{a}3] 379b-380c; CH 11 [1138^{a}4-13] 386b-c / *Politics*, BK IV, CH 16 [1300^{b}19-38] 501c-d; BK VI, CH 8 [1321^{b}40-1322^{a}28] 525d-526a; BK VII, CH 13 [1332^{a}12-16] 536d / *Athenian Constitution*, CH 52-53 576b-577b; CH 56, par 6-CH 59, par 7 579a-580c / *Rhetoric*, BK I, CH 12 615c-617c; CH 14 619a-d
12 LUCRETIUS: *Nature of Things*, BK V [1136-1160] 76a-b
14 PLUTARCH: *Cicero*, 710c-712d
15 TACITUS: *Annals*, BK XIV, 151d-152b / *Histories*, BK I, 200c-d
18 AUGUSTINE: *City of God*, BK XIX, CH 6 514b-515a
20 AQUINAS: *Summa Theologica*, PART I-II, Q 87, A 1, ANS 185d-186c; PART II-II, Q 33, A 1, ANS and REP 1 550b-551a; A 3, ANS 552d-553b; A 4, ANS 553b-554b; A 6, ANS and REP 1 555a-d
23 MACHIAVELLI: *Prince*, CH VII, 11b-c; CH VIII, 14a-c
23 HOBBES: *Leviathan*, PART II, 138d-148b; CONCLUSION, 281a-d
26 SHAKESPEARE: *2nd Henry VI*, ACT III, SC I [223-281] 49c-50a
29 CERVANTES: *Don Quixote*, PART I, 68b-73a; 177a-b
35 LOCKE: *Toleration*, 3c-4a; 5b-6a; 14a-15a / *Civil Government*, CH VII, SECT 87-88 44a-c; CH XV, SECT 171 65a-b
36 SWIFT: *Gulliver*, PART I, 28a-b; 29b
38 MONTESQUIEU: *Spirit of Laws*, BK VI, 37d-43d; BK XII, 85a-92b
38 ROUSSEAU: *Inequality*, 351b-d / *Political Economy*, 371a-c / *Social Contract*, BK II, 398b-399a
39 SMITH: *Wealth of Nations*, BK V, 309a-c
40 GIBBON: *Decline and Fall*, 197b; 198d-200a; 215b-216a; 225d-229b; 387d-388d; 437b-d

41 GIBBON: *Decline and Fall*, 91a-94c; 187b
42 KANT: *Science of Right*, 446a-448b
43 CONSTITUTION OF THE U.S.: ARTICLE I, SECT 8 [210–212] [220–225] 13b; ARTICLE III, SECT 3 [507–511] 16a
43 FEDERALIST: NUMBER 15, 65a-b
43 MILL: *Liberty*, 304d-305b; 313a-b
46 HEGEL: *Philosophy of Right*, PART I, par 90–103 35d-39b esp par 96–100 36c-38a; PART III, par 218 72c-d; ADDITIONS, 138 139a-b
51 TOLSTOY: *War and Peace*, BK V, 223a-232a passim; BK XI, 505a-511b; BK XII, 547a-551c
52 DOSTOEVSKY: *Brothers Karamazov*, BK II, 30b-32a

4a. Punishment for lawbreaking as a necessary sanction of law

5 AESCHYLUS: *Eumenides* [490–562] 86b-87a; [681–710] 88b-c
5 SOPHOCLES: *Antigone* [640–680] 136d-137a
5 EURIPIDES: *Orestes* [478–606] 398d-400a
6 HERODOTUS: *History*, BK V, 164c
6 THUCYDIDES: *Peloponnesian War*, BK III, 427d-428a
7 PLATO: *Statesman*, 601c-602d / *Laws*, BK IX, 747d; 757a; BK X, 769d-770c; BK XII, 792c-793a
9 ARISTOTLE: *Ethics*, BK V, CH 4 379b-380b; CH II [1138^{a}4–13] 386b-c; BK X, CH 9 [1179^{a}33–1180^{a}32] 434a-435a / *Politics*, BK VI, CH 8 [1321^{b}40–1322^{a}28] 525d-526a; BK VII, CH 13 [1332^{a}10–16] 536d
18 AUGUSTINE: *City of God*, BK XIX, CH 6 514b-515a; BK XXI, CH 11, 570c-d
20 AQUINAS: *Summa Theologica*, PART I-II, Q 92, A 2, ANS and REP 3-4 214d-215a,c; Q 96, A 5 233d-234d; Q 105, A 2, ANS 309d-316a
22 CHAUCER: *Tale of Melibeus*, par 40 418b-419a
23 HOBBES: *Leviathan*, PART II, 131a-b; 145a-148b; 157d-158a
26 SHAKESPEARE: *2nd Henry VI*, ACT II, SC III [1–15] 44c-d / *Romeo and Juliet*, ACT I, SC I [71–110] 286b-d / *Henry V*, ACT II, SC II 539a-541a
27 SHAKESPEARE: *Measure for Measure*, ACT V, SC I [318–324] 202b
29 CERVANTES: *Don Quixote*, PART I, 68b-73a
31 SPINOZA: *Ethics*, PART IV, PROP 37, SCHOL 2, 436a; PROP 51, SCHOL 439d; PROP 63, SCHOL 444a
33 PASCAL: *Provincial Letters*, 108b-109a
35 LOCKE: *Toleration*, 3a / *Civil Government*, CH I, SECT 3 25d; CH II, SECT 7–13 26c-28b passim; CH VII, SECT 87–88 44a-c; CH IX 53c-54d passim / *Human Understanding*, BK I, CH II, SECT 12–13 107b-108c; BK II, CH XXVIII, SECT 5–12 229c-231c passim, esp SECT 6 229d
35 HUME: *Human Understanding*, SECT VIII, DIV 76, 485a
38 ROUSSEAU: *Social Contract*, BK II, 398b-399a; 406c
40 GIBBON: *Decline and Fall*, 617b-d
42 KANT: *Practical Reason*, 306b-c / *Science of Right*, 446a-d
43 FEDERALIST: NUMBER 15, 65a-b; NUMBER 21, 78b-d
43 MILL: *Liberty*, 302d-303a / *Representative Government*, 329d-330a / *Utilitarianism*, 467d-468c; 471d-472d
46 HEGEL: *Philosophy of Right*, PART III, par 220 73a-b; par 233 75d; ADDITIONS, 60 125d; 138 139a-b; 173 146d
52 DOSTOEVSKY: *Brothers Karamazov*, BK XII 348b,d-401d passim, esp 395a-401d

4b. The forms of punishment available to the state

5 EURIPIDES: *Orestes* [491–601] 399a-400a
7 PLATO: *Apology*, 209d-210a / *Gorgias*, 264b / *Laws*, BK V, 690d-691b; BK IX 743a-757d passim; BK XI 771b-784b passim; BK XII, 784d-786b
9 ARISTOTLE: *Ethics*, BK V, CH 5 [1132^{b}21–1133^{a}4] 380b-c; CH II [1138^{a}4–13] 386b-c; BK X, CH 9 [1180^{a}5–13] 434d / *Athenian Constitution*, CH 52–53 576b-577b passim; CH 56–60 578c-580d passim; CH 67, par 5 583b
15 TACITUS: *Annals*, BK XIV, 152d-153a
18 AUGUSTINE: *City of God*, BK XXI, CH 11, 570c-d
20 AQUINAS: *Summa Theologica*, PART I-II, Q 105, A 2, REP 9-12 309d-316a; PART III SUPPL, Q 99, A 1, ANS 1078c-1081a
23 HOBBES: *Leviathan*, PART II, 146b-147b
25 MONTAIGNE: *Essays*, 23b-24a
26 SHAKESPEARE: *Merchant of Venice*, ACT IV, SC I [346–400] 429a-d
35 LOCKE: *Toleration*, 3a / *Civil Government*, CH I, SECT 3 25d / *Human Understanding*, BK II, CH XXVIII, SECT 9 230b
36 SWIFT: *Gulliver*, PART I, 28a-29b; 35a-37b
38 MONTESQUIEU: *Spirit of Laws*, BK VI, 37d-38b
40 GIBBON: *Decline and Fall*, 217c; 450b-c
41 GIBBON: *Decline and Fall*, 85c; 91a-92c; 93a-94c
42 KANT: *Science of Right*, 446a-449c
43 FEDERALIST: NUMBER 15, 65a-b
46 HEGEL: *Philosophy of History*, PART I, 214d-216a; PART IV, 320b-c
50 MARX: *Capital*, 364a-367a passim

4b(1) The death penalty: its justification

OLD TESTAMENT: *Genesis*, 9:6 / *Exodus*, 21:12–29; 22:18–20; 35:2 / *Leviticus*, 20:9–18,27; 24:16–21 / *Numbers*, 35:16–31 / *Deuteronomy*, 13:1–10; 17:2–7; 18:20; 19:11–13; 21:18–23; 22:21–27; 24:7 / *Joshua*, 7:10–26—(*D*) *Josue*, 7:10–26 / *I Kings*, 21:10–13—(*D*) *III Kings*, 21:10–13 / *Esther*, 4:11–5:2; 7:7–10
APOCRYPHA: *II Maccabees*, 4:38; 13:5–8—(*D*) OT, *II Machabees*, 4:38; 13:5–8
5 EURIPIDES: *Orestes* [491–601] 399a-400a

(*4b. The forms of punishment available to the state. 4b(1) The death penalty: its justification.*)

6 HERODOTUS: *History*, BK IV, 131b-c; 135c-136a; 137a-138c; 149c; BK VIII, 275c-d
6 THUCYDIDES: *Peloponnesian War*, BK III, 424d 429a esp 427d-428a
7 PLATO: *Apology*, 209d-210a / *Statesman*, 607b-c / *Laws*, BK V, 690d-691b; BK IX, 743b-744a; 747d; BK XII, 784c-d; 791c-d; 792c-793a
9 ARISTOTLE: *Athenian Constitution*, CH 52, par 1 576b-c; CH 60, par 2 580c; CH 67, par 5 583b
14 PLUTARCH: *Numa Pompilius*, 54c-55a / *Solon*, 70d / *Cicero*, 710c-712d
15 TACITUS: *Annals*, BK III, 49d-50a / *Histories*, BK I, 200d
18 AUGUSTINE: *City of God*, BK I, CH 21 142d-143a; BK XIX, CH 6 514b-515a; BK XXI, CH 11, 570c-d
20 AQUINAS: *Summa Theologica*, PART I-II, Q 87, A 3, REP 1-2 187b-188b; Q 100, A 8, REP 3 259d-261a; Q 105, A 2, REP 9-10,12 309d-316a; PART II-II, Q 25, A 6, REP 2 504d-505d; PART III SUPPL, Q 86, A 2, REP 3 993c-994d; Q 99, A 1, ANS 1078c-1081a
23 HOBBES: *Leviathan*, PART II, 146b-c
25 MONTAIGNE: *Essays*, 23b-24a; 205b-206c; 338b-339a
26 SHAKESPEARE: *2nd Henry VI*, ACT II, SC III [1-16] 44c-d / *Romeo and Juliet*, ACT I, SC I [71-110] 286b-d / *Richard II*, ACT III, SC I [1-30] 334d-335b / *1st Henry IV*, ACT V, SC V [1-15] 466a-c / *Henry V*, ACT II, SC II [145-181] 540c-541a
27 SHAKESPEARE: *Measure for Measure*, ACT II, SC II [34-141] 182b-183c / *Coriolanus*, ACT III, SC I [174-336] 371b-373b / *Timon of Athens*, ACT III, SC V 406d-408a / *Henry VIII*, ACT II, SC I [51-136] 558c-559c
33 PASCAL: *Provincial Letters*, 108b-109b
35 LOCKE: *Civil Government*, CH I, SECT 3 25d; CH II, SECT 11-12 27b-28a; CH IV, SECT 22 30a; CH VII, SECT 87 44a-b
36 SWIFT: *Gulliver*, PART I, 28a; PART II, 78b; PART III, 119b; 122a-123a
37 FIELDING: *Tom Jones*, 150b
38 MONTESQUIEU: *Spirit of Laws*, BK VI, 38a; 39a; 39d-40a; BK XII, 86c-d; 87c-91c passim; BK XV, 109d; BK XXIX, 264c-d
38 ROUSSEAU: *Social Contract*, BK II, 398b-399a; BK IV, 439a
40 GIBBON: *Decline and Fall*, 175d-176a; 215d-216a; 216d-217d passim; 218d-219a; 617b-d
41 GIBBON: *Decline and Fall*, 91c-92a; 95c-96a passim; 187b
42 KANT: *Science of Right*, 446b-449c esp 446b-c, 448b-d
46 HEGEL: *Philosophy of Right*, PART I, par 100 37d-38a
51 TOLSTOY: *War and Peace*, BK XI, 505a-511b; BK XII, 547a-551c

4b(2) Exile or ostracism: imprisonment or incarceration

5 SOPHOCLES: *Antigone* [766-780] 137d-138a
5 EURIPIDES: *Medea* [271-356] 214b-215b / *Heracles Mad* [1-25] 365a-b / *Orestes* [491-601] 399a-400a
7 PLATO: *Apology*, 209d-210a / *Statesman*, 607b-c / *Laws*, BK V, 690d-691b; BK IX, 743b-744a; BK X, 769d-770c
9 ARISTOTLE: *Ethics*, BK X, CH 9 [1180a5-9] 434d / *Politics*, BK III, CH 13 [1284a3-b34] 482a-483a; BK V, CH 3 [1302b15-21] 504a; CH 8 [1308b17-20] 510d / *Athenian Constitution*, CH 22 562d-563c
14 PLUTARCH: *Themistocles*, 97b-101d / *Alcibiades*, 160a-b; 162d-171c / *Coriolanus*, 179c-184c / *Aristides*, 263b; 265d-266b / *Nicias*, 428c-429b
15 TACITUS: *Annals*, BK XIV, 152d-153a
18 AUGUSTINE: *City of God*, BK XXI, CH 11, 570c-d
20 AQUINAS: *Summa Theologica*, PART I-II, Q 87, A 3, REP 1 187b-188b; Q 105, A 2, REP 10 309d-316a; PART III SUPPL, Q 99, A 1, ANS and REP 3 1078c-1081a
21 DANTE: *Divine Comedy*, PARADISE, XVII [13-99] 132b-133a
22 CHAUCER: *Knight's Tale* [1153-1354] 179a-182a
23 HOBBES: *Leviathan*, PART II, 146d-147b
25 MONTAIGNE: *Essays*, 91a
26 SHAKESPEARE: *2nd Henry VI*, ACT II, SC III [1-16] 44c-d / *Two Gentlemen of Verona*, ACT III, SC I [157-187] 242a-b; ACT IV, SC I 245b-246b / *Romeo and Juliet*, ACT III, SC I [146-202] 302c-303a / *Richard II*, ACT I, SC III [118-155] 324d-325b / *As You Like It*, ACT I, SC I [100-118] 598b-c
27 SHAKESPEARE: *Coriolanus*, ACT III, SC III 375b-377a / *Timon of Athens*, ACT III, SC V [96-117] 407d-408a
36 SWIFT: *Gulliver*, PART III, 119b
38 MONTESQUIEU: *Spirit of Laws*, BK XII, 85d; BK XXVI, 222d-223a; BK XXIX, 263c
38 ROUSSEAU: *Social Contract*, BK IV, 439a
41 GIBBON: *Decline and Fall*, 93a-d passim; 166c
42 KANT: *Science of Right*, 448b; 450a
51 TOLSTOY: *War and Peace*, BK VIII, 338c-d; BK XIV, 606a-607a
52 DOSTOEVSKY: *Brothers Karamazov*, EPILOGUE, 402a-c

4b(3) Enforced labor or enslavement

OLD TESTAMENT: *Genesis*, 43:18; 44:1-17
6 HERODOTUS: *History*, BK II, 78b
7 PLATO: *Statesman*, 607c
15 TACITUS: *Annals*, BK III, 49d-50a; BK XIII, 132a-c

18 AUGUSTINE: *City of God*, BK XXI, CH 11, 570c-d
20 AQUINAS: *Summa Theologica*, PART I-II, Q 105, A 2, REP 10 309d-316a
23 HOBBES: *Leviathan*, PART II, 147a
32 MILTON: *Samson Agonistes* 339a-378a esp [1-46] 339b-340b, [356-380] 347b-348a, [1156-1177] 364b-365a, [1391-1409] 370a
35 LOCKE: *Civil Government*, CH IV, SECT 22 30a
38 MONTESQUIEU: *Spirit of Laws*, BK XV, 109b-c; 110a-b
40 GIBBON: *Decline and Fall*, 217c
42 KANT: *Science of Right*, 445c-446a
43 CONSTITUTION OF THE U.S.: AMENDMENTS, XIII 18c
44 BOSWELL: *Johnson*, 385a-b
50 MARX: *Capital*, 364a-366a
51 TOLSTOY: *War and Peace*, BK XIV, 606a-607a

4b(4) Torture: cruel and unusual punishments

OLD TESTAMENT: *Leviticus*, 24:14 / *Deuteronomy*, 25:1-3,5-12
4 HOMER: *Odyssey*, BK XXII [170-199] 307d-308a; [433-477] 310b-d
5 ARISTOPHANES: *Knights* [1395-1408] 487c
6 HERODOTUS: *History*, BK I, 28a-c; BK III, 92c-93a; BK IV, 159b-d; BK VIII, 281c
9 ARISTOTLE: *Politics*, BK II, CH 12 [1274^{b}15-17] 471c
14 PLUTARCH: *Coriolanus*, 185b-186a / *Sulla*, 384a-385b / *Crassus*, 442d-443a / *Artaxerxes*, 851a-852d
18 AUGUSTINE: *City of God*, BK XIX, CH 6 514b-515a
23 HOBBES: *Leviathan*, PART I, 90b; PART II, 146b
25 MONTAIGNE: *Essays*, 4c-5a; 95a-c; 176a-c; 205b-206c; 331a-332a; 338b-339a; 349a-c
26 SHAKESPEARE: *King John*, ACT IV, SC I 392d-394b
27 SHAKESPEARE: *King Lear*, ACT III, SC VII 267d-269b
36 SWIFT: *Gulliver*, PART I, 35a-37b
36 STERNE: *Tristram Shandy*, 265a-266a
38 MONTESQUIEU: *Spirit of Laws*, BK VI, 38d-39a; 42c-d; BK XII, 86a; 90c-d; BK XXV, 212b-213d; BK XXVIII, 239a-b; 240a-b; BK XXIX, 262a-b; 264c-d
38 ROUSSEAU: *Political Economy*, 371a-b
40 GIBBON: *Decline and Fall*, 175d-176a; 212c-d; 216d-217b; 232b-c; 251b-d; 389b-c; 604b; 651b-c; 765d [n 119]
41 GIBBON: *Decline and Fall*, 91c-92c; 93b; 94a-c; 167a-c; 193c; 501c-503a
42 KANT: *Science of Right*, 447b
43 CONSTITUTION OF THE U.S.: AMENDMENTS, VIII 17d
46 HEGEL: *Philosophy of History*, PART IV, 355a-b
51 TOLSTOY: *War and Peace*, BK II, 95c; BK X, 429b-d; BK XI, 505a-511b
52 DOSTOEVSKY: *Brothers Karamazov*, BK V, 122d-125c

4c. The justice of legal punishment: the conventionality of the punishments determined by positive law

5 AESCHYLUS: *Seven Against Thebes* [1011-1084] 38b-39a,c
5 SOPHOCLES: *Antigone* 131a-142d
5 EURIPIDES: *Phoenician Maidens* [1625-1766] 392b-393d
7 PLATO: *Crito* 213a-219a,c esp 216d-219a,c / *Gorgias*, 267c-270c / *Laws*, BK IX 743a-757d esp 743a-744a, 746a-748d; BK X, 769d-770c
9 ARISTOTLE: *Ethics*, BK V, CH 4 [1131^{b}25]-CH 5 [1133^{a}3] 379b-380c; CH 7 [1134^{b}20-25] 382c; CH 11 [1138^{a}4-13] 386b-c
17 PLOTINUS: *Fourth Ennead*, TR III, CH 16 150c-d
18 AUGUSTINE: *City of God*, BK I, CH 21 142d-143a
20 AQUINAS: *Summa Theologica*, PART I-II, Q 95, A 2, ANS 227c-228c; Q 105, A 2, ANS and REP 9-12 309d-316a; Q 108, A 3, REP 2 334a-336b; PART III SUPPL, Q 89, A 6, REP 1 1009d-1010c
23 HOBBES: *Leviathan*, PART II, 101c; 140c-141b; 145a-d; 146d-147c
25 MONTAIGNE: *Essays*, 519a-d
26 SHAKESPEARE: *2nd Henry IV*, ACT V, SC II [73-117] 498d-499a
27 SHAKESPEARE: *Measure for Measure*, ACT II, SC I [1-32] 178d-179b
29 CERVANTES: *Don Quixote*, PART I, 68b-73a
31 SPINOZA: *Ethics*, PART IV, PROP 37, SCHOL 2 435b-436a
35 LOCKE: *Toleration*, 16d / *Civil Government*, CH II, SECT 7-13 26c-28b passim; CH XV, SECT 171 65a-b
38 MONTESQUIEU: *Spirit of Laws*, BK VII, 49a-50a; BK XV, 109d; BK XIX, 138c; BK XXIX, 267d-268c
38 ROUSSEAU: *Social Contract*, BK II, 398b-399a
40 GIBBON: *Decline and Fall*, 617c-d
42 KANT: *Practical Reason*, 306b-c / *Science of Right*, 433c-434d; 446a-c; 448b-d; 449c
43 MILL: *Liberty*, 271c-272d; 302d-312a passim / *Utilitarianism*, 467d-468c; 469c-470c; 471b-472d; 474b; 474d
46 HEGEL: *Philosophy of Right*, PART I, par 93 36a-b; par 96 36c-37a; par 99-100 37b-38a; PART II, par 132 46b-47a; PART III, par 319, 106a; ADDITIONS, 134 138b-c; 138 139a-b / *Philosophy of History*, PART IV, 320b-c
52 DOSTOEVSKY: *Brothers Karamazov*, BK XII 348b,d-401d passim, esp 395a-401d
54 FREUD: *Interpretation of Dreams*, 328a-b

4d. Grades of severity in punishment: making the punishment fit the crime

OLD TESTAMENT: *Deuteronomy*, 25:1-3
NEW TESTAMENT: *II Corinthians*, 11:24
7 PLATO: *Apology*, 209b-210b / *Laws*, BK IX, 754b-756a; BK X, 769d-771b; BK XI, 782a-b; BK XII, 784c-d

(4. Crime and punishment: punishment as a political instrument. 4d. Grades of severity in punishment: making the punishment fit the crime.)

9 ARISTOTLE: *Ethics*, BK III, CH 5 [1113b21–1114a2] 359d-360a; BK V, CH 4 [1131b25]–CH 5 [1133a3] 379b-380c / *Politics*, BK II, CH 12 [1274b15–17] 471c / *Rhetoric*, BK I, CH 14 619a-d

14 PLUTARCH: *Theseus*, 4a-b / *Solon*, 70d / *Artaxerxes*, 851a-b

15 TACITUS: *Annals*, BK III, 57a; BK XIV, 152d-153b

18 AUGUSTINE: *City of God*, BK XXI, CH 11 570b-571a

20 AQUINAS: *Summa Theologica*, PART I-II, Q 87, A 3, REP 1 187b-188b; Q 105, A 2, ANS and REP 9–12 309d-316a; PART III SUPPL, Q 99, A 1, ANS and REP 1–2,6 1078c-1081a

21 DANTE: *Divine Comedy*, HELL, V [1–72] 7a-d; VII [100–130] 10c-d; XII 16b-17d; XIV [43–72] 20a-b; XX [1–39] 28b-d; XXVIII 41b-43a esp [130–142] 42d-43a; PURGATORY, X [97]–XI [90] 68b-69c; XIII 71d-73c; XIX [70–145] 82b-83a; XXIII [1–75] 88b-89a

23 HOBBES: *Leviathan*, PART II, 139c-140a; 145d; 157d-158a

25 MONTAIGNE: *Essays*, 23b-24a

27 SHAKESPEARE: *Measure for Measure*, ACT II, SC II [126–141] 183b-c / *Coriolanus*, ACT III, SC I [263–336] 372c-373b

35 LOCKE: *Civil Government*, CH II, SECT 11–13 27b-28b

36 SWIFT: *Gulliver*, PART I, 28a-b

37 FIELDING: *Tom Jones*, 399c-d

38 MONTESQUIEU: *Spirit of Laws*, BK VI, 37d-43d; BK XII, 85c-91c; BK XXIX, 264d-266b

38 ROUSSEAU: *Political Economy*, 371a-b / *Social Contract*, BK IV, 439a

40 GIBBON: *Decline and Fall*, 127d-128a; 175d-176a; 199b-c

41 GIBBON: *Decline and Fall*, 83b-c; 91c-94b passim

42 KANT: *Science of Right*, 446a-448b

43 FEDERALIST: NUMBER 74, 221d-222d

43 MILL: *Utilitarianism*, 472c-d; 474d

46 HEGEL: *Philosophy of Right*, PART I, par 96 36c-37a; PART III, par 218 72c-d; par 319, 106a; ADDITIONS, 60 125d; 138 139a-b / *Philosophy of History*, PART IV, 320b-c; 355a-b

5. The punishment for sin

5a. The origin and fulfillment of curses

OLD TESTAMENT: *Genesis*, 4:8–16; 9:21–27; 12:1–4 / *Numbers*, 22–24 / *Deuteronomy*, 11:26–30; 27:15–26; 28:15–68; 29:18–29 / *I Samuel*, 14:24–25—(*D*) *I Kings*, 14:24–25 / *II Samuel*, 16:5–13—(*D*) *II Kings*, 16:5–13 / *I Kings*, 21:17–24—(*D*) *III Kings*, 21:17–24 / *II Kings*, 2:23–24; 9:10,30–37—(*D*) *IV Kings*, 2:23–24; 9:10,30–37 / *II Chronicles*, 21:12–20; 36 esp 36:21—(*D*) *II Paralipomenon*, 21:12–20; 36 esp 36:21 / *Zechariah*, 5:1–4—(*D*) *Zacharias*, 5:1–4 / *Malachi*, 2—(*D*) *Malachias*, 2

APOCRYPHA: *Ecclesiasticus*, 21:27; 41:8–10—(*D*) OT, *Ecclesiasticus*, 21:30; 41:11–13 / *Baruch*, 1:20–2:7—(*D*) OT, *Baruch*, 1:20–2:7

NEW TESTAMENT: *Matthew*, 25:41 / *I Corinthians*, 16:22 / *Galatians*, 3:10–14

5 AESCHYLUS: *Suppliant Maidens* [524–599] 7c-8d / *Seven Against Thebes* 27a-39a,c esp [653–956] 34b-37d / *Agamemnon* 52a-69d esp [1372–1616] 66d-69a / *Choephoroe* 70a-80d esp [1067–1076] 80d / *Eumenides* 81a-91d esp [94–178] 82a-83a

5 SOPHOCLES: *Oedipus the King* 99a-113a,c / *Oedipus at Colonus* 114a-130a,c esp [783–799] 121b-c, [1348–1446] 126c-127b

6 HERODOTUS: *History*, BK III, 106b-c

6 THUCYDIDES: *Peloponnesian War*, BK I, 380a-d

14 PLUTARCH: *Camillus*, 107b-d / *Alcibiades*, 165a-b

15 TACITUS: *Annals*, BK II, 40d-41a

20 AQUINAS: *Summa Theologica*, PART II-II, Q 25, A 6, REP 3 504d-505d

26 SHAKESPEARE: *Richard III*, ACT I, SC II [14–80] 107c-108b; ACT III, SC III 126c-127a; ACT IV, SC IV [1–195] 136a-138b / *Richard II*, ACT III, SC II [129–134] 336d; ACT IV, SC I [114–149] 342c-343a / *Julius Caesar*, ACT III, SC I [253–275] 583b

30 BACON: *Advancement of Learning*, 97c

32 MILTON: *Paradise Lost*, BK X [1046–1104] 297a-298b; BK XI [84–98] 301a; [162–180] 302b-303a; [251–262] 304b-305a; [470–523] 309b-310b; BK XII [101–120] 321b

36 STERNE: *Tristram Shandy*, 281b-289b; 466b-467b

41 GIBBON: *Decline and Fall*, 150a; 423c; 469a-d

51 TOLSTOY: *War and Peace*, BK VII, 275a

5b. The wages of sin: the punishment of original sin

OLD TESTAMENT: *Genesis*, 3:9–24; 6:5; 8:21 / *Ecclesiastes*, 9:3

APOCRYPHA: *Wisdom of Solomon*, 2:23–24—(*D*) OT, *Book of Wisdom*, 2:23–25

NEW TESTAMENT: *Romans*, 5:12–21; 6:23; 7; 8:20–21 / *I Corinthians*, 15:21–22 / *Ephesians*, 2:1–5

18 AUGUSTINE: *City of God*, BK XII, CH 12 357a-b; BK XIII, CH 1–15 360a-366d; CH 23–24 372a-376a,c; BK XIV, CH 1–5 376b,d-380b; CH 12–13 387a-388c; CH 15–27 388d-397a; BK XV, CH 22 416a-c; BK XVI, CH 4 425b-426a; BK XIX, CH 15 521a-c; CH 28 529d-530a,c; BK XXI, CH 12 571a-c; CH 15 572c-573b; BK XXII, CH 30, 617c-618a / *Christian Doctrine*, BK II, CH 23 648a-c

19 AQUINAS: *Summa Theologica*, PART I, Q 19, A 6, ANS 113c-114d; PART I-II, Q 17, A 9, REP 3 692d-693d; Q 42, A 3, REP 1 802d-803c

20 AQUINAS: *Summa Theologica*, PART I-II, Q 72, A 5 115a-116b; QQ 81-83 162d-174b; QQ 85-89 178b-204a,c; Q 91, A 6 212c-213c; Q 94, A 6 225d-226b; PART II-II, Q 24, A 12 499c-500d; Q 25, A 7 506a-d
21 DANTE: *Divine Comedy*, PURGATORY, III [16-45] 56a-b; XXVIII [91-96] 97a; XXIX [22-30] 97d-98a; PARADISE, VII [19-120] 115b-116b
22 CHAUCER: *Parson's Tale*, par 18, 507b
23 HOBBES: *Leviathan*, PART II, 112a-b; PART III, 191b-c
30 BACON: *Novum Organum*, BK II, APH 52, 195d
32 MILTON: *Paradise Lost*, BK III [167-216] 139a-140a; [274-343] 141b-143a; BK IX [780-1189] 264b-273a; BK X 274a-298b esp [103-123] 276b-277a, [229-409] 279b-283a, [585-640] 287a-288b; BK XI [84-98] 301a; BK XI [423]-BK XII [371] 308b-327a
33 PASCAL: *Pensées*, 430 245a-247b; 434-435 248a-251a; 446-450 252a-253a
44 BOSWELL: *Johnson*, 482a
46 HEGEL: *Philosophy of History*, PART III, 304d-305b

5c. The pain of remorse and the torment of conscience: the atonement for sin

OLD TESTAMENT: *Leviticus*, 16:29-34 esp 16:29, 16:31 / *II Samuel*, 12:9-23—(*D*) *II Kings*, 12:9-23 / *I Kings*, 8:31-50—(*D*) *III Kings*, 8:31-50 / *II Chronicles*, 6:24-42; 7:12-14; 33:12-19—(*D*) *II Paralipomenon*, 6:24-42; 7:12-14; 33:12-19 / *Job*, 42:5-6 / *Psalms*, 32; 34:18; 35:13-15; 38:18; 51; 69:7-12; 102:1-12—(*D*) *Psalms*, 31; 33:19; 34:13-15; 37:19; 50; 68:8-13; 101:1-13 / *Proverbs*, 5; 28:1 / *Jeremiah*, 2:19—(*D*) *Jeremias*, 2:19 / *Daniel*, 9:3-20 / *Joel*, 1:1-2:17 / *Jonah*, 3—(*D*) *Jonas*, 3
APOCRYPHA: *Wisdom of Solomon*, 5:1-13; 11:16; 12:19,23; 17—(*D*) OT, *Book of Wisdom*, 5:1-14; 11:17; 12:19,23; 17 / *Ecclesiasticus*, 14:1-2; 17:24-26; 18:21—(*D*) OT, *Ecclesiasticus*, 14:1-2; 17:20-24; 18:21 / *I Maccabees*, 6:1-15 esp 6:12-13—(*D*) OT, *I Machabees*, 6:1-15 esp 6:12-13
NEW TESTAMENT: *Matthew*, 3:1-12; 4:18; 11:20-21; 27:3-5 / *Mark*, 1:14-15 / *Luke*, 3:7-14; 5:32; 7:36-50; 10:13; 13:1-5; 15:11-21; 16:27-31 / *John*, 8:1-11 / *Acts*, 3:19; 17:30; 26:20 / *II Corinthians*, 7:8-12 / *II Timothy*, 2:25-26 / *Hebrews*, 12:16-17 / *James*, 4:8-10 / *II Peter*, 3:9
5 AESCHYLUS: *Choephoroe* [1010-1076] 80a-d
5 SOPHOCLES: *Antigone* [1257-1353] 141d-142d / *Ajax* [646-683] 148c-149a
5 EURIPIDES: *Andromache* [802-879] 322a-c / *Electra* [1177-1232] 337d-338a / *Heracles Mad* [1229-1428] 375c-377d / *Orestes* [1-423] 394a-398b / *Iphigenia Among the Tauri* [924-986] 419a-d
9 ARISTOTLE: *Ethics*, BK IX, CH 4 [1166^{b}11-24] 419d-420a
12 LUCRETIUS: *Nature of Things*, BK III [978-1023] 42d-43b; BK V [1151-1160] 76a-b
15 TACITUS: *Annals*, BK VI, 87b-c / *Histories*, BK III, 255b-c
18 AUGUSTINE: *Confessions*, BK II, par 1 9a; par 9, 10d; par 17 12d-13a; BK III, par 5 14b; BK IV, par 14 22d-23a; BK V, par 2 27b-c; BK X, par 65-66, 88a-b / *City of God*, BK XIV, CH 8 381c-383a
19 AQUINAS: *Summa Theologica*, PART I-II, Q 35, A 5, REP 1 775d-777a; Q 37, A 2, REP 1 784c-785b
20 AQUINAS: *Summa Theologica*, PART I-II, Q 87, A 6 189c-190c; A 7, ANS and REP 3 190c-191d; A 8, ANS 191d-192d; PART III SUPPL, Q 97, A 2 1066d-1067b; Q 98, A 2 1073b-1074a; A 7 1076d-1077b
21 DANTE: *Divine Comedy*, HELL, XXX [91-148] 45c-46a; PURGATORY, II [106]-III [15] 55c-56a; IV [97-135] 58c-d; IX-XXVII 65d-96a esp X-XII 67b-71d, XVIII [76-145] 80d-81b, XIX [70-145] 82b-83a, XXI [34-75] 85b-d, XXIII [1-75] 88b-89a; XXX-XXXI 99b-102b
22 CHAUCER: *Physician's Tale* [12,211-220] 370b-371a / *Parson's Tale*, par 1-15 495a-506b; par 91-103 547a-550a
25 MONTAIGNE: *Essays*, 14b; 174d-176c
26 SHAKESPEARE: *Richard III*, ACT I, SC IV 114d-117c; ACT V, SC III [178-206] 145c-d / *Richard II*, ACT V, SC VI [30-52] 351c-d / *King John*, ACT IV, SC II [215-248] 396d 397a / *Merchant of Venice*, ACT II, SC II [1-33] 412a-b
27 SHAKESPEARE: *Hamlet*, ACT II, SC II [616-633] 46c-d; ACT III, SC III [36-72] 53d-54a; SC IV 54b-56d; ACT IV, SC V [16-20] 59d / *Othello*, ACT V, SC II 238d-243a,c / *King Lear*, ACT III, SC IV [23-36] 264c / *Macbeth*, ACT II, SC II 291a-292a; ACT III, SC II 296b-297a; SC IV 297c-299b; ACT V, SC I 306b-307a / *Cymbeline*, ACT V, SC I [1]-SC II [10] 479a-c
29 CERVANTES: *Don Quixote*, PART I, 123a-b
31 SPINOZA: *Ethics*, PART III, PROP 51, SCHOL 411d-412a; PART IV, PROP 54 440b-c
32 MILTON: *Paradise Lost*, BK IV [32-104] 153a-154b; BK IX [1042-1189] 270a-273a / *Samson Agonistes* [502-520] 350b-351a; [606-632] 352b-353b
35 LOCKE: *Civil Government*, CH IX 53c-54d passim
36 STERNE: *Tristram Shandy*, 257a-266b
37 FIELDING: *Tom Jones*, 267b-c; 398d-399a
40 GIBBON: *Decline and Fall*, 54c-55a; 191b-c; 199a-c; 452b-d
42 KANT: *Practical Reason*, 306d-307d; 333a-c / *Pref. Metaphysical Elements of Ethics*, 379b-d / *Judgement*, 593a-d
43 MILL: *Utilitarianism*, 458b-459b
46 HEGEL: *Philosophy of History*, PART III, 304c-d; PART IV, 354a-c
47 GOETHE: *Faust*, PART I [3776-3834] 92a-93b; PART II [11,384-510] 277a-280a
48 MELVILLE: *Moby Dick*, 34b-36b

(5. *The punishment for sin.* 5c. *The pain of remorse and the torment of conscience: the atonement for sin.*)

49 DARWIN: *Descent of Man*, 312d-314c

51 TOLSTOY: *War and Peace*, BK V, 216a-d; BK VIII, 321b-d; BK XIV, 606a-607a

52 DOSTOEVSKY: *Brothers Karamazov*, BK II, 24a-c; 30b-32a; BK III, 46c-47b; BK VI, 159c-163d; BK VII, 184b-188a; BK VIII, 217c-218c; BK XII, 381c-d; 395a-398d; EPILOGUE, 404c-408a passim

54 FREUD: *Interpretation of Dreams*, 246c; 247c-248b passim / *General Introduction*, 581d / *Civilization and Its Discontents*, 793b-c; 797c-798a / *New Introductory Lectures*, 831b

5*d*. The modes of divine punishment: here and hereafter, temporal and eternal

OLD TESTAMENT: *Genesis*, 3:9-19 esp 3:14-19; 4:8-15; 6-8 esp 6:5-7; 18:20-19:29 / *Exodus*, 7-12; 22:22-24; 32 / *Leviticus*, 10:1-3; 18:24-30; 26 / *Numbers*, 12-14; 15:30-31; 16; 21:5-9; 25 / *Deuteronomy*, 27-30 passim; 32 / *Joshua*, 5:6; 7—(*D*) *Josue*, 5:6; 7 / *Judges*, 9 esp 9:23-24, 9:57 / *I Samuel*, 15—(*D*) *I Kings*, 15 / *II Samuel*, 6:6-8; 21:1; 24—(*D*) *II Kings*, 6:6-8; 21:1; 24 / *I Kings*, 9:6-9; 11:9-13,29-39; 13; 14:7-17; 16:1-7,18-19; 21:19-29—(*D*) *III Kings*, 9:6-9; 11:9-13,29-39; 13; 14:7-17; 16:1-7,18-19; 21:19-29 / *II Kings*, 5:20-27; 9:1-10:11; 17:6-18:12—(*D*) *IV Kings*, 5:20-27; 9:1-10:11; 17:6-18:12 / *I Chronicles*, 10:13-14; 13:9-11; 21—(*D*) *I Paralipomenon*, 10:13-14; 13:9-11; 21 / *II Chronicles*, 6:24-42; 12; 21:12-20; 26:16-21; 36—(*D*) *II Paralipomenon*, 6:24-42; 12; 21:12-20; 26:16-21; 36 / *Ezra*, 9—(*D*) *I Esdras*, 9 / *Job* / *Psalms*, 9:16-17; 11; 18; 21:8-12; 34; 37; 78-79 passim; 89:28-33; 94; 112; 116:3—(*D*) *Psalms*, 9:17-18; 10; 17; 20:9-13; 33; 36; 77-78 passim; 88:29-34; 93; 111; 114:3 / *Isaiah*, 1; 2:5-3:26; 5; 9:13-10:27; 13-24; 28-32; 33:7-14; 34; 42:13-25; 47; 63:1-6; 65-66—(*D*) *Isaias*, 1; 2:5-3:26; 5; 9:13-10:27; 13-24; 28-32; 33:7-14; 34; 42:13-25; 47; 63:1-6; 65-66 / *Jeremiah*, 1; 4-9; 11; 13:9-14:12; 15:1-9; 16; 17:27-19:13; 21-29; 34; 44; 46-52—(*D*) *Jeremias*, 1; 4-9; 11; 13:9-14:12; 15:1-9; 16; 17:27-19:13; 21-29; 34; 44; 46-52 / *Lamentations* / *Ezekiel*, 5-7 esp 5:1-6:7; 9; 11; 13-18; 20-39 esp 28:1-19, 31:10-18—(*D*) *Ezechiel*, 5-7 esp 5:1-6:7; 9; 11; 13-18; 20-39 esp 28:1-19, 31:10-18 / *Daniel*, 4; 5:17-30; 12:2 / *Hosea*, 4-13—(*D*) *Osee*, 4:1-14:1 / *Joel* passim / *Amos* / *Obadiah*—(*D*) *Abdias* / *Micah* passim—(*D*) *Micheas* passim / *Nahum* / *Habakkuk*—(*D*) *Habacuc* / *Zephaniah*—(*D*) *Sophonias* / *Zechariah*, 7:8-14; 11:1-9,17; 12-14—(*D*) *Zacharias*, 7:8-14; 11:1-9,17; 12-14 / *Malachi*, 2—(*D*) *Malachias*, 2

APOCRYPHA: *Judith*, 5:17-18; 16:17—(*D*) OT, *Judith*, 5:17-18; 16:20-21 / *Wisdom of Solomon*, 3-5; 4:16-5:14; 11:5-16; 12:1-8; 16-19—(*D*) OT, *Book of Wisdom*, 3-5; 4:16-5:15; 11:5-17; 12:1-8; 16-19 / *Ecclesiasticus*, 7:16-17; 18:22,24; 21:9-10; 39:27-30—(*D*) OT, *Ecclesiasticus*, 7:18-19; 18:22,24; 21:10-11; 39:32-36 / *I Maccabees*, 6:1-16—(*D*) OT, *I Machabees*, 6:1-16 / *II Maccabees*, 6:12-17; 9; 12:40-42—(*D*) OT, *II Machabees*, 6:12-17; 9; 12:40-42

NEW TESTAMENT: *Matthew*, 3:7-12; 5:22,29; 8:12; 10:14-15,28; 11:20-24; 13:41-42,49-50; 18:9; 23:33; 25:41-46 / *Mark*, 9:42-48; 16:16 / *Luke*, 16:19-26; 18:28-30 / *John*, 15:6 / *Acts*, 12:20-23; 13:4-12 / *Romans*, 2:5-9; 13:2 / *II Thessalonians*, 1:7-9 / *Hebrews*, 10:26-31 / *II Peter*, 2 / *Jude*, 5-16 / *Revelation*, 9; 14:9-11; 19:17-21; 20:9-10,12-15; 21:8—(*D*) *Apocalypse*, 9; 14:9-11; 19:17-21; 20:9-10,12-15; 21:8

4 HOMER: *Iliad*, BK I [1-317] 3a-6b; BK XXIV [600-619] 177d / *Odyssey*, BK XI [100-117] 244a-b; [568-600] 248d-249a; BK XII [127-141] 251b-c; [260-419] 252d-254c

5 AESCHYLUS: *Suppliant Maidens* [524-599] 7c-8d / *Persians* 15a-26d esp [739-842] 23a-24b / *Prometheus Bound* 40a-51d / *Agamemnon* [320-402] 55c-56b; [681-781] 59b-60b / *Choephoroe* [585-651] 75d-76b / *Eumenides* 81a-91d esp [490-562] 86b-87a

5 SOPHOCLES: *Oedipus the King* [1-215] 99a-101a / *Antigone* [278-296] 133c; [1348-1353] 142d / *Ajax* 143a-155a,c esp [118-133] 144c, [748-783] 149c-d / *Electra* [173-183] 157c

5 EURIPIDES: *Bacchantes* 340a-352a,c esp [1216-1392] 350b-352a,c

5 ARISTOPHANES: *Frogs* [137-159] 565d-566a

6 HERODOTUS: *History*, BK I, 4d; 8a-10a; BK III, 103b-d; BK IV, 159d; BK V, 173d-174b; BK VI, 199c-d; 203a-b; 211a-213a,c; BK VII, 218c-d; 219c-220a; 237d-239a; 246b-c; BK VIII, 283d; BK IX, 308a-c

6 THUCYDIDES: *Peloponnesian War*, BK I, 380a-d; BK VII, 560a-b

7 PLATO: *Phaedrus*, 125b-126a / *Phaedo*, 246d-247b / *Gorgias*, 292b-293d / *Republic*, BK II, 313b-314d; BK X, 436c-441a,c / *Theaetetus*, 530d / *Laws*, BK IX, 757a; BK X, 767c-768c / *Seventh Letter*, 806a

12 LUCRETIUS: *Nature of Things*, BK III [978-1023] 42d-43b

13 VIRGIL: *Aeneid*, BK VI [264-594] 218a-227a

17 PLOTINUS: *Fourth Ennead*, TR III, CH 16 150c-d; CH 24 154b-d

18 AUGUSTINE: *Confessions*, BK IX, par 34-37 70c-71b / *City of God*, BK XI, CH 23 334c-335c; BK XIII 360a-376a,c esp CH 1-15 360a-366d, CH 23-24 372a-376a,c; BK XIV, CH 1-5 376b,d-380b; CH 15 388d-390a; BK XIX, CH 15 521a-c; BK XX-XXII 530a-618d / *Christian Doctrine*, BK I, CH 15 628b-c; CH 20-21 629b; BK II, CH 23 648a-c

19 AQUINAS: *Summa Theologica*, PART I, Q 3, A 2, REP 2 15c-16a; Q 64 333d-338d; Q 66, A 3

347b-348d; Q 114, A 1, REP 1 581d-582c; PART I-II, Q 17, A 9, REP 3 692d-693d

20 AQUINAS: *Summa Theologica*, PART I-II, Q 79, AA 3-4 158a-159c; QQ 85-87 178b-192d; Q 91, A 6 212c-213c; Q 105, A 2, ANS and REP 9-12 309d-316a; PART II-II, Q 33, A 7, REP 1-2 556a-557d; PART III SUPPL, Q 69 885a-893c; Q 70, A 3 897d-900d; Q 74, AA 7-9 932b-935a,c; Q 86 992b-996a,c; QQ 91-99 1016a-1085a,c

21 DANTE: *Divine Comedy*

22 CHAUCER: *Friar's Tale* [7227-7246] 284a / *Physician's Tale* [12,211-220] 370b-371a / *Pardoner's Tale* 374a-382b / *Monk's Tale* 434a-448b / *Parson's Tale*, par 10, 499b-502a

23 HOBBES: *Leviathan*, PART II, 163d-164a; PART III, 177d; 191b-198a; 244b-c; PART IV, 253b-258b

24 RABELAIS: *Gargantua and Pantagruel*, BK II, 119b-122a

30 BACON: *New Atlantis*, 204d-205d

31 DESCARTES: *Meditations*, 69b / *Objections and Replies*, 226d-227a

32 MILTON: *Paradise Lost*, BK I [356-363] 101a; BK II [477-485] 121b; BK III [167-216] 139a-140a; BK XI [470-523] 309b-310b / *Samson Agonistes* 339a-378a esp [1-46] 339b-340b, [667-709] 354a-355a, [1156-1177] 364b-365a, [1669-1707] 376a-b

33 PASCAL: *Pensées*, 194 205b-209b / *Geometrical Demonstration*, 440a-b

35 LOCKE: *Human Understanding*, BK I, CH II, SECT 13 107d-108c; CH III, SECT 5 113c; BK II, CH XXI, SECT 62 194c-d; SECT 72 198a-c; CH XXVIII, SECT 8 230a

35 HUME: *Human Understanding*, SECT XI, DIV 108 500b-d; DIV 114, 503a

37 FIELDING: *Tom Jones*, 20b-21a; 75c-d

38 MONTESQUIEU: *Spirit of Laws*, BK XII, 85d-86a

40 GIBBON: *Decline and Fall*, 180b; 187b-189b; 198d-199a; 409b; 438a-c

41 GIBBON: *Decline and Fall*, 233c-234d

44 BOSWELL: *Johnson*, 363a-b; 482a-c; 514d-515a

48 MELVILLE: *Moby Dick*, 30a-36b

51 TOLSTOY: *War and Peace*, BK XIV, 606a-607a

52 DOSTOEVSKY: *Brothers Karamazov*, BK I, 10c-11a; BK VI, 169c-170b; BK VII, 185a-c

5e. The justice of divine punishment

OLD TESTAMENT: *II Chronicles*, 6:23,30—(*D*) *II Paralipomenon*, 6:23,30 / *Ezra*, 9:10-15—(*D*) *I Esdras*, 9:10-15 / *Job* esp 34:11-12 / *Psalms*, 7:8-17; 28:3-4; 62:12—(*D*) *Psalms*, 7:9-18; 27:3-4; 61:13 / *Proverbs*, 11:31; 24:12 / *Ecclesiastes*, 9:1-3 / *Isaiah*, 59:16-19; 65:6-7—(*D*) *Isaias*, 59:16-19; 65:6-7 / *Jeremiah*, 16:18; 25:14; 50:29; 51:56—(*D*) *Jeremias*, 16:18; 25:14; 50:29; 51:56 / *Lamentations*, 3:64 / *Ezekiel*, 9:10; 16:43; 23:49—(*D*) *Ezechiel*, 9:10; 16:43; 23:49 / *Hosea*, 12:2—(*D*) *Osee*, 12:2

APOCRYPHA: *Wisdom of Solomon*, 12 esp 12:15, 12:18; 14:27-31; 15:18-16:1; 19:4,13—(*D*) OT, *Book of Wisdom*, 12 esp 12:15, 12:18; 14:27-31; 15:18-16:1; 19:4,12 / *Ecclesiasticus*, 11:26; 35:18-19—(*D*) OT, *Ecclesiasticus*, 11:28; 35:22-25 / *II Maccabees*, 4:38; 7:36-38; 9 esp 9:6, 9:18—(*D*) OT, *II Machabees*, 4:38; 7:36-38; 9 esp 9:6, 9:18

NEW TESTAMENT: *Matthew*, 16:27 / *Romans*, 2:5-11; 3:5-6 / *II Corinthians*, 5:10; 11:15 / *II Thessalonians*, 1:6 / *II Timothy*, 4:14 / *Hebrews*, 2:1-4 / *Revelation*, 2:23; 20:12-13—(*D*) *Apocalypse*, 2:23; 20:12-13

5 AESCHYLUS: *Agamemnon* [1560-1565] 68c / *Choephoroe* [585-651] 75d-76b

5 SOPHOCLES: *Electra* [173-183] 157c / *Philoctetes* 182a-195a,c esp [433-452] 186a, [1316-1347] 193d-194a, [1408-1444] 194d-195a,c

5 EURIPIDES: *Heracles Mad* 365a-377d esp [726-873] 371b-372c

6 HERODOTUS: *History*, BK VII, 237d-239a

7 PLATO: *Phaedrus*, 125b-126a / *Gorgias*, 292b-293d / *Republic*, BK II, 321d-322d; BK X, 436c-441a,c / *Laws*, BK X, 767c-768c

12 LUCRETIUS: *Nature of Things*, BK VI [379-395] 85b-c

13 VIRGIL: *Aeneid*, BK VII [286-322] 243b-245a

17 PLOTINUS: *Fourth Ennead*, TR III, CH 16 150c-d

18 AUGUSTINE: *City of God*, BK XIII, CH 1 360a-b; CH 3 361a-c; CH 14-15 366b-d; BK XIV, CH 15 388d-390a; BK XV, CH 21, 415d-416a; CH 25 419a-b; BK XIX, CH 13 519a-520a; BK XX, CH 27 556b; BK XXI, CH 13 571c-572a / *Christian Doctrine*, BK I, CH 32 633c-d; BK II, CH 23 648a-c

19 AQUINAS: *Summa Theologica*, PART I, Q 19, A 9, ANS 116d-117d; Q 21, A 4 126c-127c; Q 23, A 3 134b-135a; Q 49, A 2, ANS and REP 1 266a-c; Q 64, A 4 337d-338d; PART I-II, Q 39, A 2, REP 3 790d-791b; Q 47, A 1, REP 1 819c-820b

20 AQUINAS: *Summa Theologica*, PART I-II, Q 87, 185c-192d; Q 105, A 2, ANS and REP 9-12 309d-316a; PART II-II, Q 19 465a-474d; Q 25, A 6, REP 2-3 504d-505d; PART III SUPPL, QQ 87-90 997a-1016a

21 DANTE: *Divine Comedy*, HELL, III [1-18] 4a-b; [100-136] 5a-b; XI 15a-16b; XIII [91-108] 18d-19a; XIX [1-30] 26d-27a; XX [1-39] 28b-d; XXIV [79-120] 35b-d; XXIX [52-57] 43c; PURGATORY, XVI [52-84] 77b-d; XIX]70-145] 82b-83a; XX [85-96] 84a; PARADISE, VI [82-92] 114c; VII [16-84] 115b-116a; XV [1-12] 128b-c; XVIII [115-136] 134d-135a

22 CHAUCER: *Tale of Melibeus*, par 40-43 418b-419b

23 HOBBES: *Leviathan*, PART II, 160c-161a; PART IV, 254a-b

26 SHAKESPEARE: *Richard II*, ACT I, SC II [1-43] 322d-323a / *Henry V*, ACT IV, SC I [140-186] 553a-c

(5. *The punishment for sin.* 5e. *The justice of divine punishment.*)

27 SHAKESPEARE: *King Lear*, ACT III, SC II [42-59] 263b-c; ACT IV, SC II [37-80] 270d-271b; ACT V, SC III [170-174] 281a / *Cymbeline*, ACT V, SC IV [11-29] 481b / *Winter's Tale*, ACT III, SC II [125-155] 502c-503a

29 CERVANTES: *Don Quixote*, PART II, 413d

32 MILTON: *Paradise Lost*, BK III [80-166] 137a-139a esp [131-134] 138a; [372-415] 143b-144b; BK IV [1-113] 152b-155a; BK X [145-208] 277b-279a / *Samson Agonistes* [293-299] 346a; [356-380] 347b-348a; [667-709] 354a-355a; [1156-1177] 364b-365a

35 LOCKE: *Human Understanding*, BK II, CH XXI, SECT 62 194c-d

36 STERNE: *Tristram Shandy*, 282a-287b

44 BOSWELL: *Johnson*, 482a-d; 539d-540a

48 MELVILLE: *Moby Dick*, 380b-381a

52 DOSTOEVSKY: *Brothers Karamazov*, BK XI, 337a-346a

54 FREUD: *New Introductory Lectures*, 878a-b

5e(1) The justification of eternal suffering in Hell or Hades

OLD TESTAMENT: *Job*, 26:6 / *Psalms*, 9:16-17; 21:8-12; 116:3—(*D*) *Psalms*, 9:17-18; 20:9-13; 114:3 / *Proverbs*, 15:11,24; 27:20 / *Isaiah*, 5:14-15; 14:4-23; 33:10-14; 66:24—(*D*) *Isaias*, 5:14 15; 14:4-23; 33:10-14; 66:24 / *Ezekiel*, 31:10-18—(*D*) *Ezechiel*, 31:10-18 / *Daniel*, 12:2

APOCRYPHA: *Judith*, 16:17—(*D*) OT, *Judith*, 16:20-21 / *Wisdom of Solomon*, 4:16-5:14—(*D*) OT, *Book of Wisdom*, 4:16-5:15 / *Ecclesiasticus*, 7:16-17; 18:22,24; 21:9-10—(*D*) OT, *Ecclesiasticus*, 7:18-19; 18:22,24; 21:10-11

NEW TESTAMENT: *Matthew*, 3:7 12; 5:22,29; 8:12; 10:14-15,28; 11:20-24; 13:41-42,49-50; 18:9; 23:33; 25:41-46 / *Mark*, 9:42-48; 16:16 / *Luke*, 12:5; 16:19-26 / *John*, 15:6 / *Romans*, 2:5-9; 13:2 / *II Thessalonians*, 1:7-9 / *Hebrews*, 10:26-31 / *James*, 5:1-6 / *Jude*, 6-13 / *Revelation*, 9; 14:9-11; 19:17-21; 20:9-10,12-15; 21:8—(*D*) *Apocalypse*, 9; 14:9-11; 19:17-21; 20:9-10,12-15; 21:8

4 HOMER: *Odyssey*, BK XI [568-600] 248d-249a

5 ARISTOPHANES: *Frogs* [137-159] 565d-566a

7 PLATO: *Phaedo*, 249c-250a / *Republic*, BK X, 437c-438c / *Laws*, BK IX, 757a; BK X, 767c-768c

18 AUGUSTINE: *City of God*, BK XIII, CH 2 360b-361a; CH 12 365d-366a; BK XIV, CH 1 376b,d-377a; BK XIX, CH 13 519a-520a; CH 28 529d-530a,c; BK XXI, CH 11-12 570b-571c; CH 16-18 573b-575b; CH 23-24 576c-579d

19 AQUINAS: *Summa Theologica*, PART I, Q 21, A 4, REP 1 126c-127c; Q 63, A 8, ANS 332c-333b

20 AQUINAS: *Summa Theologica*, PART I-II, Q 79, A 4, REP 2 158d-159c; Q 87, AA 3-5 187b-189c; PART III SUPPL, Q 94 1040d-1042c; QQ 97-99 1066a-1085a,c

21 DANTE: *Divine Comedy*, HELL 1a-52d esp III 4a-5b, V [1-51] 7a-c, VI [94-115] 9b-c, XI 15a-16b, XIV [16-72] 19c-20b, XXVII [55-136] 40a-41b, XXVIII [112-142] 42c-43a, XXXIII [91-150] 50c-51a; PARADISE, XV [10-12] 128c

23 HOBBES: *Leviathan*, PART IV, 254a-b

26 SHAKESPEARE: *Richard III*, ACT I, SC IV [42-63] 115a-b

35 LOCKE: *Human Understanding*, BK II, CH XXI, SECT 62 194c-d

44 BOSWELL: *Johnson*, 363a-b; 514d-515a

52 DOSTOEVSKY: *Brothers Karamazov*, BK VI, 169c-170b; BK XI, 337a-346a

5e(2) The necessity of expiation in Purgatory

OLD TESTAMENT: *Isaiah*, 4:4—(*D*) *Isaias*, 4:4

APOCRYPHA: *II Maccabees*, 12:43-46—(*D*) OT, *II Machabees*, 12:43-46

NEW TESTAMENT: *Matthew*, 12:32 / *I Corinthians*, 3:11-15

18 AUGUSTINE: *City of God*, BK XX, CH 25 554c-555a; BK XXI, CH 13 571c-572a; CH 16 573b-574a; CH 24 577b-579d

20 AQUINAS: *Summa Theologica*, PART III SUPPL, Q 69, A 2, ANS and REP 2 886c-887d; A 7 891d-893c; Q 97, A 1, REP 2 1066b-d

21 DANTE: *Divine Comedy*, PURGATORY 53a-105d esp I-II 53a-55d, III [118-132] 57a-b, IX 65d-67b, X [97]-XI [90] 68b-69c, XIII 71d-73c, XVII [76-139] 79b-d, XVIII [76-145] 80d-81b, XIX [97-126] 82c-d, XXI [34-75] 85b-d, XXV [109]-XXVI [90] 92c-93d, XXX-XXXI 99b-102b

23 HOBBES: *Leviathan*, PART IV, 251b-c; 255b-258b

27 SHAKESPEARE: *Hamlet*, ACT I, SC V [9-22] 37a

44 BOSWELL: *Johnson*, 173d

6. Pathological motivations with respect to punishment: abnormal sense of sin or guilt; perverse desires to inflict or suffer punishment

6 HERODOTUS: *History*, BK III, 95d-97c

9 ARISTOTLE: *Ethics*, BK IV, CH 5 [1126^{a}9-30] 373a-c; BK IX, CH 4 [1166^{b}12-24] 419d-420a

12 LUCRETIUS: *Nature of Things*, BK III [1014-1023] 43a-b

15 TACITUS: *Annals*, BK I, 13c-d; 14d-15a; BK XV, 168a-c

26 SHAKESPEARE: *Titus Andronicus* 170a-198d esp ACT I, SC I [90-141] 171c-172a, ACT II, SC III [89-191] 178d-179d, SC IV 181b-d

27 SHAKESPEARE: *Macbeth*, ACT V, SC I 306b-307a; SC III [37-46] 308a

40 GIBBON: *Decline and Fall*, 55a-d; 127d-128a; 216a-c; 389b-c

46 HEGEL: *Philosophy of History*, PART I, 224b-d; 228b; PART IV, 354a-c

51 TOLSTOY: *War and Peace*, BK I, 24a-25a; BK IV, 174b; 183d-186c; 188a-190c; BK V, 216a-d;

BK VI, 238a-c; 271c-274a,c; BK VIII, 305b-307d; 322c; BK IX, 349d-350d; 357a-358b; BK XI, 505a-511b; 514c; BK XIII, 573d; BK XIV, 610c

52 DOSTOEVSKY: *Brothers Karamazov*, BK V, 122d-125c; BK XI, 317b-320a; 324d-329b passim

54 FREUD: *Interpretation of Dreams*, 204b-c; 328a-b / *General Introduction*, 535c-d / *Ego and Id*, 712b-715b / *Inhibitions, Symptoms, and Anxiety*, 730b-731b; 735c-d; 743b-744a / *Civilization and Its Discontents*, 797a-799a passim / *New Introductory Lectures*, 831c-832a; 851d-852d

CROSS-REFERENCES

For: Another discussion of the distinction between the pain of sense and the pain of loss, *see* PLEASURE AND PAIN 4e.

The general problem of the justice or utility of punishment, *see* JUSTICE 10c; LAW 6e(2).

Responsibility as a condition of just punishment, *see* LIBERTY 3c; SIN 6a-6b; VIRTUE AND VICE 5c; WILL 5b(4).

Rewards and punishments as factors in moral training, *see* EDUCATION 4; FAMILY 6d; PLEASURE AND PAIN 8a, 10a; VIRTUE AND VICE 4d(2).

The discussion of punishment as a sanction of law, *see* LAW 6a; and for the general theory of crime and its punishment, *see* JUSTICE 10c; LAW 6e-6e(3).

Another consideration of the penal use of labor, *see* LABOR 1c; SLAVERY 3a.

The sacramental aspect of the punishment of sin, *see* SIN 4e; and for the nature and justice of divine punishment, *see* GOD 5i; HAPPINESS 7c(3); IMMORTALITY 5d-5e; JUSTICE 11a; SIN 6c-6e.

Other discussions of the sense of sin and of repentance, and of the desire or need for punishment, *see* PLEASURE AND PAIN 8c; SIN 5.

ADDITIONAL READINGS

Listed below are works not included in *Great Books of the Western World*, but relevant to the idea and topics with which this chapter deals. These works are divided into two groups:

I. Works by authors represented in this collection.
II. Works by authors not represented in this collection.

For the date, place, and other facts concerning the publication of the works cited, consult the Bibliography of Additional Readings which follows the last chapter of *The Great Ideas.*

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Chapter 75: QUALITY

INTRODUCTION

IT is sometimes supposed that the fundamental categories in terms of which men think they are describing reality or their experience merely reflect the conventions of their language. Substance and attribute—and among attributes, quality and quantity—happen to be fundamental categories in western thought, it is held, only because the group of languages which the western cultures use all have a grammatical structure that involves a distinction between noun and adjective and between different kinds of adjectives. It is said, for example, that Aristotle's enumeration of the categories is merely a verbal classification based on Greek grammar. When he says that the basic terms of discourse represent substances, qualities, quantities, relations, and so forth, he is recognizing the grammatical difference between such words as "man" and "white," or between "white" and "six feet tall" and "double." The lineaments of reality, the varieties of being, or the modes of experience are not, it is held, thereby finally described.

In the tradition of the great books, another interpretation generally prevails. Even those who disagree in one way or another about the basic categories do not regard them as conventional or of linguistic origin. Kant, for example, disagrees with Aristotle's listing of the categories. He makes substance a mode of relation rather than coordinate with quality, quantity, and relation. He calls his categories "transcendental" to indicate that they are not drawn from experience and that, as *a priori* forms of thought, they determine the structure of all possible experience. Aristotle, on the other hand, draws his categories from experience. He thinks that they represent fundamental modes of being and that they are, therefore, the basic concepts in terms of which thought apprehends reality. Despite all these differences, Kant and Aristotle agree that the categories signify real—not verbal—distinctions. Their agreement on this point seems to be shared even by those, like Hume, who question our ability to know whether substances exist; or those, like Berkeley, who question the validity of the distinction between quality and quantity.

In one sense, no one questions the existence of qualities, as they do the existence of substances—the enduring things, material or otherwise, in which qualities are supposed to inhere. Everyone somehow acknowledges the hot and the cold, the light and the dark, the moist and the dry, the hard and the soft. But such acknowledgement does not preclude a number of basic questions about quality on which much disagreement exists.

Are qualities attributes? Do they exist, that is, only as *qualifiers*, only as belonging to something else? Or do they exist independently, in and of themselves? If qualities are attributes, do they belong to things quite apart from our experience of them, or do they belong to things only as experienced and have no separate reality? Do things have in reality certain attributes that cause in us the experience of other traits which we then attribute to the things themselves?

Are all the attributes of things, whether in or apart from experience, to be conceived as qualities, and if so, are there different kinds of qualities? Or is quality only one kind of attribute, and if so, how is quality related to other kinds of attributes? Is quality, for example, distinct from quantity, dependent on quantity, reducible to quantity, affected by quantity?

These questions appear to be related in ways which make the issues they raise dependent on one another. If, in addition, their presuppositions and implications are observed, it will be seen that they cannot be fully discussed without entering into matters considered in other chap-

ters, such as the notions of substance and accident in the chapter on BEING; the theory of experience and the various accounts of sense-perception and the objects of sense in the chapters on EXPERIENCE and SENSE; and, of course, some of the principal topics considered in the closely related chapter on QUANTITY.

SPINOZA DISTINGUISHES between substance and mode as that which exists in itself and that which exists in another thing. He lays down as an axiom that "everything which is, is either in itself or in another." Whether or not qualities are modes of substance, it seems to be clear that Spinoza would not call them substances. The notion of qualities existing in themselves, and not as the qualities *of* anything, seems to be self-contradictory. As Descartes points out, to assert "the existence of real accidents," by which he means the existence of qualities or quantities apart from substances, is to deny the distinction between substance and accident. "Substance," he writes, "can never be conceived after the fashion of accidents, nor can it derive its reality from them"; whereas "no reality can be ascribed to [accidents], which is not taken from the idea of substance."

Anyone who acknowledges the distinction between substance and accident also conceives qualities as accidents or attributes, *i.e.*, as existing in the things they qualify. Spinoza, Descartes, Locke, and Aristotle do not conceive substance in the same way, nor do they all use the word "accident" to name the characteristics which inhere in substance. Locke, for example, uses the word "quality" with almost the same generality that Spinoza gives to the word "mode," or Descartes and Aristotle to "accident." And the word "substance" Locke uses in a sense that is nearer to Aristotle's meaning for the word "matter," when, in trying to conceive bare substance as the underlying "I know not what," Locke defines this substratum as that which supports qualities. Apart from its qualities, substance has no positive characteristics.

Nevertheless, such differences in theory leave untouched the point of agreement that qualities do not float freely—without any support—in either reality or experience. Even Berkeley's denial of matter, or of bodies existing apart from their being perceived, does not turn qualities into substances, for qualities *as perceived* are the qualities of bodies *as perceived*, and both together have their existence *in* the perceiver.

The contrary view—that qualities exist in and of themselves—does not seem to receive clear or explicit expression in the tradition of the great books. It may be implied in the conception of experience which Hume develops more fully in the *Treatise on Human Nature* than in the *Enquiry*. There it seems to be supposed that each element of experience has the same reality as any other; that each stands by itself without any perceptible dependence upon any other; and that it has no existence beyond its momentary appearance. On this view no enduring substances exist. In addition, it is as appropriate to call the elements of experience "qualities" as it is to call them anything else. Experience can be described as nothing but qualities and relations—or as qualities related by succession and contiguity.

The notion that experience is a continual flux in which nothing has a continuing identity from moment to moment, seems to be basic to any theory which denies substances and affirms the independent reality of qualities. The theory of qualities which Plato attributes to Heraclitus or his followers illustrates this. "Their first principle," Socrates tells Theaetetus, "is that all is motion, and upon this all the affections of which we were just now speaking are supposed to depend; there is nothing but motion, which has two forms, one active and the other passive, both in endless number; and out of the union and friction of them is generated a progeny endless in number, having two forms, sense and the object of sense."

For example, "when the eye and the appropriate object meet together and give birth to whiteness and the sensation connatural with it ... then, while the sight is flowing from the eye, whiteness proceeds from the object which combines in producing the color. ... This is true of all sensible objects, hard, warm, and the like, which are similarly to be regarded not as having any absolute existence, but as being all of them generated by motion in their intercourse with one another ... for the agent has no existence until united with the patient, and the patient has no existence until united with the agent. ...

And from all these considerations," Socrates says, "there arises a general reflection that there is no self-existent thing, but everything is becoming and in relation."

Socrates explains that, for those who assert a universal flux, qualities are not only the products of motion, but also are themselves in motion—"not even white continues to flow white, and whiteness itself is a flux or change which is passing into another color." There is no need to refute this doctrine, Socrates thinks, since it refutes itself by its unintelligibility or, worse, its inability to say anything definite in consequence of denying that words can have a constant meaning from moment to moment.

Aristotle concurs in this attitude toward "the most extreme view of the professed Heracliteans," but goes on to remark that "not even at different times does one sense disagree about the quality, but only about that to which the quality belongs. I mean, for instance, that the same wine might seem, if either it or one's body changed, at one time sweet and at another time not sweet; but at least the sweet, such as it is when it exists, has never yet changed." The sweet thing may become sour, either in itself or to us, but sweetness itself never becomes sourness.

THAT QUALITIES DO NOT change into one another, whereas substances undergoing alteration change from one quality to another, seems to Aristotle to distinguish quality from substance. "The most distinctive mark of substance," he writes, "appears to be that, while remaining numerically one and the same, it is capable of having contrary qualities. . . . Thus, one and the same color cannot be white and black. . . . But the same individual person is at one time white, at another black, at one time warm, at another cold, at one time good, at another bad." The qualities do not change, but the substance in changing, passes from one quality to its contrary. (The difference between change of quality, or alteration, and the other types of change which substances can undergo, is discussed in the chapter on CHANGE.)

Aristotle suggests another mark of distinction between substance and quality. One substance, he says, never stands to another as its contrary, in the way in which qualities are contrary to one another, like hot and cold, white and black, good and bad. A quality may have a correlative as well as a contrary, *e.g.*, if knowledge is a quality of mind, the object known is its correlative, whereas ignorance of the object is the contrary of knowledge. In some cases, the contrary qualities may be the extremes or limits of a continuous series of intermediates, *e.g.*, white and black with all the intermediate greys. In some cases, as with knowledge and ignorance, the contrary qualities have no intermediates. (Contrariety and correlation, most frequently exemplified by qualities, are considered in the chapter on OPPOSITION.)

Still another mark of distinction between substance and quality, according to Aristotle, is that qualities *do* and substances *do not* admit of variation in degree. "One man cannot be more man than another," he writes, "as that which is white may be more or less white than some other white object. . . . The same quality, moreover, is said to subsist in a thing in varying degrees at different times. A white body is said to be whiter at one time than it was before, or a warm body is said to be warmer or less warm than at some other time."

This observation raises a number of questions. Does variation in the degree of a quality from time to time imply that qualities themselves undergo change, just as substances undergo change in quality? Do they remain one and the same in kind while varying in degree? Is this change which qualities undergo as they increase or decrease in intensity, a change in quantity? Furthermore, does the fact that something white can become more or less white, mean that a quality can have a certain quantity even as a body can? Aquinas suggests an answer by distinguishing between what he calls the "dimensive quantity" of bodies and the "virtual quantity" of qualities. Virtual quantity is the degree or intensity which non-quantitative attributes may possess—such personal qualities as virtues and habits, or such corporeal qualities as colors and textures.

But this still seems to leave a very difficult question to be answered. How can qualities have the attribute of quantity without becoming substances? On the principle which both Aristotle and Aquinas accept—that accidents exist only in substances—how can one kind of

accident (quantity) exist in another (quality)? The view which William James holds, namely, that variation in intensity creates differences in color as much as variation in hue, would solve the problem, or rather it would dismiss the problem as not genuine by denying Aristotle's thesis that a color can remain the same while varying in degree.

However handled, the problem is not peculiar to qualities. Actions and passions, Aristotle points out, also vary in degree. Nor are qualities distinguished from everything else in the world by having contraries. Correlatives can also have contraries, as can actions and passions. Furthermore, not all qualities have contraries. Not all admit of variation in degree. Shape, like triangular or square, which Aristotle regards as a kind of quality, cannot vary in this way. The square thing cannot become more or less square. In view of all this, Aristotle concludes that there is one characteristic alone which differentiates quality not only from substance, but also from everything else. Quality is the basis for saying that things are like or unlike, similar or dissimilar, as quantity is the basis for saying that things are equal or unequal.

Other contrasts between quality and quantity, especially those bearing on the reduction of quality to quantity, are discussed in the chapter on QUANTITY. Here it may be illuminating to apply the foregoing distinction between quality and quantity to shapes or figures. Shape or figure is a curious mixture of quality and quantity. It is a quantified quality or a qualified quantity or, as Aquinas says, "a quality about quantity, since the nature of shape consists in fixing the bounds of magnitude." This seems to be evident in the fact that shapes, like quantities, do not admit of variation in degree. But it may also be seen in the fact that Euclid deals quite separately with problems concerning the *equality* of triangles and problems concerning their *similarity*.

EXCEPT FOR THE QUESTION of whether qualities subsist by themselves or are the attributes of substances, most of the problems of quality seem to concern its distinction from or relation to quantity. As we have seen, the question of the degree or amount of a quality involves the notion of quantity. Even more explicitly a problem of how qualities and quantities are related, is the question of the order of these two attributes. Can it be said that quantities are the more fundamental attributes of things and that they somehow precede or underlie qualities? Is it the reverse? Or are qualities prior in certain respects and quantities in other respects?

Aristotle's theory of the elements seems to give absolute primacy to quality in the realm of material things. The four elements of matter are characterized by combinations of two pairs of contrary qualities, the hot and the cold, the dry and the moist. On the other hand, the atomic theory of Lucretius appears to make quantities, such as size and weight, the primary properties of matter. Newton's enumeration of what he calls "the universal qualities of all bodies whatsoever," including, of course, their "least particles," lists "extension, hardness, impenetrability, mobility, and inertia." As indicated in the chapter on QUANTITY, the very reason Newton gives for calling these qualities "universal" would seem to justify calling them "quantities" rather than qualities. In any case, Newton's view, like that of the ancient atomists, seems to be opposed to the theory of the *elementary* and *contrary* qualities.

But Aristotle himself also appears to hold a view which makes quantity prior to quality. Considering the way in which the quality *white* is in a body, he says that it is in the body in virtue of the body's extended surface. If surface or extension is interpreted as a physical quantity, then it would seem to follow that this quantity underlies a body's possession of visible and perhaps other qualities. Aquinas, for example, says that "quantity is the proximate subject of the qualities that cause alteration, as surface is of color," and, again, that "quantity is in substance before sensible qualities are."

This last statement can be interpreted to mean that quantity is universally prior to quality among the attributes of substance. Or it can be understood to mean that quantity is prior only to *sensible* qualities and then only among the physical attributes of bodies. Which interpretation is chosen depends in part on whether *all* qualities are sensible.

It would seem that all qualities are not sensible, according to Aristotle and Aquinas, and therefore quantity is not prior to every kind of

quality among the accidents of substance. Natural qualities, Aquinas writes, "may be in the intellectual part or in the body and its powers." Certainly the qualities inherent in the intellectual part of man's nature are not sensible; nor are the first two of the four species of quality which both Aristotle and Aquinas enumerate.

In their enumeration, human qualities—the habits or dispositions of a man, such as knowledge and virtue, or beauty and health—are the first sort. The powers or inborn capacities whereby men and other animals act to develop their natures are a second type of quality; *e.g.*, the power of sensitivity in animals, the power of rationality in men, are qualities proper to these species and are, therefore, sometimes called "properties." This second type of quality does not seem to be restricted to living things. Inanimate bodies also have, among their properties, certain fundamental powers of action or reaction. The third and fourth types of quality differ from the first two in that both are sensible, *i.e.*, capable of affecting the senses directly and, therefore, sometimes called "affective qualities." Of these, the third type—shape or figure—has already been discussed. The fourth type—colors, sounds, textures, odors, tastes, and such thermal qualities as hot and cold—are, more than shape or figure, regarded as the principal affective or sensible qualities.

The fact that Aristotle regards certain qualities, such as hot and cold, or hard and soft, as being dispositions or powers as well as being affective qualities, need not invalidate his fourfold classification. His classification of the same attribute under two distinct species of quality seems to imply that it can be considered from two points of view. The elementary qualities, for example, are affective or sensible qualities but they are also the active qualities or powers —the properties—of the elements.

In view of this classification of qualities, it does not seem to be the case that quantities are prior to *all* the qualitative attributes of substance. On the conception of living things as composite of soul and body, the qualities which are vital powers are usually regarded as properties which the thing has in virtue of having a soul. They are certainly not founded upon the quantitative attributes of the organism's body. The moral and spiritual qualities of men seem to afford another example of qualities either prior to, or at least independent of, quantities. Even in the case of inanimate bodies, it may be that certain fundamental properties or powers are essentially qualitative rather than quantitative. The proposition that in substances, quantities are prior to qualities—or that qualities inhere in substances in virtue of their quantities—may apply only to sensible qualities, as, for example, colors in relation to surfaces.

ONE OF THE GREAT ISSUES in the tradition of western thought concerns our perception or knowledge of qualities. If certain characteristics which are not directly sensible are to be called "qualities," then the problem of how we know such qualities does not differ from the problem of how we know anything else that cannot be apprehended by our senses. We may, for example, be able to infer such qualities as habits or powers from the sensible evidences of a thing's behavior, even as in turn we infer the thing's nature or essence from its proper qualities or properties. With regard to sensible qualities, the problem does not seem to be *how* we know them—for the fact that they are sensible means that they are knowable by the senses. The question is rather one of the mode of existence—the objectivity or subjectivity—of the qualities sensed.

Locke's famous distinction between primary and secondary qualities states the problem. It is preceded by his distinction between the qualities of things and the ideas in our minds. "A snow-ball," he writes, has "the power to produce in us the idea of white, cold, and round. The powers to produce those ideas in us, as they are in the snow-ball, I call qualities; and as they are sensations or perceptions in our understandings, I call them ideas; which ideas, if I speak of them sometimes as in the things themselves, I would be understood to mean those qualities in the objects which produce them in us."

The primary qualities of bodies are those which are utterly inseparable from body—such as "sense constantly finds in every particle of matter which has bulk enough to be perceived, and the mind finds inseparable from every par-

ticle of matter, though less than to make itself singly perceived by our senses." Locke's enumeration of these "original or primary qualities of body, which we may observe to produce simple ideas in us, *viz.*, solidity, extension, figure, motion or rest, and number," closely resembles Newton's list of the universal qualities of perceptible bodies and of their "least particles" or atoms.

In contrast, the secondary qualities, such as colors, sounds, tastes, etc., are "nothing in the objects themselves, but powers to produce various sensations in us by their primary qualities, *i.e.*, by the bulk, figure, texture, and motion of their insensible parts. . . . From whence," Locke declares, "I think it is easy to draw this observation, that the ideas of primary qualities of bodies, are resemblances of them, and their patterns do really exist in the bodies themselves, but the ideas produced in us by these secondary qualities, have no resemblance of them at all. There is nothing like our ideas existing in the bodies themselves. They are in the bodies we denominate from them, only a power to produce those sensations in us: what is sweet, blue, or warm, in idea, is but the certain bulk, figure and motion of the insensible parts in the bodies which we call so."

Locke thinks the sensation of pain confirms this insight. As the piece of steel which by its corporeal properties has the power to produce pain in us, does not itself have the quality of pain, so it does not have anything corresponding to the ideas of blueness or coldness which it produces in us, except the power to produce these ideas through the action of its primary qualities on our senses. Yet Locke maintains that all our simple ideas of quality—not only of primary, but also of secondary qualities—"agree with the reality of things." By *agreement* he does not mean *resemblance* in the sense of copying; and therefore he thinks he can, without inconsistency, deny any *resemblance* between sensations of color or taste and the secondary qualities of bodies, while saying that "if sugar produces in us the ideas we call whiteness and sweetness, we are sure there is a power in sugar to produce those ideas in our minds, or else they could not have been produced by it."

Locke's point, however, is sometimes given exactly the opposite implication. Earlier thinkers who do not speak of primary and secondary qualities attribute to bodies only the characteristics which Locke calls primary, and give what he calls secondary qualities no reality at all, that is, no existence outside the mind. The secondary qualities are not qualities of things, but of sensations or images. Descartes, for example, says that nothing belongs "to the nature or essence of body except . . . length, breadth and depth, admitting of various shapes and various motions. . . . On the other hand, colors, odors, savours, and the rest of such things are merely sensations existing in my thought, and differing no less from bodies than pain differs from the shape and motion of the instrument which inflicts it."

Hobbes similarly regards the various sensible qualities as feelings in us—the seemings or fancies of sense. All these "qualities called sensible are in the object that causes them, nothing but so many several motions of the matter. . . . The object is one thing, the fancy is another." One type of "absurd assertion," in the opinion of Hobbes, consists in giving "the names of the accidents of bodies without us, to the accidents of our own bodies, as they do that say, *the color is in the body, the sound is in the air*, etc."

The attributes or accidents which Descartes and Hobbes assign to bodies seem to be quantities rather than qualities. Accordingly, whereas Locke attributes both primary and secondary *qualities* to bodies, Hobbes and Descartes seem to be saying that bodies differ from one another only quantitatively, and that qualities or qualitative differences occur only in the realm of sense or thought. Expounding the atomism of Democritus and Epicurus, Lucretius appears to make precisely this point when he says that the first-beginnings or atoms are characterized only by size, weight, shape, and motion. "The bodies of matter," he writes, "have no color at all." They are bereft not only of color; "they are also sundered altogether from warmth and cold, and fiery heat, and are carried along barren of sound and devoid of taste." These qualities, caused by the blows of the atoms upon the sense-organs of animals, are the qualities of sensations, not of things.

THE CRITICISM OF THIS THEORY—whether in the formulation of Locke or in that of Descartes,

Hobbes, and Lucretius—seems itself to take two forms. Aristotle, for example, criticizes Democritus and the atomists for treating perceptible qualities differently from perceptible quantities. According to his own theory of the objects of sense, some, like colors, sounds, odors, flavors—which Locke calls "secondary qualities" and the others simply "qualities"—are the proper objects of the special senses, such as sight, hearing, smell, taste. In contrast to these "proper sensibles," each exclusively perceived by one and only one sense, there are the "common sensibles," such as size and shape, number, movement and rest, which can be perceived commonly by several senses, *e.g.*, shape is visible and tangible, motion is visible and audible. Such sensible attributes of body, which Locke calls "primary qualities," Aristotle, no less than Hobbes or Lucretius, regards as quantities, not qualities. Reporting his view, Aquinas writes that "the common sensibles are all reducible to quantity."

Aristotle's critical point seems to be that the atomists "reduce the proper to the common sensibles, as Democritus does with white and black; for he asserts that the latter is a mode of the rough and the former a mode of the smooth, while he reduces savours to the atomic figures." The atomists sometimes make the opposite error of representing "all objects of sense as objects of touch." But in either case they have no ground, in Aristotle's opinion, for giving to certain sensible attributes—whether these be tangible qualities or the commonly sensible quantities—an objective reality they deny to other sensible traits, like colors, sounds, and odors.

Aristotle's theory of sensation and the sensible is discussed more fully in the chapter on SENSE. According to it, the qualities, no less than the quantities, perceptible by sense have real or actual existence as the attributes of bodies. On this score Aristotle does not differentiate between qualities (the proper sensibles) and quantities (the common sensibles). Just as a body actually has the shape we perceive it to have, so it actually has the color we perceive it to have, on the supposition, of course, that our perception is accurate in both cases. If the senses are fallible at all, we are less prone to make errors, Aristotle thinks, in the field of the proper than of the common sensibles, *e.g.*, the stick in water which looks bent to the eye feels straight to the hand.

PRECISELY THE OPPOSITE direction seems to be taken by Berkeley and Hume. Where Aristotle criticizes the atomists for treating quantities (or common sensibles) as objective, and qualities (or proper sensibles) as subjective, Berkeley criticizes Locke for treating primary and secondary qualities differently. Where Aristotle's own theory assigns the same reality to all objects of sense, granting them an actuality apart from perception, Berkeley makes the actuality of the primary as well as the secondary qualities dependent upon their being perceived.

"Some there are," writes Berkeley, "who make a distinction betwixt *primary* and *secondary* qualities. By the former they mean extension, figure, motion, rest, solidity or impenetrability and number; by the latter they denote all other sensible qualities, as colors, sounds, tastes and so forth. The ideas we have of these they acknowledge not to be the resemblances of anything existing without the mind or unperceived, but they will have our ideas of the primary qualities to be patterns or images of things which exist without the mind, in an unthinking substance which they call Matter."

Berkeley then argues that the so-called primary qualities are incapable of being separated, in reality or thought, from the secondary qualities, and that, therefore, the one like the other exists only in the mind. "In short, let anyone consider those arguments which are thought manifestly to prove that colors and tastes exist only in the mind, and he shall find they may with equal force be brought to prove the same thing of extension, figure, and motion." His own arguments, he thinks, "plainly show it to be impossible that any color or extension at all, or other sensible quality whatsoever, should exist in any unthinking subject without the mind, or in truth, that there should be any such thing as an outward object."

Hume professes to adopt Berkeley's reasoning. "It is universally allowed by modern enquirers," he writes, "that all the sensible qualities of objects, such as hard, soft, hot, cold, white, black, etc., are merely secondary, and

exist not in the objects themselves, but are perceptions of the mind, without any external archetype or model which they represent. If this be allowed, with regard to secondary qualities, it must also follow with regard to the supposed primary qualities of extension and solidity.... The idea of extension is entirely acquired from the senses of sight and feeling; and if all the qualities, perceived by the senses, be in the mind, not in the object, the same conclusion must reach the idea of extension. . . . Nothing can save us from this conclusion, but the asserting that the ideas of those primary qualities are attained by *Abstraction*, an opinion, which, if we examine it accurately, we shall find to be unintelligible, and even absurd."

One fundamental point about sensible qualities may, however, remain unaffected by this long and many-sided controversy. No one denies that sensible qualities are the elements of human experience. That they are "the original, innate, or *a priori* properties of our subjective nature," James declares, must be allowed by "all schools (however they otherwise differ). . . . This is so on either of the two hypotheses we may make concerning the relation of the feelings to the realities at whose touch they become alive."

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REFERENCES

To find the passages cited, use the numbers in heavy type, which are the volume and page numbers of the passages referred to. For example, in **4** HOMER: *Iliad*, BK II [265–283] **12d**, the number **4** is the number of the volume in the set; the number **12d** indicates that the passage is in section d of page 12.

PAGE SECTIONS: When the text is printed in one column, the letters a and b refer to the upper and lower halves of the page. For example, in **53** JAMES: *Psychology*, **116a-119b**, the passage begins in the upper half of page 116 and ends in the lower half of page 119. When the text is printed in two columns, the letters a and b refer to the upper and lower halves of the left-hand side of the page, the letters c and d to the upper and lower halves of the right-hand side of the page. For example, in **7** PLATO: *Symposium*, **163b-164c**, the passage begins in the lower half of the left-hand side of page 163 and ends in the upper half of the right-hand side of page 164.

AUTHOR'S DIVISIONS: One or more of the main divisions of a work (such as PART, BK, CH, SECT) are sometimes included in the reference; line numbers, in brackets, are given in certain cases; *e.g.*, *Iliad*, BK II [265–283] **12d**.

BIBLE REFERENCES: The references are to book, chapter, and verse. When the King James and Douay versions differ in title of books or in the numbering of chapters or verses, the King James version is cited first and the Douay, indicated by a (*D*), follows; *e.g.*, OLD TESTAMENT: *Nehemiah*, 7:45—(*D*) *II Esdras*, 7:46.

SYMBOLS: The abbreviation "esp" calls the reader's attention to one or more especially relevant parts of a whole reference; "passim" signifies that the topic is discussed intermittently rather than continuously in the work or passage cited.

For additional information concerning the style of the references, see the Explanation of Reference Style; for general guidance in the use of *The Great Ideas*, consult the Preface.

1. The nature and existence of qualities: the relation of quality to substance or matter; the transcendental categories of quality

7 PLATO: *Timaeus*, 462b-466a / *Theaetetus*, 519d-520b; 521d-522a; 533b-d / *Philebus*, 615c-616c

8 ARISTOTLE: *Categories*, CH 5 [3^b10–23] 7d-8a; CH 8 13d-16c / *Posterior Analytics*, BK I, CH 22 [83^a36–$^b13$] 113d-114a / *Physics*, BK V, CH 2 [226^a26–30] 306d / *Metaphysics*, BK V, CH 14 541c-542a; BK VII, CH 13 [1038^b24–28] 562c; BK IX, CH 1 [1045^b28–32] 570b; BK XII, CH 1 [1069^a18–25] 598a; CH 5 [1070^b36–1071^a4] 600b-c; [1071^a23–$^b1$] 600d-601a / *Sense and the Sensible*, CH 6 [445^b4–21] 683b-d

10 GALEN: *Natural Faculties*, BK I, CH 2, 167d

12 LUCRETIUS: *Nature of Things*, BK I [298–304] 4d; BK II [398–521] 20a-21c; [730–864] 24b-26a

17 PLOTINUS: *First Ennead*, TR VIII, CH 8, 30d-31a / *Second Ennead*, TR IV, CH 8 52c-53a; CH 13 55b-d; TR VI 60c-62d / *Third Ennead*, TR VI, CH 8–10 111c-113a / *Fourth Ennead*, TR IV, CH 29, 173d-174a; TR VII, CH 8, 196a-b / *Sixth Ennead*, TR I, CH 10–12 257b-259d; CH 29 267c-268b; TR II, CH 14 276c-277a; TR III, CH 6 284a-c; CH 15 289a-c; CH 19–20 291d-293a

18 AUGUSTINE: *City of God*, BK XI, CH 10, 328a-d

19 AQUINAS: *Summa Theologica*, PART I, Q 67, A 3, REP 1 351b-352a; Q 78, A 3, REP 1–2 410a-411d; Q 83, A 1, REP 5 436d-438a; Q 85, A 1, REP 1 451c-453c; Q 115, A 3, REP 2 588c-589c

20 AQUINAS: *Summa Theologica*, PART I–II, Q 49, AA 1–2 1b-4a; Q 53, A 2, REP 1–3 21a-d; Q 110, A 2, REP 3 349a-d; PART III SUPPL, Q 91, A 4, REP 1 1022d-1023d

23 HOBBES: *Leviathan*, PART I, 49b-d; PART III, 172b

31 DESCARTES: *Rules*, XII, 19a-c / *Meditations*, VI, 100a-d / *Objections and Replies*, 162d-165d esp 164d-165a; 211a-b; 228c-229c; 229d-230a; 231a-b

34 NEWTON: *Optics*, BK I, 428a-b

35 LOCKE: *Human Understanding*, BK I, CH III, SECT 19 117c-d; BK II, CH VIII 133b-138b passim, esp SECT 8 134b-c; CH XIII, SECT 19–20 152c-d; CH XXI, SECT 3 178d; CH XXIII, SECT 1–6 204a-205c; CH XXX, SECT 2 238b-c; CH XXXI, SECT 2 239b-d; SECT 6, 241a-d; SECT 11 242d-243a; SECT 13, 243b; CH XXXII, SECT 14–16 245c-246b; BK III, CH IV, SECT 16 263b-c; CH VI, SECT 2–3 268c-d; SECT 6 269d-270a; BK IV, CH III, SECT 12–14 316a-d; CH IV, SECT 4 324c

35 BERKELEY: *Human Knowledge* 403a-444d passim, esp INTRO, SECT 7 406a-b, SECT 1–3

(1. *The nature and existence of qualities: the relation of quality to substance or matter; the transcendental categories of quality.*)

413a-d, SECT 7–15 414b-416a, SECT 25–33 417d-419a, SECT 48–49 422a-b, SECT 56–57 423c-424a, SECT 73 427b-c, SECT 76 427d-428a, SECT 78 428a-b, SECT 86–91 429c-431a, SECT 102 432d-433a

35 HUME: *Human Understanding*, SECT XII, DIV 122–123 505c-506a

42 KANT: *Pure Reason*, 15b-c; 23a-24a; 29d-33d esp 30d-31a, 31d-32a, 32d-33b [fn 1]; 41c-45b; 212a-c / *Intro. Metaphysic of Morals*, 385a-c

48 MELVILLE: *Moby Dick*, 144b-145a

53 JAMES: *Psychology*, 127b-128a; 457a-459b; 546b-547b [fn 1]; 851b-852a; 860b; 882a-883a

2. The kinds of quality

2a. Sensible and nonsensible qualities: habits, dispositions, powers or capacities, and affective qualities

8 ARISTOTLE: *Categories*, CH 8 [8^b26–10^a26] 13d-15b; CH 15 [15^b17–19] 21c / *Physics*, BK V, CH 2 [226^a26–30] 306d / *Metaphysics*, BK V, CH 14 541c-542a; CH 19–21 543d-544b

9 ARISTOTLE: *History of Animals*, BK VIII, CH 1 [588^a18–$^b4$] 114b,d

17 PLOTINUS: *Second Ennead*, TR VI, CH 1 60c-61c / *Sixth Ennead*, TR I, CH 11–12 258b-259d esp CH 12, 258d-259a; TR III, CH 16–19 289c-292b

20 AQUINAS: *Summa Theologica*, PART I–II, Q 49, A 2 2b-4a; A 4, ANS 5a-6a; Q 110, A 3, REP 3 350a-d

35 LOCKE: *Human Understanding*, BK II, CH VIII, SECT 8–10 134b-d; SECT 23–26 137a-138b; CH XXI, SECT 1–6 178b-180a; CH XXIII, SECT 7–10 205d-206d; SECT 37, 214a-b; CH XXX, SECT 2 238b-c; CH XXXII, SECT 14–16 245c-246b esp SECT 16 246b

2b. Primary and secondary qualities: the related distinction of proper and common sensibles

7 PLATO: *Timaeus*, 462c-463d; 464b-465d

8 ARISTOTLE: *Soul*, BK II, CH 6 [418^a6–19] 648d-649a; BK III, CH 1 [425^a14–29] 657b-c; [425^b4–10] 657c-d / *Sense and the Sensible*, CH 1 [437^a3–10] 673d-674a; CH 4 [442^a30–$^b18$] 680a-b; CH 6 [445^b4–446^a20] 683b-684c

9 ARISTOTLE: *Ethics*, BK VI, CH 8 [1142^a23–31] 391b-c

10 GALEN: *Natural Faculties*, BK I, CH 6, 169c-d

12 LUCRETIUS: *Nature of Things*, BK II [398–521] 20a-21c; [730–864] 24b-26a; BK IV [522–721] 51a-53d

19 AQUINAS: *Summa Theologica*, PART I, Q 78, A 3 esp REP 2 410a-411d; A 4, REP 2 411d-413d

20 AQUINAS: *Summa Theologica*, PART III SUPPL, Q 92, A 2, ANS 1032b-1034b

23 HOBBES: *Leviathan*, PART I, 49b-d; PART III, 172b

30 BACON: *Novum Organum*, BK I, APH 66, 114d-115a

31 DESCARTES: *Rules*, XII, 19a-c / *Objections and Replies*, 162d-165d; 228c-229c; 229d-230a; 231a-b

34 NEWTON: *Principles*, BK III, RULE III 270b-271a / *Optics*, BK I, 428a-b

35 LOCKE: *Human Understanding*, BK II, CH V 131b; CH VIII, SECT 7–26 134b-138b; CH XXI, SECT 3 178d; SECT 75 200b-d; CH XXIII, SECT 7–13 205d-208b; SECT 37, 214a-b; CH XXX, SECT 2 238b-c; CH XXXI, SECT 2 239b-d; BK III, CH IV, SECT 16 263b-c; BK IV, CH III, SECT 11–14 315d-316d esp SECT 13 316a-b; SECT 28 322a-c

35 BERKELEY: *Human Knowledge*, SECT 9–15 414d-416a; SECT 25 417d-418a; SECT 73 427b-c; SECT 102 432d-433a

35 HUME: *Human Understanding*, SECT XII, DIV 122 505c-d

42 KANT: *Pure Reason*, 15b-c; 23a-24a; 29d-33d esp 30d-31a, 31d-32a, 32d-33b [fn 1]

53 JAMES: *Psychology*, 503a; 651a

3. Quality and quantity

3a. The distinction between quality and quantity: its relation to the distinction between secondary and primary qualities

8 ARISTOTLE: *Categories*, CH 6 [6^a31–36] 10d-11a; CH 8 [11^a5–14] 16a-b / *Generation and Corruption*, BK I, CH 2 [315^b32–316^a4] 411b-c / *Metaphysics*, BK V, CH 4 [1014^b20–27] 535a; CH 14 [1020^b3–8] 541d; CH 28 [1024^b10–16] 546c; BK X, CH 1 [1052^b1–1053^b8] 578d-580a; BK XI, CH 6 [1063^a22–28] 591c; BK XII, CH 4 [1070^a31–$^b9$] 599d-600a; BK XIII, CH 8 [1083^a1–17] 614d

12 LUCRETIUS: *Nature of Things*, BK I [298–304] 4d; BK II [398–521] 20a-21c; [730–864] 24b-26a; BK III [221–227] 32d-33a; BK IV [522–721] 51a-53d

17 PLOTINUS: *Second Ennead*, TR IV, CH 13 55b-d / *Fourth Ennead*, TR VII, CH 8, 196a-b / *Sixth Ennead*, TR III, CH 14 288b-289a

19 AQUINAS: *Summa Theologica*, PART I, Q 78, A 3, REP 2 410a-411d

20 AQUINAS: *Summa Theologica*, PART I–II, Q 49, A 2, ANS 2b-4a

23 HOBBES: *Leviathan*, PART I, 49b-d

31 DESCARTES: *Rules*, XII, 19a-c / *Objections and Replies*, 162d-165d esp 164d-165a; 228c-229c; 231a-b

35 LOCKE: *Human Understanding*, BK II, CH VIII, SECT 7–26 134b-138b passim, esp SECT 9–10 134c-d; CH XXI, SECT 3 178d; CH XXIII, SECT 8–9 206a-c; SECT 11 206d-207a; SECT 37, 214a-b; BK IV, CH II, SECT 9–13 311b-312b; CH III, SECT 12–14 316a-d esp SECT 13 316a-b; SECT 28 322a-c

35 BERKELEY: *Human Knowledge*, SECT 9–15 414d-416a; SECT 25 417d-418a; SECT 73 427b-c; SECT 102 432d-433a
35 HUME: *Human Understanding*, SECT XII, DIV 122 505c-d
42 KANT: *Pure Reason*, 15b-c; 23a-24a; 29d-33d esp 30c-31a, 31d-32a, 32d-33b [fn 1]; 66d-72c esp 68a-72c; 211c-213a
46 HEGEL: *Philosophy of Right*, PART I, par 63 28b-c; ADDITIONS, 40 122d-123b
50 MARX: *Capital*, 149d
53 JAMES: *Psychology*, 320a-322a

3b. Shape or figure as qualified quantity

8 ARISTOTLE: *Categories*, CH 8 [10^a11–16] 15a-b; [11^a5–14] 16a-b / *Metaphysics*, BK V, CH 14 [1020^a35–$^b1$] 541c
11 EUCLID: *Elements*, BK VII, DEFINITIONS, 16–19 127b
11 NICOMACHUS: *Arithmetic*, BK II, 831d-841c
17 PLOTINUS: *Sixth Ennead*, TR III, CH 14 288b-289a
19 AQUINAS: *Summa Theologica*, PART I, Q 7, A 1, REP 2 31a-d; Q 78, A 3, REP 2 410a-411d
20 AQUINAS: *Summa Theologica*, PART I-II, Q 49, A 2, ANS 2b-4a; PART III, Q 2, A 1, ANS 710a-711c
23 HOBBES: *Leviathan*, PART IV, 262b
31 DESCARTES: *Geometry* 295a-353b esp BK I, 298b-304a, BK II, 308a-314b
33 PASCAL: *Arithmetical Triangle*, 455a-456a
42 KANT: *Pure Reason*, 212a-c
53 JAMES: *Psychology*, 548b-552a

3c. The degrees or amounts of a quality: intensity and extensity; the quantitative conditions of variation in quality

7 PLATO: *Philebus*, 615c-616c
8 ARISTOTLE: *Categories*, CH 5 [3^b32–4^a9] 8a-b; CH 7 [6^b20–26] 11b; CH 8 [10^b26–11^a14] 15d-16b; CH 10 [12^a2–25] 17b-c / *Topics*, BK III, CH 5 166b-c / *Physics*, BK IV, CH 9 [217^a34–$^b11$] 297b / *Metaphysics*, BK IV, CH 7 [1011^b29–37] 531d; BK X, CH 1 [1052^b1–1053^b8] 578d-580a; CH 3 [1054^b6–11] 581b; CH 7 584c-585b; BK XI, CH 3 [1061^a18–28] 589b-c
9 ARISTOTLE: *History of Animals*, BK VIII, CH 1 [588^a18–$^b4$] 114b,d / *Parts of Animals*, BK II, CH 2 [648^b12–649^b9] 173a-174a / *Ethics*, BK II, CH 6 351c-352d; BK X, CH 3 [1173^a14–29] 427b-c
12 LUCRETIUS: *Nature of Things*, BK II [826–833] 25c; BK IV [687–705] 53b-c
17 PLOTINUS: *Sixth Ennead*, TR III, CH 20, 292d-293a
18 AUGUSTINE: *City of God*, BK XI, CH 10, 328b
19 AQUINAS: *Summa Theologica*, PART I, Q 4, A 3, ANS 22b-23b; Q 8, A 2, REP 3 35c-36b; Q 42, A 1, REP 1 224b-225d; Q 45, A 5, REP 2-3 245c-247a; Q 48, A 4, ANS and REP 3 262a-263a; PART I-II, Q 22, A 2, REP 1 721c-722c
20 AQUINAS: *Summa Theologica*, PART I-II, Q 50, A 1, REP 3 6a-7b; QQ 52–53 15d-22d; Q 54, A 4, REP 1,3 25b-d; Q 72, A 7, ANS 117a-118a; PART II-II, Q 5, A 4 412d-413c; Q 24, AA 4–10 491d-498a; PART III, Q 7, A 12 754c-755c
28 GALILEO: *Two New Sciences*, FIRST DAY, 131d-132a; THIRD DAY, 200b-202a; 205b-d
30 BACON: *Novum Organum*, BK II, APH 13 145b-148d
34 NEWTON: *Principles*, BK III, RULE III 270b 271a / *Optics*, BK I, 431a-443a; BK II, 458b 460a; 466a-467b; 472b-474a; 482b-485a
35 LOCKE: *Human Understanding*, BK II, CH XVI, SECT 3 165d-166a; CH XVII, SECT 6 169a-b; CH XXVIII, SECT 1 228c; BK IV, CH II, SECT 11–13 311c-312b
42 KANT: *Pure Reason*, 68a-72c
45 LAVOISIER: *Elements of Chemistry*, PART I 14a-b; PART III, 99d-103b
45 FOURIER: *Theory of Heat*, 169a-172a; 177a-193a
45 FARADAY: *Researches in Electricity*, 411c-412c
53 JAMES: *Psychology*, 319b-322a esp 319b-320a; 329a-330a; 346a-b; 540a-547a esp 541a, 544a, 547a
54 FREUD: *Hysteria*, 87a / *Interpretation of Dreams*, 384d / *Narcissism*, 403d-404a / *Beyond the Pleasure Principle*, 639b-d

3d. The priority of quality or quantity in relation to form, matter, or substance

8 ARISTOTLE: *Physics*, BK I, CH 2 [185^a20–$^b4$] 260a-b; BK IV, CH 3 [210^b1–8] 289b-c / *Metaphysics*, BK IX, CH 1 [1045^b28–32] 570b; BK X, CH 1 [1052^b1–1053^b8] 578d-580a; BK XI, CH 3 [1061^a29–$^b4$] 589c; BK XII, CH 1 [1069^a18–25] 598a / *Sense and the Sensible*, CH 6 [445^b4–446^a20] 683b-684c; CH 7 [449^a21–30] 688d-689a
17 PLOTINUS: *Second Ennead*, TR IV, CH 13, 55c / *Fourth Ennead*, TR VII, CH 8, 196a-b / *Sixth Ennead*, TR III, CH 15 289a-c
19 AQUINAS: *Summa Theologica*, PART I, Q 3, A 2, CONTRARY 15c-16a; Q 78, A 3, REP 2 410a-411d; Q 85, A 1, REP 2 451c-453c
20 AQUINAS: *Summa Theologica*, PART I-II, Q 52, A 1, ANS 15d-18a; PART III SUPPL, Q 83, A 2, ANS 976c-978c
31 DESCARTES: *Rules*, XII, 18d-19c / *Objections and Replies*, 162d-165d esp 164d-165a; 228c-229c; 231a-b
35 LOCKE: *Human Understanding*, BK II, CH VIII, SECT 9–26 134c-138b passim; CH XXI, SECT 3 178d; CH XXIII, SECT 9 206b-c; SECT 37, 214a-b; CH XXXI, SECT 2 239b-d
35 BERKELEY: *Human Knowledge*, SECT 9–15 414d-416a esp SECT 10 414d-415a; SECT 73 427b-c
42 KANT: *Pure Reason*, 15b-c; 41c-45b
46 HEGEL: *Philosophy of Right*, PART I, par 63 28b-c

4. The relation of qualities to one another

4*a*. Qualities which imply correlatives

8 ARISTOTLE: *Categories*, CH 7 [6[b]4–8] 11a; CH 8 [11[a]20–39] 16b-c; CH 10 [11[b]27–33] 17a / *Physics*, BK VII, CH 3 [246[b]3–248[a]8] 329c-330d

4*b*. The contrariety of qualities: with or without intermediate degrees

7 PLATO: *Phaedo*, 226d-227b; 243c-244b

8 ARISTOTLE: *Categories*, CH 5 [4[a]10–[b]19] 8b-9a; CH 8 [10[b]11–25] 15d; CH 10 [12[a]9–25] 17b-c / *Physics*, BK IV, CH 9 [217[a]34–[b]11] 297b / *Generation and Corruption*, BK II, CH 1–3 428b,d-431a / *Metaphysics*, BK I, CH 5 [986[a]22–[b]4] 504b-c; BK V, CH 10 [1018[a]22–31] 539a-b; BK XIV, CH 1 [1087[a]28–[b]4] 619b

9 ARISTOTLE: *Ethics*, BK V, CH 1 [1129[a]1–35] 376a-d; BK VIII, CH 8 [1159[b]19–23] 411d

10 HIPPOCRATES: *Ancient Medicine*, par 13–19 4c-7b; par 24 8d-9a,c

10 GALEN: *Natural Faculties*, BK I, CH 2, 167b-168b; BK II, CH 8–9 191b-199a,c passim

12 LUCRETIUS: *Nature of Things*, BK II [515–521] 21c

17 PLOTINUS: *Sixth Ennead*, TR III, CH 19–20 291d-293a

22 CHAUCER: *Troilus and Cressida*, BK I, STANZA 91–92 13a

48 MELVILLE: *Moby Dick*, 39b-40a

53 JAMES: *Psychology*, 327a-328b; 363b-364a; 387b; 458a-459b

4*c*. The similarity of things with respect to quality: likeness and unlikeness in quality

7 PLATO: *Parmenides*, 493d-494a

8 ARISTOTLE: *Categories*, CH 6 [6[a]27–35] 10d-11a; CH 8 [11[a]15–19] 16b / *Generation and Corruption*, BK II, CH 6 [333[a]27–34] 434a / *Metaphysics*, BK V, CH 9 [1018[a]15–19] 538d-539a; CH 15 [1021[a]8–14] 542b-c; BK X, CH 3 [1054[b]3–13] 581b

9 ARISTOTLE: *History of Animals*, BK I, CH 1 [486[a]15–487[a]1] 7b-d; BK VIII, CH 1 [588[a]18–[b]4] 114b,d

11 EUCLID: *Elements*, BK VI, DEFINITIONS, 1 99a

17 PLOTINUS: *First Ennead*, TR II, CH 2, 7b / *Fourth Ennead*, TR IX, CH 4, 206c-d / *Sixth Ennead*, TR III, CH 15 289a-c

19 AQUINAS: *Summa Theologica*, PART I, Q 4, A 3, ANS 22b-23b; PART I–II, Q 27, A 3 738c-739c; Q 28, A 1, REP 2 740b-741a

20 AQUINAS: *Summa Theologica*, PART III SUPPL, Q 69, A 1, REP 2 885c-886c; Q 92, A 1, ANS 1025c-1032b

31 SPINOZA: *Ethics*, PART III, PROP 57, SCHOL 415b

42 KANT: *Pure Reason*, 73c-74a / *Judgement*, 602b-603a esp 602b,d [fn 1]

53 JAMES: *Psychology*, 319b-322a; 344b-348a esp 346a-348a; 378b-379a

5. Change of quality: the analysis of alteration

7 PLATO: *Phaedo*, 226d-227b / *Parmenides*, 509b-510a / *Theaetetus*, 533a-534a

8 ARISTOTLE: *Categories*, CH 5 [4[a]10–[b]19] 8b-9a; CH 14 [15[a]14–32] 20d-21a / *Topics*, BK VI, CH 6 [145[a]2–13] 198c-d / *Physics*, BK I, CH 7 [190[b]5–9] 266b; BK V, CH 2 [226[a]26–29] 306d; [226[b]1–9] 307a; BK VI, CH 10 [241[a]26–32] 325b-c; BK VII, CH 2 [244[b]1–245[a]12] 328b-d; CH 3 329a-330d; BK VIII, CH 7 [260[a]26–[b]14] 346b-c / *Heavens*, BK I, CH 3 [270[a]26–36] 361c; CH 12 [283[b]17–23] 375c-d / *Generation and Corruption*, BK I, CH 1 409a-410c; CH 4 416c-417a / *Metaphysics*, BK I, CH 8 [989[a]18–29] 507b-c; BK V, CH 21 544a-b; BK XI, CH 12 [1068[b]15–19] 597c / *Soul*, BK II, CH 5 [417[a]21–418[a]6] 647d-648d / *Sense and the Sensible*, CH 6 [446[b]27–447[a]9] 685b-c / *Dreams*, CH 2 [459[a]23–[b]6] 703a-b

9 ARISTOTLE: *Motion of Animals*, CH 5 235c-d; CH 7 [701[b]1]–CH 8 [702[a]22] 236d-237c; CH 11 [703[b]8–21] 239b-c / *Generation of Animals*, BK I, CH 18 [724[a]20–[b]13] 264b-d; BK II, CH 5 [741[b]5–15] 282c

10 GALEN: *Natural Faculties*, BK I, CH 2, 167b-168b; CH 5 169b-c; CH 8 171a; CH 12 172d-173c; BK III, CH 7, 203c-204c

12 LUCRETIUS: *Nature of Things*, BK I [635–920] 8d-12b; BK II [730–787] 24b-25a; BK V [235–415] 64a-66c

17 PLOTINUS: *Third Ennead*, TR VI, CH 8–10 111c-113a

19 AQUINAS: *Summa Theologica*, PART I, Q 48, A 4, ANS and REP 3 262a-263a

20 AQUINAS: *Summa Theologica*, PART I–II, Q 50, A 1, REP 3 6a-7b; Q 52, A 1, ANS and REP 3 15d-18a; PART III SUPPL, Q 82, A 3, ANS and REP 2 971a-972d; Q 91, A 1, REP 2,4 1016b-1017c

23 HOBBES: *Leviathan*, PART III, 172b

30 BACON: *Novum Organum*, BK I, APH 50 111b; APH 66 114d-115c; BK II, APH 7 139c-140a

34 NEWTON: *Optics*, BK III, 541b

35 LOCKE: *Human Understanding*, BK II, CH XXI, SECT 1–2 178b-c; CH XXII, SECT 11 203c-d; CH XXVI, SECT 1–2 217a-d

35 BERKELEY: *Human Knowledge*, SECT 25–33 417d-419a passim, esp SECT 26 418a

45 LAVOISIER: *Elements of Chemistry*, PART III, 87c-d; 103b-c; 105d

45 FOURIER: *Theory of Heat*, 169b

53 JAMES: *Psychology*, 68a-b; 104a-105a

6. Qualities as objects of knowledge

6*a*. Quality in relation to definition or abstraction

8 ARISTOTLE: *Topics*, BK I, CH 9 [103[b]27–33] 147a; BK IV, CH 1 [121[a]6–9] 168d-169a; CH 2 [122[b]12–18] 170d-171a; CH 6 [128[a]20–29] 177d-178a; BK VI, CH 6 196d-199c / *Metaphysics*, BK V, CH 14 [1020[a]34–[b]9] 541c-d; [1020[b]13–17] 541d; BK XI, CH 6 [1063[a]22–28] 591c

17 PLOTINUS: *Second Ennead*, TR VI, CH I 60c-61c / *Sixth Ennead*, TR I, CH 10-12 257b-259d; TR III, CH 16-19 289c-292b
19 AQUINAS: *Summa Theologica*, PART I-II, Q 35, A 4, ANS 774d-775d
23 HOBBES: *Leviathan*, PART I, 72a-d; PART IV, 272b
35 LOCKE: *Human Understanding*, BK II, CH XI, SECT 9 145b-c; CH XII, SECT 1, 147b-c; BK III, CH IV, SECT 4-11 260b-262b passim, esp SECT 7 260d; SECT 16 263b-c
35 BERKELEY: *Human Knowledge*, SECT 6-19 414b-416d passim, esp SECT 7-10 414b-415a; SECT 99 432b
35 HUME: *Human Understanding*, SECT XII, DIV 122 505c-d
42 KANT: *Pure Reason*, 73c-74a
53 JAMES: *Psychology*, 185a-b; 305a-308b esp 308a-b; 329a-331b esp 331a-b; 503a-b; 668a-673a

6b. The perception of qualities

7 PLATO: *Meno*, 177b-c / *Timaeus*, 462b-466a / *Theaetetus*, 519d-520b; 521d-522a; 533b-d / *Seventh Letter*, 810a-b
8 ARISTOTLE: *Categories*, CH 7 [7^b35-8^a12] 12d-13a / *Physics*, BK VII, CH 2 [244^b10-245^a3] 328c-d / *Soul*, BK II, CH 5-BK III, CH 2 647b-659c; BK III, CH 4 [429^a10-$^b4$] 661b-d; CH 8 664b-d / *Sense and the Sensible* 673a-689a,c / *Dreams*, CH 2 [459^a23-460^a32] 703a-704b
12 LUCRETIUS: *Nature of Things*, BK I [298-304] 4d; BK IV [26-268] 44b-47d; [478-499] 50b-d; [522-721] 51a-53d; BK VI [921-935] 92c-d
19 AQUINAS: *Summa Theologica*, PART I, Q 14, A 1, ANS 75d-76c; A 2, ANS 76d-77d; Q 78, A 3 410a-411d
20 AQUINAS: *Summa Theologica*, PART III SUPPL, Q 82, AA 3-4 971a-974c
22 CHAUCER: *Troilus and Cressida*, BK I, STANZA 91-92 13a
23 HOBBES: *Leviathan*, PART I, 49b-d; PART III, 172b
31 DESCARTES: *Rules*, XII, 18d-19c / *Meditations*, VI, 100a-d / *Objections and Replies*, 162d-165d esp 164d-165a; 211a-b; 229d-230a
34 NEWTON: *Optics*, BK I, 428a-b; BK III, 519a-b
35 LOCKE: *Human Understanding*, INTRO, SECT 2 93b-d; BK II, CH II, SECT 1 127d-128a; CH VIII, SECT 4 133d; SECT 11-21 134d-136d passim; CH IX, SECT 1-10 138b-140b passim; CH XXIII, SECT 11-13 206d-208b; BK III, CH VI, SECT 9 270d-271a; BK IV, CH II, SECT 9-13 311b-312b
42 KANT: *Pure Reason*, 15b-c; 23a-24a; 29d-33d esp 30d-31a, 31d-32a, 32d-33b [fn 1]; 212a-c
48 MELVILLE: *Moby Dick*, 39b-40a; 144b-145a
53 JAMES: *Psychology*, 98b-105a passim, esp 104a-105a; 184b; 327a-341a esp 327a-b, 329a-331b; 363b; 452a-471a esp 452a-456a, 459a-b, 469a-471a; 479a; 502a-505b esp 505b; 520a-521a; 526b-527a; 540a-635a esp 541a, 548b-549a, 552a-564a, 589b-595a, 606b-608b, 627a-628b
54 FREUD: *Interpretation of Dreams*, 352d; 367b-c; 384c-385c

6c. The objectivity of sense-qualities: the comparative objectivity of primary and secondary qualities

7 PLATO: *Timaeus*, 462b-466a / *Theaetetus*, 517b-520b; 521d-522a; 533b-d
8 ARISTOTLE: *Generation and Corruption*, BK I, CH 2 [315^b33-316^a3] 411c / *Metaphysics*, BK IV, CH 5 [1010^b30-1011^a2] 530c / *Soul*, BK III, CH 2 [426^a20-26] 658c / *Sense and the Sensible*, CH 6 [445^b4-446^a20] 683b-684c
9 ARISTOTLE: *Parts of Animals*, BK II, CH 2 [648^b 15-17] 173a
10 GALEN: *Natural Faculties*, BK I, CH 2, 167d
12 LUCRETIUS: *Nature of Things*, BK II [730-864] 24b-26a; [1002-1022] 27d-28a
23 HOBBES: *Leviathan*, PART I, 49b-d; 57b; 59d; 62b; PART III, 172b; PART IV, 258b-c; 262a-b
31 DESCARTES: *Rules*, XII, 19a-c / *Meditations*, VI, 100a-d / *Objections and Replies*, 162d-165d; 211a-b; 228c-229c; 229d-230a; 231a-b
34 NEWTON: *Principles*, BK III, RULE III 270b-271a / *Optics*, BK I, 428a-b
35 LOCKE: *Human Understanding*, BK II, CH VIII, SECT 7-26 134b-138b; CH XXI, SECT 3 178d; CH XXIII, SECT 7-13 205d-208b esp SECT 9 206b-c; SECT 37, 214a-b; CH XXX, SECT 2 238b-c; CH XXXI, SECT 2 239b-d; CH XXXII, SECT 14-16 245c-246b; BK IV, CH II, SECT 11-14 311c-312d; CH III, SECT 6, 314b; SECT 28 322a-c; CH IV, SECT 4 324c; CH XI, SECT 4-9 355b-357a
35 BERKELEY: *Human Knowledge*, SECT 1-91 413a-431a esp SECT 3 413c-d, SECT 9-15 414d-416a, SECT 48-49 422a-b, SECT 56-57 423c-424a, SECT 73 427b-c, SECT 76-78 427d-428b, SECT 86-91 429c-431a
35 HUME: *Human Understanding*, SECT XII, DIV 117-123 504a-506a
42 KANT: *Pure Reason*, 15b-c; 23a-24a; 29d-33d esp 30d-31a, 31d-32a, 32d-33b [fn 1]; 69c-72c / *Intro. Metaphysic of Morals*, 385a-c
50 MARX: *Capital*, 31c-d
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CROSS-REFERENCES

For: Discussions relevant to the problem of the existence of qualities and of their relation to substance, matter, or experience, *see* BEING 7b, 7b(5)–7b(6); EXPERIENCE 1; MATTER 2c.

Discussions relevant to the conception of the categories as transcendental concepts of the understanding, *see* FORM 1c; JUDGMENT 8c–8d; MEMORY AND IMAGINATION 6c(2); MIND 1c(1); PRINCIPLE 2b(3).

The consideration of such non-sensible qualities as habits, dispositions, and powers, *see* BEING 7c(2); HABIT 1; LIFE AND DEATH 2; MAN 4d; NATURE 1a(1); SOUL 2a, 2c.

The distinction between proper and common sensibles, and the related distinction between primary and secondary qualities, *see* SENSE 3c(2)–3c(4).

Other discussions of the relation of quantity to quality, *see* MECHANICS 4b; QUANTITY 1a; and for the problem of the variation of qualities in degree or intensity, *see* SAME AND OTHER 3c; SENSE 3c(2).

The contrariety and correlation of qualities, *see* OPPOSITION 1a–1b.

The conception of similarity as likeness in quality, *see* SAME AND OTHER 3c.

The distinction of alteration, or change in quality, from other kinds of change, *see* CHANGE 6, 9.

The general theory of sensitive knowledge and its bearing on the objectivity of sensible qualities, *see* KNOWLEDGE 6b(1); SENSE 4–4c.

ADDITIONAL READINGS

Listed below are works not included in *Great Books of the Western World*, but relevant to the idea and topics with which this chapter deals. These works are divided into two groups:

I. Works by authors represented in this collection.
II. Works by authors not represented in this collection.

For the date, place, and other facts concerning the publication of the works cited, consult the Bibliography of Additional Readings which follows the last chapter of *The Great Ideas.*

I.

BERKELEY. *Three Dialogues Between Hylas and Philonous*

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II.

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BOYLE. *The Origin of Forms and Qualities, According to the Corpuscular Philosophy*

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W. E. JOHNSON. *Logic*, PART II, CH 7

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BORING. *The Physical Dimensions of Consciousness*, CH 6

Chapter 76: QUANTITY

INTRODUCTION

AS indicated in the chapter on QUALITY, the traditional consideration of that fundamental notion involves questions concerning the relation of quality and quantity and the priority of one or the other in the nature of things. According to one theory of the elements, difference in quality rather than in quantity seems to be the defining characteristic. Certain kinds of qualities, it is thought, inhere in substances directly and without being based upon their quantitative aspects. But it is seldom if ever suggested that quality takes universal precedence over quantity.

In the tradition of western thought, the opposite view—that quantities are primary—seems to occur with some frequency, at least so far as the realm of material things is concerned. It is held that bodies have only quantitative attributes. Such sensible qualities as colors, odors, tastes, textures are thought to have no reality apart from experience; or, as it is sometimes put, red and blue, hot and cold, sweet and sour are the qualities of sensations, not of things.

Those who think that bodies can exist without being perceived, also tend to think that bodies can exist totally bereft of qualities, but never without the dimensions of quantity. The notions of matter and quantity seem to be inseparably associated. For matter to exist without existing in some quantity seems to be as inconceivable as for experience to exist without qualitative diversity "As if there could be matter," says Hobbes, "that had not some determined quantity, when quantity is nothing else but determination of matter; that is to say, of body, by which we say that one body is greater or less than another by thus or thus much."

The use of the word "quality" where quantity appears to be meant only slightly obscures this point. Newton refers to "extension, hardness, impenetrability, mobility, and inertia" as "the qualities of bodies" which "are to be esteemed the universal qualities of all bodies whatsoever." Following him, Locke calls our simple ideas of "solidity, extension, figure, motion or rest, and number" ideas of "the original or primary qualities of bodies," and says that even if bodies are divided "till their parts become insensible, they must retain still each of them all those qualities. For division . . . can never take away either solidity, extension, figure, or mobility from any body, but only makes two or more distinct separate masses of matter, of that which was one before."

Though Locke uses the word "quality" for those attributes which belong to bodies even when they are not sensed or are not even sensible, he also appears to recognize that number, extension, and figure are, as the traditional objects of the mathematical sciences, traditionally regarded as quantities rather than qualities. "It has been generally taken for granted," he writes, "that mathematics alone are capable of demonstrative certainty; but to have such an agreement or disagreement as may intuitively be perceived, being, as I imagine, not the privilege of the ideas of number, extension, and figure alone, it may possibly be the want of due method and application in us . . . that demonstration has been thought to have so little to do in other parts of knowledge." Yet, he adds, "in other simple ideas, whose modes and differences are made and counted by degrees, and not quantity, we have not so nice and accurate a distinction of their differences as to perceive, or find ways to measure, their just equality."

Newton also gives some indication that his "universal qualities" are quantities. He restricts them to attributes "which admit neither intensification nor remission of degrees." One dif-

ference between quantity and quality, according to an ancient opinion, is that qualities are subject to variation in degree, quantities not. One thing may be white or hot to a greater or less degree than another, Aristotle observes, but "one thing cannot be two cubits long in a greater degree than another. Similarly with regard to number: what is 'three' is not more truly three than what is 'five' is five . . . Nor is there any other kind of quantity, of all that have been mentioned, with regard to which variation in degree can be predicated."

GRANTED THAT WHAT Newton and Locke call "qualities" are not qualities, except in the sense in which the word "quality" means attribute, difficult questions remain concerning their enumeration of the *universal* or *primary* attributes of bodies. Do extension, hardness, impenetrability, motion and rest, figure and number constitute an exhaustive enumeration? Are these *all* the corporeal quantities, or only the basic ones from which others can be derived? Are they all of the same kind and, among them, are some more fundamental than others?

Descartes, for example, seems to make extension the one primary attribute of bodies. "I observed," he writes, "that nothing at all belonged to the nature or essence of bodies, except that it was a thing with length, breadth, and depth, admitting of various shapes and various motions. I found also that its shape and motions were only modes, which no power could make to exist apart from it . . . Finally, I saw that gravity, hardness, the power of heating, of attracting, and of purging, and all other qualities which we experience in bodies, consisted solely in motion or its absence, and in the configuration and situation of their parts."

With motion and figure modes of extension, and all the other properties of bodies the result of their motions or configurations, the three dimensions of extension (or spatial magnitude) become almost identical with body itself. Considering the statement *body possesses extension*, Descartes points out that, though "the meaning of *extension* is not identical with that of *body*, yet we do not construct two distinct ideas in our imagination, one of body, the other of extension, but merely a single image of extended body; and from the point of view of the thing it is exactly as if I had said: *body is extended*, or better, *the extended is extended*."

But, Descartes adds, when we consider the expression *extension is not body*, "the meaning of the term *extension* becomes otherwise than as above. When we give it this meaning there is no special idea corresponding to it in the imagination." It becomes a purely abstract entity, which may properly be the object of the geometer's consideration; but then it should be treated as an abstraction and not as if it had independent reality.

Aquinas also distinguishes between physical and mathematical quantities, or the quantities which inhere in bodies and the quantities abstracted therefrom. "Quantities, such as number, dimension, and figure, which are the terminations of quantity, can be considered apart from sensible qualities, and this is to abstract them from sensible matter. But they cannot be considered without understanding the substance which is subject to quantity"—that is, corporeal or material substance. Like a body, a mathematical solid has three dimensions, but, as Aquinas points out, lacking matter, this three-dimensional object does not occupy space or fill a place. The three spatial dimensions are not for him, however, the only primary quantities of either the physical or the mathematical body. Number and figure are as fundamental.

Still another enumeration of corporeal quantities is given by Lucretius in his description of the properties of atoms. According to him, atoms vary in size, weight, and shape. Each of these attributes is a distinct quantity, not reducible to the others. In addition, atoms have the property which Newton calls "impenetrability" and Locke "solidity." But whereas atoms may be unequal in size and weight, and different in shape or configuration, they are all equal in their solidity, being absolutely indivisible through lack of void or pores.

THE DISTINCTION BETWEEN mathematical and physical quantity and the enumeration or ordering of diverse quantities seem to require the consideration of two prior questions. What is the nature of quantity? What are the kinds or modes of quantity?

Terms like quantity and quality do not appear to be susceptible of definition. Quantity is,

perhaps, *the* fundamental notion in the mathematical sciences, yet neither it nor such terms as magnitude, figure, and number are defined in the great books of geometry or arithmetic. In Aristotle's theory of the categories as the highest genera, such terms as substance, quantity, quality, and relation are strictly indefinable, if to define a term is to give its genus and differentia.

With quite a different theory of the categories, Kant also treats them as indefinable. As indicated in the chapter on QUALITY, they are for him the transcendental concepts of the understanding. He uses such terms as quantity, quality, and relation, with modality as a coordinate fourth, to represent the four major groupings of the categories. In his table of the categories, Kant's treatment of quantity, under which he lists the concepts of unity, plurality, and totality, parallels the treatment of quantity in his table of judgments, according to which judgments are classified as universal, particular, and singular. All these considerations of quantity belong to what Kant calls his "transcendental logic." So far as Kant considers quantity in its mathematical or physical (rather than logical) significance, he discusses it in connection with the transcendental forms of space and time which provide, according to him, the *a priori* foundations of geometry and arithmetic—the sciences of magnitude and number. But in none of these connections are quantity and its principal modes, magnitude and number, defined.

Though indefinable, quantity can, according to Aristotle, be characterized by certain distinctive marks. As we have already observed, where qualities admit of variation in degree, quantities do not. With few exceptions, each quality has a contrary, whereas definite quantities such as an extent or a number are not opposed by contrary quantities. Aristotle considers the possibility that such apparently quantitative terms as 'large' and 'small' may also appear to be contrary to one another, as hot is to cold, or white is to black. But, he argues, these terms represent quantities only relatively, not absolutely. When things are compared with respect to size, one may be judged to be both larger and smaller than others, but the sizes of each of two things unequal in size are not contrary to one another.

These two characteristics (lack of contrariety and of variation in degree) do not, however, satisfy Aristotle's search for a distinctive mark of quantity. They apply to substances, such as tree or man, as well as to figures and numbers. This fact could have some bearing on the issue whether the objects of mathematics have a separate existence comparable to that of substances, but in Aristotle's view at least, quantities are not substances. Physical quantities are the attributes of bodies; the objects of mathematics consist of quantities abstracted from sensible matter.

Conceiving quantity as one of the attributes of substance, Aristotle says that "the most distinctive mark of quantity is equality and inequality." Only when things are compared quantitatively can they be said to be equal or unequal; and, conversely, in whatever respect things are said to be equal or unequal, in that respect they are determined in quantity.

"How far is it true," Plotinus asks, "that equality and inequality are characteristic of quantity?" It is significant, he thinks, that triangles and other figures are said to be similar as well as equal. "It may, of course, be the case that the term 'similarity' has a different sense here from that understood in reference to quality"; or another alternative, Plotinus adds, may be that "similarity is predicable of quantity only insofar as quantity possesses [qualitative] differences." In any case, comparison, whether in terms of equality or likeness, seems to generate the relationships fundamental to the mathematical treatment of quantities.

Euclid does not define magnitude in itself, but only the relation of magnitudes to one another. The first four definitions in the fifth book of his *Elements* illustrate this. "1. A magnitude is a *part* of a magnitude, the less of the greater, when it measures the greater. 2. The greater is a *multiple* of the less when it is measured by the less. 3. A *ratio* is a sort of relation in respect of size between two magnitudes of the same kind. 4. Magnitudes are said to *have a ratio* to one another, which are capable, when multiplied, of exceeding one another."

Archimedes also states his understanding of the distinction between kinds of magnitudes—without defining these kinds—by reference to their comparability. Assuming that any given

magnitude can, by being multiplied, exceed any other magnitude of the same kind, he is able to know that magnitudes are of the same kind if, by being multiplied, they can exceed one another. It follows that an indivisible point and a finite or divisible magnitude, such as a line, are not of the same kind, for they cannot have a ratio to one another. For the same reason, the length of a line, the area of a plane, and the volume of a solid are not magnitudes of the same kind. Since they bear no ratio to one another, they are quantitatively incomparable.

THE EMPHASIS UPON ratios has some significance for a controversial point in the definition of the subject matter of mathematics. In the tradition of the great books, mathematicians and philosophers seem to agree that arithmetic and geometry have as their objects the two principal species of quantity—number and magnitude. This is the opinion of Euclid, Nicomachus, Descartes, and Galileo; it is the opinion of Plato, Aristotle, Aquinas, Bacon, Hume, and Kant. But writers like Russell and Whitehead, who reflect developments in mathematics since the 19th century, reject the traditional opinion as unduly narrowing the scope of mathematics.

To give adequate expression to the universality of mathematics, they sometimes propose that it should be conceived as the science not merely of quantity, but of relations and order. In view of the fact that the great books of mathematics deal with quantities largely in terms of their relationship or order to one another, the broader conception seems to fit the older tradition as well as more recent developments. Whether there is a genuine issue here concerning the definition of mathematical subject matter may depend, therefore, on whether the fundamental terms which generate the systems of relationship and order are or are not essentially quantitative. To this question the traditional answer seems to be that the mathematician studies not relations of any sort, but the relation of quantities.

The problem of the kinds of quantity seems to appeal for solution to the principle of commensurability. For example, Galileo's observation that finite and infinite quantities cannot be compared in any way, implies their utter diversity. But he goes further and says that "the attributes 'larger,' 'smaller,' and 'equal' have no place either in comparing infinite quantities with each other or in comparing infinite with finite quantities." If the notion of quantity entails the possibility of equality or inequality between two quantities *of the same kind*, then either infinite quantities are not quantities, or each infinite quantity belongs to a kind of its own.

The principle of incommensurability seems to be applied by mathematicians to distinguish quantities which are different species of the same generic kind. For example, the one-dimensional, two-dimensional, and three-dimensional quantities of a line, a plane, and a solid, are incommensurable *magnitudes*. The number of days in a year and the number of years in infinite or endless time are incommensurable *multitudes*.

The distinction between magnitude and multitude (or number) as two modes of quantity appears to be based upon another principle, that of continuity and discontinuity. Yet the question can be raised whether magnitudes are commensurable with numbers, at least to the extent of being measured by numbers. It may be necessary, however, to postpone answering it until we have examined the fundamental difference between magnitude and multitude as generic kinds of quantity.

What if magnitude and multitude, or continuous and discontinuous quantity, do not divide quantity into its ultimate kinds? Aquinas, for example, proposes that the two basic kinds are dimensive and virtual quantity. "There is quantity of *bulk* or dimensive quantity," he writes, "which is to be found only in corporeal things, and has, therefore, no place in God. There is also quantity of *virtue*, which is measured according to the perfection of some nature or form." It is in the latter sense, according to Aquinas, that Augustine writes: "In things which are great, but not in bulk, to be greater is to be better."

Just as dimensive quantities can be incommensurable with one another, so with respect to virtual quantities, God's infinite perfection makes him incommensurable with finite creatures. But a dimensive quantity cannot be either commensurable or incommensurable with

a virtual quantity. The standard of measurement by which dimensive quantities are compared, and the standard by which virtual quantities are ordered, represent utterly diverse principles of commensurability. Euclid's statement that "those magnitudes are said to be commensurable which are measured by the same measure, and those incommensurable which cannot have a common measure," cannot be extended to cover dimensive and virtual quantities, for the very meaning of "measure" changes when we turn from the dimensions of a body to the perfections of a being.

The distinction which Aquinas makes between dimensive and virtual magnitudes has its parallel in the distinction he makes between two kinds of number, for both depend on the difference between *material* and *formal* quantity. "Division is twofold," he writes. "One is material, and is division of the continuous; from this results number, which is a species of quantity. Number in this sense is found only in material things which have quantity. The other kind of division is formal, and is effected by opposite or diverse forms; and this kind of division results in a multitude, which does not belong to a genus, but is transcendental in the sense in which being is divided by one and many. Only this kind of multitude is found in immaterial things." According to the example suggested in the context, such is the multitude which is the number of persons in the Trinity.

THE MATERIAL quantities of physics and mathematics seem to fall under the two main heads of magnitude and multitude. "Quantity is either discrete or continuous," writes Aristotle. "Instances of discrete quantities are number and speech; of continuous, lines, surfaces, solids, and, besides these, time and place." Nicomachus explains the two kinds of quantity by examples. "The unified and continuous," he says, is exemplified by "an animal, the universe, a tree, and the like, which are properly and peculiarly called 'magnitudes' "; to illustrate the discontinuous, he points to "heaps of things, which are called 'multitudes,' a flock, for instance, a people, a chorus, and the like."

The principle of this distinction appears to be the possession or lack of a common boundary. To take Aristotle's example of speech as a quantity, the letters of a written word or the syllables of vocal utterance comprise a multitude rather than a continuum or magnitude "because there is no common boundary at which the syllables join, each being separate and distinct from the rest." The continuity of magnitudes can be readily seen, according to Aristotle, in the possibility of finding a common boundary at which the parts of a line join or make contact. "In the case of a line," he says, "this common boundary is the point; in the case of a plane, it is the line. . . . Similarly, you can find a common boundary in the case of the parts of a solid, namely, either a line or a plane."

Accepting the principle of the distinction, Plotinus insists that "number and magnitude are to be regarded as the only true quantities." All others, like space and time, or motion, are quantities only in a relative sense, that is, insofar as they can be measured by number or involve magnitude. Galileo raises another sort of difficulty. The Aristotelian conception of magnitudes as continuous quantities implies their infinite divisibility. This means, in his terms, that "every magnitude is divisible into magnitudes" and that "it is impossible for anything continuous to be composed of indivisible parts." Galileo acknowledges the objections to "building up continuous quantities out of indivisible quantities" on the ground that "the addition of one indivisible to another cannot produce a divisible, for if this were so it would render the indivisible divisible." Suppose a line to comprise an odd number of indivisible points. Since such a line can, in principle, be cut into two equal parts, we are required to do the impossible, namely, "to cut the indivisible which lies exactly in the middle of the line."

To this and other objections which seem to him of the same type, Galileo replies that "a divisible magnitude cannot be constructed out of two or ten or a hundred or a thousand indivisibles, but requires an infinite number of them. . . . I am willing," he says, "to grant to the Peripatetics the truth of their opinion that a continuous quantity is divisible only into parts which are still further divisible, so that however far the division and subdivision be continued, no end will be reached; but I am not so certain that they will concede to me that none of these divisions of theirs can be a final

one, as is surely the fact, because there always remains 'another'; the final and ultimate division is rather one which resolves a continuous quantity into an infinite number of indivisible quantities."

The question remains whether these indivisible units, an infinite number of which constitute the continuity of a finite magnitude, can properly be called quantities. At least they are not magnitudes, as is indicated by Euclid's definition of a point as "that which has no part," or by Nicomachus' statement that "the point is the beginning of dimension, but is not itself a dimension." If, in addition to having position, a point had size or extent, a finite line could not contain an infinite number of points. This problem of infinite and infinitesimal quantities is more fully discussed in the chapter on INFINITY.

WITHIN EACH OF THE two main divisions of quantity—magnitude and number—further sub-divisions into kinds are made. Relations of equality and inequality, or proportions of these ratios, may occur between quantities different in kind—different plane figures, for example. But the great books of mathematics indicate other problems in the study of quantity than those concerned with the ratios and proportions of quantities. The classification of lines and figures results in the discovery of the properties which belong to each type. Possessing the same properties, all lines or figures of a certain type are similar in kind, not equal in quantity. In addition to developing the properties of such straight lines as perpendiculars and parallels, or such curved lines as circles and ellipses, parabolas and hyperbolas, the geometer defines the different types of relationship in which straight lines can stand to curves, *e.g.*, tangents, secants, asymptotes.

As there are types of lines and figures, both plane and solid, so there are types of numbers. Euclid and Nicomachus divide the odd numbers into the prime and the composite—into those which are divisible only by themselves and unity, such as 5 and 7, and those which have other factors, such as 9 and 15. The composite are further differentiated into the variety which is simply secondary and composite and "the variety which, in itself, is secondary and composite, but relatively is prime and incomposite." To illustrate the latter, Nicomachus asks us to compare 9 with 25. "Each in itself," he writes, "is secondary and composite, but relatively to each other they have only unity as a common measure, and no factors in them have the same denominator, for the third part in the former does not exist in the latter nor is the fifth part in the latter found in the former."

The even numbers are divided by Nicomachus into the even-times-even (numbers like 64 which can be divided into equal halves, and their halves can again be divided into equal halves, and so on until division must stop); the even-times-odd (numbers like 6, 10, 14, 18 which can be divided into equal halves, but whose halves cannot be divided again into equal halves); and the odd-times-even (numbers like 24, 28, 40 which can be divided into equal parts, whose parts also can be so divided, and perhaps again these parts, but which cannot be divided in this way as far as unity). By another principle of classification, the even numbers fall into the superabundant, the deficient, and the perfect. The factors which produce superabundant or deficient numbers, when added together, amount to more or less than the number itself; but a number is perfect, Nicomachus writes, when, "comparing with itself the sum and combination of all the factors whose presence it will admit, it neither exceeds them in multitude nor is exceeded by them." It is "equal to its own parts"; as, for example, 6, "for 6 has the factors half, third, and sixth, 3, 2, and 1, respectively, and these added together make 6 and are equal to the original number." At the time of Nicomachus only four perfect numbers were known—6, 28, 496, 8128; since his day seven more have been discovered.

The further classification of numbers as linear, plane, and solid, and of plane numbers as triangular, square, pentagonal, etc., assigns properties to them according to their configurations. The analysis of figurate numbers by Nicomachus or Pascal represents one of the great bridges between arithmetic and geometry, of which the other, in the opposite direction, is the algebraic rendering of geometrical loci in Descartes' analytical geometry.

In either direction of the translation between arithmetic and geometry, discontinuous and continuous quantities seem to have certain

properties in common, at least by analogy. Euclid, for example, proposes numerical ratios as the test for the commensurability of magnitudes. "Commensurable magnitudes have to one another," he writes, "the ratio which a number has to a number." With the exception of infinite numbers, all numbers are commensurable and so provide the criterion for determining whether two magnitudes are or are not commensurable.

Introducing the notion of dimensionality into the discussion of figurate numbers, Nicomachus observes that "mathematical speculations are always to be interlocked and to be explained one by means of another." Though the dimensions by which linear, plane, and solid numbers are to be distinguished "are more closely related to magnitude . . . yet the germs of these ideas are taken over into arithmetic as the science which is the mother of geometry and more elementary than it." The translation does not seem to fail in any respect. The only non-dimensional number, unity, finds its geometrical analogue in the point, which has position without magnitude.

When diverse magnitudes are translated into numbers, the diversity of the magnitudes seems to be effaced by the fact that their numerical measures do not have a corresponding diversity. The numbers will appear to be commensurable though the magnitudes they measure are not, as magnitudes, comparable. As Descartes points out, it is necessary, therefore, to regard each order of magnitude as a distinct dimension.

"By dimension," Descartes writes, "I understand nothing but the mode and aspect according to which a subject is considered to be measurable. Thus it is not merely the case that length, breadth, and depth are dimensions; but weight also is a dimension in terms of which the heaviness of objects is estimated. So, too, speed is a dimension of motion, and there are an infinite number of similar instances. For that very division of the whole into a number of parts of identical nature, whether it exist in the real order of things or be merely the work of the understanding, gives us exactly that dimension in terms of which we apply number to objects."

The theory of dimensions can be illustrated by the choice of clocks, rules, and balances as the fundamental instruments for the measurement of physical quantities. They represent the three dimensions in the fundamental equations of mechanics—time, distance, and mass.

Additional dimensions may be introduced in electricity or thermodynamics. In developing the theory of heat, Fourier, for example, enumerates five quantities which, in order to be numerically expressed, require five different kinds of units, "namely, the unit of length, the unit of time, that of temperature, that of weight, and finally the unit which serves to measure quantities of heat." To which he adds the remark that "every undetermined magnitude or constant has one *dimension* proper to itself, and that the terms of one and the same equation could not be compared, if they had not the same *exponent of dimension*."

A fuller discussion of the basic physical quantities, their definition, measurement, and their relation to one another, belongs to the chapter on MECHANICS. The consideration of time and space as quantities, or physical dimensions, occurs in the chapters devoted to those subjects.

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REFERENCES

To find the passages cited, use the numbers in heavy type, which are the volume and page numbers of the passages referred to. For example, in **4** HOMER: *Iliad*, BK II [265–283] **12d**, the number **4** is the number of the volume in the set; the number **12d** indicates that the passage is in section d of page 12.

PAGE SECTIONS: When the text is printed in one column, the letters a and b refer to the upper and lower halves of the page. For example, in **53** JAMES: *Psychology*, **116a-119b**, the passage begins in the upper half of page 116 and ends in the lower half of page 119. When the text is printed in two columns, the letters a and b refer to the upper and lower halves of the left-hand side of the page, the letters c and d to the upper and lower halves of the right-hand side of the page. For example, in **7** PLATO: *Symposium*, **163b-164c**, the passage begins in the lower half of the left-hand side of page 163 and ends in the upper half of the right-hand side of page 164.

AUTHOR'S DIVISIONS: One or more of the main divisions of a work (such as PART, BK, CH, SECT) are sometimes included in the reference; line numbers, in brackets, are given in certain cases; *e.g.*, *Iliad*, BK II [265–283] **12d**.

BIBLE REFERENCES: The references are to book, chapter, and verse. When the King James and Douay versions differ in title of books or in the numbering of chapters or verses, the King James version is cited first and the Douay, indicated by a (*D*), follows; *e.g.*, OLD TESTAMENT: *Nehemiah*, 7:45—(*D*) *II Esdras*, 7:46.

SYMBOLS: The abbreviation "esp" calls the reader's attention to one or more especially relevant parts of a whole reference; "passim" signifies that the topic is discussed intermittently rather than continuously in the work or passage cited.

For additional information concerning the style of the references, see the Explanation of Reference Style; for general guidance in the use of *The Great Ideas*, consult the Preface.

1. The nature and existence of quantity: its relation to matter, substance, and body; the transcendental categories of quantity

7 PLATO: *Theaetetus*, **518b-519b** / *Sophist*, **566d** / *Philebus*, **616a**

8 ARISTOTLE: *Categories*, CH 5 [3^b24–4^a9] **8a-b**; CH 6 **9a-11a** / *Posterior Analytics*, BK I, CH 13 [79^a6–10] **108c**; CH 18 [81^a40–$^b6$] **111b-c** / *Topics*, BK I, CH 9 **147a-b** / *Physics*, BK I, CH 2 [185^a20–$^b4$] **260a-b**; CH 4 [187^b14–22] **262d**; BK II, CH 2 [193^b22–194^a11] **270a-c**; BK IV, CH 1 [208^b19–24] **287b-c**; CH 2 **288b-289a** / *Metaphysics*, BK I, CH 5 [985^b22–986^a21] **503d-504b**; CH 6 [987^b10–34] **505c-506a**; CH 8 [989^b29–990^a32] **508a-c**; CH 9 [991^b9–992^b17] **509d-511a**; BK III, CH 1 [995^b13–18] **514a**; [996^a13–15] **514c**; CH 2 [997^b12–998^a19] **516b-d**; CH 5 **520c-521b**; BK V, CH 13 **541b-c**; BK VII, CH 10 [1035^b32–1036^a12] **559b-c**; CH 11 [1036^b32–1037^a4] **560b-c**; BK VIII, CH 3 [1043^b34–1044^a14] **568b-d**; BK IX, CH 1 [1045^b28–32] **570b**; BK XI, CH 2 [1060^a36–$^b19$] **588c-d**; CH 3 [1061^a29–$^b4$] **589c**; BK XII, CH 1 [1069^a18–25] **598a**; CH 5 [1071^a23–$^b1$] **600d-601a**; BK XIII, CH 1–3 **607a-610a**; CH 6–9 **611d-618c**; BK XIV **619b,d-626d** / *Soul*, BK I, CH 4 [408^b31]–CH 5 [409^b18] **638d-639c**; BK III, CH 7 [431^b13–19] **664b**

11 NICOMACHUS: *Arithmetic*, BK I, **811b-812a**

17 PLOTINUS: *Second Ennead*, TR IV, CH 9 **53a-b**; CH 11–12 **53d-55b** / *Third Ennead*, TR VI, CH 16–18 **116c-118c** / *Fourth Ennead*, TR VII, CH 8, **196a-b** / *Fifth Ennead*, TR I, CH 4, **210b-c** / *Sixth Ennead*, TR I, CH 4–5 **253b-254d**; TR II, CH 13 **276a-c**; TR III, CH 11–15 **286d-289c**; TR VI **310d-321b** esp CH 3–7 **311c-314a**, CH 13–18 **316d-321b**

19 AQUINAS: *Summa Theologica*, PART I, Q 3, A 2, CONTRARY **15c-16a**; Q 5, A 3, REP 4 **25a-d**; Q 7, A 1, REP 2 **31a-d**; Q 8, A 2, REP 3 **35c-36b**; Q 10, A 6, ANS **45c-46d**; Q 11, A 1, REP 1 **46d-47d**; A 3, REP 2 **49a-c**; Q 44, A 1, REP 3 **238b-239a**; Q 85, A 1, REP 2 **451c-453c**

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23 HOBBES: *Leviathan*, PART III, **172b**; PART IV, **269d-270a**; **271d-272a**

31 DESCARTES: *Rules*, XII, **18d-19c**; XIV, **29b-30b** / *Objections and Replies*, **154a**; **231a-b**

31 SPINOZA: *Ethics*, PART I, PROP 15, SCHOL **360b-361d**; PART II, PROP 2 **374a**

35 LOCKE: *Human Understanding*, BK II, CH VIII, SECT 9–26 **134c-138b** passim, esp SECT 9 **134c**; CH XXIII, SECT 9, **206b**; CH XXXI, SECT 2, **239d**

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35 BERKELEY: *Human Knowledge*, SECT 9–15 414d-416a; SECT 73 427b-c
42 KANT: *Pure Reason*, 15b-c; 41c-45b esp 43d-44a; 69c-72c; 74b-76c; 137a-140a,c; 161d-163a; 211c-213a
53 JAMES: *Psychology*, 551a; 874a-878a esp 875a-876b, 878a

1a. The relation between quantity and quality: reducibility of quality to quantity

7 PLATO: *Meno*, 176d-177a / *Timaeus*, 458b-460b; 462b-465d / *Philebus*, 615c-616c
8 ARISTOTLE: *Categories*, CH 7 [6^b20–26] 11b; CH 8 [10^a11–16] 15a-b; [10^b26–11^a14] 15d-16b / *Generation and Corruption*, BK I, CH 2 [315^b 32-316^a4] 411b-c / *Metaphysics*, BK V, CH 4 [1014^b20–27] 535a; CH 14 [1020^b3–8] [1020^b 14–17] 541d; CH 28 [1024^b10–16] 546c; BK X, CH 1 [1052^b1–1053^b8] 578d-580a; BK XI, CH 6 [1063^a22–28] 591c; BK XII, CH 1 [1069^a18–25] 598a; BK XIII, CH 8 [1083^a1–17] 614d / *Soul*, BK III, CH 1 [425^a14–19] 657b / *Sense and the Sensible*, CH 6 [445^b4–446^a20] 683b-684c; CH 7 [448^a20–^{b}16] 687a-d; [449^a21–30] 688d-689a
10 GALEN: *Natural Faculties*, BK I, CH 2, 167d-168b
11 EUCLID: *Elements*, BK VII, DEFINITIONS, 16–19 127b
11 NICOMACHUS: *Arithmetic*, BK II, 831d-841c
12 LUCRETIUS: *Nature of Things*, BK I [298–304] 4d; BK II [398–521] 20a-21c; [677–687] 23c-d; [730–864] 24b-26a; BK III [221–227] 32d-33a; BK IV [26–268] 44b-47d; [522–721] 51a-53d
17 PLOTINUS: *Second Ennead*, TR IV, CH 13 55b-d / *Fourth Ennead*, TR VII, CH 8, 196a-b / *Fifth Ennead*, TR I, CH 4, 210c / *Sixth Ennead*, TR III, CH 13-15 287d-289c
19 AQUINAS: *Summa Theologica*, PART I, Q 8, A 2, REP 3 35c-36b; Q 42, A 1, REP 1–2 224b-225d; Q 78, A 3, REP 2 410a-411d
20 AQUINAS: *Summa Theologica*, PART I–II, Q 49, A 2, ANS 2b-4a; Q 50, A 1, REP 3 6a-7b; Q 52 15d-19c; Q 53, AA 2–3 21a-22d; PART II–II, Q 24, AA 4–10 491d-498a; PART III, Q 7, A 12 754c-755c
23 HOBBES: *Leviathan*, PART I, 49a-d; PART III, 172b
31 DESCARTES: *Rules*, XII, 19a-c / *Objections and Replies*, 162d-165d; 228c-229c; 231a-b
34 NEWTON: *Optics*, BK I, 428a-b; 431a-455a esp 450a-453a
35 LOCKE: *Human Understanding*, BK II, CH VIII, SECT 9–26 134c-138b passim; CH XXI, SECT 3 178d; SECT 75 200b-d; CH XXIII, SECT 8–9 206a-c; SECT 11 206d-207a; SECT 37, 214a-b; CH XXXI, SECT 2 239b-d; BK IV, CH II, SECT 9–13 311b-312b; CH III, SECT 12–14 316a-d; SECT 28 322a-c
35 BERKELEY: *Human Knowledge*, SECT 9–15 414d-416a; SECT 25 417d-418a; SECT 73 427b-c; SECT 102 432d-433a
35 HUME: *Human Understanding*, SECT XII, DIV 122 505c-d
42 KANT: *Pure Reason*, 15b-c; 23a-24a; 32d-33b [fn 1]; 68a-72c; 211c-213a
43 MILL: *Utilitarianism*, 448c-d; 475b [fn 1]
46 HEGEL: *Philosophy of Right*, PART I, par 63 28b-c; ADDITIONS, 40 122d-123b
50 MARX: *Capital*, 149d
53 JAMES: *Psychology*, 104b; 319b-322a; 346a-348a
54 FREUD: *Hysteria*, 87a / *Interpretation of Dreams*, 384d / *Narcissism*, 403d-404a / *Beyond the Pleasure Principle*, 639b-d

1b. The relation of quantities: equality and proportion

7 PLATO: *Phaedo*, 228d-229c / *Parmenides*, 494a-c; 500c-502a; 508c-d; 510d-511a / *Theaetetus*, 518b-519b
8 ARISTOTLE: *Categories*, CH 6 [6^a27–35] 10d-11a / *Generation and Corruption*, BK II, CH 6 [333^a27–34] 434a / *Metaphysics*, BK V, CH 13 [1020^a22–26] 541c; CH 15 [1020^b26–1021^a14] 542a-c; BK X, CH 3 [1054^b1–3] 581b; CH 5-6 583a-584c; BK XIV, CH 1 [1088^a20–29] 620c / *Memory and Reminiscence*, CH 2 [452^b7–23] 694b-d
9 ARISTOTLE: *Ethics*, BK II, CH 6 [1106^a26–^{b}8] 351d-352a; BK V, CH 3–5 378c-381d passim / *Politics*, BK V, CH 1 [1301^b29–36] 503a
11 EUCLID: *Elements*, BK I, COMMON NOTIONS 2a; PROP 4 4a-b; PROP 8 6b-7a; PROP 26 16a-17b; BK V 81a-98b esp DEFINITIONS, 5 81a, 7,9–10 81b; BK VI, PROP 23 117a-b; BK X 191a-300b
11 ARCHIMEDES: *Sphere and Cylinder*, BK I, ASSUMPTIONS 404b / *Spirals*, 484b / *Quadrature of the Parabola*, 527a-b
11 NICOMACHUS: *Arithmetic*, BK I–II, 821d-831d; BK II, 841c-848d
16 KEPLER: *Harmonies of the World*, 1012b-1014b; 1078b-1080a
17 PLOTINUS: *Sixth Ennead*, TR III, CH 15 289a-c
19 AQUINAS: *Summa Theologica*, PART I, Q 13, A 7, ANS 68d-70d; Q 42, A 1, ANS and REP 1 224b-225d; Q 47, A 2, REP 2 257b-258c
20 AQUINAS: *Summa Theologica*, PART I–II, Q 113, A 9, ANS 368d-369c
28 GALILEO: *Two New Sciences*, FIRST DAY, 142a-145a
31 DESCARTES: *Discourse*, PART II, 47c / *Geometry*, BK I, 295a-298b; BK III, 332b-341b
34 NEWTON: *Principles*, BK I, LEMMA I 25a; LEMMA II, SCHOL, 31b-32a; BK II, LEMMA I 159b; LEMMA 2 168a-169b
35 LOCKE: *Human Understanding*, BK IV, CH II, SECT 9–10 311b-c
38 ROUSSEAU: *Social Contract*, BK III, 407b-408b

42 KANT: *Pure Reason*, 73c-d; 211c-213a / *Judgement*, 497a-498b passim
50 MARX: *Capital*, 19a-25d esp 19d-20b, 25a-d
53 JAMES: *Psychology*, 551a; 874a-878a esp 874b-875a

2. The kinds of quantity: continuous and discontinuous

7 PLATO: *Parmenides*, 499d-500c / *Theaetetus*, 515b-c
8 ARISTOTLE: *Categories*, CH 6 [4b20-5a37] 9a-d / *Physics*, BK IV, CH 4 [211a29-b4] 290c; CH 5 [212b3-6] 291d; BK V, CH 3 [227a10-34] 307d-308b; BK VI, CH 1-2 312b,d-315d / *Heavens*, BK I, CH 1 [268a6-11] 359a / *Generation and Corruption*, BK I, CH 2 [315b25-317a17] 411b-413a; BK II, CH 10 [337a22-34] 439b-c / *Metaphysics*, BK III, CH 4 [1001a4-b25] 519d-520c; BK V, CH 6 [1015b35-1016a17] 536b-c; [1016b6-32] 537a-b; CH 13 [1020a9-14] 541b; BK VIII, CH 3 [1043b33-1044a14] 568b-d; BK X, CH 1 [1052a15-37] 578b,d; CH 3 [1054a20-29] 581a; BK XI, CH 12 [1068b26-1069a14] 597d-598a,c; BK XIV, CH 1 [1087b34-1088a14] 620a-b
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17 PLOTINUS: *Second Ennead*, TR IV, CH 7, 52c / *Fourth Ennead*, TR II, CH 1, 139d-140a / *Sixth Ennead*, TR I, CH 4 253b-254b; TR III, CH 13, 287d-288a
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20 AQUINAS: *Summa Theologica*, PART II-II, Q 24, A 4, REP 1 491d-492b; PART III, Q 7, A 12, REP 1 754c-755c
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30 BACON: *Novum Organum*, BK I, APH 48 110d-111a
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31 SPINOZA: *Ethics*, PART I, PROP 13, COROL 359d; PROP 15, SCHOL 360b-361d
33 PASCAL: *Geometrical Demonstration*, 434b-439b
34 NEWTON: *Principles*, BK I, LEMMA I 25a; LEMMA II, SCHOL, 31a-32a
35 LOCKE: *Human Understanding*, BK II, CH XV, SECT 9 164b-d; CH XVI, SECT 3-4 165d-166b
35 BERKELEY: *Human Knowledge*, SECT 123-132 437c-439c
35 HUME: *Human Understanding*, SECT XII, DIV 124-125 506a-507a
42 KANT: *Pure Reason*, 66d-72c esp 68a-72c; 131c; 135a-140a,c esp 137d-138d [antithesis]; 152a-d; 161d-163a
51 TOLSTOY: *War and Peace*, BK XI, 469a-d

3. The magnitudes of geometry: the relations of dimensionality

8 ARISTOTLE: *Categories*, CH 6 [5a1-23] 9b-c; CH 8 [10a11-16] 15a-b / *Topics*, BK VI, CH 6 [143b11-23] 197b / *Heavens*, BK I, CH 1 359a-c; BK II, CH 4 [286b12-33] 378a-c / *Metaphysics*, BK I, CH 9 [992a10-24] 510b-c; BK V, CH 6 [1016b25-31] 537b; BK XIII, CH 2 [1077a14-37] 608b-d
11 EUCLID: *Elements*, BK I, DEFINITIONS, 1-2,5 1a; 14 1b; BK XI, DEFINITIONS, 1 301a
11 NICOMACHUS: *Arithmetic*, BK II, 832b-d
16 KEPLER: *Epitome*, BK IV, 865a-b
17 PLOTINUS: *Sixth Ennead*, TR II, CH 13 276a-c; TR III, CH 13-14 287d-289a
19 AQUINAS: *Summa Theologica*, PART I, Q 85, A 8, REP 2 460b-461b
23 HOBBES: *Leviathan*, PART IV, 269d
31 DESCARTES: *Rules*, XIV, 29b-32a / *Discourse*, PART IV, 52d-53a / *Meditations*, V, 93a-d; VI, 96b-d / *Objections and Replies*, 216d-217c; 228c-229a
35 LOCKE: *Human Understanding*, BK II, CH XIII, SECT 5-6 149b-d
42 KANT: *Pure Reason*, 25a-b
53 JAMES: *Psychology*, 876b-878a

3a. Straight lines: their length and their relations; angles, perpendiculars, parallels

8 ARISTOTLE: *Prior Analytics*, BK I, CH 24 [41b14-21] 58c; CH 35 66c-d; BK II, CH 16 [64b28-65a9] 85c-d / *Posterior Analytics*, BK I, CH 4 [73a34-38] 100b; CH 5 101b-102b passim; CH 24 [85b37-86a3] 117b-c / *Topics*, BK VI, CH 11 [148b23-33] 203a / *Heavens*, BK I, CH 2 [268b15-20] 359d / *Metaphysics*, BK IX, CH 9 [1051a23-26] 577c
9 ARISTOTLE: *Gait of Animals*, CH 9 [708b34-709a2] 247b
11 EUCLID: *Elements*, BK I, DEFINITIONS, 2-4,8-12 1a; 23 2a; POSTULATES, 1-2,4-5 2a; PROP 1-34 2b-21b; BK II, PROP 11 38a-39a; BK IV, PROP 10 73b-74b; BK VI, DEFINITIONS, 2-3 99a; PROP 2-17 100b-112a; PROP 30 123a-b; PROP 32 124b-125a; BK X 191a-300b passim; BK XI, DEFINITIONS, 11 301b; PROP 1-23 302b-319a; PROP 26 321b-323a; PROP 35 332b-334b; BK XIII, PROP 5-12 372b-381a
11 ARCHIMEDES: *Sphere and Cylinder*, BK I, DEFINITIONS, 1-2 404a; ASSUMPTIONS, 1 404b; PROP 2 405a-b / *Spirals*, PROP 1-2 484b
16 PTOLEMY: *Almagest*, BK I, 26a-28b
16 COPERNICUS: *Revolutions of the Heavenly Spheres*, BK I, 543a-545b; BK II, 569b-570a
19 AQUINAS: *Summa Theologica*, PART I, Q 85 A 8, REP 2 460b-461b

(3. *The magnitudes of geometry: the relations of dimensionality.* 3a. *Straight lines: their length and their relations; angles, perpendiculars, parallels.*)

28 GALILEO: *Two New Sciences*, FIRST DAY, 149d-150d; THIRD DAY, 233d
34 NEWTON: *Principles*, BK I, LEMMA 16 53b-54a; LEMMA 23 67a; LEMMA 26 71a-72a; BK III, LEMMA 7 339b
42 KANT: *Pure Reason*, 110a; 212c-d
52 DOSTOEVSKY: *Brothers Karamazov*, BK V, 121a-b
53 JAMES: *Psychology*, 876b-877a

3b. Curved lines: their kinds, number, and degree

8 ARISTOTLE: *Heavens*, BK I, CH 2 [268b15-20] 359d
11 EUCLID: *Elements*, BK I, DEFINITIONS, 2-3 1a
11 ARCHIMEDES: *Sphere and Cylinder*, BK I, DEFINITIONS, 1-2 404a; ASSUMPTIONS, 2 404b / *Spirals*, DEFINITIONS-PROP 28 490a-501a
28 GALILEO: *Two New Sciences*, SECOND DAY, 195b-c
31 DESCARTES: *Geometry*, BK I-III, 298b-332b; BK III, 341a-353b
34 NEWTON: *Principles*, BK I, LEMMA 11 29b-30b; LEMMA 15-PROP 29 and SCHOL 50a-75b; LEMMA 28 76b-78a; PROP 48-50 102b-105a; BK II, LEMMA 3 189b-190a; BK III, LEMMA 5 338b-339a

3b(1) Circles

8 ARISTOTLE: *Categories*, CH 7 [7b29-33] 12c-d / *Prior Analytics*, BK I, CH 24 [41b14-21] 58c; BK II, CH 25 [69a30-34] 91a-b / *Posterior Analytics*, BK II, CH 11 [94a20-35] 128d-129a / *Heavens*, BK II, CH 4 [286b13-287a3] 378b-c / *Meteorology*, BK III, CH 3 [373a6-17] 477c-d; CH 5 480a-481c / *Metaphysics*, BK IX, CH 9 [1051a 27-29] 577c
11 EUCLID: *Elements*, BK I, DEFINITIONS, 15-18 1b; BK III-IV 41a-80b; BK VI, PROP 33 125a-126a; BK XII, PROP 2 339a-340b; PROP 16 362b-363a
11 ARCHIMEDES: *Sphere and Cylinder*, BK I, ASSUMPTIONS, 5 404b; PROP 1 405a; PROP 3-6 405b-408a / *Measurement of a Circle* 447a-451b / *Spirals*, PROP 3-9 485a-488a / *Book of Lemmas* 561a-568b
11 APOLLONIUS: *Conics*, BK I, PROP 4-5 606b-608b; PROP 9 613b-614b; PROP 17-19 626a-627b; PROP 21 628a-629a; PROP 32 638a-640a; PROP 34 641a-643a; PROP 36-41 643b-653b; PROP 43 654b-655b; PROP 45 657a-658b; PROP 47 659b-660b; PROP 50 663a-666b; BK II, PROP 6-7 686b-687a; PROP 26-30 700b-702b; PROP 44 710b-711a; PROP 49-51 714b-726a; BK III, PROP 1-3 731a-735b; PROP 16-17 747b-750a; PROP 27 761b-762b; PROP 37-38 772b-775b; PROP 42 780b-782a; PROP 45-50 783b-790a; PROP 53-54 792b-796a
16 PTOLEMY: *Almagest*, BK I, 14a-21a; 26a-28b; BK VI, 208a-b
16 COPERNICUS: *Revolutions of the Heavenly Spheres*, BK I, 532b-538a; 545b-556b
28 GALILEO: *Two New Sciences*, FIRST DAY, 149d-150d; 155b-156d
31 DESCARTES: *Geometry*, BK II, 313b-314a
34 NEWTON: *Principles*, BK I, LEMMA 29 138a-b

3b(2) Ellipses

11 ARCHIMEDES: *Conoids and Spheroids*, PROP 4-9 459a-464a; PROP 11-14 464b-467a
11 APOLLONIUS: *Conics*, BK I, PROP 13 618a-620a; PROP 15 621b-624a; SECOND DEFINITIONS, 9,11 626a; PROP 17-19 626a-627b; PROP 21 628a-629a; PROP 23 630a-b; PROP 25 631a-b; PROP 30 636a-637a; PROP 32 638a-640a; PROP 34 641a-643a; PROP 36-41 643b-653b; PROP 43 654b-655b; PROP 45 657a-658b; PROP 47 659b-660b; PROP 50 663a-666b; PROP 56-58 675b-679b; BK II, PROP 6-7 686b-687a; PROP 26-30 700b-702b; PROP 44-45 710b-711b; PROP 47-50 712b-723a; BK II, PROP 52-BK III, PROP 3 726b-735b; BK III, PROP 16-17 747b-750a; PROP 27 761b-762b; PROP 37-38 772b-775b; PROP 42 780b-782a; PROP 45-50 783b-790a; PROP 52-54 791b-796a
16 KEPLER: *Epitome*, BK V, 975a-984b passim
31 DESCARTES: *Geometry*, BK II, 308b-313b
34 NEWTON: *Principles*, BK I, LEMMA 12 41a; LEMMA 15-PROP 29 and SCHOL 50a-75b esp LEMMA 15-PROP 18 50a-51a; LEMMA 28, COROL-PROP 31 and SCHOL 78a-81a
34 HUYGENS: *Light*, CH V, 604b-606b

3b(3) Parabolas

11 ARCHIMEDES: *Conoids and Spheroids*, PROP 3 458b-459a; PROP 11 464b-465a / *Quadrature of the Parabola*, PROP 1-5 528a-529b; PROP 14-22 531b-536a; PROP 24 537a-b / *Method*, PROP 1 571a-572b
11 APOLLONIUS: *Conics*, BK I, PROP 11 615a-616a; PROP 17-20 626a-628a; PROP 22 629a-630a; PROP 24 631a; PROP 26-27 631b-634a; PROP 32-33 638a-640b; PROP 35 643a-b; PROP 42 653b-654b; PROP 46 659a-b; PROP 49 661b-663a; PROP 52-53 668a-670b; BK II, PROP 5 686a; PROP 7 687a; PROP 24 699b-700a; PROP 28-30 701b-702b; PROP 44 710b-711a; PROP 46 711b-712a; PROP 48-51 713a-726a; BK III, PROP 1-3 731a-735b; PROP 16-17 747b-750a; PROP 37-38 772b-775b; PROP 41 778b-780b; PROP 54 793b-796a
28 GALILEO: *Two New Sciences*, SECOND DAY, 193a-195c; FOURTH DAY, 238d-239d
31 DESCARTES: *Geometry*, BK II, 308b-310b
34 NEWTON: *Principles*, BK I, LEMMA 13-14 45a; LEMMA 15-PROP 29 and SCHOL 50a-75b esp PROP 19 51a; PROP 30 76a-b

3b(4) Hyperbolas

11 ARCHIMEDES: *Conoids and Spheroids*, PROP 11 464b-465a

11 APOLLONIUS: *Conics*, BK I, PROP 12 616a-618a; PROP 14 620a-621b; PROP 16-19 624b-627b; PROP 21-22 628a-630a; PROP 24 631a; PROP 26 631b-632b; PROP 28-32 634a-640a; PROP 34 641a-643a; PROP 36-41 643b-653b; PROP 43-45 654b-658b; PROP 47-48 659b-661a; PROP 50-51 663a-668a; PROP 54-55 670b-675a; PROP 59-60 679b-681b; BK II, PROP 1-5 682a-686a; PROP 7-23 687a-699b; PROP 25 700a; PROP 28-45 701b-711b; PROP 47-51 712b-726a; BK III, PROP 1-26 731a-761a; PROP 28-40 763a-778b; PROP 42-51 780b-791b; PROP 53-56 792b-798b

31 DESCARTES: *Geometry*, BK II, 306b-307a; 308b-312b

34 NEWTON: *Principles*, BK I, LEMMA 12 41a; LEMMA 15-PROP 29 and SCHOL 50a-75b esp LEMMA 15-PROP 18 50a-51a

3c. The relations of straight and curved lines: tangents, secants, asymptotes

8 ARISTOTLE: *Prior Analytics*, BK I, CH 24 [41^{b} 14-21] 58c

11 EUCLID: *Elements*, BK III, DEFINITIONS, 2,4-5 41a; 7-11 41a-b; PROP 2-4 42b-44a; PROP 7-8 44b-47a; PROP 11-12 48b-49a; PROP 14-24 50a-56a esp PROP 16-17 51b-53a; PROP 26-29 57b-59a; BK III, PROP 31-BK IV, PROP 16 59b-80b; BK VI, PROP 33 125a-126a; BK XII, PROP 1 338a-339a; PROP 16 362b-363a; BK XIII, PROP 9-12 375b-381a

11 ARCHIMEDES: *Sphere and Cylinder*, BK I, ASSUMPTIONS, 1-2,5 404b; PROP 1 405a; PROP 3-4 405b-406b; PROP 21-22 418a-419a / *Measurement of a Circle*, PROP 3 448b-451b / *Spirals*, PROP 3-9 485a-488a; PROP 12-13 490b; PROP 16-20 491b-495b / *Quadrature of the Parabola*, PROP 1-5 528a-529b; PROP 18-19 535a / *Book of Lemmas*, PROP 1-3 561a-562a; PROP 6 563b-564a; PROP 8-13 564b-567a; PROP 15 567b-568b

11 APOLLONIUS: *Conics*, BK I, FIRST DEFINITIONS, 4-8 604a-b; PROP 15-51 621b-668a; BK II 682a-730b esp PROP 14-15 691b-692b, PROP 17 693b-694a; BK III, PROP 1-44 731a-783b; PROP 53-56 792b-798b

16 PTOLEMY: *Almagest*, BK I, 14a-24b; 26a-28b

16 COPERNICUS: *Revolutions of the Heavenly Spheres*, BK I, 532b-542b

16 KEPLER: *Epitome*, BK V, 973a-975a

28 GALILEO: *Two New Sciences*, FIRST DAY, 149d-150d; THIRD DAY, 229d-230a; 233b-234b; FOURTH DAY, 239b-d

31 DESCARTES: *Geometry*, BK I-II, 298b-331b

34 NEWTON: *Principles*, BK I, LEMMA 5-7 27a-b; LEMMA 11 29b-30b; LEMMA 15-PROP 29 and SCHOL 50a-75b; LEMMA 29 138a-b

35 HUME: *Human Understanding*, SECT XII, DIV 124 506a-c esp 506c

3d. Surfaces

8 ARISTOTLE: *Heavens*, BK II, CH 4 [286^{b}13-287^{a}3] 378b-c

11 EUCLID: *Elements*, BK I, DEFINITIONS, 5-7 1a; 15-22 1b-2a; POSTULATES, 3 2a; PROP 1 2b-3a; PROP 22 13b-14a; PROP 46 27b-28a; BK VI, PROP 18 112a-b; BK XI, DEFINITIONS, 2 301a

11 ARCHIMEDES: *Sphere and Cylinder*, BK I, DEFINITIONS, 3-4 404a

11 APOLLONIUS: *Conics*, BK I, FIRST DEFINITIONS, 1 604a

11 NICOMACHUS: *Arithmetic*, BK II, 832c-833b

31 DESCARTES: *Objections and Replies*, 228c-229a

3d(1) The measurement and transformation of areas

7 PLATO: *Meno*, 180c-182c

8 ARISTOTLE: *Categories*, CH 7 [7^{b}29-33] 12c-d; CH 14 [15^{a}29-32] 21a / *Prior Analytics*, BK II, CH 25 [69^{a}30-34] 91a-b / *Sophistical Refutations*, CH 11 [171^{b}12-18] 236b; [171^{b}34-172^{a}7] 236d / *Physics*, BK I, CH 2 [185^{a}14-17] 259d-260a / *Metaphysics*, BK III, CH 2 [996^{b}18-22] 515b / *Soul*, BK I, CH 2 [413^{a}13-19] 643b

11 EUCLID: *Elements*, BK I, PROP 4 4a-b; PROP 8 6b-7a; PROP 26 16a-17b; PROP 35-45 21b-27b; BK I, PROP 47-BK II, PROP 14 28a-40b; BK III, DEFINITIONS, 1 41a; 11 41b; BK VI, DEFINITIONS, 1 99a; PROP 1 99a-100a; PROP 14-17 109a-112a; PROP 19-29 112b-123a; PROP 31 123b-124a; BK X, PROP 9 197a-198b; PROP 13, LEMMA-PROP 14 200b-202a; PROP 16, LEMMA 203a-b; PROP 19 206a; PROP 21 and LEMMA 206b-207b; PROP 24-26 209b-211b; PROP 32, LEMMA 217b-218a; PROP 53, LEMMA 235a-b; PROP 59, LEMMA 242a-b; BK XII, PROP 1-2 338a-340b; BK XIII, PROP 1-5 369a-373a

11 ARCHIMEDES: *Sphere and Cylinder*, BK I, ASSUMPTIONS, 3-4 404b; PROP 5-16 406b-414b; PROP 23-25 419a-420b; PROP 28-30 422a-423a; PROP 32-33 423b-425b; PROP 34, COROL-PROP 37 427a-428a; PROP 39-43 429a-432b; BK II, PROP 3 437a-b; PROP 6 441b-442b; PROP 8-9 443b-446a / *Measurement of a Circle*, PROP 1-2 447a-448a / *Conoids and Spheroids*, PROP 2-6 458a-460b / *Spirals*, PROP 21-28 495b-501a / *Quadrature of the Parabola*, PROP 14-17 531b-535a; PROP 20-24 535b-537b / *Book of Lemmas*, PROP 4-5 562b-563b; PROP 7 564b; PROP 14 567a-b / *Method*, PROP 1 571a-572b

16 KEPLER: *Epitome*, BK V, 979b-984b passim

28 GALILEO: *Two New Sciences*, FIRST DAY, 153d-154a; 155b-156d; SECOND DAY, 193a-194d; FOURTH DAY, 239d-240a

34 NEWTON: *Principles*, BK I, LEMMA 2-4 25a-26b; LEMMA 8-9 27b-28b; LEMMA 22 64a-65b; PROP 30-31 and SCHOL 76a-81a; PROP 81 140b-142b

53 JAMES: *Psychology*, 673b

(*3d. Surfaces.*)

3d(2) The relations of surfaces to lines and solids

8 ARISTOTLE: *Metaphysics*, BK I, CH 9 [992a10–24] 510b-c
11 EUCLID: *Elements*, BK XI, DEFINITIONS, 2–8 301a-b; PROP 1–8 302b-308a; PROP 11–19 309a-314b; PROP 24 319b-320b; PROP 28 323b-324a; PROP 38 336a-337a
11 ARCHIMEDES: *Conoids and Spheroids*, DEFINITIONS 455a-b; PROP 7–9 461a-464a; PROP 11–18 464b-468b / *Floating Bodies*, BK I, PROP 1 538a-b
11 APOLLONIUS: *Conics*, BK I, FIRST DEFINITIONS, 1 604a; PROP 1–14 604b-621b; PROP 52–58 668a-679b
28 GALILEO: *Two New Sciences*, FIRST DAY, 142b-143d

3e. Solids: regular and irregular

11 EUCLID: *Elements*, BK XI, DEFINITIONS, 1 301a; 12–28 301b-302b; PROP 27 323a-b; BK XIII, PROP 13–18 381a-396a
11 ARCHIMEDES: *Conoids and Spheroids*, 452a-455a
11 APOLLONIUS: *Conics*, BK I, FIRST DEFINITIONS, 2–3 604a
11 NICOMACHUS: *Arithmetic*, BK II, 832c-d; 836b-c
16 KEPLER: *Epitome*, BK IV, 863b-868b / *Harmonies of the World*, 1011a-1012a

3e(1) The determination of volume

11 EUCLID: *Elements*, BK XI, DEFINITIONS, 9–10 301b; PROP 25 320b-321b; PROP 28–34 323b-332b; PROP 36–37 334b-336a; PROP 39 337a-b; BK XII, PROP 3–15 341a-362b; PROP 18 367a-368b
11 ARCHIMEDES: *Sphere and Cylinder*, BK I, LEMMAS–PROP 20 414b-418a; PROP 26–28 421a-422b; PROP 31–32 423b-424b; PROP 34 and COROL 425b-427a; PROP 38 428b-429a; PROP 41 431a-b; PROP 44 433a-b; BK II, PROP 1–2 434b-437a; PROP 4–5 437b-441b; PROP 7–9 442b-446a / *Conoids and Spheroids*, PROP 10 464a; PROP 18–32 468b-481b / *Method*, PROP 2–4 572b-576b; PROP 7 579a-580b; PROP 10–15 583a-592a
28 GALILEO: *Two New Sciences*, FIRST DAY, 154c-155b; SECOND DAY, 196b-c

3e(2) The relations of solids: inscribed and circumscribed spheres; solids of revolution

8 ARISTOTLE: *Heavens*, BK II, CH 4 [287a2–11] 378c
11 EUCLID: *Elements*, BK XI, DEFINITIONS, 14 301b; 18,21 302a; BK XII, PROP 3–4 341a-344b; PROP 7 347b-348b; PROP 17 363a-367a; BK XIII, PROP 13–17 381a-393a
11 ARCHIMEDES: *Sphere and Cylinder*, BK I, DEFINITIONS, 5–6 404a; PROP 23–32 419a-424b; PROP 35–41 427a-431b / *Conoids and Spheroids*, 452a-455a; PROP 19–20 468b-469b
33 PASCAL: *Equilibrium of Liquids*, 395a-b
34 HUYGENS: *Light*, CH V, 603b-604b

4. Discrete quantities: number and numbering

7 PLATO: *Parmenides*, 496a-d
8 ARISTOTLE: *Categories*, CH 6 [4b23–36] 9a-b; [5a24–36] 9c-d / *Posterior Analytics*, BK I, CH 2 [72a22–24] 98d / *Physics*, BK III, CH 7 [207b1–14] 285d-286a; BK IV, CH 11 [219b2–8] 299b; [220a21–24] 300a; CH 12 [220a27–32] 300b; CH 14 [223a21–25] 303a / *Metaphysics*, BK VIII, CH 3 [1043b33–1044a14] 568b-d; BK X, CH 1 [1053a24–31] 579d-580a; CH 3 [1054a20–29] 581a; CH 6 [1056b32–1057a7] 584b; BK XIII, CH 6–9 611d-618c; BK XIV 619b,d-626d
11 EUCLID: *Elements*, BK VII, DEFINITIONS, 1–2 127a
11 ARCHIMEDES: *Sand-Reckoner* 520a-526b
11 NICOMACHUS: *Arithmetic*, BK I, 811d-812b; 813d-814b
17 PLOTINUS: *Fifth Ennead*, TR V, CH 4–5, 230b-231a / *Sixth Ennead*, TR I, CH 4–5 253b-254d; TR II, CH 13 276a-c; TR VI 310d-321b
18 AUGUSTINE: *Confessions*, BK X, par 19 76a-b / *Christian Doctrine*, BK II, CH 38 654b-c
19 AQUINAS: *Summa Theologica*, PART I, Q 5, A 5, ANS 26c-27c; Q 30, A 3 169b-170c; Q 85, A 8, REP 2 460b-461b; Q 118, A 2, REP 2 601c-603b
20 AQUINAS: *Summa Theologica*, PART I-II, Q 52, A 1, ANS 15d-18a
33 PASCAL: *Arithmetical Triangle*, 455a-456b
35 LOCKE: *Human Understanding*, BK II, CH XVI 165c-167c
53 JAMES: *Psychology*, 874b-876b

4a. The kinds of numbers: odd-even, square-triangular, prime-composite

7 PLATO: *Euthyphro*, 196d-197a / *Phaedo*, 244c-d / *Gorgias*, 254a-c / *Parmenides*, 496a-d / *Theaetetus*, 515b-c
8 ARISTOTLE: *Posterior Analytics*, BK II, CH 13 [96a34–b2] 131c / *Topics*, BK III, CH 6 [120b3–6] 168c; BK VI, CH 4 [142b6–10] 196a; CH 11 [149a29–37] 203c-d / *Sophistical Refutations*, CH 13 [173b8–10] 239a / *Metaphysics*, BK V, CH 14 [1020b2–8] 541d
11 EUCLID: *Elements*, BK VII, DEFINITIONS, 6–14 127a-b; 16–19 127b; 21–22 128a; PROP 1 128a-b; PROP 21–32 139b-144b; BK VIII, PROP 5 154b-155a; PROP 9 157a-158a; PROP 11–12 159b-160b; PROP 14–27 161b-170a; BK IX, PROP 1–10 171a-176b; PROP 16–17 182a-b; PROP 20–36 183b-190b; BK X, PROP 28, LEMMA 1–2 213a-214b
11 NICOMACHUS: *Arithmetic*, BK I, 814b-821d; BK II, 831d-841c
28 GALILEO: *Two New Sciences*, FIRST DAY, 144b-d

33 PASCAL: *Arithmetical Triangle*, 455a-456a; 470b-473b / *Correspondence with Fermat*, 486b

4b. The relations of numbers to one another: multiples and fractions

7 PLATO: *Gorgias*, 254a-c / *Theaetetus*, 515b-c
8 ARISTOTLE: *Physics*, BK IV, CH 8 [215^{b}12-19] 295b / *Metaphysics*, BK V, CH 15 [1020^{b}26-1021^{a}14] 542a-c
11 EUCLID: *Elements*, BK VII-VIII 127a-170a esp BK VII, DEFINITIONS, 3-5 127a, 15,20 127b; BK IX, PROP 1-19 171a-183b; PROP 35 188b-189a
11 ARCHIMEDES: *Conoids and Spheroids*, LEMMA 455b-456a; LEMMA TO PROP 2 456b-457b / *Spirals*, PROP 10-11 488a-489b / *Sand-Reckoner* 520a-526b
11 NICOMACHUS: *Arithmetic*, BK I-II, 821d-831d; BK II, 841c-848d
16 KEPLER: *Harmonies of the World*, 1012b-1014b
28 GALILEO: *Two New Sciences*, FIRST DAY, 144b-145a; SECOND DAY, 193b-c
33 PASCAL: *Arithmetical Triangle*, 447a-454b; 456b-460a; 468b-473b / *Correspondence with Fermat*, 477b-478a; 484b-485a; 486b
42 KANT: *Pure Reason*, 212d-213a

4c. The number series as a continuum

11 EUCLID: *Elements*, BK V, DEFINITIONS, 5 81a; BK VII, DEFINITIONS, 20 127b; BK X, PROP 5-9 195a-198b
31 DESCARTES: *Geometry* 295a-353b esp BK I, 295a-298b
33 PASCAL: *Geometrical Demonstration*, 434b-439b passim
34 NEWTON: *Principles*, BK II, LEMMA 2 168a-169b
45 FOURIER: *Theory of Heat* 169a-251b passim

5. Physical quantities

5a. Space: the matrix of figures and distances

7 PLATO: *Timaeus*, 456a-458a
8 ARISTOTLE: *Categories*, CH 6 [5^{a}6-23] 9b-c / *Physics*, BK IV, CH 1-9 287a-297c
12 LUCRETIUS: *Nature of Things*, BK I [418-448] 6b-c; [951-1007] 12d-13b
17 PLOTINUS: *Sixth Ennead*, TR III, CH 11, 286d-287a
19 AQUINAS: *Summa Theologica*, PART I, Q 8, A 2, REP 1,3 35c-36b
30 BACON: *Novum Organum*, BK I, APH 48 110d-111a
31 DESCARTES: *Rules*, XIV 28a-33b / *Discourse*, PART IV, 52d-53a / *Objections and Replies*, 169c-170a; 231a-b
33 PASCAL: *Vacuum*, 370a; 372a-373a / *Geometrical Demonstration*, 434a-439b
34 NEWTON: *Principles*, DEFINITIONS, SCHOL 8b-13a esp 8b-9a, 12a-b; BK III, GENERAL SCHOL, 370a-b / *Optics*, BK III, 542b-543a
35 LOCKE: *Human Understanding*, BK II, CH XV 162b-165c passim
35 BERKELEY: *Human Knowledge*, SECT 110-117 434b-436a; SECT 123-132 437c-439c
42 KANT: *Pure Reason*, 23a-26b; 28b-33d; 160b-163a
45 FOURIER: *Theory of Heat*, 249a-251b passim
53 JAMES: *Psychology*, 399a; 548b-552a esp 548b-549a; 626b; 877b

5b. Time: the number of motion

7 PLATO: *Timaeus*, 450c-451d / *Parmenides*, 505a-b
8 ARISTOTLE: *Categories*, CH 6 [5^{a}6-14] 9b-c / *Physics*, BK IV, CH 10-14 297c-304a,c; BK VI 312b,d-325d passim, esp CH 1-2 312b,d-315d / *Generation and Corruption*, BK II, CH 10 [337^{a}22-34] 439b-c / *Metaphysics*, BK V, CH 13 [1020^{a}25-33] 541c; BK XII, CH 6 [1071^{b}6-12] 601b / *Memory and Reminiscence*, CH 2 [452^{b}7-29] 694b-695a
12 AURELIUS: *Meditations*, BK VI, SECT 15 275a-b
16 KEPLER: *Epitome*, BK IV, 905a-907a; BK V, 979b-985b / *Harmonies of the World*, 1019b-1020b
17 PLOTINUS: *Third Ennead*, TR VII 119b-129a passim, esp CH 8-10 123b-126a / *Fourth Ennead*, TR IV, CH 15 165c-d / *Sixth Ennead*, TR I, CH 4-5 253b-254d; CH 16 260d-261c; TR III, CH 11, 286d-287a; CH 22, 294c
18 AUGUSTINE: *Confessions*, BK XI, par 12-40 92b-99a / *City of God*, BK XI, CH 6 325c-d; BK XII, CH 15 351b-352d passim
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21 DANTE: *Divine Comedy*, PARADISE, XXVII [106-120] 148b-c
28 GALILEO: *Two New Sciences*, THIRD DAY, 201a-202a
30 BACON: *Novum Organum*, BK I, APH 48 110d-111a; BK II, APH 46 177c-179a
31 DESCARTES: *Objections and Replies*, 110d-111a; 213b-c
32 MILTON: *Paradise Lost*, BK V [577-591] 187b-188a
33 PASCAL: *Geometrical Demonstration*, 432b-433b; 434a-439b passim
34 NEWTON: *Principles*, DEFINITIONS, SCHOL 8b-13a esp 8b, 9b-10a, 12a-b; BK I, PROP 1-3 and SCHOL 32b-35b; PROP 4, COROL VI-VII 36a; PROP 10, COROL II 42a; PROP 15 46b-47a; BK III, PHENOMENON I-II 272a-273b; PHENOMENON IV-VI 274a-275a

(5. Physical quantities. 5b. Time: the number of motion.)

35 LOCKE: *Human Understanding*, BK II, CH XIV 155b-162a esp SECT 22 159d; CH XV 162b-165c passim
35 BERKELEY: *Human Knowledge*, SECT 97–98 431d-432a
35 HUME: *Human Understanding*, SECT XII, DIV 124–125 506a-507a
36 STERNE: *Tristram Shandy*, 292a-293b
42 KANT: *Pure Reason*, 23a-24a; 26b-33d esp 27a; 72c-76c; 130b-133c
45 FOURIER: *Theory of Heat*, 249a-251b passim
51 TOLSTOY: *War and Peace*, BK XI, 469a-c
53 JAMES: *Psychology*, 398a-408a passim, esp 399a-b, 407a-408a

5c. The quantity of motion: momentum, velocity, acceleration

8 ARISTOTLE: *Physics*, BK IV, CH 8 [215^{a}24–216^{a}21] 295a-d; CH 11 [219^{a}10–13] 298d-299a; BK V, CH 4 [228^{a}20–^{b}12] 309b-c; BK VI 312b,d-325d passim, esp CH 1–2 312b,d-315d; BK VII, CH 4 330d-333a; BK VIII, CH 8 348b-352a / *Metaphysics*, BK V, CH 6 [1016^{a}4–7] 536b-c; CH 13 [1020^{a}25–33] 541c; BK X, CH 1 [1052^{b}24–31] 579b
12 LUCRETIUS: *Nature of Things*, BK II [294–307] 18d-19a
17 PLOTINUS: *Sixth Ennead*, TR I, CH 4–5 253b-254d; CH 16 260d-261c
19 AQUINAS: *Summa Theologica*, PART I, Q 7, A 3, REP 4 32c-33c; Q 25, A 2, REP 3 144c-145b
28 GALILEO: *Two New Sciences*, FIRST DAY, 166d-168a; THIRD DAY, 197b-c; 200a-207d; 209a-210c; 224b-225d; FOURTH DAY, 240a-d; 243d-249b
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51 TOLSTOY: *War and Peace*, BK XI, 469a-c; 470d-471a; BK XIV, 589d

5d. Mass: its relation to weight

7 PLATO: *Timaeus*, 462d-463c
8 ARISTOTLE: *Physics*, BK IV, CH 9 296b-297c / *Heavens*, BK I, CH 6 [273^{a}22–274^{a}18] 364c-365b; BK III, CH 2 [301^{a}21–^{b}18] 392c-393a; BK IV, CH 2 399d-401c
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16 KEPLER: *Epitome*, BK V, 970b
17 PLOTINUS: *Second Ennead*, TR VII, CH 1–2 62d-64b
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30 BACON: *Novum Organum*, BK II, APH 24, 154d-155a; APH 35, 163c-d; APH 36, 166b-c; APH 40, 171d-172b; APH 48, 179d-180a
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45 FOURIER: *Theory of Heat*, 249a-251b passim
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5e. Force: its measure and the measure of its effect

8 ARISTOTLE: *Physics*, BK VII, CH 5 333a-d; BK VIII, CH 10 [266^{a}25–267^{a}21] 353c-354d / *Heavens*, BK III, CH 2 [301^{b}2–32] 392d-393b
9 ARISTOTLE: *Motion of Animals*, CH 3 [699^{a}27–^{b}12] 234b-c
16 KEPLER: *Epitome*, BK IV, 938b-939a; BK V, 969a-971b
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20 AQUINAS: *Summa Theologica*, PART III SUPPL, Q 84, A 3, REP 2 985d-989b
28 GILBERT: *Loadstone*, BK II, 26d-40b passim; 54d-55c
28 GALILEO: *Two New Sciences*, THIRD DAY, 202d-203a
31 DESCARTES: *Rules*, IX, 15c / *Objections and Replies*, 231c-232a
34 NEWTON: *Principles*, DEF III–VIII 5b-8a; DEFINITIONS, SCHOL, 11a-13a; LAWS OF MOTION 14a-24a; BK I, LEMMA 10 28b-29a; PROP 1–17 and SCHOL 32b-50a esp PROP 6 37b-38b; PROP 70–93 and SCHOL 131b-152b; BK III, PROP 1–9 276a-284a esp PROP 6, COROL V 281b; GENERAL SCHOL, 371b-372a / *Optics*, BK III, 531b; 541b-542a
45 FARADAY: *Researches in Electricity*, 338a-b; 514d-532a; 646b-655d; 670a-673d; 817a-818d
51 TOLSTOY: *War and Peace*, BK XIII, 570d; EPILOGUE II, 678a-b

6. The measurements of quantities: the relation of magnitudes and multitudes; the units of measurement

8 ARISTOTLE: *Physics*, BK IV, CH 12 [220^{b}15–31] 300c-d; CH 14 [223^{b}12–224^{a}1] 303c-d / *Metaphysics*, BK III, CH 2 [997^{b}25–33] 516c; BK V, CH 6 [1016^{b}18–31] 537b; BK X, CH 1 [1052^{b}15–1053^{a}31] 579a-580a
9 ARISTOTLE: *Ethics*, BK V, CH 5 [1133^{a}5–^{b}29] 380d-381c
17 PLOTINUS: *Sixth Ennead*, TR I, CH 4 253b-254b

19 AQUINAS: *Summa Theologica*, PART I, Q 3, A 5, REP 2 17c-18b; Q 10, A 6, ANS and REP 4 45c-46d; Q 66, A 4, REP 3 348d-349d
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39 SMITH: *Wealth of Nations*, BK I, 14b
42 KANT: *Judgement*, 497a-498d esp 498b-d
45 LAVOISIER: *Elements of Chemistry*, PART III, 87d-88a
45 FOURIER: *Theory of Heat*, 249b-251b
45 FARADAY: *Researches in Electricity*, 820d-821c
46 HEGEL: *Philosophy of Right*, ADDITIONS, 40 122d-123b
50 MARX: *Capital*, 20b; 44a
53 JAMES: *Psychology*, 346a-347a; 400a-408a; 551a-b; 567a-570a

6a. Commensurable and incommensurable magnitudes

7 PLATO: *Theaetetus*, 515b-c / *Laws*, BK VII, 729b-c
8 ARISTOTLE: *Prior Analytics*, BK I, CH 23 [41^{a}23-27] 58a / *Physics*, BK VII, CH 4 330d-333a / *Metaphysics*, BK I, CH 2 [983^{a}11-20] 501b-c; BK X, CH 1 [1053^{a}14-18] 579c-d
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11 ARCHIMEDES: *Equilibrium of Planes*, BK I, PROP 6-7 503b-504b
16 KEPLER: *Harmonies of the World*, 1012a-b; 1013a-b

6b. Mathematical procedures in measurement: superposition, congruence; ratio and proportion; parameters and coordinates

11 EUCLID: *Elements*, BK I, POSTULATES, 4, COMMON NOTIONS, 4 2a; PROP 4 4a-b; PROP 8 6b-7a; PROP 26 16a-17b; BK V 81a-98b esp DEFINITIONS, 5 81a, 7 81b; BK VI, PROP 1 99a-100a; PROP 4-7 102a-105b; BK VII, DEFINITIONS, 20 127b; PROP 2-3 128b-130b; PROP 34 146a-147a; PROP 36-39 147b-149b; BK X, PROP 3-4 193a-195a
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16 PTOLEMY: *Almagest*, BK I, 14a-24b; 26a-28b
16 COPERNICUS: *Revolutions of the Heavenly Spheres*, BK I, 532b-556b
28 GALILEO: *Two New Sciences*, SECOND DAY, 178c-179c
31 DESCARTES: *Geometry*, BK III, 332b-341b
34 NEWTON: *Principles*, BK I, LEMMA I 25a; LEMMA 28-PROP 31 and SCHOL 76b-81a; BK III, LEMMA 5 338b-339a

6c. Physical procedures in measurement: experiment and observation; clocks, rules, balances

5 ARISTOPHANES: *Birds* [992-1020] 555a-b
6 HERODOTUS: *History*, BK II, 49d-50a; 70b-c; BK IV, 139c
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28 GALILEO: *Two New Sciences*, FIRST DAY, 136d-137c; 148d-149c; 164a-166c; 167a-168a; THIRD DAY, 207d-208c
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30 BACON: *Novum Organum*, BK I, APH 109, 129b; BK II, APH 39, 170b-c; APH 44-48 175d-188b passim
33 PASCAL: *Great Experiment* 382a-389b
34 NEWTON: *Principles*, DEFINITIONS, SCHOL, 9b-10a; LAWS OF MOTION, SCHOL, 20a-22a; BK II, GENERAL SCHOL 211b-219a; PROP 40, SCHOL 239a-246b; BK III, PROP 20 291b-294b; LEMMA 4 333a-337b
34 HUYGENS: *Light*, CH I, 554b-557b
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53 JAMES: *Psychology*, 56a-57b; 348a-355b; 401a-404a

7. Infinite quantity: the actual infinite and the potentially infinite quantity; the mathematical and physical infinite of the great and the small

7 PLATO: *Parmenides*, 495d-497b
8 ARISTOTLE: *Physics*, BK I, CH 2 [185^{a}28-^{b}4] 260a-b; BK III, CH 1 [200^{b}15-19] 278a; CH 4-8 280c-286d / *Heavens*, BK I, CH 5-7 362c-367b / *Generation and Corruption*, BK I, CH 3 [318^{a}13-24] 414c-d / *Metaphysics*, BK II, CH 2 [994^{b}23-27] 513a-b; BK IX, CH 6 [1048^{b}9-17] 574a; BK XI, CH 10 [1066^{a}35-^{b}22] 594d-595b; BK XII, CH 7 [1073^{a}3-13] 603a-b

(7. *Infinite quantity: the actual infinite and the potentially infinite quantity: the mathematical and physical infinite of the great and the small.*)

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11 ARCHIMEDES: *Sphere and Cylinder*, BK I, ASSUMPTIONS, 5 404b / *Spirals*, 484b / *Sand-Reckoner* 520a-526b / *Quadrature of the Parabola*, 527a-b / *Method* 569a-592a passim
11 APOLLONIUS: *Conics*, BK II, PROP 14 691b-692a
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12 LUCRETIUS: *Nature of Things*, BK I [551–634] 7d-8d; [951–1113] 12d-14d
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17 PLOTINUS: *Sixth Ennead*, TR VI, CH 2-3 311b-312b; CH 17, 319d-320a
18 AUGUSTINE: *City of God*, BK XI, CH 5 324d-325c; BK XII, CH 18 354b-d
19 AQUINAS: *Summa Theologica*, PART I, Q 7 31a-34c; PART I-II, Q 1, A 4, REP 2 612a-613a
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31 DESCARTES: *Objections and Replies*, 112b
31 SPINOZA: *Ethics*, PART I, PROP 15, SCHOL 360b-361d
33 PASCAL: *Pensées*, 121 195a; 231-233, 213b-214a / *Geometrical Demonstration*, 434a-439b
34 NEWTON: *Principles*, BK I, LEMMA 1-11 and SCHOL 25a-32a esp LEMMA II, SCHOL, 31a-b; BK II, LEMMA 2 168a-169b; BK III, GENERAL SCHOL, 370a-b / *Optics*, BK III, 543a
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35 BERKELEY: *Human Knowledge*, SECT 123-132 437c-439c
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42 KANT: *Pure Reason*, 24d; 26d; 130b-133c; 135a-137a,c; 152a-d; 158a-159d; 160b-163a / *Judgement*, 498b-501b
43 FEDERALIST: NUMBER 31, 103d
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CROSS-REFERENCES

For: Discussions relevant to the problem of the existence of quantities and of their relation to matter, substance, and body, *see* BEING 7b, 7b(5)–7b(6); MATTER 2a; QUALITY 3d.

Discussions relevant to the conception of the categories as transcendental concepts of the understanding, *see* FORM 1c; JUDGMENT 8c–8d; MEMORY AND IMAGINATION 6c(1); MIND 1e(1); PRINCIPLE 2b(3).

Other considerations of the relation between quantity and quality, *see* MECHANICS 4b; QUALITY 3a.

The conception of equality and inequality as the basic relation between quantities, *see* SAME AND OTHER 3d; and for the general theory of ratios and proportions, *see* MATHEMATICS 4c; RELATION 5a(3); SAME AND OTHER 3b.

The division of quantities into magnitudes and multitudes, or continuous and discontinuous quantities, *see* MATHEMATICS 2c; ONE AND MANY 3a(2)–3a(4); and for the conception of space and time as magnitudes, *see* MECHANICS 3a; SPACE 1a; TIME 1.

Other discussions of magnitudes and numbers as the objects of geometry and arithmetic, *see* MATHEMATICS 2; ONE AND MANY 2a; SPACE 3b–3c; TIME 6c.

Other discussions of such physical quantities as space, time, motion, mass, and force, *see* ASTRONOMY 7; CHANGE 5a–5b; MECHANICS 5d–5e(2), 6b–6e; SPACE 3d; TIME 4.

The general theory of measurement, *see* MATHEMATICS 5a; MECHANICS 3a; PHYSICS 4d.

Other discussions of infinite quantity, *see* INFINITY 1b, 3a–3e; SPACE 3a; TIME 2b.

ADDITIONAL READINGS

Listed below are works not included in *Great Books of the Western World*, but relevant to the idea and topics with which this chapter deals. These works are divided into two groups:

I. Works by authors represented in this collection.
II. Works by authors not represented in this collection.

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Chapter 77: REASONING

INTRODUCTION

IN the tradition of western thought, certain verbal expressions have become shorthand for the fundamental ideas in the discussion of which they happen to be so often repeated. This may be due to the influence of the textbooks used in the schools, which copy one from another and hand down an easily recited jargon from generation to generation. In most cases the great books themselves are probably the original source, though they have usually suffered over-simplification or distortion when their insights are thus transmitted.

"Featherless biped" and "rational animal" are, for example, stock phrases to illustrate the idea that a definition consists of genus and differentia—the class to which man, in this instance, belongs and the attribute which differentiates him from other members of this class. Statements such as "the whole is greater than the part" or "two plus two equals four" similarly serve to represent axioms or at least statements which, whether or not they can be proved, are usually accepted as true without proof. In the field of reasoning, the familiar verbal landmark is "All men are mortal, Socrates is a man; therefore, Socrates is mortal." Even those who have never heard of syllogisms, or who are throughly innocent of the age-old controversies about the theory of the syllogism and the difference between deduction and induction, might offer this sequence of statements if, pressed to say what reasoning is, they tried to answer by giving an example.

The example, shopworn though it is and far from being the perfect paradigm, does convey certain insights into the nature of reasoning which are generally undisputed.

The word "therefore," which connects the third statement with the first two, signifies a relationship which is sometimes described in terms of cause and effect, as by Aristotle, and sometimes in terms of antecedent and consequent, as by Hobbes. The premises (*i.e.*, the statements which precede the "therefore") cause the conclusion, it is said. We know that Socrates is mortal *because* we know that Socrates is a man and that all men are mortal. The premises are the cause in the sense of the *reason why* the conclusion may be regarded as true.

The conclusion is also said to *follow from* the premises, or the premises are said to *imply* or *yield* the conclusion. *If* the premises are true, *then* the truth of the conclusion can be inferred or proved. The relationship between the premises and the conclusion seems to be the same whether the act of reasoning is called "proof" or "inference." The distinction in meaning between these two words seems to be one of direction. We speak of "proving" a conclusion when we look toward the premises as the foundation for its truth; we speak of "inferring" a conclusion when we look toward it as something which can be drawn from the premises.

The words "if" and "then" indicate that reasoning is a motion of the mind from one statement to another. Sometimes the inference is immediate, as when we argue that if all men are mortal, then some mortals are men. Here only two propositions are involved, one of which is simply the converse of the other. Those who deny that immediate inference is truly inference (because a proposition and its converse are merely two ways of stating the same fact), insist that, implicitly or explicitly, reasoning always involves *at least* three statements. In any case, a single statement like "Socrates is a man," or even a pair of statements connected by "and" rather than "if-then"—*e.g.*, "Socrates is a man and Socrates is mortal"—does not express what is commonly recognized as reasoning. The motion of reasoning does, however, appear in this sequence of statements, "If Socrates is a

man, then Socrates is mortal," even though it omits a statement that may be necessary to the validity of the reasoning, namely, "All men are mortal."

Thus, the familiar grammatical distinctions of word (or phrase), sentence, and paragraph do not seem to provide a perfect parallel for the distinctions which the logicians make between terms, propositions, and syllogisms. But this much is clear. Just as a single word or phrase, like "man" or "rational animal," can never express a proposition, but only a term, so a simple sentence expresses only a proposition, and never a syllogism; and a compound sentence, one made up of a number of sentences, expresses a syllogism only if its verbal construction somehow indicates that they form a sequence in which one *follows* from the others, or if they are related in such a way that the truth of one is caused by the truth of the others.

THE CHAPTER ON IDEA (and perhaps also the chapter on DEFINITION) deals with that content or act of the mind—whether a percept or a concept, an image or an abstraction—which is verbally expressed in words or phrases and of which the *term* is the logical representative. The chapter on JUDGMENT (and perhaps also the chapter on PRINCIPLE) deals with the mental act or content that requires a sentence for its expression and is logically represented by the *proposition*. Here we are concerned with mental activity which involves not only two or more ideas, but also two or more judgments so connected that the mind passes from one to another.

Whether the logical structure that Aristotle calls a "syllogism" represents all forms of the mental activity called reasoning, is one of the great traditional issues. Hume suggests, for example, that animals reason without making use of syllogisms; and Descartes and Locke seem to hold that the highest forms of thinking, such as occur in mathematics or philosophy, cannot be reduced to syllogisms, except perhaps by a *tour de force*.

We face a different sort of problem when we compare reasoning with other acts of the mind —with conception (or the having of ideas) and with judgment (or the connecting of ideas with one another in the manner which mediaeval writers call "composition and division"). No one denies that reasoning is thinking, nor does anyone deny that there are forms of thinking which are not reasoning, since conceiving and judging are generally regarded as kinds of thinking or modes of thought. Reasoning is merely that mode of thought which is a *process*—the going step by step from one statement to another.

The problem which arises from the comparison of reasoning with other modes of thought turns on the question whether the mind can learn anything without having to think rationally. Can certain things be known by insight or instinct, by induction or intuition, rather than by reasoning? Are there truths which cannot be known by reasoning at all, but only by some other mode of thought? These questions in turn raise the problem of the priority or superiority of such modes of thought as do not consist in reasoning. The theory discussed in the chapter on INDUCTION—that induction is prior to reasoning because intuitive generalization from experience must provide the starting-points for demonstration—indicates one solution of the problem. Our present concern, however, goes beyond the issue concerning induction and deduction to the most general contrast between the intuitive and the rational.

FOR PLOTINUS ANY FORM of thinking—not merely reasoning—signifies a deficiency or weakness. In the scale of intellectual beings man occupies the lowest rank because he reasons. But even the pure intelligences, which know intuitively, rank below the One, because even the simplest act of thought involves some duality of subject and object. The One, according to Plotinus, transcends thought even as it transcends being. "The super-essential," he says, "is the supra-cogitative." The One "has no need for intellection, being always self-sufficing."

Other writers do not go as far as this. Christian theologians do, however, contrast the human mind with the angelic intellect and the mind of God by saying that the latter are supra-rational, *i.e.*, above the need to reason. They do not, like Plotinus, hold that the transcendent being transcends thought itself—certainly not insofar as they discuss the divine ideas. But the kind of thinking which is not an instantaneous act of vision or an immediate intuition involves

the mind in a process of thought, somehow akin to change or motion; and this, the theologians hold, cannot take place in any immutable being—the angels or God.

The human intellect, according to Aquinas, gradually comes to know the truth "by a kind of movement and discursive intellectual operation . . . by advancing from one thing known to another. But if from the knowledge of a known principle [men] were straightway to perceive as known all its consequent conclusions, then there would be no place for discursiveness in the human intellect. Such is the condition of the angels, because in the truths which they know naturally, they at once behold all things whatsoever that can be known in them."

That, says Aquinas, is why the angels "are called *intellectual* beings" and men "are called *rational*." Recourse to reasoning on the part of men betrays "the feebleness of their intellectual light. For if they possessed the fullness of intellectual light, like the angels, then in the first grasping of principles they would at once comprehend all that they implied, by perceiving at once whatever could be reasoned out of them."

The type of intuitive apprehension which the angels enjoy is even more perfectly exemplified in God's knowledge. "In the divine knowledge," according to Aquinas, "there is no discursiveness"—no succession, neither the turning from one thought to another, nor the advance from the known to the unknown by reasoning from principles to conclusion. The divine knowledge, Aquinas explains, is a single all-embracing act of vision, in which "God sees all things in one thing alone, which is Himself," and therefore "sees all things together and not successively." Apart from participation in the vision of God through supernatural light, all human thinking on the natural plane is discursive. Even the conception and the judgment are discursive in the sense that the one involves an act of abstraction or definition and the other involves a composition or division of concepts. But though it is always discursive, human thinking is not, according to Aquinas, always involved in the *motion* of reasoning, that is, the transition from one thought to another. "Reasoning," he says, "is compared to understanding"—*i.e.*, the act of judgment by which we affirm or deny a single proposition—"as movement is to rest, or acquisition to possession."

DESCARTES USES THE word "intuition" to name the way in which we know certain truths immediately and with certitude. He distinguishes "intuition from deduction by the fact that into the conception of the latter there enters a certain movement or succession, into that of the former there does not. . . . The first principles are given by intuition alone, while, on the contrary, the remote conclusions are furnished only by deduction." But while deduction, which Descartes says he understands to be "all necessary inference from other facts that are known with certainty," supplements intuition, it is never at any stage of the reasoning process independent of intuition.

Not only does intuition, according to Descartes, supply the first principles or ultimate premises of reasoning, but it also certifies each step in the process. He asks us to "consider this consequence: 2 and 2 amount to the same as 3 and 1. Now we need to see intuitively not only that 2 and 2 make 4, and that likewise 3 and 1 make 4, but further that the third of the above statements is a necessary conclusion from these two."

If in addition to knowing the premises by intuition, the drawing of a conclusion from them is, as Descartes says, itself "effected by intuition"—if the act of inference rests on the intuition that the conclusion follows logically from the premises—in what way does deduction or reasoning supplement intuition? To this question, Descartes replies that though the mind "has a clear vision of each step in the process," it cannot comprehend in one intuition all the connections involved in a long chain of reasoning. Only by taking the steps one after another can we "know that the last link in a long chain is connected with the first, even though we do not take in by means of one and the same act of vision all the intermediate links on which that connection depends, but only remember that we have taken them successively under review."

Like Descartes, Locke contrasts intuition and reasoning, or intuitive and demonstrative knowledge. "Sometimes the mind perceives the agreement or disagreement of two ideas immediately by themselves, without the interven-

tion of any other: and this," says Locke, "we may call intuitive knowledge. ... When the mind cannot so bring its ideas together, as by their immediate comparison ... to perceive their agreement or disagreement, it is fain by the intervention of other ideas ... to discover the agreement or disagreement which it searches; and this is that which we call reasoning."

Again like Descartes, Locke asks, "What need is there of reason?" It is necessary, he thinks, "both for the enlargement of our knowledge and regulating our assent ... Sense and intuition reach but very little of the way. The greatest part of our knowledge depends upon deductions and intermediate ideas; and in those cases where we are fain to substitute assent instead of knowledge, and take propositions for true without being certain they are so, we have need to find out, examine, and compare the grounds of their probability." But though reasoning enlarges our knowledge beyond what can be known intuitively, reasoning produces certain knowledge, according to Locke, only if "every step in reasoning ... has intuitive certainty. ... To make anything a demonstration, it is necessary to perceive the immediate agreement of the intervening ideas, whereby the agreement or disagreement of the two ideas under examination (whereof the one is always the first, and the other the last, in the account) is found."

On this view of reasoning, nothing can be known demonstratively or by proof unless some things can be known intuitively, *i.e.*, without inference or proof. Locke and Descartes seem to agree with Aquinas and Aristotle that demonstration depends upon indemonstrable truths, whether these are called axioms, immediate propositions, first principles, or self-evident maxims. Locke and Descartes, on the one hand, stress the point that in reasoning the logical connection between premises and conclusion is also indemonstrable and must be intuitively perceived. Aquinas and Aristotle, on the other, repeatedly observe that the truth of the conclusion is implicitly contained in the truth of the premises, so that the advance which reasoning appears to make from the known to the unknown consists in coming to know actually what is already potentially known. Nevertheless they, unlike Descartes and Locke, maintain that reasoning extends knowledge, even though it may not be the method of initial discovery.

A somewhat contrary view seems to be taken by Hume. If the objects under consideration are matters of fact rather than the relations between our own ideas, the kind of reasoning which goes from premises to conclusion avails not at all. The beliefs we hold about such matters, according to Hume, result from mental operations which are "a species of natural instinct ... which no reasoning or process of thought is able either to produce or to prevent." What he calls "experimental reasoning" or "reasoning concerning matters of fact" is founded, he says, "on a species of Analogy, which leads us to expect from any cause the same events which we have observed to result from similar causes."

Not only men, but also animals reason in this way. But Hume thinks "it is impossible that this inference of the animal can be founded on any process of argument or reasoning by which he concludes that like events must follow like objects. ... The experimental reasoning itself, which we possess in common with beasts, and on which the whole conduct of life depends, is nothing but a species of instinct or mechanical power, that acts in us unknown to ourselves; and in its chief operations is not directed by any such relations or comparisons of ideas, as are the proper objects of our intellectual faculties."

THE FOREGOING considerations indicate how diverse theories of the role of reasoning arise from diverse theories of the nature and kinds of knowledge in animals, men, angels, and God. According as various distinctions are made between human knowledge and opinion, or between the way in which different objects can be known, or between speculative and practical interests, so, too, different formulations are given of the nature of reasoning.

Aristotle's distinction, for example, between scientific and dialectical or rhetorical reasoning turns upon his understanding of the difference between the objects of certain knowledge and the objects of probable opinion. This difference, he says, makes it "equally foolish to accept probable reasoning from a mathematician and to demand from a rhetorician scientific proofs."

Hume's distinction between *a priori* and *a posteriori* reasoning—*i.e.*, between reasoning from principles and reasoning from experience—depends upon his understanding of what matters must be submitted to experience and of the manner in which experience generates belief. The distinction which Aquinas makes between demonstrations *propter quid* and demonstrations *quia*—*i.e.*, between proving *what* something is from its causes and proving *that* it is from its effects—depends upon his understanding of the difference between essence and existence as objects of rational knowledge.

To take an example in the opposite vein, Locke's theory that the same type of demonstration is possible in both mathematics and the moral sciences, seems to rest upon his view that all knowledge consists in the comparison of ideas. In contrast to this, other theories, which hold that the mode of reasoning differs in different disciplines (especially in mathematics and morals, or in metaphysics and the natural sciences), seem to arise from the contrary view that, in these different fields of inquiry, the objects and conditions of knowledge are different.

Sometimes a distinction in the modes of reasoning is based upon the same considerations, but the distinction itself is expressed by different writers in different terms. The role of causes in reasoning appears to underlie Aquinas' distinction between *a priori* and *a posteriori* reasoning, or reasoning from cause to effect as opposed to reasoning from effect to cause. "Demonstration can be made in two ways," he writes; "one is through the cause and is called *a priori*, and this is to argue from what is prior absolutely. The other is through the effect, and is called a demonstration *a posteriori*; this is to argue from what is prior relatively only to us." Descartes appears to make a parallel distinction, though he makes it in different terms. "The method of proof is twofold," he says, "one being analytic, the other synthetic. Analysis shows the true way by which a thing was methodically discovered, as it were effect from cause. . . . Synthesis employs an opposite procedure, one in which the search goes as it were from effect to cause." For both mathematical and metaphysical reasoning, Descartes prefers the analytic to the synthetic method.

According to Newton, the method of analysis, in natural science as well as mathematics, consists in going from effects to causes, while the method of synthesis goes from causes to effects. Newton relates the difference between analysis and synthesis to the difference between inductive and deductive reasoning. This way of distinguishing between inductive and deductive reasoning, in terms of going from effects to causes or from causes to effects, would also seem to be related to the distinction Aquinas makes between demonstration *quia* (*i.e.*, reasoning which proves only *that* something exists) and demonstration *propter quid* (*i.e.*, reasoning which proves *what* something is—its nature or properties). The proof that God exists is, according to Aquinas, a demonstration *quia*; it is also *a posteriori* reasoning or reasoning from effect to cause. But he would not call it "inductive." In one passage at least, he seems to regard induction as the method whereby we can come to some knowledge of what God is. "From natural things," he writes, "one does not come by a demonstration of reason to know non-natural things, but by the induction of reason one may know something above nature, since the natural bears a certain resemblance to the supernatural."

This sense of the word "induction," however, is like that in which Aristotle opposes induction to reasoning, not like that in which he distinguishes between inductive and deductive reasoning according to the order of terms in the inductive and deductive syllogism. In the ordinary deductive syllogism, the middle term establishes the connection between the two extreme terms (for example, 'being a man' establishes the connection between 'Socrates' and 'being mortal'). But "the syllogism which springs out of induction," according to Aristotle, establishes "a relation between one extreme and the middle by means of the other extreme, *e.g.*, if B is the middle term between A and C, it consists in proving through C that A belongs to B." Starting from C (particular cases of long-lived animals, such as man, horse, mule), we can argue inductively from the fact that these long-lived animals are bileless, to the general connection between B (being bileless) and A (being long-lived). Such reasoning is valid, Aristotle adds, only if we can treat C "as made up of all the particulars; for induction

proceeds through an enumeration of all the cases."

DIFFERENT THEORIES of definition also affect the place which is assigned to definition in reasoning. Hobbes, for example, regards reasoning as a kind of calculation with names, which wholly depends upon the determination of their meanings. The operations of addition and subtraction when done with words rather than with numbers are, he thinks, equivalent to "conceiving of the consequence of the names of all the parts, to the name of the whole; or from the names of the whole and one part, to the name of the other part." It is "nothing but *reckoning* (that is, adding and subtracting) of the consequences of general names agreed upon." Aristotle, with the theory that definitions state the essential natures of things, not just the meanings of words, holds that a definition may be "the conclusion of a demonstration giving essential nature," as well as "an indemonstrable statement of essential nature." In the latter case, the definition functions as a principle in demonstration.

According to William James, reasoning, like definition, is "a selective activity of the mind" which serves an individual's interest or purpose. "My thinking," he says, "is first, last, and always for the sake of my doing. . . . Reasoning is always for a subjective interest, to attain some particular conclusion, or to gratify some special curiosity." It makes no difference whether the interest is practical or the curiosity speculative. The process of reasoning will be the same, though the element which provides a solution to the problem in any emergency will be called a "'reason' if the emergency be theoretical, a 'means' if it be practical."

Those writers who, like Aristotle and Aquinas, regard the speculative and the practical as distinct though related orders of thought and knowledge, seem to think that practical reasoning has its own syllogistic form. Practical deliberations for them are different from theoretic demonstrations. The conclusion of theoretic reasoning is an assertion that something is either true or false, whereas the conclusion of practical deliberation is a judgment that something is good or evil, and therefore should either be done or avoided. According to Aristotle, practical reasoning of the sort which ends in a decision that leads to action, takes the form of a syllogism which has one universal and one particular premise. The major premise is a general rule of conduct, the minor premise a particular perception of fact. In the example Aristotle gives of the practical syllogism, the major premise is the rule that *everything sweet ought to be tasted*, and the minor premise is the perception that *this particular thing is sweet*. These two premises lead to the practical conclusion that *this particular thing ought to be tasted*.

Not all practical reasoning, however, is concerned with reaching decisions or prompting action in particular cases. The rules of conduct which decisions and actions apply may themselves be the products of practical reasoning. The process by which general rules are derived from even more general principles—the precepts of law or morality—involves, according to Aquinas, a form of thinking distinctly different from the theoretic or speculative sort. He points out in his Treatise on Law that we are able to formulate certain practical rules only by making particular determinations of universal principles, not by drawing deductions from them. "Something may be derived from the natural law in two ways," he writes: "first, as a conclusion from premises; secondly, by way of determination of certain generalities. The first way is like that by which, in the speculative sciences, demonstrated conclusions are drawn from the principles; while the second mode is likened to that whereby, in the arts, general forms are particularized as to details." Of these two ways of thinking in the field of law, it would appear that it is only the second type which is peculiar to the practical as opposed to the speculative order.

THE DISCUSSION OF reasoning in relation to knowledge, opinion, and action, or in relation to different disciplines and sciences, usually presupposes a theory of the form which reasoning takes regardless of its subject matter or use. This fact is most explicitly attested by the order of three great books concerned with reasoning. Aristotle's *Posterior Analytics* deals with the theory of demonstration in the sciences. His *Topics* deals with the theory of probable argument or reasoning in the sphere of opinion.

Both are preceded by his *Prior Analytics* which treats of the syllogism in terms of its purely formal structure and its various forms. In the later tradition, the distinction between the problems of the *Prior* and the *Posterior Analytics* comes to be represented by the separation between what are called "formal" and "material" logic.

The formal analysis of reasoning centers on the problem of its cogency. Quite apart from any consideration of the truth of its premises or conclusions, reasoning is true or false according as it is valid or invalid on purely logical grounds. From premises which are in fact false, a conclusion, which may be either true or false, can be truly inferred if the structure of the reasoning is formally valid—that is, if the form of the premises stands in a certain logically prescribed relation to the form of the conclusion. The logical problem, then, is to prescribe the formal relationships among propositions which permit valid inference from certain propositions to others, without regard to the content of the propositions or their truth in fact.

Defining a syllogism as "discourse in which, certain things being stated, something other than what is stated follows of necessity from their being so," Aristotle says, "I call that a perfect syllogism which needs nothing other than what has been stated to make plain what necessarily follows; a syllogism is imperfect, if it needs either one or more propositions which are indeed the necessary consequences of the terms set down, but have not been expressly stated as premises." Using the letters S and P to symbolize the subject and predicate of the conclusion, and the letter M to symbolize the middle term, the term which appears in the premises but not in the conclusion, Aristotle states the form of a perfect syllogism in the following manner: "All M is P, all S is M; therefore all S is P."

The first of these propositions, the one which contains the predicate of the conclusion, is called the major premise; the second, the one which contains the subject of the conclusion, the minor premise; the subject of the conclusion is called the minor term, the predicate the major term. Aristotle classifies syllogisms into three figures, or formal types, according to the position of the middle term, either as subject of the major premise and predicate of the minor in the first figure, or as predicate in both or as subject in both in the second and third figures respectively. Then according to whether the premises are universal propositions or particular ('All M is P' or 'Some S is M'), and each is either affirmative or negative ('All M is P' or 'Some S is not M'), he further distinguishes within each figure a number of valid moods, or formally correct patterns of inference.

For example, in no figure can a valid mood be constructed with two particular or two negative premises. No conclusion can be drawn from the two particular statements that some poisons are liquids and that some liquids are indispensable to life; nor can any conclusion be drawn from the two negative statements that no triangles are parallelograms and no rhomboids are parallelograms. In the first figure, the minor premise can be particular and must be affirmative, the major can be negative and must be universal. In this figure the following combinations of premises—"some figures are not rectangular" with "all rectangular figures are parallelograms," or "all prime numbers are odd" with "some odd numbers are squares"—yield no conclusions. In the second figure, one premise must be negative. Here it is impossible to draw a valid conclusion from two affirmative premises. Nothing follows from the two affirmative statements that all fish swim and all whales swim. In the third figure, only a particular conclusion can be drawn from a pair of premises both of which are universal. From the proposition that no men are wise and the proposition that all men are mortal, we can conclude only that some mortals are not wise.

From these examples it will be seen that Aristotle's rules of the syllogism are rules concerning the quantity and quality of the premises required in each figure to permit a valid inference; and as in the third figure these rules permit only a particular conclusion to be drawn, so for all figures they determine the character of the conclusion which can be drawn from premises of a certain quantity and quality. If one premise is negative, the conclusion must be negative. If one premise is particular, the conclusion must be particular.

There seems to be one universal principle of the syllogism which underlies all these specific rules for the valid moods in different figures.

"When one thing is predicated of another," Aristotle says, "all that which is predicable of the predicate will be predicable also of the subject." The negative aspect of this principle is immediately obvious. What cannot be predicated of a predicate, cannot be predicated of its subject. In the tradition of formal logic, this principle is sometimes stated in terms of the relation of classes rather than in terms of subjects and predicates: if one class is included in a second, and that second class is included in a third, the first is included in the third; and if one class excludes another, the classes which it includes are also excluded from that other.

The principle of the syllogism is traditionally called the *dictum de omni et nullo*. The *dictum de omni*, which Kant in his *Introduction to Logic* calls "the supreme principle of affirmative syllogisms," is thus expressed by him: "Whatever is universally affirmed of a concept is also affirmed of everything contained under it." The *dictum de nullo*, according to Kant, states that "whatever is universally denied of a concept is also denied of everything that is contained under it." Kant appears to think that both these rules follow from even more general principles: that "an attribute of an attribute is an attribute of the thing itself" and that "whatever is inconsistent with the attribute of a thing is inconsistent with the thing itself."

James also attempts to make a more general formulation of the *dictum de omni et nullo*. This law of thought, he says, is "*only the result of the function of comparison* in the mind which has come by some lucky variation to apprehend a series of more than two terms at once." As James states what he calls the "principle of mediate comparison," it appears to be broader than the principle of the syllogism. It applies to any series of related terms—to the relation of equal and unequal quantities in mathematics, as well as to the relation of subjects and predicates in the logic of predication or classes.

James' principle of mediate comparison itself depends on what in mathematical logic and the logic of relations is called the "transitivity" of relations. The relation of *larger than*, for example, is transitive; for if one thing is larger than a second, and the second is larger than a third, it follows that the first is larger than the third. As stated in mathematical logic, the principle of the syllogism is merely a special case of transitivity as it appears in the relation of implication; for if P implies Q, and Q implies R, then P implies R.

James recognizes this when he writes that "*the principle of mediate predication or subsumption* is only the axiom of skipped intermediaries applied to a series of successive predications. It expresses the fact that any earlier term in the series stands to any later term, in the same relation in which it stands to any intermediate term; in other words, that *whatever has an attribute has all the attributes of that attribute*; or more briefly still, that *whatever is of a kind is of that kind's kind*." Along with "the *axiom of mediate equality*, 'equals of equals are equal,' " the rule of mediate predication or subsumption is, according to James, a special case of the law that "skipping intermediary terms leaves relations the same. This AXIOM OF SKIPPED INTERMEDIARIES or of TRANSFERRED RELATIONS . . . seems to be on the whole the broadest and deepest law of man's thought."

JAMES' ATTEMPT TO state a law of thought or principle of reasoning which relegates all the rules of the syllogism to the status of a special case represents one type of attack on the syllogism. Whether, for instance, the sample of reasoning which Descartes asks us to consider—that if 2 and 2 make 4, and 3 and 1 make 4, then 2 and 2 amount to the same as 3 and 1—can be reduced to the syllogistic form of subject and predicate, or must be formulated under a more general principle of "transferred relations," illustrates the basic issue here between subject-predicate logic and relational or mathematical logic. Other aspects of that issue are discussed in the chapters on LOGIC, JUDGMENT, and RELATION.

Another type of criticism of the traditional theory of the syllogism accepts the syllogism as the form of *all* reasoning, but objects, as Kant does, to what he calls "the mistaken subtilty" of the classification of syllogisms according to figures and moods. But Kant does not deny all distinctions among syllogisms. On the contrary, he says that syllogisms are "threefold, like all judgements, differing from each other in the manner in which they express the relation of knowledge in the understanding, namely, cate-

gorical, hypothetical, and disjunctive." Whether the hypothetical and disjunctive syllogisms are distinct types of reasoning, or only special cases which it would be a mistaken subtlety to treat as having principles of their own, is a problem considered in the chapter on HYPOTHESIS.

Of all criticisms, the most severe is that which either rejects the syllogism entirely as of no use in reasoning, or regards the deductive syllogism as useful only in argumentation or debate, not in the process of inquiry or discovery, where inductive reasoning alone is fruitful or instructive. From the conclusion of a syllogism, according to Mill, one learns nothing more than one already knew in the premises; whereas in inductive reasoning, Mill, like Bacon, thinks that the mind goes beyond anything contained in the premises and genuinely discovers a new truth.

It seems to be Descartes' opinion that "the syllogistic forms are of no aid in perceiving the truth about objects." Locke makes the same point more extensively. Admitting that "all right reasoning may be reduced to [Aristotle's] forms of syllogism," he denies that they are "the best way of reasoning for the leading of those into truth who are willing to find it and desire to make the best use of their reason for the attainment of knowledge. . . . The rules of syllogism," he writes, "serve not to furnish the mind with those intermediate ideas that may show the connexion of remote ones. This way of reasoning discovers no new proofs, but is the art of marshalling and ranging the old ones we have already. The forty-seventh proposition of the first book of Euclid, is very true; but the discovery of it, I think, not owing to any rules of common logic. A man knows first, and then he is able to prove syllogistically; so that syllogism comes after knowledge, and then a man has little or no need of it. . . . Syllogism, at best, is but the art of fencing with the little knowledge we have, without making any addition to it."

It may be that the critics of the syllogism attribute to its exponents claims they do not make. Aristotle, for example, seems to present the syllogism as a method of expounding arguments rather than of discovering them, and of testing the validity of reasoning rather than of learning the truth about things. "All instruction given or received by way of argument," he writes, "proceeds from pre-existent knowledge. This becomes evident upon a survey of all the species of instruction. The mathematical sciences, and all other speculative disciplines, are acquired in this way, and so are the two forms of dialectical reasoning, syllogistic and inductive; for each of these latter makes use of old knowledge to impart new, the syllogism assuming an audience that accepts its premises, induction exhibiting the universal as implicit in the clearly known particular."

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REFERENCES

To find the passages cited, use the numbers in heavy type, which are the volume and page numbers of the passages referred to. For example, in **4** HOMER: *Iliad*, BK II [265-283] **12d**, the number **4** is the number of the volume in the set; the number **12d** indicates that the passage is in section d of page 12.

PAGE SECTIONS: When the text is printed in one column, the letters **a** and **b** refer to the upper and lower halves of the page. For example, in **53** JAMES: *Psychology*, **116a-119b**, the passage begins in the upper half of page 116 and ends in the lower half of page 119. When the text is printed in two columns, the letters **a** and **b** refer to the upper and lower halves of the left-hand side of the page, the letters **c** and **d** to the upper and lower halves of the right-hand side of the page. For example, in **7** PLATO: *Symposium*, **163b-164c**, the passage begins in the lower half of the left-hand side of page 163 and ends in the upper half of the right-hand side of page 164.

AUTHOR'S DIVISIONS: One or more of the main divisions of a work (such as PART, BK, CH, SECT) are sometimes included in the reference; line numbers, in brackets, are given in certain cases; *e.g.*, *Iliad*, BK II [265-283] **12d**.

BIBLE REFERENCES: The references are to book, chapter, and verse. When the King James and Douay versions differ in title of books or in the numbering of chapters or verses, the King James version is cited first and the Douay, indicated by a (*D*), follows; *e.g.*, OLD TESTAMENT: *Nehemiah*, 7:45—(*D*) *II Esdras*, 7:46.

SYMBOLS: The abbreviation "esp" calls the reader's attention to one or more especially relevant parts of a whole reference; "passim" signifies that the topic is discussed intermittently rather than continuously in the work or passage cited.

For additional information concerning the style of the references, see the Explanation of Reference Style; for general guidance in the use of *The Great Ideas*, consult the Preface.

1. Definitions or descriptions of reasoning: the process of thought

7 PLATO: *Phaedo*, 244c-245c / *Republic*, BK VI-VII, 383d-398c / *Theaetetus*, 537d-538a / *Sophist*, 570a-577b / *Statesman*, 594d-595d / *Seventh Letter*, 809c-810d

8 ARISTOTLE: *Prior Analytics*, BK I, CH 1[24^{b}18-22]39c / *Topics*, BK I, CH 1 143a-d / *Sophistical Refutations*, CH 1 [165^{a}1-3] **227b**; CH 2 **227d-228a**

12 EPICTETUS: *Discourses*, BK I, CH 7 **112b-113d**

17 PLOTINUS: *Fourth Ennead*, TR IV, CH 12, **164b**

18 AUGUSTINE: *Christian Doctrine*, BK II, CH 31 **651d-652b**

19 AQUINAS: *Summa Theologica*, PART I, Q 14, A 7 **81d-82b**; Q 58, A 3 **301d-302d**; A 4, ANS **302d-303c**; Q 79, AA 8-9 **421c-423d**; A 10, REP 2-3 **423d-424d**; Q 84, A 3, REP 3 **443d-444d**; Q 85, A 5, ANS **457d-458d**

20 AQUINAS: *Summa Theologica*, PART II-II, Q 2, A 1 **391a-392a**; Q 8, A 1, REP 2 **417a-d**; PART III, Q 11, A 3 **773d-774c**

23 HOBBES: *Leviathan*, PART I, **56d-57a**; **58a-c**; **60a**

28 HARVEY: *On Animal Generation*, **332a-335c**

31 DESCARTES: *Rules* **1a-40a,c** passim, esp **V-VII 7d-12a**, **X-XII 15d-25a**, XIV, **28b-29a**, **32d** / *Objections and Replies*, **137a**

35 LOCKE: *Human Understanding*, BK IV, CH II, SECT 2-13 **309d-312b**; CH XV, SECT 1 **365a-c**; CH XVII **371c-380d** passim, esp SECT 2 **371d-372b**

38 ROUSSEAU: *Inequality*, **337d-342c**

42 KANT: *Pure Reason*, **15d-16c**; **20a**; **34c-35b**; **108a-209d** esp **109d-112d**, **115d-116a**, **118a-c**, **119a-b**, **129c-130c**, **158a-159d**, **173b-174a**, **185b-c**, **187a-c**, **193d-194b**, **199a-c**; **224a-227a** / *Judgement*, **551a-552c**; **570b-572c**

45 LAVOISIER: *Elements of Chemistry*, PREF, **1a**

49 DARWIN: *Descent of Man*, **292b-293d**; **299b-300a**

53 JAMES: *Psychology*, **146a-187a** esp **161a-176a**, **179b-184a**, **186a**; **360a-362b**; **381b-385b**; **664a-693b** esp **666b-668a**, **672b-678b**, **690a-b**

54 FREUD: *Interpretation of Dreams*, 337a; **363b-364b** esp **364a-b**; **367b-c**; **377c-379c** esp **379a-c**; **384c-385c** / *Unconscious*, **442d-443a** / *Ego and Id*, **700a-701d** esp **701d**

1*a*. Human reasoning compared with the reasoning of animals

8 ARISTOTLE: *Metaphysics*, BK I, CH 1 [980^{b}25-27] **499b** / *Soul*, BK II, CH 3 [414^{b}17-20] **644d**; [415^{a}7-12] **645b** / *Memory and Reminiscence*, CH 2 [453^{a}5-14] **695b**

9 ARISTOTLE: *History of Animals*, BK I, CH 1 [488^{b}20-27] **9d** / *Ethics*, BK VI, CH 7 [1141^{a}22-

28] 390a-b; BK VII, CH 3 [1147b2-5] 397d / *Politics*, BK VII, CH 13 [1332a39-b8] 537a-b

10 GALEN: *Natural Faculties*, BK I, CH 12, 173a-c

12 AURELIUS: *Meditations*, BK V, SECT 16 271c-d; BK VI, SECT 23 276b; BK IX, SECT 9 292b-d

19 AQUINAS: *Summa Theologica*, PART I, Q 76, A 5, REP 4 394c-396a; Q 78, A 4, ANS and REP 5 411d-413d; Q 81, A 3, ANS and REP 2 430c-431d; Q 86, A 4, REP 3 463d-464d; Q 96, A 1, REP 4 510b-511b; PART I-II, Q 13, A 2, REP 3 673c-674c

20 AQUINAS: *Summa Theologica*, PART I-II, Q 50, A 3, REP 2 8b-9a

23 HOBBES: *Leviathan*, PART I, 52b; 53a-b; 53d-54a; 57d; 59b-c; 63a; 64a-c; 79b-c; PART II, 100a-c; PART IV, 267b

25 MONTAIGNE: *Essays*, 215a-223b passim, esp 220b-223b

30 BACON: *Novum Organum*, BK II, APH 35, 163d

31 DESCARTES: *Discourse*, PART V, 59a-60c / *Objections and Replies*, 156c-d

32 MILTON: *Paradise Lost*, BK VII [449-549] 227a-229a; BK VIII [369-451] 240a-242a; BK IX [549-566] 259b

33 PASCAL: *Pensées*, 339-344 233a-b

35 LOCKE: *Human Understanding*, BK II, CH XI, SECT 11 145d-146a; CH XXVII, SECT 8 221a-222a; BK IV, CH XVII, SECT 1 371c-d

35 BERKELEY: *Human Knowledge*, INTRO, SECT 11 407b-408a

35 HUME: *Human Understanding*, SECT IX 487b-488c

36 SWIFT: *Gulliver*, PART IV, 151b-152a; 159b-160a

38 ROUSSEAU: *Inequality*, 337d-338a; 341d-342a / *Social Contract*, BK I, 393b-c

42 KANT: *Pure Reason*, 199c-200c / *Pref. Metaphysical Elements of Ethics*, 372a-b / *Judgement*, 602b,d [fn 1]

49 DARWIN: *Descent of Man*, 292b-297c esp 292b-294c; 400a-c

51 TOLSTOY: *War and Peace*, EPILOGUE II, 689c-690a

53 JAMES: *Psychology*, 665a-666b; 676b-677a esp 677a; 679a-686b esp 679a-683a, 686a-b; 873a

1b. Discursive reasoning contrasted with immediate intuition

7 PLATO: *Republic*, BK VI, 386d-388a / *Seventh Letter*, 809c-810d

8 ARISTOTLE: *Metaphysics*, BK IX, CH 6 [1048b 18-34] 574a-c; CH 9 [1051a22-34] 577b-c; BK XII, CH 7 [1072b14-29] 602d-603a; CH 9 605a-d

17 PLOTINUS: *Fourth Ennead*, TR III, CH 18 151b-c; TR IV, CH 1 159a-d; CH 12, 164b / *Fifth Ennead*, TR III, CH 3 216c-217b; TR V, CH 1-2 228b-229d passim; CH 7 231d-232b; TR VI 235b-237d

18 AUGUSTINE: *Confessions*, BK IX, par 23-25 68a-c; BK XII, par 16 102d-103a / *City of God*, BK IX, CH 22 296d-297a; BK XI, CH 2 323a-c; CH 7 326a-c; CH 21 333a-d; CH 29 339a-b; BK XVI, CH 6 426c-427a; BK XXII, CH 29, 614b-d

19 AQUINAS: *Summa Theologica*, PART I, Q 14, A 7 81d-82b; Q 34, A 1, REP 2 185b-187b; Q 46, A 2, REP 3 253a-255a; Q 58, A 3 301d-302d; A 4, ANS 302d-303c; Q 79, A 8, ANS and REP 3 421c-422b; Q 85, A 5, ANS 457d-458d; PART I-II, Q 14, A 1, REP 2 677b-678a; Q 15, A 4, REP 1 683b-684a

21 DANTE: *Divine Comedy*, PARADISE, II [43-45] 108a

30 BACON: *Advancement of Learning*, 17b-c / *Novum Organum*, BK II, APH 15 149a

31 DESCARTES: *Rules*, III, 4a-d; XI 17b-18b; XII, 23b-c / *Objections and Replies*, 123a-b

31 SPINOZA: *Ethics*, PART II, PROP 40, SCHOL 2 388a-b; PART V, PROP 28 459b

32 MILTON: *Paradise Lost*, BK V [469-505] 185b-186a

33 PASCAL: *Pensées*, 1-5 171a-173a; 277-288 222b-224b

35 LOCKE: *Human Understanding*, BK I, CH III, SECT 23 119b-120a; BK IV, CH I, SECT 9, 309b; CH IX, SECT 2-3 349a-c; CH XVII, SECT 14-17 378c-379c

36 STERNE: *Tristram Shandy*, 318b-319a

42 KANT: *Pure Reason*, 33a-d / *Practical Reason*, 320c-321b; 337a-c; 350c-351b / *Judgement*, 572d-574b; 579a

1c. The role of sense, memory, and imagination in reasoning: perceptual inference, rational reminiscence, the collation of images

7 PLATO: *Meno*, 179d-183a; 188d-189a / *Phaedo*, 224a-225c; 228a-230a / *Republic*, BK III, 333b-d; BK VI-VII, 383d-398c / *Seventh Letter*, 809c-810d

8 ARISTOTLE: *Posterior Analytics*, BK II, CH 19 136a-137a,c / *Soul*, BK I, CH 1 [403a2-16] 632a-b; BK III, CH 7 [431a14-b19] 663d-664b / *Sense and the Sensible*, CH 1 [436b17-437a17] 673d-674a / *Memory and Reminiscence*, CH 2 [453a5-15] 695b

12 LUCRETIUS: *Nature of Things*, BK IV [353-521] 48d-51a esp [469-521] 50b-51a

18 AUGUSTINE: *Confessions*, BK X, par 10 73d-74a; par 16-19 75b-76b; par 26-38 78a-81a / *City of God*, BK VIII, CH 6, 269b-c

19 AQUINAS: *Summa Theologica*, PART I, Q 78, A 4, ANS and REP 4-5 411d-413d; Q 81, A 3, ANS and REP 2 430c-431d

23 HOBBES: *Leviathan*, PART I, 52b-54c; 60a-b; PART IV, 267b

28 HARVEY: *On Animal Generation*, 332a-335c esp 334c-d

31 DESCARTES: *Rules*, XII, 18b-c; 20b-d; XIV 28a-33b / *Discourse*, PART I, 41d / *Objections and Replies*, 229d-230c

(1. *Definitions or descriptions of reasoning: the process of thought.* 1c. *The role of sense, memory, and imagination in reasoning: perceptual inference, rational reminiscence, the collation of images.*)

35 LOCKE: *Human Understanding*, BK II, CH XI, SECT 13 146b-c
36 STERNE: *Tristram Shandy*, 234b-236b
38 ROUSSEAU: *Inequality*, 341d-342a
42 KANT: *Pure Reason*, 23a-24a; 34a-c; 54b-64a; 111d-112a / *Practical Reason*, 352c-353a
49 DARWIN: *Descent of Man*, 292d-293d
53 JAMES: *Psychology*, 381b-385b; 525a-526b; 664a-666b esp 664b-665b; 667b-674a; 676a-686b esp 677a-678b

2. The rules of reasoning: the theory of the syllogism

7 PLATO: *Phaedo*, 244c-245c
8 ARISTOTLE: *Categories*, CH 3 [1^b10-16] 5c-d / *Prior Analytics* 39a-93a,c / *Posterior Analytics*, BK I, CH 14 108d-109a
9 ARISTOTLE: *Rhetoric*, BK I, CH 2 [1356^b13-17] 596a
12 EPICTETUS: *Discourses*, BK I, CH 7 112b-113d
18 AUGUSTINE: *Christian Doctrine*, BK II, CH 31-34 651d-653b
23 HOBBES: *Leviathan*, PART I, 56b-58a; 58d-60b
30 BACON: *Advancement of Learning*, 56c-58b esp 57b-58b; 59c-60a; 96d-97a / *Novum Organum*, BK I, APH 14 107d-108a; APH 104-106 128a-c; BK II, APH 27-32 157b-161b esp APH 32 161a-b
31 DESCARTES: *Rules* 1a-40a,c passim, esp V-VII 7d-12a, X-XII 15d-25a, XIV, 28b-29a, 32d / *Discourse* 41a-67a,c esp PART I, 41d-42b, PART II, 45b-c, 46c-48b, PART III, 50b-51a, PART IV, 52a
33 PASCAL: *Geometrical Demonstration*, 430b-434a; 442a-443b
35 LOCKE: *Human Understanding*, BK IV, CH XVII, SECT 4-8 372c-377d
36 STERNE: *Tristram Shandy*, 318b-319a
41 GIBBON: *Decline and Fall*, 299b
42 KANT: *Pure Reason*, 59c-108a,c; 110d-112d esp 110d-111c; 115d-119a / *Fund. Prin. Metaphysic of Morals*, 253a-b / *Judgement*, 600d-603d esp 601d-602b
53 JAMES: *Psychology*, 667b-668a; 868b-873a esp 869b-870a, 871a, 872b-873a; 878b-879a

2a. The structure of a syllogism: its figures and moods

8 ARISTOTLE: *Prior Analytics*, BK I, CH 1-26 39a-60b
24 RABELAIS: *Gargantua and Pantagruel*, BK I, 22b-c
30 BACON: *Advancement of Learning*, 59c-60a
35 LOCKE: *Human Understanding*, BK IV, CH XVII, SECT 4, 373c-375a; SECT 8 377b-d
42 KANT: *Pure Reason*, 110d-112d esp 110d-111c; 118a-c

2a(1) The number of premises and the number of terms: the middle term in reasoning

8 ARISTOTLE: *Prior Analytics*, BK I, CH 4 [25^b 32-39] 40d; CH 25 58d-59d; CH 32 65a-d / *Metaphysics*, BK V, CH 3 [1014^a35-$^b3$] 534c
30 BACON: *Advancement of Learning*, 59c-60a
35 LOCKE: *Human Understanding*, BK IV, CH XVII, SECT 4, 374d-375a; SECT 8, 377c-d
36 STERNE: *Tristram Shandy*, 318b-319a
42 KANT: *Pure Reason*, 110d-112d esp 110d-111c, 112a; 118a-c
53 JAMES: *Psychology*, 667b-668a; 672b

2a(2) Affirmation, negation, and the distribution of the middle term: the quantity and the quality of the premises

8 ARISTOTLE: *Prior Analytics*, BK I, CH 4-7 40d-45b; CH 24 58b-d; CH 26 59d-60b; CH 33 65d-66a / *Posterior Analytics*, BK I, CH 14 108d-109a
19 AQUINAS: *Summa Theologica*, PART I, Q 86, A 1, REP 2 461c-462a
35 LOCKE: *Human Understanding*, BK IV, CH XVII, SECT 8, 377b-c
42 KANT: *Pure Reason*, 39c-41c esp 39d-40c

2b. The kinds of syllogism: categorical, hypothetical, disjunctive, modal

8 ARISTOTLE: *Prior Analytics*, BK I, CH 23 57b-58b; CH 27-29 60b-63d; CH 44 68d-69b
42 KANT: *Pure Reason*, 110d-111c esp 111b; 175c-d

2c. The connection of syllogisms: sorites, prosyllogisms and epi-syllogisms

8 ARISTOTLE: *Prior Analytics*, BK I, CH 25 [42^b1-26] 59c-d / *Posterior Analytics*, BK I, CH 25 [86^a33-$^b29$] 118a-c
35 LOCKE: *Human Understanding*, BK IV, CH XVII, SECT 4 373a-374d; SECT 15, 379a-b
42 KANT: *Pure Reason*, 111d-112d; 115d-119a
53 JAMES: *Psychology*, 872b-873a

3. The truth and cogency of reasoning

3a. Formal and material truth: logical validity distinguished from factual truth

8 ARISTOTLE: *Prior Analytics*, BK II, CH 2-4 72d-77a / *Posterior Analytics*, BK I, CH 12 [77^b16-34] 106d-107a / *Physics*, BK I, CH 2 [185^a5-12] 259d; CH 3 [186^a4-9] 260d-261a
10 GALEN: *Natural Faculties*, BK I, CH 14, 178c-d
12 EPICTETUS: *Discourses*, BK I, CH 7 112b-113d
18 AUGUSTINE: *Christian Doctrine*, BK II, CH 31-34 651d-653b

30 BACON: *Advancement of Learning*, 57d-58a; 59c-60c / *Novum Organum*, BK I, APH 14 107d-108a
31 DESCARTES: *Rules*, X, 16d-17a / *Objections and Replies*, 126b-127c
35 LOCKE: *Human Understanding*, BK II, CH XI, SECT 13 146b-c
42 KANT: *Pure Reason*, 36a-37d esp 36b-37b; 180c-182b; 193a-b
44 BOSWELL: *Johnson*, 134c-d
51 TOLSTOY: *War and Peace*, EPILOGUE II, 683d-684a
53 JAMES: *Psychology*, 872b; 879b-885a esp 880b-882a

3b. Lack of cogency in reasoning: invalid syllogisms; formal fallacies

8 ARISTOTLE: *Prior Analytics*, BK II, CH 16-21 85c-89b / *Posterior Analytics*, BK I, CH 12 [77^{b}16-34] 106d-107a / *Physics*, BK I, CH 2 [185^{a}5-12] 259d; CH 3 [186^{a}4-9] 260d-261a
9 ARISTOTLE: *Rhetoric*, BK II, CH 24 649d-651d
12 EPICTETUS: *Discourses*, BK I, CH 7 112b-113d
18 AUGUSTINE: *Christian Doctrine*, BK II, CH 31-34 651d-653b
24 RABELAIS: *Gargantua and Pantagruel*, BK I, 23b-c
31 DESCARTES: *Objections and Replies*, 126b-127c
33 PASCAL: *Vacuum*, 368b-369a
42 KANT: *Pure Reason*, 109b-c; 133d
53 JAMES: *Psychology*, 108a-b; 227b-228a; 236b [fn 1]; 526b [fn 1]

3c. Lack of truth in reasoning: sophistical arguments; material fallacies

7 PLATO: *Euthydemus* 65a-84a,c / *Phaedo*, 237b-238a
8 ARISTOTLE: *Prior Analytics*, BK I, CH 34-35 66b-d; BK II, CH 18 87a-b / *Posterior Analytics*, BK I, CH 16-17 109b-111b / *Topics*, BK I, CH 1 [100^{b}23-101^{a}18] 143b-d; BK VIII, CH 10 [160^{b} 23-39] 218b-c; CH 12-13 220c-221d / *Sophistical Refutations* 227a-253d / *Physics*, BK I, CH 2 [185^{a}5-12] 259d; CH 3 [186^{a}4-9] 260d-261a
9 ARISTOTLE: *Rhetoric*, BK II, CH 24 649d-651d
12 EPICTETUS: *Discourses*, BK I, CH 7 112b-113d
18 AUGUSTINE: *Christian Doctrine*, BK II, CH 31 651d-652b
23 HOBBES: *Leviathan*, PART I, 56b-d; 58d-60c
30 BACON: *Advancement of Learning*, 60a-61d / *Novum Organum*, BK I, APH 38-69 109c-116b
31 DESCARTES: *Rules*, X, 16d-17a / *Objections and Replies*, 126b-127c
33 PASCAL: *Vacuum*, 367a-368b
35 LOCKE: *Human Understanding*, BK II, CH I, SECT 10, 123c; CH XI, SECT 13 146b-c; BK IV, CH XVII, SECT 19-21 379d-380a
35 HUME: *Human Understanding*, SECT VIII, DIV 75, 484c; SECT XII, DIV 132 509a-d
42 KANT: *Pure Reason*, 36d-37d; 109b-c; 120c-121c; 133d

3d. Necessity and contingency in reasoning: logical necessity; certainty and probability

8 ARISTOTLE: *Prior Analytics*, BK I, CH 1 [24^{b}18-26] 39c; CH 8-22 45b-57b; CH 30 [46^{a}3-10] 63d; BK II, CH 25 91a-b / *Posterior Analytics*, BK I, CH 2 [72^{a}25-^{b}4] 98d-99a; CH 6 [75^{a}12-28] 103a-b / *Topics*, BK I, CH 1 [100^{a}25-^{b}23] 143a-b; BK II, CH 5 [112^{a}16-23] 157b-c; BK VIII, CH 12 [162^{a}35-^{b}2] 220c / *Physics*, BK II, CH 9 [200^{a}15-29] 277c-d / *Metaphysics*, BK V, CH 5 [1015^{b}6-8] 535d-536a; BK VII, CH 15 [1039^{b}31-1040^{a}8] 563d-564a; BK XII, CH 8 [1074^{a}14-16] 604c
9 ARISTOTLE: *Ethics*, BK I, CH 3 [1094^{b}12-27] 339d-340a; CH 7 [1098^{a}25-^{b}7] 343d-344a; BK VI, CH 3 388b-c / *Rhetoric*, BK I, CH 1 [1355^{a}3-18] 594b; CH 2 [1357^{a}14-30] 596d-597a; BK II, CH 25 [1402^{b}13-1403^{a}17] 652b-653a
12 EPICTETUS: *Discourses*, BK I, CH 7, 112d-113d; CH 26, 131b
16 COPERNICUS: *Revolutions of the Heavenly Spheres*, 505a-506a
19 AQUINAS: *Summa Theologica*, PART I, Q 12, A 7, ANS and REP 2 56a-57b; Q 19, A 8, REP 3 116a-d; Q 44, A 1, REP 2 238b-239a; Q 47, A 1, REP 3 256a-257b; Q 82, A 2, ANS 432d-433c; PART I-II, Q 13, A 5, ANS 675c-676b; A 6, REP 1-2 676c-677b
20 AQUINAS: *Summa Theologica*, PART I-II, Q 94, A 4, ANS 223d-224d; PART II-II, Q 4, A 8 409a-d; PART III, Q 9, A 3, REP 2 765b-766b
23 HOBBES: *Leviathan*, PART I, 65c-d; 71c
31 DESCARTES: *Rules*, II 2a-3b; XII, 23b / *Discourse*, PART II, 46c-48b / *Meditations*, I, 76c
33 PASCAL: *Vacuum*, 368b-369a
34 HUYGENS: *Light*, PREF, 551b-552a
35 LOCKE: *Human Understanding*, BK IV, CH XV, SECT 1-3 365a-d esp SECT 1 365a-c; CH XVI 366d-371c passim; CH XVII, SECT 2 371d-372b; SECT 15-17 378d-379c
35 HUME: *Human Understanding*, SECT IV, DIV 20-21 458a-c; SECT VI 469d-470d esp 469d [fn 1]; SECT X, DIV 87-88 489b-490b
38 ROUSSEAU: *Inequality*, 348a,c
42 KANT: *Pure Reason*, 14d; 17d-18a; 194b-d / *Intro. Metaphysic of Morals*, 387a-d
53 JAMES: *Psychology*, 878a-884b

4. The types of reasoning, inference, or argument

4a. Immediate inference: its relation to mediated inference or reasoning

7 PLATO: *Euthyphro*, 196d
8 ARISTOTLE: *Interpretation*, CH 7 [17^{b}23-37] 27b-c; CH 10 [20^{a}16-37] 30d-31b / *Prior*

(4. The types of reasoning, inference, or argument. 4a. Immediate inference: its relation to mediated inference or reasoning.)

Analytics, BK I, CH 2-3 39d-40c; BK II, CH 8-10 79b-81b; CH 22 [67^{b}26-68^{a}24] 89b-d

42 KANT: *Pure Reason*, 17d-18a; 109d-111c esp 109d-110a, 110d-111c

4b. The direction and uses of reasoning: the distinction between proof and inference, and between demonstration and discovery

7 PLATO: *Republic*, BK VI, 383d-388a

8 ARISTOTLE: *Posterior Analytics*, BK I, CH 3 [72^{b}25-33] 99c / *Topics*, BK I, CH 2 143d-144a / *Sophistical Refutations*, CH 2 227d-228a; CH 10-11 234d-237c

9 ARISTOTLE: *Ethics*, BK I, CH 4 [1095^{a}30-^{b}13] 340c-d

11 ARCHIMEDES: *Method*, 569b-570a

23 HOBBES: *Leviathan*, PART IV, 267a-b

30 BACON: *Advancement of Learning*, 56c-58b; 59c-d; 96d-97a / *Novum Organum*, PREF 105a-106d; BK I 107a-136a,c esp APH 11-26 107d-108d, APH 29-30 109a, APH 69 116a-b, APH 103-106 127d-128c

31 DESCARTES: *Rules*, II, 2c-3a; X, 16d-17a; XIV, 28b-c / *Discourse*, PART II, 46c-48b

33 PASCAL: *Pensées*, I 171a-172a; 40 177b-178a

35 LOCKE: *Human Understanding*, BK IV, CH VII, SECT 11, 340c-341a; CH XVII, SECT 2-3 371d-372b; SECT 6-7 376c-377b

42 KANT: *Pure Reason*, 15d-16c; 110d-111c; 119a-b; 193a-200c esp 193d-194b, 199a-c / *Practical Reason*, 294a-b / *Judgement*, 570b-572b; 572d-574b; 600d-603d esp 603b-c

53 JAMES: *Psychology*, 381b-385b esp 382a, 384a-385b; 672b-673b

4c. Inductive and deductive reasoning

8 ARISTOTLE: *Prior Analytics*, BK II, CH 23 90a-c / *Posterior Analytics*, BK I, CH 1 [71^{a}1-11] 97a; CH 3 [72^{b}25-33] 99c; CH 18 111b-c; BK II, CH 7 [92^{a}34-^{b}1] 126b / *Topics*, BK I, CH 12 148d; CH 18 [108^{b}7-12] 152d; BK VIII, CH 14 [164^{a}11-16] 222d

9 ARISTOTLE: *Ethics*, BK I, CH 4 [1095^{a}30-^{b}8] 340c; CH 7 [1098^{a}35-^{b}3] 343d; BK VI, CH 3 388b-c / *Rhetoric*, BK I, CH 2 [1356^{a}36-1358^{a}35] 596a-598b; BK II, CH 20-22 640d-645a

28 GALILEO: *Two New Sciences*, FOURTH DAY, 252a-b

28 HARVEY: *Motion of the Heart*, 280c

30 BACON: *Advancement of Learning*, 42a-c; 57b-58b; 61d; 96d-97a / *Novum Organum*, BK I 107a-136a,c esp APH 11-26 107d-108d, APH 69 116a-b, APH 103-106 127d-128c

31 DESCARTES: *Rules*, II, 2d-3a; III, 4c-d; VII 10b-12a; XI 17b-18b; XII, 23b-24c / *Discourse*, PART VI, 61d-62c / *Objections and Replies*, 167c-d

34 NEWTON: *Principles*, BK III, RULE IV 271b / *Optics*, BK III, 543a-b

35 LOCKE: *Human Understanding*, BK IV, CH XII, SECT 6-13 360a-362d

35 HUME: *Human Understanding*, SECT I, DIV 9 454c-455a; SECT III, DIV 19, 458a; SECT IV, DIV 26 460b-c; SECT VIII, DIV 65, 479b-c; SECT IX, DIV 82 487b-c; SECT XII, DIV 131-132 508d-509d passim

42 KANT: *Pure Reason*, 45b-46a; 195d-197b

43 MILL: *Utilitarianism*, 445a-447b passim; 475b,d [fn 1] passim

45 FARADAY: *Researches in Electricity*, 659a

51 TOLSTOY: *War and Peace*, EPILOGUE II, 690b

53 JAMES: *Psychology*, 674a-675b esp 675b

4d. Direct and indirect argumentation: proof by *reductio ad absurdum*; argument from the impossible or ideal case

8 ARISTOTLE: *Prior Analytics*, BK I, CH 23 57b-58b; CH 29 62d-63d; BK II, CH 11-14 81b-84b; CH 17 86b-87a / *Posterior Analytics*, BK I, CH 26 118d-119b / *Topics*, BK VIII, CH 2 [157^{b}34-158^{a}2] 214b-c / *Metaphysics*, BK IV, CH 4 [1006^{a}12-29] 525b-c; BK XI, CH 5 [1061^{b}34-1062^{a}12] 590a-b

9 ARISTOTLE: *Ethics*, BK VII, CH 2 [1146^{a}22-30] 396b

33 PASCAL: *Vacuum*, 368b

36 STERNE: *Tristram Shandy*, 227a-228a

4e. Refutation: disproof

7 PLATO: *Sophist*, 558b-d

8 ARISTOTLE: *Prior Analytics*, BK II, CH 20 87c-d; CH 26 91b-d / *Sophistical Refutations*, CH 4-11 228b-237c

9 ARISTOTLE: *Ethics*, BK VII, CH 1 [1145^{b}1-7] 395b / *Rhetoric*, BK II, CH 22 [1396^{b}20]-CH 26 [1403^{a}34] 644d-653a,c esp CH 25 [1402^{a}29]-CH 26 [1403^{a}34] 651d-653a,c

10 GALEN: *Natural Faculties*, BK I, CH 14, 177a-179d

31 DESCARTES: *Objections and Replies*, 208a-c

33 PASCAL: *Vacuum*, 368b

4f. Reasoning by analogy: arguments from similarity

7 PLATO: *Republic*, BK II, 316a-b; BK IV, 350a-b; BK VI-VII, 383d-391b

8 ARISTOTLE: *Prior Analytics*, BK II, CH 24 90c-91a / *Topics*, BK I, CH 18 [108^{b}6-19] 152d-153a

9 ARISTOTLE: *Rhetoric*, BK I, CH 2 [1357^{b}25-1358^{a}2] 597c-d; BK II, CH 20 [1393^{a}22-1394^{a}8] 640d-641d

20 AQUINAS: *Summa Theologica*, PART III SUPPL, Q 75, A 3, REP 2 938a-939d

23 HOBBES: *Leviathan*, PART I, 60c; 67c

30 BACON: *Novum Organum*, BK I, APH 34 109b; BK II, APH 27, 158a-b

34 NEWTON: *Principles*, BK III, GENERAL SCHOL, 370b-371a
35 LOCKE: *Human Understanding*, BK II, CH XI, SECT 2 144a-c; BK IV, CH XVI, SECT 12 370b-371a
35 BERKELEY: *Human Knowledge*, SECT 105–106 433b-d
35 HUME: *Human Understanding*, SECT IX, DIV 82 487b-c; SECT XI, DIV 113 502a-d; DIV 115 503b-c
42 KANT: *Judgement*, 547b-548c; 600d-603d esp 601d-602a, 602b [fn 1]
49 DARWIN: *Origin of Species*, 26a; 241b
53 JAMES: *Psychology*, 295a-b; 677a-678a; 686b-690a esp 688a-689a
54 FREUD: *Civilization and Its Discontents*, 801b-c / *New Introductory Lectures*, 819a

5. Reasoning in relation to knowledge, opinion, and action

5*a*. The fact and the reasoned fact: mere belief distinguished from belief on rational grounds

7 PLATO: *Meno*, 188b-189a / *Republic*, BK V, 370d-373c
8 ARISTOTLE: *Posterior Analytics*, BK I, CH 6 [75^{a}12–37] 103a-c; CH 13 107c-108c; BK II, CH 1-2 122b,d-123c / *Soul*, BK II, CH 2 [413^{a}11–19] 643a-b
9 ARISTOTLE: *Ethics*, BK I, CH 4 [1095^{a}30–^{b}13] 340c-d; CH 7 [1098^{a}35–^{b}4] 343d; BK VI, CH 3 388b-c; CH 11 392c-393b
11 ARCHIMEDES: *Method*, 569b-570a; PROP I, 572b
20 AQUINAS: *Summa Theologica*, PART III, Q 9, A 3, REP 2 765b-766b
31 DESCARTES: *Rules*, XVI, 35a-b
35 LOCKE: *Human Understanding*, BK II, CH XXIII, SECT 25 210c-d
35 HUME: *Human Understanding*, SECT IV 458a-463d passim, esp DIV 28–33 460d-463d; SECT V 463d-469c passim, esp DIV 38 466b-c, DIV 45 469c
36 SWIFT: *Gulliver*, PART IV, 165a-b
42 KANT: *Pure Reason*, 228c-d; 240b-243c / *Judgement*, 601d-607c
43 MILL: *Liberty*, 283c-288c passim / *Utilitarianism*, 445d-446b
46 HEGEL: *Philosophy of History*, INTRO, 156d-160b
53 JAMES: *Psychology*, 689b-690a

5*b*. Scientific reasoning: the theory of demonstration

7 PLATO: *Meno* 174a-190a,c / *Republic*, BK VI, 386d-388a / *Parmenides* 486a-511d esp 491a-c / *Philebus*, 610d-613a
8 ARISTOTLE: *Prior Analytics*, BK I, CH 30 63d-64b / *Posterior Analytics* 97a-137a,c / *Metaphysics*, BK VI, CH 1 [1025^{b}1–13] 547b; BK VII, CH 15 [1039^{b}20–1040^{a}8] 563c-564a
9 ARISTOTLE: *Ethics*, BK VI, CH 3 388b-c; CH 6 389d
23 HOBBES: *Leviathan*, PART I, 58a-c; 60a-b; 60d; 65c-d; PART IV, 267a-c
28 HARVEY: *On Animal Generation*, 332a-337a,c
30 BACON: *Advancement of Learning*, 42a-c; 56c-59c; 61d / *Novum Organum*, PREF 105a-106d; BK I 107a-136a,c esp APH 11–26 107d-108d, APH 69 116a-b, APH 103–106 127d-128c
31 DESCARTES: *Rules*, I–XIII 1a-27d / *Discourse*, PART VI 60d-67a,c
33 PASCAL: *Vacuum*, 365b-366a; 368b-369a / *Geometrical Demonstration*, 430b-434a; 442a-443b
34 NEWTON: *Principles*, BK III, RULES 270a-271b / *Optics*, BK III, 543a-b
35 LOCKE: *Human Understanding*, BK III, CH XI, SECT 16 303c-d; BK IV, CH I, SECT 9, 308d-309b; CH II, SECT 2–13 309d-312b; CH IV, SECT 7 325b; CH VII, SECT 11, 340c-341a; CH XII, SECT 6–13 360a-362d; CH XV, SECT 1 365a-c; CH XVII 371c-380d passim, esp SECT 2–4 371d-376c, SECT 15 378d-379b
35 HUME: *Human Understanding*, SECT IV, DIV 20 458a-b; DIV 30, 462a; SECT XII, DIV 131–132 508d-509d
42 KANT: *Pure Reason*, 1a-13d; 190c-191a; 194b-c; 211c-218d esp 217c-d / *Fund. Prin. Metaphysic of Morals*, 264d / *Pref. Metaphysical Elements of Ethics*, 365a-366a / *Judgement*, 463a-467a; 542c-543a; 603b-c
43 MILL: *Utilitarianism*, 445b-d
53 JAMES: *Psychology*, 674a-675b; 677b; 862a-865a

5*b*(1) The indemonstrable as a basis for demonstration

7 PLATO: *Cratylus*, 112a
8 ARISTOTLE: *Prior Analytics*, BK I, CH 1 [24^{a}21–^{b}16] 39a-c / *Posterior Analytics*, BK I, CH 3 99b-100a; CH 7 [75^{a}38–^{b}7] 103c; CH 11 105d-106b; CH 19–23 111c-116a; BK II, CH 19 136a-137a,c / *Physics*, BK II, CH 1 [193^{a}1–9] 269b / *Heavens*, BK I, CH 5 [271^{b}1–13] 362c-d / *Metaphysics*, BK I, CH 9 [992^{b}24–993^{a}1] 511a-b; BK III, CH 2 [996^{b}26–997^{a}14] 515b-d; BK IV, CH 4 [1006^{a}4–12] 525a-b; CH 6 [1011^{a}3–14] 530d; BK XI, CH 6 [1063^{b}7–12] 591d; BK XIII, CH 4 [1078^{b}28–31] 610b-c / *Soul*, BK I, CH 3 [407^{a}22–30] 636d-637a
9 ARISTOTLE: *Generation of Animals*, BK II, CH 6 [742^{b}17–35] 283d-284a / *Ethics*, BK VI, CH 3 388b-c; CH 6 389d; CH 11 392c-393b
19 AQUINAS: *Summa Theologica*, PART I, Q 17, A 3, REP 1–2 102d-103c; Q 36, A 3, REP 4 194c-195d; PART I-II, Q 1, A 4, REP 2 612a-613a
20 AQUINAS: *Summa Theologica*, PART I-II, Q 94, A 2, ANS 221d-223a; Q 112, A 5, ANS 359c-360c

(***5b. Scientific reasoning: the theory of demonstration.*** **5b(1) *The indemonstrable as a basis for demonstration.*)**

28 HARVEY: *On Animal Generation*, 333d-334d esp 334a
30 BACON: *Advancement of Learning*, 59c-d; 97a
31 DESCARTES: *Rules*, II 2a-3b / *Discourse*, PART II, 46c-47a / *Meditations*, I, 76c / *Objections and Replies*, 123a-b; 224b,d
35 LOCKE: *Human Understanding*, BK IV, CH II, SECT 1, 309d; SECT 7-8 310d-311a; CH III, SECT 4 313b-c; CH XV, SECT 1 365a-c; SECT 3 365d; CH XVII, SECT 15 378d-379b
42 KANT: *Pure Reason*, 217c-d / *Practical Reason*, 307d-310c esp 309b / *Judgement*, 542d-543a
43 FEDERALIST: NUMBER 31, 103c-104a
43 MILL: *Utilitarianism*, 446d-447a; 461c-462a; 475b,d [fn 1]
44 BOSWELL: *Johnson*, 82b
46 HEGEL: *Philosophy of Right*, ADDITIONS, 3 116a

5b(2) Definitions used as means in reasoning: definitions as the end of reasoning

7 PLATO: *Sophist*, 551a-552c / *Seventh Letter*, 809c-810d
8 ARISTOTLE: *Prior Analytics*, BK I, CH 43 68d / *Posterior Analytics*, BK I, CH 2 [72^a19-24] 98d; CH 8 [75^b21-32] 104a; CH 10 [76^b35-77^a4] 105c-d; CH 22 [82^b36-83^a1] 113b; CH 33 [89^a17-$^b5$] 121d-122a,c; BK II, CH 3-10 123c-128d / *Topics*, BK VII, CH 5 [154^a23-$^b13$] 209d-210a; [155^a17-23] 210d; BK VIII, CH 3 214d-215d / *Metaphysics*, BK I, CH 9 [992^b30-993^a1] 511b; BK III, CH 2 [996^b18-21] 515b; BK IV, CH 4 [1005^b35-1007^b20] 525a-527a; CH 7 [1012^a18-24] 532a-b; CH 8 [1012^b5-8] 532c; BK XI, CH 5 590a-d; BK XIII, CH 4 [1078^b23-30] 610b-c / *Soul*, BK I, CH 1 [402^b16-403^a2] 631d-632a; CH 3 [407^a22-30] 636d-637a; CH 5 [409^a31-$^b18$] 639b-c; BK II, CH 2 [413^a11-19] 643a-b
9 ARISTOTLE: *Parts of Animals*, BK I, CH 1 [639^b7-642^b5] 161d-165d
19 AQUINAS: *Summa Theologica*, PART I, Q 2, A 1, REP 2 10d-11d; A 2, REP 2 11d-12c; Q 3, A 5, ANS 17c-18b; Q 17, A 3, REP 1-2 102d-103c; Q 85, A 6 458d-459c
23 HOBBES: *Leviathan*, PART I, 56b-60c; 65d
31 DESCARTES: *Objections and Replies*, 128c-129a
33 PASCAL: *Pensées*, I 171a-172a / *Geometrical Demonstration*, 430b-434b
35 LOCKE: *Human Understanding*, BK III, CH XI, SECT 15-17 303b-304a esp SECT 16 303c-d; BK IV, CH III, SECT 20, 319b
35 HUME: *Human Understanding*, SECT VII, DIV 48 470d-471c; SECT VIII, DIV 74 484a-c; SECT XII, DIV 131 508d-509a
42 KANT: *Pure Reason*, 179d-182b; 211c-218d / *Practical Reason*, 293c-294b
51 TOLSTOY: *War and Peace*, EPILOGUE II, 690b
54 FREUD: *Instincts*, 412a-b

5b(3) *A priori* and *a posteriori* reasoning: from causes or from effects; from principles or from experience; analysis and synthesis

7 PLATO: *Phaedo*, 242b-243c
8 ARISTOTLE: *Posterior Analytics*, BK I, CH 3 [72^b25-33] 99c / *Physics*, BK I, CH 1 259a-b / *Generation and Corruption*, BK I, CH 2 [316^a5-14] 411c-d / *Metaphysics*, BK VII, CH 3 [1029^a33-$^b12$] 552a
9 ARISTOTLE: *Ethics*, BK I, CH 3 [1094^b29-1095^a12] 340a-b; CH 4 [1095^a30-$^b13$] 340c-d; BK III, CH 3 [1112^b20-24] 358d; BK VI, CH 8 [1142^a12-19] 391b / *Politics*, BK I, CH 1 [1252^a17-24] 445b
10 GALEN: *Natural Faculties*, BK I, CH 14, 177a-178d esp 177c, 178c-d; BK III, CH 1-2, 199c-d
19 AQUINAS: *Summa Theologica*, PART I-II, Q 14, A 5 680a-c
23 HOBBES: *Leviathan*, PART I, 60a-b; PART IV, 267a-b
28 HARVEY: *On Animal Generation*, 332a-335c
30 BACON: *Novum Organum*, BK I, APH 104-106 128a-c
31 DESCARTES: *Rules*, II, 2d-3a; IV-V 5a-8a / *Objections and Replies*, 128a-129a
33 PASCAL: *Vacuum*, 368b-369a
34 NEWTON: *Optics*, BK III, 543a-b
34 HUYGENS: *Light*, PREF, 551b-552a
35 LOCKE: *Human Understanding*, BK II, CH 1, SECT 10, 123c; BK IV, CH XII, SECT 6-13 360a-362d
35 BERKELEY: *Human Knowledge*, SECT 21 417a
35 HUME: *Human Understanding*, SECT IV 458a-463d passim, esp DIV 20-21 458a-c, DIV 30, 462a; SECT V, DIV 34-38, 464a-466c; SECT XI 497b-503c passim, esp DIV 105 498d-499a; SECT XII, DIV 131-132 508d-509d passim
42 KANT: *Pure Reason*, 14a-20c; 34a-36a; 110d-111c; 115d-120c; 129a; 135a-173a esp 158a-160b, 172c-173a; 174a; 179c-182b; 190c-191a; 192a-b; 193d-200c; 211c-218d / *Fund. Prin. Metaphysic of Morals*, 253a-254d esp 253d-254a; 262a-287d esp 263a-264d, 268b-d / *Practical Reason*, 294a-b; 307d-308b; 309b-d; 329d-330c / *Science of Right*, 405b-d / *Judgement*, 600d-603d esp 603a-b
43 MILL: *Utilitarianism*, 445c-446b
46 HEGEL: *Philosophy of History*, INTRO, 182d-183c
53 JAMES: *Psychology*, 91a-94b esp 94b; 673a-674b; 872a-873a
54 FREUD: *Narcissism*, 400d

5b(4) The role of causes in demonstration and scientific reasoning

7 PLATO: *Timaeus*, 455a-b; 465d-466a
8 ARISTOTLE: *Posterior Analytics* 97a-137a,c esp BK II, CH 11-18 128d-136a / *Physics*, BK II, CH 7 275b-d / *Metaphysics*, BK III, CH 2 [996^a18-$^b26$] 514d-515b; BK VI, CH 1 [1025^b1-

13] 547b; BK VII, CH 17 [1041a10–b11] 565b-d; BK VIII, CH 4 [1044a33–b20] 569a-b

9 ARISTOTLE: *Parts of Animals*, BK I, CH I [639b7–642b5] 161d-165d esp [639b34–640a9] 162b, [640b5–12] 163a, [642a14–21] 165b / *Ethics*, BK I, CH 7 [1098a25]–CH 8 [1098b35] 343d-344b

16 COPERNICUS: *Revolutions of the Heavenly Spheres*, 505a-506a

19 AQUINAS: *Summa Theologica*, PART I, Q 2, A 2, ANS and REP 2–3 11d-12c; Q 14, A 7 81d-82b; A 11, ANS 84c-85c; Q 19, A 5, ANS and REP 2 112d-113c; Q 44, A 1, REP 1 238b-239a; Q 57, A 2, ANS 295d-297a; PART I–II, Q 14, A 5 680a-c

20 AQUINAS: *Summa Theologica*, PART I–II, Q 55, A 4 28c-29d; PART III, Q 9, A 3, REP 2 765b-766b

23 HOBBES: *Leviathan*, PART I, 60a-b; PART IV, 267a-b

28 GALILEO: *Two New Sciences*, THIRD DAY, 202d-203a; FOURTH DAY, 252a-b

28 HARVEY: *Circulation of the Blood*, 319c / *On Animal Generation*, 335c-336c; 393b-c; 425a

30 BACON: *Advancement of Learning*, 45a-46a; 46c-47c / *Novum Organum*, BK I, APH 48 110d-111a; APH 99 127b-c

31 DESCARTES: *Discourse*, PART IV, 52a-d; PART VI, 61d-62c; 66a-b / *Meditations*, III 81d-89a esp 84b-85a, 87c-88c; IV, 90a-b / *Objections and Replies*, 108b-112a; 120c-122c; AXIOM V 131d-132a; 212c; 215a-b

31 SPINOZA: *Ethics*, PART I, AXIOM 2,4 355d; PROP 8, SCHOL 2 356d-357d esp 357b-d; APPENDIX 369b-372d; PART III, 395a-d; PART IV, PREF, 422b,d-423c; APPENDIX, I 447a

34 NEWTON: *Principles*, BK III, RULE I–II 270a; GENERAL SCHOL, 371b-372a / *Optics*, BK III, 541b-542a; 543a-b

35 LOCKE: *Human Understanding*, BK IV, CH XII, SECT 9 360d-361b; CH XVII, SECT 2 371d-372b

35 HUME: *Human Understanding*, SECT VII, DIV 60, 477a; SECT IX, DIV 82 487b-c; SECT XII, DIV 132, 509b-c

38 ROUSSEAU: *Inequality*, 348a,c

42 KANT: *Pure Reason*, 46d-47c; 164a-171a; 183b [fn 1] / *Fund. Prin. Metaphysic of Morals*, 285c-286a / *Practical Reason*, 310d-311d; 339a / *Judgement*, 574a-b; 578a-d

45 LAVOISIER: *Elements of Chemistry*, PART I, 9b-10b

45 FOURIER: *Theory of Heat*, 169a; 183a-184a

49 DARWIN: *Origin of Species*, 217d-218a; 239b-240d

50 MARX: *Capital*, 10b-11b esp 11b

53 JAMES: *Psychology*, 89b-90a; 668a-671a esp 670a-b; 745b; 824b-825a; 884b-886a

54 FREUD: *General Introduction*, 454b-c; 483d-484a

5b(5) Demonstration in relation to essence and existence: demonstrations *propter quid* and *quia*

8 ARISTOTLE: *Metaphysics*, BK III, CH 2 [996b12–21] 515a-b; BK VI, CH 1 [1025b1–18] 547b,d

19 AQUINAS: *Summa Theologica*, PART I, Q 2, A 2 11d-12c; Q 3, A 4, REP 2 16d-17c; A 5, ANS 17c-18b; Q 46, A 2, ANS 253a-255a

21 DANTE: *Divine Comedy*, PURGATORY, III [34–45] 56b

23 HOBBES: *Leviathan*, PART I, 78d-79a; 79d-80b

31 DESCARTES: *Meditations*, I, 76c; III 81d-89a; VI 96b-103d / *Objections and Replies*, 110b-c; 216d-218b; 261a

35 LOCKE: *Human Understanding*, BK II, CH XVII, SECT 20, 173a; CH XXXI, SECT 6 240d-241d esp 241a-b; SECT II 242d-243a; BK III, CH XI, SECT 15–17 303b-304a esp SECT 16 303c-d; BK IV, CH IV, SECT 8 325b-c; CH XII, SECT 6–9 360a-361b esp SECT 9 360d-361b

35 HUME: *Human Understanding*, SECT IV 458a-463d passim, esp DIV 20–21 458a-c, DIV 30 461d-462b; SECT XII, DIV 131–132 508d-509d

42 KANT: *Pure Reason*, 85d-88a; 95a-d; 179c-182b

53 JAMES: *Psychology*, 667b

5c. Dialectical reasoning: the opposition of rational arguments

7 PLATO: *Euthydemus* 65a-84a,c / *Phaedrus*, 134b-c / *Phaedo*, 242b-243c / *Republic*, BK VI–VII, 383d-398c / *Parmenides*, 491a-511d / *Theaetetus*, 525d-526b / *Sophist*, 558b-d / *Statesman*, 594d-595d

8 ARISTOTLE: *Prior Analytics*, BK I, CH 1 [24a21–b16] 39a-c; CH 30 [46a3–10] 63d / *Posterior Analytics*, BK I, CH 6 [75a21–28] 103b; CH 11 [77a25–35] 106b / *Topics* 143a-223a,c / *Sophistical Refutations*, CH 2 227d-228a; CH 9 234b-d; CH 11 236a-237c / *Heavens*, BK I, CH 10 [279b4–12] 370d / *Generation and Corruption*, BK I, CH 2 [316a5–14] 411c-d / *Metaphysics*, BK IV, CH 2 [1004b18–27] 523d; BK XI, CH 3 [1061b8–12] 589d; BK XIII, CH 4 [1078b18–28] 610b

9 ARISTOTLE: *Rhetoric*, BK I, CH 1 [1355a28–39] 594c-d

12 EPICTETUS: *Discourses*, BK I, CH 8 113d-114c; BK II, CH 12, 151d-152a

19 AQUINAS: *Summa Theologica*, PART I, Q 83, A 1, ANS 436d-438a

20 AQUINAS: *Summa Theologica*, PART III, Q 9, A 3, REP 2 765b-766b

24 RABELAIS: *Gargantua and Pantagruel*, BK II, 101b-106a

30 BACON: *Advancement of Learning*, 47d-48d

31 DESCARTES: *Discourse*, PART I, 43d

35 LOCKE: *Human Understanding*, BK IV, CH XVI, SECT 9 369b-c

(5. *Reasoning in relation to knowledge, opinion, and action.* 5c. *Dialectical reasoning: the opposition of rational arguments.*)

35 HUME: *Human Understanding*, SECT X, DIV 86–91 488d-491c
42 KANT: *Pure Reason*, 1a-b; 36d-37d; 108a-d; 120c-173a esp 129c-130b, 133c; 174b-177b; 187a-192d; 200c-209d; 219a-220b; 229b-c; 231c-232a / *Fund. Prin. Metaphysic of Morals*, 260d-261b; 283d-284d / *Practical Reason*, 291a-292a; 302a-d; 331c-337a,c; 340a-342d; 348d-349a / *Science of Right*, 407a-408b / *Judgement*, 540a-546d; 562a-578a esp 562d-564c, 575b-578a; 584c-d
46 HEGEL: *Philosophy of Right*, PART II, par 135 47b-d
54 FREUD: *General Introduction*, 545d

5d. Rhetorical reasoning: the rational grounds of persuasion

7 PLATO: *Protagoras*, 50d-52d; 57a-c / *Phaedrus* 115a-141a,c esp 129d-141a,c / *Meno*, 176d-177a / *Gorgias* 252a-294d / *Timaeus*, 457c / *Sophist*, 558a-561a
8 ARISTOTLE: *Prior Analytics*, BK II, CH 27 92a-93a,c / *Posterior Analytics*, BK I, CH I [71^{a}1–10] 97a / *Metaphysics*, BK IV, CH 5 [1009^{a}16–22] 528c
9 ARISTOTLE: *Ethics*, BK I, CH 3 [1094^{b}23–27] 339d-340a / *Rhetoric*, BK I 593a-622d esp CH I [1355^{a}4–^{b}22] 594b-595a; BK II, CH 18–26 639a-653a,c; BK III, CH 15 669d-670c; CH 17–19 672a-675a,c
10 GALEN: *Natural Faculties*, BK I, CH 16, 180c-181a
12 EPICTETUS: *Discourses*, BK I, CH 5 110b-c; CH 8 113d-114c
18 AUGUSTINE: *Christian Doctrine*, BK II, CH 36–37 653d-654b; BK IV, CH 4 676d-677a
19 AQUINAS: *Summa Theologica*, PART I, Q 83, A 1, ANS 436d-438a; PART I-II, Q 7, A 1, REP 1 651d-652c
23 HOBBES: *Leviathan*, PART I, 67c; PART II, 127d; 128d
25 MONTAIGNE: *Essays*, 446d-450a; 453c-454d
30 BACON: *Advancement of Learning*, 58c-59a; 66c-67c
31 DESCARTES: *Rules*, X, 16d-17a
33 PASCAL: *Geometrical Demonstration*, 440b-442a
35 LOCKE: *Human Understanding*, BK III, CH X, SECT 34 299d-300a
36 STERNE: *Tristram Shandy*, 227a-228a
37 FIELDING: *Tom Jones*, 261c-d; 320c-321b
42 KANT: *Pref. Metaphysical Elements of Ethics*, 376c-d
43 FEDERALIST: NUMBER 14, 62a-d
43 MILL: *Liberty*, 284b-c
44 BOSWELL: *Johnson*, 209a
51 TOLSTOY: *War and Peace*, BK VI, 243b; EPILOGUE I, 672a-b

5e. Practical reasoning

8 ARISTOTLE: *Topics*, BK III, CH I–4 162a-166b / *Metaphysics*, BK VII, CH 7 [1032^{a}25–^{b}22] 555b-d / *Soul*, BK I, CH 3 [407^{a}22–23] 636d; BK III, CH 9 [432^{b}26–433^{a}5] 665c
9 ARISTOTLE: *Motion of Animals*, CH 7 [701^{a}5–39] 236b-d / *Ethics*, BK I, CH 3 [1094^{b}12–27] 339d-340a; CH 4 [1095^{a}30–^{b}13] 340c-d; CH 7 [1098^{a}20–^{b}8] 343c-344a; BK II, CH 7 [1107^{a}27–32] 352d-353a; BK X, CH I [1172^{a}34–^{b}7] 426b-c
12 EPICTETUS: *Discourses*, BK III, CH 2 177c-178d
23 HOBBES: *Leviathan*, PART I, 53a-54a; 60b-61a; 66c-68a; 78a-d
30 BACON: *Advancement of Learning*, 57d-58b; 81d-82a
31 DESCARTES: *Discourse*, PART III, 48b-50b
33 PASCAL: *Provincial Letters*, 27a-80b; 90a-127a
42 KANT: *Pure Reason*, 60a-c; 149d-150a; 190c-191a / *Fund. Prin. Metaphysic of Morals*, 253a-255d; 260d-261b; 264b-265b; 266b-d; 271a-c; 277d-279d; 283d-287d esp 283d-284d / *Practical Reason*, 291a-297c; 298a-300a; 300d [fn 1]; 306d-307a; 307d-321b esp 307d-309b, 309d-310b; 329a-337a,c esp 329b-d; 338c-343d; 349b-350c / *Pref. Metaphysical Elements of Ethics*, 372b-d / *Intro. Metaphysic of Morals*, 383a-d; 388d; 390b,d-391a; 393a / *Science of Right*, 398c-399c; 416b-417a / *Judgement*, 461a-467a esp 463a-467a; 596c-598b
43 MILL: *Utilitarianism*, 445c-d; 456a-457b
53 JAMES: *Psychology*, 186a; 381b-385b esp 382a

5e(1) The form of the practical syllogism

8 ARISTOTLE: *Soul*, BK III, CH II [434^{a}16–22] 667a
9 ARISTOTLE: *Motion of Animals*, CH 7 [701^{a}5–39] 236b-d / *Ethics*, BK VI, CH 9 391c-392b esp [1142^{b}20–26] 392a; BK VII, CH 3 [1146^{b}24–1147^{b}19] 396d-398a passim
19 AQUINAS: *Summa Theologica*, PART I, Q 81, A 3, ANS and REP 2 430c-431d; Q 86, A 1, REP 2 461c-462a
20 AQUINAS: *Summa Theologica*, PART I-II, Q 76, A 1, ANS 141a-c; Q 77, A 2, REP 4 145d-147c

5e(2) Deduction and determination in legal thought

9 ARISTOTLE: *Ethics*, BK V, CH 7 382c-383a; CH 10 385c-386b / *Politics*, BK III, CH 11 [1282^{b}1–6] 480b-c; CH 15 [1286^{a}10–37] 484b-d; CH 16 [1287^{a}23–28] 485d; [1287^{b}15–25] 486a-b
20 AQUINAS: *Summa Theologica*, PART I-II, Q 95, A 2 227c-228c; A 4 229b-230c
23 HOBBES: *Leviathan*, PART I, 86c-87b; 91a-96b esp 95c-96b; PART II, 130c-136b esp 130c; 164a,c; PART III, 165a
30 BACON: *Advancement of Learning*, 94d-95b
38 MONTESQUIEU: *Spirit of Laws*, BK I, 3a; 3c; BK XXVI, 214b,d

42 KANT: *Pure Reason*, 149d-150a
43 MILL: *Utilitarianism*, 445c-446b; 456a-457b; 475b,d [fn 1]
46 HEGEL: *Philosophy of Right*, PART III, par 214 71a-c; par 216 71d-72a; par 222 73b-c; par 225-229 73d-75b esp par 227 74b-d; ADDITIONS, 134 138b-c; 140 139b-c

5e(3) Deliberation: the choice of alternative means; decision

5 EURIPIDES: *Phoenician Maidens* [528-593] 382c-383a
9 ARISTOTLE: *Ethics*, BK III, CH 1 [1110a28-35] 356a; CH 2-3 357b-359a; BK VI, CH 1-2 387a-388b; CH 5 389a-c passim; CH 7 [1141b8-21] 390c-d; CH 8-9 390d-392b; CH 12 [1144a6-37] 393d-394a
12 AURELIUS: *Meditations*, BK IV, SECT 12 264c
19 AQUINAS: *Summa Theologica*, PART I, Q 19, A 5, ANS 112d-113c; A 7, ANS 114d-115d; Q 82, A 2, REP 3 432d-433c; Q 83, A 1, ANS 436d-438a; PART I-II, QQ 13-15 672d-684a; Q 44, A 2 808b-d
22 CHAUCER: *Tale of Melibeus* 401a-432a esp par 9-36 403a-417b
23 HOBBES: *Leviathan*, PART I, 53a; 64a-65c; 77d
26 SHAKESPEARE: *Merchant of Venice*, ACT II, SC VII [1-75] 416a-417a; SC IX [19-72] 417d-418b; ACT III, SC II [73-139] 420d-421b
30 BACON: *Advancement of Learning*, 81d-95b
31 DESCARTES: *Discourse*, PART III, 48b-50b
35 LOCKÉ: *Human Understanding*, BK II, CH XXI, SECT 48 190c-d; SECT 53 191d-192b; SECT 57 193b-c; SECT 60-73 194a-199c passim
42 KANT: *Pure Reason*, 60a-c; 169c-170a / *Fund. Prin. Metaphysic of Morals*, 260d-261b; 266b-267d; 268b / *Practical Reason*, 327d-329a / *Science of Right*, 398a-399c / *Judgement*, 586a-b; 588b [fn 2]; 595a-d
43 MILL: *Liberty*, 276b-277a; 294d-295b / *Utilitarianism*, 456a-457b
46 HEGEL: *Philosophy of Right*, PART II, par 122 44a
53 JAMES: *Psychology*, 794a-798b esp 794a, 796a-b

6. The character of reasoning in the various disciplines

6a. Proof in metaphysics and theology

7 PLATO: *Parmenides* 486a-511d esp 491a-c / *Sophist*, 570a-d / *Seventh Letter*, 809c-810d
8 ARISTOTLE: *Metaphysics*, BK IV, CH 2 [1004a 25-31] 523b-c; BK VI, CH 1 [1025b1-18] 547b,d; BK IX, CH 6 [1048a25-b9] 573c-574a; BK XI, CH 3 [1061a10-18] 589b; CH 7 [1064a1-9] 592b
19 AQUINAS: *Summa Theologica*, PART I, Q 1 3a-10c; Q 2, A 2 11d-12c; Q 32, A 1, REP 2 175d-178a; Q 46, A 2 253a-255a
20 AQUINAS: *Summa Theologica*, PART II-II, Q 2 A 10 399b-400b; PART III SUPPL, Q 75, A 3 REP 2 938a-939d
23 HOBBES: *Leviathan*, PART I, 78d-79a; 79d-80a; PART II, 163a-b; PART III, 165b
29 CERVANTES: *Don Quixote*, PART I, 122b-c
30 BACON: *Advancement of Learning*, 95d-101c
31 DESCARTES: *Meditations*, 69a-71a,c / *Objections and Replies*, 119d; 128a-129a
31 SPINOZA: *Ethics*, PART I, PROP 11, SCHOL 358d-359b
33 PASCAL: *Vacuum*, 355b-356b
35 HUME: *Human Understanding*, SECT I, DIV 2 451b-c; DIV 4 451d-452c
40 GIBBON: *Decline and Fall*, 308c-d
42 KANT: *Pure Reason*, 15c-16c; 85d-88a; 179c 182b; 190a-200c; 211c-218d esp 215d-216d / *Fund. Prin. Metaphysic of Morals*, 264d / *Practical Reason*, 293c-294b; 351b-352c / *Pref. Metaphysical Elements of Ethics*, 365a-366a / *Judgement*, 600d-603d

6b. Demonstration in mathematics: analysis and synthesis

7 PLATO: *Meno*, 180b-183c / *Republic*, BK VI, 386d-388a; BK VII, 392a-395c; 397c-d
8 ARISTOTLE: *Prior Analytics*, BK I, CH 41 [49b 32-37] 68c / *Posterior Analytics*, BK I, CH 1 [71a11-16] 97a-b; CH 10 104d-105d esp [76b 39-77a2] 105d; CH 12 106c-107c; CH 18 111b-c; BK II, CH 9 [93b21-25] 128a-b / *Topics*, BK V, CH 4 [132a32-34] 183b; BK VI, CH 4 [141b3-22] 194d-195a; BK VII, CH 3 [153a6-11] 208a b; BK VIII, CH 1 [157a1-3] 213a / *Physics*, BK II, CH 9 [200a15-29] 277c-d / *Heavens*, BK III, CH 4 [302b27-31] 394a / *Metaphysics*, BK III, CH 2 [996a21-36] 514d-515a; [996b18-21] 515b; BK VII, CH 10 [1036a2-8] 559b-c; BK IX, CH 9 [1051a22-34] 577b-c; BK XI, CH 3 [1061a29-b3] 589c; CH 4 589d-590a; CH 7 [1063b36-1064a9] 592b; BK XIII, CH 2 [1077b1-10] 608d-609a; CH 3 609a-610a
9 ARISTOTLE: *Generation of Animals*, BK II, CH 6 [742b23-35] 283d-284a / *Ethics*, BK I, CH 3 [1094b19-27] 339d-340a; BK III, CH 3 [1112b 20-24] 358d; BK VII, CH 8 [1151a15-19] 402a
11 ARCHIMEDES: *Method*, 569b-570a; PROP 1, 572b
11 APOLLONIUS: *Conics*, BK II, PROP 44-47 710b-713a; PROP 49-51 714b-726a
23 HOBBES: *Leviathan*, PART I, 56b; 58a-c; 59c
28 GILBERT: *Loadstone*, PREF, 1b-c
31 DESCARTES: *Rules* 1a-40a,c passim, esp II, 3a, IV, 7c, VI 8a-10a, XIV, 30d-33b, XVI-XXI 33d-40a,c / *Discourse*, PART I, 43b-c; PART II, 46c-47c; PART IV, 52d-53a / *Meditations*, 73a; I, 76c; V, 93a-d / *Objections and Replies*, 128a-129a / *Geometry* 295a-353b esp BK I, 295a-298b, BK II, 304a-b, BK III, 353a

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33 PASCAL: *Pensées*, 1–5 171a-173a / *Vacuum*, 365b-366a / *Geometrical Demonstration*, 430a-434a; 442a-443b
34 NEWTON: *Principles*, 1a-b / *Optics*, BK III, 543a-b
35 LOCKE: *Human Understanding*, BK II, CH XVI, SECT 4 166a-b; BK IV, CH I, SECT 9, 308d-309b; CH II, SECT 9–10 311b-c; CH III, SECT 18–20 317d-319c passim; CH XII, SECT 1–8 358c-360c passim, esp SECT 7 360b-c; SECT 14–15 362d-363b; CH XVII, SECT 11 378b
35 BERKELEY: *Human Knowledge*, INTRO, SECT 12 408a-b; SECT 15–16 409a-d
35 HUME: *Human Understanding*, SECT IV, DIV 20 458a-b; SECT VII, DIV 48 470d-471c; SECT XII, DIV 131 508d-509a
42 KANT: *Pure Reason*, 15c-16c; 17d-18d; 46a-b; 68a-69c; 211c-218d esp 215d-217a / *Practical Reason*, 295b-d; 330d-331a / *Pref. Metaphysical Elements of Ethics*, 376c-d / *Science of Right*, 399a-b / *Judgement*, 551a-553c
43 FEDERALIST: NUMBER 31, 103c-104a
43 MILL: *Utilitarianism*, 445a-d
45 LAVOISIER: *Elements of Chemistry*, PREF, 2b
45 FOURIER: *Theory of Heat*, 173a-b
51 TOLSTOY: *War and Peace*, BK XI, 469a-d; EPILOGUE II, 695b-c
53 JAMES: *Psychology*, 874a-878a passim

6c. Inductive and deductive inference in the philosophy of nature and the natural sciences

8 ARISTOTLE: *Physics*, BK II, CH 7–9 275b-278a,c / *Heavens*, BK II, CH 5 379b-c; BK III, CH 7 [306a1–18] 397b-c / *Generation and Corruption*, BK I, CH 2 [316a5–14] 411c-d / *Metaphysics*, BK II, CH 3 [995a15–17] 513d
9 ARISTOTLE: *Generation of Animals*, BK III, CH 10 [760b29–32] 301d-302a
10 HIPPOCRATES: *Ancient Medicine*, par 1–8 1a-3b
10 GALEN: *Natural Faculties*, BK III, CH 1–2 199a-200a esp 199c-d
16 COPERNICUS: *Revolutions of the Heavenly Spheres*, 505a-506a
19 AQUINAS: *Summa Theologica*, PART I, Q 1, A 1, REP 2 3b-4a; Q 32, A 1, REP 2 175d-178a
28 GALILEO: *Two New Sciences*, THIRD DAY, 207d-208c; FOURTH DAY, 252a-b
28 HARVEY: *Motion of the Heart*, 267b,d-268a; 280c; 285c-d; 295d-296a / *On Animal Generation*, 332a-335c; 336b-d; 383d
30 BACON: *Advancement of Learning*, 16a; 34b; 42a-c; 56c-59c; 96d-97a / *Novum Organum* 105a-195d esp PREF 105a-106d, BK I, APH 11–26 107d-108d, APH 69 116a-b, APH 103–106 127d-128c, BK II, APH 1–9 137a-140c, APH 36 164a-168d, APH 52 194c-195d
31 DESCARTES: *Discourse*, PART VI 60d-67a,c esp 61d-62c / *Objections and Replies*, 215a-b
33 PASCAL: *Vacuum*, 365b-371a
34 NEWTON: *Principles*, BK III, RULES 270a-271b; GENERAL SCHOL, 371b-372a / *Optics*, BK III, 541b-542a; 543a-b
34 HUYGENS: *Light*, PREF, 551b-552a
35 LOCKE: *Human Understanding*, BK II, CH I, SECT 10 123b-d; BK IV, CH III, SECT 25–29 321a-323a passim; CH VI, SECT 13 335c-d; CH XII, SECT 9–13 360d-362d
35 BERKELEY: *Human Knowledge*, SECT 107, 434a
35 HUME: *Human Understanding*, SECT I, DIV 9 454c-455a; SECT III, DIV 19, 458a; SECT IV, DIV 26 460b-c; SECT VII, DIV 48 470d-471c; DIV 60, 477a; SECT IX, DIV 82 487b-c
36 SWIFT: *Gulliver*, PART IV, 165a-b
42 KANT: *Intro. Metaphysic of Morals*, 387a-b / *Judgement*, 578d-582c esp 579b-c
45 FARADAY: *Researches in Electricity*, 659a; 774d-775a
49 DARWIN: *Origin of Species*, 42a; 239c
50 MARX: *Capital*, 6a-c
51 TOLSTOY: *War and Peace*, BK XI, 469a-d
53 JAMES: *Psychology*, 91a-94b esp 94b; 126a-127a passim; 295a-b; 324b; 385a-b; 674a-675b esp 675b; 677b; 862a-865a; 882a-884b passim
54 FREUD: *Narcissism*, 400d-401b / *Instincts*, 412a-b / *General Introduction*, 483d-485a esp 484c-485a; 502d-503d; 545c / *Beyond the Pleasure Principle*, 661c-662a / *New Introductory Lectures*, 879c

6d. Induction and demonstration in the moral sciences

9 ARISTOTLE: *Ethics*, BK I, CH 3 [1094b12–27] 339d-340a; CH 4 [1095a30–b13] 340c-d; CH 7 [1098a25–b7] 343d-344a; BK VII, CH 1 [1145b 1–7] 395b; BK X, CH 1 [1172a34–b7] 426b-c / *Politics*, BK I, CH 1 [1252a17–24] 445b
23 HOBBES: *Leviathan*, PART I, 58a-b; PART II, 130c-136b; 153c-154a; 164a,c; PART III, 165a
35 LOCKE: *Human Understanding*, BK I, CH II, SECT 1 103d-104a; SECT 4 104d-105a; BK III, CH XI, SECT 15–17 303b-304a esp SECT 16 303c-d; BK IV, CH III, SECT 18–20 317d-319c; CH IV, SECT 7 325b; CH XII, SECT 8 360c
35 HUME: *Human Understanding*, SECT I, DIV 1–5 451a-453b passim; DIV 9, 454d-455a; SECT V, DIV 36, 465a-d [fn 1]; SECT VII, DIV 48 470d-471c; SECT XII, DIV 131–132 508d-509d passim, esp DIV 132, 509c-d
38 MONTESQUIEU: *Spirit of Laws*, xxib-c
42 KANT: *Pure Reason*, 169b [fn 1] / *Fund. Prin. Metaphysic of Morals*, 253d-254b; 265c-266d / *Practical Reason*, 293c-294b; 304d-305a; 306d-307a; 307d-309b; 309d-310b; 317b-318b; 320c-321b; 330d-331a / *Pref. Metaphysical Elements of Ethics*, 372b-d; 376c-d /

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43 FEDERALIST: NUMBER 31, 103c-104a; NUMBER 85, 257d-258d

43 MILL: *Utilitarianism*, 445a-447b passim; 461c-463d passim; 475b,d [fn 1]

46 HEGEL: *Philosophy of Right*, PART III, par 214 71a-c; par 222 73b-c; par 225-229 73d-75b esp par 227 74b-d; ADDITIONS, 134 138b-c; 140 139b-c

50 MARX: *Capital*, 6a-c

51 TOLSTOY: *War and Peace*, EPILOGUE II, 683d-684a; 690b

53 JAMES: *Psychology*, 886b-888a esp 887a-888a, 888b [fn 1]

CROSS-REFERENCES

For: Other comparisons of human and animal intelligence, *see* ANIMAL 1c(2); LANGUAGE 1; MAN 1a-1c; MEMORY AND IMAGINATION 6b; MIND 3a-3b.

Another discussion of the distinction between the intuitive and the discursive or rational, *see* KNOWLEDGE 6c(1); and for the consideration of supra-rational knowledge, *see* EXPERIENCE 7; GOD 6c(3)-6c(4); HAPPINESS 7c(1).

The distinction and relation between reasoning and other acts of the mind, *see* DEFINITION 5; IDEA 5a-5b, 5e; INDUCTION 1a; JUDGMENT 1, 7c; KNOWLEDGE 6c(2); MEMORY AND IMAGINATION 6c; SENSE 1c-1d.

Other discussions bearing on the theory of the syllogism, *see* HYPOTHESIS 5; IDEA 5a-5b; JUDGMENT 7c; LOGIC 1a; OPPOSITION 1d(1); UNIVERSAL AND PARTICULAR 5d.

The problems of truth and falsity, necessity and contingency, and certainty and probability in reasoning, *see* NECESSITY AND CONTINGENCY 4e(2); OPPOSITION 1d(2); SIGN AND SYMBOL 4e; TRUTH 3b(3).

An examination of immediate inference, *see* JUDGMENT 7b; and for the distinction between inductive and deductive reasoning, and *a priori* and *a posteriori* reasoning, *see* EXPERIENCE 2d; INDUCTION 1b; SCIENCE 5d.

The elements of scientific reasoning, *see* BEING 8d, 8f; CAUSE 5b; DEFINITION 5; INFINITY 2c; PHILOSOPHY 3c; PRINCIPLE 3a(2)-3a(3); SCIENCE 5d-5e.

The analysis of dialectical and rhetorical reasoning, *see* DIALECTIC 2b, 2c(2), 3b-3c; OPINION 2c; OPPOSITION 1e; RHETORIC 4c, 4c(2).

Other discussions relevant to the study of practical reasoning, *see* GOOD AND EVIL 5c; JUDGMENT 2; KNOWLEDGE 6e(1)-6e(2); LAW 5g; LOGIC 4c; OPINION 6b; PRUDENCE 5a, 6b.

The character of reasoning in the various disciplines, *see* BEING 8f; GOD 2b-2c; IMMORTALITY 2; LOGIC 4a, 4c, 4e; MATHEMATICS 3a, 3c; MECHANICS 2; MEDICINE 3c; METAPHYSICS 2c; PHILOSOPHY 3c; THEOLOGY 4c; WILL 5c.

The general problem of the rationality of the universe, *see* MIND 10a; NATURE 3a; WORLD 6c.

ADDITIONAL READINGS

Listed below are works not included in *Great Books of the Western World*, but relevant to the idea and topics with which this chapter deals. These works are divided into two groups:

I. Works by authors represented in this collection.
II. Works by authors not represented in this collection.

For the date, place, and other facts concerning the publication of the works cited, consult the Bibliography of Additional Readings which follows the last chapter of *The Great Ideas*.

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T. REID. *Essays on the Intellectual Powers of Man*, VII
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Chapter 78: RELATION

INTRODUCTION

LIKE quantity and quality, relation is generally recognized as a basic term or category. But its meaning, like theirs, cannot be defined. Relation is, perhaps, the prototype of an indefinable notion. As Bertrand Russell points out, it seems to be impossible to make any statement of what relation is without using the notion of relation in doing so.

Any term which is essentially relative seems also to be incapable of definition. Its meaning cannot be stated without referring to its correlative; and since the meaning of the latter reciprocally involves the former as *its* correlative, each member of a pair of correlative terms draws upon the other for its meaning. A part is a part of a whole; a whole, a whole of parts. Similarly, the meaning of parent involves the notion of child and the meaning of child the notion of parent.

Plato applies this maddening fact about correlative terms to all comparatives which presuppose the correlation of more and less. "Comparatives such as the hotter and the colder," he writes, "are to be ranked in the class of the infinite." They cannot be measured or defined. Terms like 'much' and 'little,' 'great' and 'small' look like quantities, but, according to Aristotle, they are "not quantities, but relatives, for things are not great or small absolutely; they are so called rather as the result of an act of comparison."

Concerning quantities and qualities, the ancients ask how they exist. The alternatives seem to be either that they exist in and of themselves, or that they exist as the attributes of substances such as stones and trees. But with regard to relations, the question seems to be whether they exist rather than how they exist.

The supposition that a relation cannot exist apart from the terms it relates may be thought to imply that the relation does exist when the terms it relates exist. The ancients, however, do not appear to regard the relation as something having a reality distinguishable from the reality of the correlative terms. It seems to be significant that both Plato and Aristotle discuss relative terms, rather than relations as such. For the most part, they signify relations by using a pair of words which name things standing in a certain relation to one another.

Thus in the *Categories*, Aristotle refers to 'double' and 'half,' 'master' and 'slave,' 'greater' and 'less,' or 'knowledge' and 'object known' as examples of correlative terms. "All relatives," he says, "have a correlative." Sometimes it is necessary to find the precise word, or even to invent the right word, for in order to indicate that a given term is relative, its correlative must be appropriately named. "Concubine," says Locke, "is, no doubt, a relative name, as well as wife; but in languages where this, and like words, have not a correlative term, there people are not so apt to take them to be so, as wanting that evident mark of relations which is between correlatives, which seem to explain one another, and not to be able to exist but together."

When "reciprocity of correlation does not appear to exist," Aristotle suggests that it may be the result of our failure to use words carefully. If we wish to use the term 'rudder' as relative, we cannot call its correlative a 'boat,' for "there are boats which have no rudders." Since there is no existing word, it would be "more accurate," Aristotle thinks, "if we coined some word like 'ruddered' to name the correlative of 'rudder.'" Similarly, in the case of 'slave' as a relative term, its correlative is not 'man' understood in any sense, but only man understood as 'master.'

The things which are designated by a pair of reciprocally relative terms must, according to

Aristotle, coexist. One man cannot be called a master unless another man exists who can be called his slave; something cannot be called larger unless something coexistent with it can be called smaller. Aristotle considers possible exceptions to this principle of the simultaneity or coexistence of correlatives; as, for example, in the case of knowledge and the knowable. It seems possible, he thinks, for the knowable to exist before anyone has actual knowledge of it. But the exception may be due to an improper naming of the correlatives. If the correlative of knowledge is the known rather than the knowable, then knowledge and its object may be said to be necessarily coexistent, for nothing comes to be an object actually known, except simultaneously with someone's coming actually to know it.

THE COEXISTENCE OF things which are correlative to one another still leaves a question concerning the existence of the relation between them. When conceived as an attribute, a quality or a quantity can be said to exist in the thing it somehow modifies. In the language of Aristotle, such accidents *inhere in* substances, and accordingly have reality as long as the substances in which they inhere exist. But a relation does not seem to inhere in *a* substance. It cannot be the attribute of a single thing. It somehow lies between two things, inhering in neither, for if it belonged to either one alone it could have some reality if that one existed and the other did not. The question, therefore, is whether relations really exist at all, or are only in the mind of him who compares things or considers them relative to one another.

"A sign that the relative is least of all a substance and a real thing," writes Aristotle, "is the fact that it alone has no proper generation or destruction or movement; as in respect of quantity there is increase and diminution, in respect of quality alteration, in respect of place locomotion, in respect of substance simple generation and destruction. In respect to relation there is no proper change; for, without changing, a thing will be now greater and now less or equal, if that with which it is compared has changed in quantity."

Plotinus also questions the reality of relations. "Has relation—for example, that of right and left, double and half—any actuality? . . . What can be the meaning of correlatives apart from our conception of their juxtaposition? 'Greater' may refer to very different magnitudes; 'different' to all sorts of objects. The comparison is ours; it does not lie in the things themselves." In the case of certain space and time relations he maintains that "right and left are in our conception, nothing of them in the things themselves. Before and after are merely two things; the relation is again of our making."

Yet Plotinus seems unwilling to say that "we do not mean anything by relation, but are victims of words," or that "none of the relations mentioned can exist." Recognizing what he calls "the elusive character of relation," he is willing to affirm the reality of relations "when the actuality of the relationships is derived from no other source than relation itself." He thinks that one quantity may be the double of another, "quite apart from our speech or thought." The fact that one quantity is the double of another is an additional fact about the two quantities over and above all their other properties. "In all the conditions in which we assert relation," Plotinus declares, "the mutual relation exists over and above the objects; we perceive it as already existent; our knowledge is directed upon a thing, there to be known—a clear testimony to the reality of relation."

The problem thus seems to become one of distinguishing between relations which have independent reality and those which exist only in the mind. "Some have said that relation is not a reality but only an idea. But this," Aquinas declares, "is plainly seen to be false from the very fact that things themselves have a mutual order and relation." Not all relations are real, however. "Relations which result in the things understood from the operation of the intellect alone are logical relations only, inasmuch as reason observes them as existing between two understood things." For example, "the relation of a thing to itself is not a real relation," for "reason, by apprehending one thing twice, regards it as two; and thus it apprehends a certain relation of a thing to itself . . . The same is true of those relations that follow upon an act of reason, as genus and species, and the like."

Aquinas offers, in contrast, "other relations which are realities with regard to both extremes; as when a relation exists between two things according to some reality that belongs to both. This is clear of all relations consequent upon quantity, great and small, double and half, and the like; for there is quantity in both extremes."

This distinction between real and logical relations seems to be qualified by the intermediate case of a relation which is partly logical and partly real; for, according to Aquinas, "sometimes a relation in one extreme may be a reality, while in the other extreme, it is only an idea. This happens whenever the two extremes are not of one order . . . Since God is outside the whole order of creation and all creatures are ordered to Him, and not conversely, it is manifest that creatures are really related to God Himself; whereas in God there is no real relation to creatures, but a relation only in idea, inasmuch as creatures are related to Him."

In the *Charmides*, Socrates raises some doubts about the admissibility of reflexive relations, or the relations of things to themselves. Others have questioned the partly real and partly logical relation, according to which one thing is related to another but the second is not related to the first. But the more important issues, in the tradition of western thought, seem to be whether there are both real and logical relations, *i.e.*, relations both in nature and in the mind, and whether, in either case, relations enter into the very nature of the things related or are merely external, so that the character of a thing is unaffected by the relations in which it stands.

AS INDICATED IN THE chapters on JUDGMENT, REASONING, and LOGIC, relation tends to displace predication in certain typically modern theories of the proposition and of inference. What is currently called "relational logic" is set against "subject-predicate logic." Relations themselves, without regard to the character of the terms related, become the primary object of logical analysis. It is said, for example, that the proposition 'John hit James' has the form 'aRb' or 'R(a,b),' and that the proposition 'John went to school with James' has the form 'R(a,b,c,).' The first is a dyadic relation, the second a triadic relation.

Relations are classified not only with respect to the number of the terms they relate, but also with respect to such formal properties as symmetry, transitivity, reflexivity. The relation of parent and child, for example, is asymmetrical. It cannot be said, if A is the parent of B, that B is also the parent of A; whereas the relation of brotherhood is symmetrical. Statements of symmetrical relationship are convertible. If we say that A is the brother of B, we can also say that B is the brother of A.

The type of relationship remains the same regardless of the character of the terms. Unequal quantities are asymmetrically related, equal quantities symmetrically; 'to-the-right-of' is an asymmetrical spatial relation, 'next-to' is symmetrical; in time, 'simultaneous-with' is symmetrical and 'prior-to' asymmetrical. The distinction between transitive and intransitive relations similarly holds for all kinds of terms. The relation of father to son or of 'standing-next-to' in space is intransitive, for if A is the father of B, and B the father of C, A is not the father of C; whereas the spatial relation of 'standing-to-the-right-of' is transitive, for if A is to the right of B, and B to the right of C, then A is to the right of C.

The modern analysis of propositions as relational structures which differ in type according to the character of the relations, not the character of the terms, has an antecedent in Locke's analysis of judgments as acts of comparison which look to the relation between ideas rather than to the ideas themselves. Both analyses lead to a theory of inference which is based on the *convertibility* of symmetrical relations and on the *transitivity* of certain relationships and the intransitivity of others. As indicated in the chapter on REASONING, the factor of transitivity appears in William James' discussion of the "principle of mediate comparison." He states this in the formula "*more than the more is more than the less.*" Then he explains that "such a formula would cover all possible cases; as, earlier than early is earlier than late, worse than bad is worse than good, east of east is east of west; etc., etc., *ad libitum*. Symbolically, we might write it as $a<b<c<d$ . . . and say that any number of intermediaries may be ex-

punged without obliging us to alter anything in what remains written."

James thus formulates what he regards as the most fundamental law of thought. For series of "homogeneously related terms," the law is that "*skipping intermediary terms leaves the relations the same.*" The factor of transitivity enters the picture when James distinguishes between relations which are and relations which are not *transferable.* "All skipping of intermediaries and transfer of relations occurs within homogeneous series," he writes. "But not all homogeneous series allow of intermediaries being skipped. It depends on which series they are, on what relations they contain. Let it not be said that it is a mere matter of verbal association, due to the fact that language sometimes permits us to transfer the *name* of a relation over skipped intermediaries, and sometimes does not; as where we call men 'progenitors' of their remote as well as of their immediate posterity, but refuse to call them 'fathers' thereof. There are relations which are *intrinsically* transferable, whilst others are not. The relation of *condition, e.g.*, is intrinsically transferable. What conditions a condition conditions what it conditions—'cause of cause is cause of effect.' The relations of negation and *frustration,* on the other hand, are not transferable: what frustrates a frustration does not frustrate what it frustrates. No changes in terminology would annul the intimate difference between these two cases."

THE FOREGOING PASSAGES from James reflect the general tenor of the theory of the calculus of relations. He himself does not systematically expound it. Its elaboration is to be found in the writings of Boole, Couturat, and De Morgan, of Jevons, Pierce, Bradley, Royce, Russell and Whitehead (whose works are cited in the Additional Readings). Is this relational logic more general than the subject-predicate logic that is traditionally called "Aristotelian," or is the reverse the case?

The modern answer insists upon the greater generality of relational logic. Royce, for example, defining "subsumption" as a non-symmetrical, transitive relation which obtains between two classes when one includes the other, declares that "the entire traditional 'theory of the syllogism' can be expressed as a sort of comment upon, and relatively simple application of, the transitivity of the subsumption relation." According to Royce, William James' axiom of skipped intermediaries represents a step in the right direction, but it fails to achieve complete generality.

Russell disposes of the traditional theory of the proposition in the same fashion that Royce disposes of the traditional theory of the syllogism. Traditional logic, he writes, "believed that there was only one form of simple proposition (*i.e.*, of proposition not stating a relation between two or more other propositions), namely, the form which ascribes a predicate to a subject." It is, therefore, "unable to admit the reality of relations; all relations, it maintains, must be reduced to properties of the apparently related terms." Russell insists, on the contrary, that "propositions stating that two things have a certain relation have a different form from subject-predicate propositions." This can be most easily seen, he thinks, in the case of asymmetrical relations. The proposition which states that A and B are related by the symmetrical relation of equality, can be interpreted to mean that A and B both possess a common property. "But when we come to asymmetrical relations, such as before and after, greater and less, etc., the attempt to reduce them to properties becomes," in Russell's opinion, "obviously impossible." The relational theory of the proposition, therefore, includes the subject-predicate theory as a special case.

A defense of the subject-predicate logic would not make the counterclaim that relational logic can be treated as a special case. Rather it would insist that the two logics are radically different in principle—that the one belongs to a philosophy of nature and a metaphysics, in which substance is the primary concept; whereas the other belongs to the empirical sciences and to modern mathematics, in which the concept of relation supplants substance. Whichever side of the controversy is taken, the undeniable difference between a relational and a subject-predicate logic represents one of the great differences between modern and ancient thought.

It is not only in logic that the modern emphasis seems to be upon relations rather than

upon things related—on relations denuded of their terms rather than on terms treated as correlatives. The same tendency appears in modern mathematics, in algebra, in the calculus, and especially in the theory of equations and functions, of sets and series. It also appears in modern physics where, according to Cassirer, the great conceptual revolution consists in displacing substance by function, and the casual interaction of substances by functional relationships and systems of order. Such substitutions obviously parallel the shift in logic—from the consideration of terms related as subjects and predicates, to the consideration of relations without regard to differences in the terms related.

In the tradition of the great books, this conceptual revolution seems to be announced by the treatment which Hume and Kant accord to the notion of substance. Hume appears to conceive of experience as a series of events related, as he says, by "only three principles of connexion . . . namely, *Resemblance*, *Contiguity* in time or place, and *Cause or Effect*." These relations make up the fabric of experience. So long as it consisted in such connections, our experience would be the same whether or not there were enduring things or substances.

"Nature has established connexions among particular ideas," Hume writes, so that "no sooner does one idea occur to our thoughts than it introduces its correlative." All our knowledge of matters of fact depends upon the association of ideas, or the relations of resemblance, contiguity, and causation among the elements of experience. All other knowledge has for its object those relations between ideas which do not connect them causally or place them in a spatial or temporal order. In either case, relations of all sorts, rather than things and their properties (or substances and their attributes), seem to be the prime constituents of nature and of knowledge.

Kant presents a fourfold classification of judgments according to their quantity, quality, relation, and modality. Under the head of relation, he distinguishes the categorical, the hypothetical, and the disjunctive according to the following criteria: "*a*. Relation of the predicate to the subject. *b*. Relation of the cause to its effect. *c*. Relation of subdivided knowledge, and of the collected members of the subdivision to each other." These are, he writes, "all the relations of thought in judgements."

Pointing out that he borrows the term from Aristotle, Kant calls the pure concepts of the understanding "categories" and constructs a table of categories which runs parallel to his table of judgments; because, as he explains, "the same function which imparts unity to various representations in one judgement imparts unity likewise to the mere synthesis of various representations in one intuition, which in a general way may be called the pure concept of understanding." Kant's categories, in contrast to Aristotle's, afford a striking example of the shift from substance to relation.

Where for Aristotle substance is the primary category and all other categories signify the accidents of substance, among which relation seems to have least reality in the nature of things, Kant makes relation one of the four major groups of categories, and under relation places subsistence and inherence (or substance and accident) along with causality and dependence (or cause and effect) and community (or reciprocity between the active and the passive). It is not substance, but the relation of substance and accident, which is for Kant a transcendental category.

THE ISSUE CONCERNING substance and relation takes another form in the problem whether relations exist *in* the very nature of things, as belonging to their essence, or only exist as connections *between* things. In the latter alternative, there is still the question whether relations between things are externally affixed to them or are internally inherent in them and affect the natures of the things related.

According to the Christian doctrine of the Trinity, there are real relations *in* God, each really distinct from the others, yet each identical with the divine essence. These relations are the persons of the Trinity—the relations Aquinas calls "paternity, filiation, spiration and procession," the relation of the Father and the Son, and of the Holy Spirit to them both. "Relation in God," he writes, "is not as an accident in a subject, but is the divine essence itself; and so it is subsistent, for the divine essence is subsistent. Therefore, as the Godhead

is God, so the divine paternity is God the Father, Who is a divine person. Therefore, a divine person signifies a relation as subsisting."

Since the three persons of the Trinity are of the same essence, the principle of their real distinction must be found elsewhere. Denying that "there can be discerned between them a real distinction in respect of the divine essence," Descartes does not reject the possibility of a distinction "in respect of their relation to one another." Aquinas considers "two principles of difference among the divine persons . . . *origin* and *relation*," but thinks it is "better to say that the persons or hypostases are distinguished by relations rather than by origin"; for, among other reasons, "when a relation is an accident, it presupposes the distinction of subjects; but when the relation is subsistent, it does not presuppose, but brings about, distinction."

It would seem to follow that, except in God, relations are not subsistent. In Aristotle's theory of corporeal substances, for example, the matter and the form which constitute a physical thing are united, not related. Though matter and form are conceived as really distinct principles in the composition of a composite substance—as essence and existence are also sometimes said to be really distinct principles in the being of all things except God—their real distinction does not imply that they are subsistent, as are the persons of the Trinity, nor that they are relations, or in relation to one another. If real as opposed to logical relations occur only between things which somehow really subsist, then those principles which must be united in order for a thing to subsist cannot be really related to one another.

WITH A SOMEWHAT different analysis, Locke seems to exclude relations from the constitution of what he calls "the complex idea of substance." All complex ideas, according to Locke, "are either modes, substances, or relations." The complex idea of substance is a "collection of those several simple ideas of sensible qualities, which we . . . . find united in the thing called horse or stone; yet because we cannot conceive how they should subsist alone, nor one in another, we suppose them existing in, and supported by some common subject; which support we denote by the name substance, though it be certain we have no clear or distinct idea of that thing we suppose a support."

The various simple ideas of qualities which, together with the indistinct notion of a supporting substratum, constitute the complex idea of a particular substance, are, in Locke's theory, compounded, not related. Relation is itself a complex idea, consisting in "the consideration and comparing of one idea with another." The ideas related may be either simple or complex, but the relations are *between* ideas, not *in* them—certainly not in simple ideas, nor in complex ideas of modes and substances, which are combinations, not relations, of simple ideas.

The exception is, of course, a complex idea of relation, which involves several distinct ideas and, in addition, the idea of a relation between them which, Locke says, "it gets from their comparison one with another. . . . Since any idea, whether simple or complex, may be the occasion why the mind thus brings two things together . . . any of our ideas may be the foundation of relation"; but, Locke adds, "there must always be in relation two ideas, or things, either in themselves really separate, or considered as distinct, and then ground or occasion for their comparison."

Locke's theory of relations not only seems to exclude them from the interior constitution of substances, but also seems to make them entirely extrinsic to the natures of the things related. "Ideas of relation," Locke says, "may be the same in men who have far different ideas of the things that are related or that are thus compared." The relation is unaffected by the things it relates, as they in turn are unaffected by it, for they are "not contained in the real existence of things, but [are] something extraneous and super-induced."

Berkeley and Hume also seem to agree that relations are entirely external. "Relations are distinct from the ideas or things related," writes Berkeley, "inasmuch as the latter may be perceived by us without our perceiving the former." To Hume, "all events seem entirely loose and separate. One event follows another; but we can never observe any tie between them. They seem *conjoined*, but never *connected*." So far as our understanding goes, nothing in the nature of one event necessarily

leads the mind to the consideration of another, as it would if the event could not be understood by us except as intrinsically related or connected with that other.

In the tradition of western thought, the issue concerning the internality or externality of relations has profound implications for man's conception of the order of nature or the structure of the world. The difference, discussed in the chapter on CHANCE, between what William James calls the "block" and the "concatenated" universe presupposes not only different views of causality, but also different positions with respect to the internality or externality of relations, as is indicated by James' criticism of Hegel and Bradley.

The relation of part and whole, and of one part to another in the structure of an organic whole, seems to be the prime example of internal relationship. Each part is thought to be constituted, both in its being and nature, by the being and nature of the whole to which it belongs and by the other parts which comprise that whole. This may be seen in Spinoza's theory of God or Nature as the one and only substance, in and through which everything else both is and is conceived. All things are locked together in a system of internal relationships—the finite parts with one another through the infinite whole which determines each to be what it is, in itself and in relation to all others.

RELATION SEEMS TO BE the principle of order. At least it can be said that the various conceptions of order which appear in the great books involve the idea of relation and of different kinds of relationship.

The order of the universe or of nature, for example, seems to be differently conceived according as things are causally related to one another, related as lower and higher species in a hierarchy of grades of being, or as the parts of one all-embracing whole. In each case, it makes a difference, as we have already observed, whether the relations involved are thought to be real or logical, and internal or external to the things related.

Relation similarly enters into conceptions of psychological, political, and moral order—the order of the parts of the soul, the order of classes or functions in the state, the order of goods, of means and ends, of duties, of loves. Just as the status of each thing in nature is affected by whether the universe is conceived as a whole of internally related parts or as a set of externally related wholes, so the status of the individual in society is affected by whether the state is conceived as an organic whole or merely as a political order formed by the free association of individuals.

The consideration of the various types of order occurs in other chapters, such as NATURE, WORLD, SOUL, STATE, GOOD AND EVIL, and BEAUTY. Particular types of relationship are also discussed in chapters concerned with the terms between which such relationships hold—the relation of cause and effect in the chapter on CAUSE; spatial and temporal relationships in the chapters on SPACE and TIME; the relation of species and genus in the chapters on EVOLUTION and IDEA; relations of equality and inequality in the chapter on QUANTITY; and relations of similarity and dissimilarity in the chapter on QUALITY.

This last type of relationship, more broadly conceived as including not merely likeness in quality, but the sameness or similitude of things in every sort of respect, is the main consideration of the chapter on SAME AND OTHER. The theory of analogy is discussed there also, for though it is concerned with relation—a proportion being a ratio of ratios—the specific relationship by which relations are themselves related in analogies or proportions seems to be one of similitude (either identity or similarity).

Finally, the idea of relation seems to be involved in the contrast between the absolute and the relative. Things are said to be considered absolutely when they are considered in themselves, and relatively when they are considered with reference to something else. By extension of these meanings, relativism tends to assert that with regard to most things, if not all, what they are depends on the point of view, *i.e.*, their relation to man, to *this* group of men, or even to *this* man. Absolutism goes to the opposite extreme of saying that things are what they are independently of man's view of them. The opposition of these two tendencies creates familiar issues concerning the true, the good, and the beautiful, which are discussed in the chapters devoted to those subjects.

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REFERENCES

To find the passages cited, use the numbers in heavy type, which are the volume and page numbers of the passages referred to. For example, in **4** HOMER: *Iliad*, BK II [265–283] **12d**, the number **4** is the number of the volume in the set; the number **12d** indicates that the passage is in section d of page 12.

PAGE SECTIONS: When the text is printed in one column, the letters **a** and **b** refer to the upper and lower halves of the page. For example, in **53** JAMES: *Psychology*, **116a-119b**, the passage begins in the upper half of page 116 and ends in the lower half of page 119. When the text is printed in two columns, the letters **a** and **b** refer to the upper and lower halves of the left-hand side of the page, the letters **c** and **d** to the upper and lower halves of the right-hand side of the page. For example, in **7** PLATO: *Symposium*, **163b-164c**, the passage begins in the lower half of the left-hand side of page 163 and ends in the upper half of the right-hand side of page 164.

AUTHOR'S DIVISIONS: One or more of the main divisions of a work (such as PART, BK, CH, SECT) are sometimes included in the reference; line numbers, in brackets, are given in certain cases; *e.g.*, *Iliad*, BK II [265–283] **12d**.

BIBLE REFERENCES: The references are to book, chapter, and verse. When the King James and Douay versions differ in title of books or in the numbering of chapters or verses, the King James version is cited first and the Douay, indicated by a (*D*), follows; *e.g.*, OLD TESTAMENT: *Nehemiah*, 7:45—(*D*) *II Esdras*, 7:46.

SYMBOLS: The abbreviation "esp" calls the reader's attention to one or more especially relevant parts of a whole reference; "passim" signifies that the topic is discussed intermittently rather than continuously in the work or passage cited.

For additional information concerning the style of the references, see the Explanation of Reference Style; for general guidance in the use of *The Great Ideas*, consult the Preface.

1. The general theory of relation

1*a*. The nature and being of relations: the distinction between real and logical or ideal relations

7 PLATO: *Charmides*, 8d-9d / *Cratylus*, 86d / *Phaedo*, 242c-245d / *Republic*, BK V, 372d-373b / *Timaeus*, 448b-449a / *Parmenides*, 489a-c / *Sophist*, 570a-574c / *Statesman*, 594a-b

8 ARISTOTLE: *Categories*, CH 7 **11a-13d** / *Physics*, BK III, CH 1 [200^{b}29-32] **278b**; BK V, CH 2 [225^{b}11–13] **305d** / *Metaphysics*, BK I, CH 9 [990^{b}9–17] **508d**; BK V, CH 15 **542a-543a**; BK XIV, CH 1 [1088^{a}15–^{b}4] **620b-d**

9 ARISTOTLE: *Ethics*, BK I, CH 6 [1096^{a}17–29] **341b-c**

17 PLOTINUS: *Sixth Ennead*, TR 1, CH 6–9 **254d-257a**

19 AQUINAS: *Summa Theologica*, PART I, Q 6, A 2, REP 1 **28d-29c**; Q 13, A 7 **68d-70d**; Q 28, AA 1–2 **157c-160a**; A 4, ANS and REP 1,3–4 **160c-161d**; Q 40, A 2, REP 4 **214b-215b**; Q 42, A 1, REP 4 **224b-225d**; Q 45, A 3, REP 1–3 **244a-d**

20 AQUINAS: *Summa Theologica*, PART I–II, Q 49, A 1, ANS **1b-2b**; PART III, Q 2, A 7, REP 2 **718b-d**

31 DESCARTES: *Rules*, VI, **8c**

35 LOCKE: *Human Understanding*, BK II, CH XXV **214d-217a**; CH XXX, SECT 4 **238d-239a**

35 BERKELEY: *Human Knowledge*, SECT 11, **415a**; SECT 89, **430c**

42 KANT: *Pure Reason*, 41c-45b esp 42c, 43d-44c; 61a-64a esp 62d-63c; 72c-85d esp 72c-74b; 99a-108a,c / *Practical Reason*, **339a-b**

46 HEGEL: *Philosophy of History*, INTRO, **156b-c**

53 JAMES: *Psychology*, **157b-159b** esp **158b-159b**; **458a-459b**; **549a-550b**; **863b** [fn 2]; **865b-866a**; **873a-b**; **879b-886a** passim, esp **880b-882a**, **884b-885a**; **889a-890a**

1*b*. The effect of relations on the nature and being of things: internal and external relations

7 PLATO: *Theaetetus*, **521d-522b**

8 ARISTOTLE: *Categories*, CH 7 [8^{a}12–^{b}24] **13a-d** / *Physics*, BK V, CH 2 [225^{b}11–13] **305d** / *Metaphysics*, BK XI, CH 12 [1068^{a}10–16] **596d-597a**; BK XIV, CH 1 [1088^{a}15–^{b}4] **620b-d**

19 AQUINAS: *Summa Theologica*, PART I, Q 13, A 7 **68d-70d**; Q 28, AA 1–2 **157c-160a**; Q 30, A 1, REP 3 **167a-168a**; Q 40, A 2, REP 3–4 **214b-215b**; Q 44, A 1, REP 1 **238b-239a**; Q 45, A 3 **244a-d**

(1. *The general theory of relation.* 1b. *The effect of relations on the nature and being of things: internal and external relations.*)

20 AQUINAS: *Summa Theologica*, PART III, Q 2, A 7, REP 2 718b-d; PART III SUPPL, Q 79, A 2, REP 2 953b-955c
31 SPINOZA: *Ethics*, PART I, AXIOM 5 355d; PROP 2-3 355d-356a
35 LOCKE: *Human Understanding*, BK II, CH XXV, SECT 4-5 215c-d; BK IV, CH VI, SECT 11 334b-335b
42 KANT: *Pure Reason*, 99a-101b
46 HEGEL: *Philosophy of Right*, PART I, par 74 31d / *Philosophy of History*, PART I, 220c
53 JAMES: *Psychology*, 142a-b; 458a-459b; 550b-551b [fn 2]; 640b [fn 1]; 644b-645a; 660a-b; 669a

1c. The coexistence of correlatives

7 PLATO: *Charmides*, 8d-9d / *Gorgias*, 267c-268a / *Republic*, BK IV, 351b-352b / *Theaetetus*, 520a-b; 521b-522b
8 ARISTOTLE: *Categories*, CH 7 [6^b26-8^a12] 11b-13a; CH 10 [11^b23-33] 17a / *Topics*, BK V, CH 6 [135^b17-26] 187b-c; BK VI, CH 4 [142^a22-33] 195c-d
9 ARISTOTLE: *Rhetoric*, BK II, CH 19 [1392^b3-4] 640a
10 GALEN: *Natural Faculties*, BK I, CH 4 169a
17 PLOTINUS: *Sixth Ennead*, TR I, CH 7, 255d-256a
19 AQUINAS: *Summa Theologica*, PART I, Q 13, A 7, REP 6 68d-70d; Q 40, A 2, REP 4 214b-215b
35 LOCKE: *Human Understanding*, BK II, CH XXV, SECT 2 215b-c; SECT 5 215d
42 KANT: *Pure Reason*, 83b-84d
46 HEGEL: *Philosophy of Right*, PART I, par 72 31c; par 74 31d

1d. Relational unity or identity of relation: the notion and use of analogy or proportionality

7 PLATO: *Gorgias*, 267c-268a / *Timaeus*, 448b-d
8 ARISTOTLE: *Posterior Analytics*, BK I, CH 10 [76^a36-$^b2$] 105a; BK II, CH 14 [98^a20-23] 134a; CH 17 [99^a1-16] 135a-b / *Topics*, BK I, CH 17 [108^a6-14] 152b; BK IV, CH 4 [124^a15-20] 172d; BK V, CH 7 [136^b33-137^a20] 189a-c; CH 8 [138^b 23-27] 191b-c / *Physics*, BK I, CH 7 [191^a8-12] 266d; BK VII, CH 4 [249^a22-24] 332b / *Generation and Corruption*, BK II, CH 6 [333^a27-34] 434a / *Meteorology*, BK IV, CH 9 [387^b1-6] 491c / *Metaphysics*, BK V, CH 6 [1016^b32-1017^a 3] 537c; CH 9 [1018^a12-13] 538d; BK VII, CH 11 [1037^a5-9] 560c; BK IX, CH 1 [1046^a4-8] 570d-571a; CH 6 [1048^a31-$^b8$] 573d-574a; BK XII, CH 4-5 599d-601a passim / *Soul*, BK III, CH 7 [431^a20-$^b1$] 663d-664a; CH 8 [431^b20-432^a2] 664b-c
9 ARISTOTLE: *History of Animals*, BK I, CH 1 [486^a15-487^a1] 7b-d; BK VIII, CH 1 [588^a18-$^b5$] 114b,d / *Parts of Animals*, BK I, CH 4 167d-168c; CH 5 [645^b1-33] 169b-d / *Generation of Animals*, BK I, CH 1 [715^b17-26] 255d; BK III, CH 10 [760^a9-17] 301b / *Ethics*, BK I, CH 6 [1096^b27-29] 342a; BK V, CH 3-5 378c-381d passim; BK VIII, CH 7 [1158^b29-33] 410d / *Politics*, BK V, CH 1 [1301^b29-36] 503a / *Rhetoric*, BK I, CH 2 [1357^b25-1358^a2] 597c-d; BK II, CH 20 [1393^a22-1394^a8] 640d-641d; BK III, CH 4 657b-d; CH 10 662c-663d; CH 11 [1412^b33-1413^a13] 665c-d / *Poetics*, CH 21 [1457^b6-33] 693a-c
11 EUCLID: *Elements*, BK V 81a-98b esp DEFINITIONS, 3-6 81a; BK VII, DEFINITIONS, 20 127b
11 NICOMACHUS: *Arithmetic*, BK II, 841c-d
16 KEPLER: *Harmonies of the World*, 1078b-1080a
19 AQUINAS: *Summa Theologica*, PART I, Q 4, A 3 22b-23b; Q 5, A 6, REP 3 27c-28b; Q 12, A 1, REP 4 50c-51c; Q 13, AA 5-6 66b-68c; A 10 72c-73c; Q 14, A 3, REP 2 77d-78b; Q 16, A 6, ANS 98b-d; Q 33, A 3, ANS 182c-183c; Q 44, A 3, ANS 240b-241a; Q 54, A 3, ANS and REP 2 286c-287b; Q 66, A 2, ANS 345d-347b; Q 93, A 1, REP 3 492a-d; PART I-II, Q 20, A 3, REP 3 713c-714c; Q 27, A 3, REP 2 738c-739c
20 AQUINAS: *Summa Theologica*, PART I-II, Q 61, A 1, REP 1 54d-55c; PART III, Q 60, A 1, ANS 847b-848a; PART III SUPPL, Q 69, A 1, REP 2 885c-886c; Q 92, A 1, REP 6 1025c-1032b
24 RABELAIS: *Gargantua and Pantagruel*, BK I, 12d-13b
28 HARVEY: *On Animal Generation*, 336b-d; 449a-b; 469d-470d
30 BACON: *Novum Organum*, BK II, APH 27 157b-158d
31 DESCARTES: *Objections and Replies*, 158b-161d
35 LOCKE: *Human Understanding*, BK II, CH XXVIII, SECT 1 228c
35 HUME: *Human Understanding*, SECT IX, DIV 82 487b-c
42 KANT: *Pure Reason*, 72c-74b / *Judgement*, 601d-603a
49 DARWIN: *Origin of Species*, 212d-213c
53 JAMES: *Psychology*, 688a-689b passim

2. Order and relation in God: the divine processions and the relations constituting the Trinity of persons

18 AUGUSTINE: *City of God*, BK X, CH 24 312d-313c; BK XI, CH 10 327d-328d
19 AQUINAS: *Summa Theologica*, PART I, Q 3 14a-20c; Q 11, AA 3-4 49a-50b; Q 28 157c-161d; Q 29, A 4 165c-167a; QQ 30-40 167a-217c passim; Q 41, A 5 222b-223b; Q 42 224a-230a
21 DANTE: *Divine Comedy*, PARADISE, XXIV [127-147] 144a; XXXIII [76-145] 157a-d

22 CHAUCER: *Second Nun's Tale* [15,794–809] 467a-b
23 HOBBES: *Leviathan*, PART I, 97c; PART III, 207b; 207d-208c; PART IV, 259d
31 DESCARTES: *Meditations*, V 93a-96a / *Objections and Replies*, POSTULATE V 131b-c; 159b-161d; 217d-218b; 232b
31 SPINOZA: *Ethics*, PART I, DEF I 355a; DEF 3–6 355b; DEF 8, EXPL 355c; PROP 7 356c; PROP 10–11 358a-359b; PROP 15, DEMONST 360a; PROP 17, SCHOL 362c-363c; PROP 20 363d-364a; PROP 23 364d-365a; PROP 29, SCHOL 366b-c; PROP 32, COROL 2 367b; PROP 33, SCHOL 2 367d-369a
32 MILTON: *Paradise Lost*, BK III [56–415] 136b-144b esp [315–341] 142a-b, [383–389] 143b-144a; BK V [600–615] 188b; BK XII [469–551] 329b-331a
40 GIBBON: *Decline and Fall*, 307b; 310b-313b esp 310b-311d
41 GIBBON: *Decline and Fall*, 422a-c; 521c
46 HEGEL: *Philosophy of History*, PART III, 306a-c

3. The relation of God to the world: divine immanence and transcendence

18 AUGUSTINE: *Confessions*, BK I, par 2–3 1b-2a; BK III, par 10 15b-d; BK IV, par 26 25c-d; par 31 26c-27a; BK VI, par 4 36a-b; BK VII, par 1–2 43b-44a; par 7 45a-d; par 17 49a; par 21 49d-50a; BK X, par 8–10 73b-74a; BK XII, par 7 100d-101a; par 21 103d-104a / *City of God*, BK VII, CH 6, 248a; CH 30 261b-d; BK XII, CH 2 343c-d; CH 17 353a-354a; CH 25 358b-359a; BK XIX, CH 13 519a-520a / *Christian Doctrine*, BK I, CH 12 627c-d; CH 32 633c-d
19 AQUINAS: *Summa Theologica*, PART I, Q 3, A 8 19d-20c; Q 6, A 2, REP 1 28d-29c; Q 8 34c-38c; Q 13, A 7 68d-70d; Q 18, A 4 107d-108c; Q 26, A 1, REP 3 157c-158d; A 4, ANS 160c-161d; Q 44, A 1, REP 1 238b-239a; Q 45, A 2, REP 2 242d-244a; A 3 244a-d; Q 51, A 3, REP 3 277a-278c; Q 52, A 2, ANS 279b-280a; Q 61, A 3, REP 2 316a-d; Q 103, A 2, CONTRARY and ANS 529a-530a; Q 104, AA 1–2 534c-537b; PART I-II, Q 17, A 8, REP 2 692a-c
20 AQUINAS: *Summa Theologica*, PART II-II, Q 28, A 2, REP 3 511a-d
21 DANTE: *Divine Comedy*, PARADISE, II [112–148] 109a-b; XIII [52–66] 126a; XIX [40–66] 135c-d; XXVIII 148d-150b; XXIX [127–145] 151c-d; XXXIII [76–93] 157a
28 HARVEY: *On Animal Generation*, 428c-d
31 DESCARTES: *Discourse*, PART IV, 52a-d / *Meditations*, III, 87b-88c / *Objections and Replies*, 110b-112a; 158b-159a; 213b-d; 214a-d
31 SPINOZA: *Ethics*, PART I 355a-372d esp DEF 3–6 355b, AXIOM 1–2 355c, PROP 2–8 355d-357d, PROP 10, SCHOL 358a-b, PROP 17, SCHOL 362c-363c, PROP 24–30 365a-366d, PROP 33, SCHOL 1–2 367c-369a; PART II, PROP 1–11 373d-377c
32 MILTON: *Paradise Lost*, BK XI [334–346] 306b
34 NEWTON: *Principles*, BK III, GENERAL SCHOL, 370a-371a
35 LOCKE: *Human Understanding*, BK II, CH XIII, SECT 18 152a-c; CH XV, SECT 12 165b-c
35 BERKELEY: *Human Knowledge*, SECT 149–150 442d-443b; SECT 155 444b-c
35 HUME: *Human Understanding*, SECT VII, DIV 56 475a-b
42 KANT: *Pure Reason*, 192c-d / *Practical Reason*, 334b-335b / *Judgement*, 566c-d; 580c-d; 592a-c
46 HEGEL: *Philosophy of History*, PART I, 220c-221a; 224a-b; 246c-247a; PART III, 306a-c; PART IV, 322a-c; 349b-350a

4. Relation in the order of thought or knowledge

4a. The definability or indefinability of relative terms

7 PLATO: *Philebus*, 615c-616c
8 ARISTOTLE: *Categories*, CH 7 [6^a36–7^b14] 11a-12b; [8^a12–$^b24$] 13a-d / *Topics*, BK IV, CH 1 [120^b36–121^a6] 168d; CH 4 [124^b15–34] 173c-d; [125^a14–$^b14$] 174a-c; BK VI, CH 4 [142^a22–33] 195c-d; CH 5 [142^b30–143^a12] 196b-c; CH 6 [145^a12–$^b20$] 198d-199b; CH 8 200b-201a; CH 9 [147^a23–32] 201b; CH 12 [149^b4–23] 203d-204a / *Sophistical Refutations*, CH 13 238d-239a; CH 31 250c-d
19 AQUINAS: *Summa Theologica*, PART I, Q 44, A 1, REP 1 238b-239a

4b. The proposition or judgment as a statement of relation: relation in reasoning

35 LOCKE: *Human Understanding*, BK IV, CH 1, SECT 1–7 307a-308a esp SECT 7 307d-308a; CH XII, SECT 6–8 360a-c
35 HUME: *Human Understanding*, SECT IV, DIV 20 458a-b
42 KANT: *Pure Reason*, 39c-41c esp 40c-d; 51d-52b
53 JAMES: *Psychology*, 174b-176a; 213b-214a esp 214b [fn 1]; 302b-304b; 638b; 640b [fn 1]; 869a-874a passim, esp 870b-871a; 878a-879b; 889a

4c. The transcendental categories of relation

42 KANT: *Pure Reason*, 41c-45b esp 42c, 43d-44c; 61a-64a esp 62d-63c

4d. Relations as objects of knowledge: ideas of relation

7 PLATO: *Phaedo*, 242c-245d / *Republic*, BK VII, 392b-393b
8 ARISTOTLE: *Categories*, CH 7 11a-13d / *Metaphysics*, BK I, CH 9 [990^b9–17] 508d

(4. Relation in the order of thought or knowledge. 4d. Relations as objects of knowledge: ideas of relation.)

19 AQUINAS: *Summa Theologica*, PART I, Q 13, A 7 68d-70d; Q 28, A 1, ANS and REP 4 157c-158d; A 4, REP 2-3 160c-161d; Q 44, A 1, REP 1 238b-239a

35 LOCKE: *Human Understanding*, BK II, CH XI, SECT 4-5 144d-145a; CH XII, SECT 1 147b-d; SECT 3 147d-148a; SECT 7 148c; CH XXI, SECT 5 179c-d; CH XXV-XXVIII 214d-233d passim, esp CH XXV 214d-217a; CH XXX, SECT 4 238d-239a; BK IV, CH III 313a-323d passim; CH IV, SECT 1 323d 324a; SECT 7 325b; SECT 18 328d-329a; CH VI, SECT 13 335c-d; SECT 16 336d; CH VII, SECT 1-7 337a-338c esp SECT 2 337a; CH XI, SECT 13-14 357d-358c; CH XII, SECT 6-8 360a-c; CH XVII, SECT 8, 377c

35 HUME: *Human Understanding*, SECT IV, DIV 20 458a-b; SECT XII, DIV 131 508d-509a

38 ROUSSEAU: *Inequality*, 349b

42 KANT: *Pure Reason*, 24a-33d esp 31d-32c; 61a-64a esp 62d-63c; 99a-101b; 119a-120c

53 JAMES: *Psychology*, 157b-161a esp 158b-159b, 160a-162b [fn 1]; 167b; 301b-304b passim, esp 302b-303b; 319b-327a esp 319b-320a, 323a, 324b-326a; 386a; 411a-413a; 457a-459b esp 459b [fn 3]; 549a-552a esp 549b-550b

54 FREUD: *Unconscious*, 442d / *Ego and Id*, 700d-701a

4e. The relations between ideas

35 LOCKE: *Human Understanding*, BK II, CH XI, SECT 4-5 144d-145a; CH XXI, SECT 5 179c-d; BK IV, CH III 313a-323d passim; CH IV, SECT 1 323d-324a; SECT 7 325b; SECT 18 328d-329a; CH VI, SECT 13, 335d; SECT 16 336d; CH VII, SECT 1-7 337a-338c esp SECT 2 337a; CH XI, SECT 13-14 357d-358c esp SECT 13, 358a; CH XII, SECT 6-8 360a-c

35 BERKELEY: *Human Knowledge*, SECT 89, 430c

35 HUME: *Human Understanding*, SECT IV, DIV 20 458a-b; DIV 30, 462a

42 KANT: *Pure Reason*, 41c-45b esp 42c; 43d-44c; 61a-64a esp 62d-63c; 99a-108a,c; 119b

53 JAMES: *Psychology*, 167b-176a esp 168a, 174b-176a; 300b-301b [fn 1]; 319b-320a; 867a-879b esp 868b-869a, 874a, 878a-879b; 889a-b

4f. The types of relationship underlying the association of ideas in thought, memory, and dreams

8 ARISTOTLE: *Memory and Reminiscence*, CH 2 [451^{b}7-452^{b}6] 692d-694b

23 HOBBES: *Leviathan*, PART I, 52b-c

31 SPINOZA: *Ethics*, PART II, PROP 18 381d-382b

35 LOCKE: *Human Understanding*, BK II, CH XXXIII 248b-251d esp SECT 5-18 248d-251c

35 HUME: *Human Understanding*, SECT III 457c-458a; SECT V, DIV 41-45 467d-469c

36 STERNE: *Tristram Shandy*, 194a

42 KANT: *Pure Reason*, 51c-d

53 JAMES: *Psychology*, 360a-364a esp 360a-361a; 367a-370b esp 369a-370a; 378a-387b esp 378a, 387a-b; 677a-678b passim

54 FREUD: *Hysteria*, 74a-75a; 76c-d / *Interpretation of Dreams*, 265a-272c passim; 348a-349c esp 348d-349a; 352a-c / *General Introduction*, 486b-489c passim, esp 487d-488a

5. Order as a system of relationships or related things

5a. The nature and types of order: inclusion and exclusion; succession and coexistence; priority, posteriority, and simultaneity

7 PLATO: *Statesman*, 594a-595a / *Philebus*, 615c-617d

8 ARISTOTLE: *Categories*, CH 7 [7^{b}15-23] 12b-c; CH 12-13 19d-20d / *Interpretation*, CH 13 [23^{a}18-26] 35b-c / *Prior Analytics*, BK I, CH 1 [24^{b}26-31] 39d / *Posterior Analytics*, BK I, CH 2 [71^{b}33-72^{a}5] 98b-c; CH 27 119b; BK II, CH 12 129d-131b; CH 16 [98^{a}35-^{b}24] 134b-c / *Topics*, BK II, CH 4 [111^{b}24-31] 156d-157a; BK VI, CH 4 194c-196a passim; CH 6 [145^{b}21-33] 199b-c / *Physics*, BK VII, CH 1 [242^{a}16-243^{a}2] 326b-327b / *Metaphysics*, BK III, CH 3 [999^{a}6-14] 517d; BK V, CH 2 [1014^{a}20-25] 534b-c; CH 11 539c-540a; BK IX, CH 8 575b-577a; BK XII, CH 1 598a-c; BK XIII, CH 2 [1077^{a}14-^{b}14] 608b-609a

9 ARISTOTLE: *Parts of Animals*, BK II, CH 1 [646^{a}25-^{b}10] 170b-c / *Generation of Animals*, BK II, CH 6 [742^{a}16-743^{a}1] 283b-284a / *Ethics*, BK I, CH 6 [1096^{a}17-23] 341b-c / *Politics*, BK I, CH 1 [1252^{a}17-24] 445b; CH 5 [1254^{a}29-33] 447d-448a; BK III, CH 1 [1275^{a}35-^{b}2] 472b

11 NICOMACHUS: *Arithmetic*, BK I, 813a-d

18 AUGUSTINE: *Confessions*, BK XII, par 40 109b-110a / *City of God*, BK XIX, CH 13, 519b

19 AQUINAS: *Summa Theologica*, PART I, Q 3, A 1, ANS 14b-15b; A 6, ANS and REP 2 18c-19a; Q 12, A 10 59a-d; Q 16, A 4 97a-c; Q 45, A 3, REP 3 244a-d; Q 66, A 4, REP 4 348d-349d; Q 94, A 3, ANS 504a-505a

20 AQUINAS: *Summa Theologica*, PART I-II, Q 49, A 2, ANS 2b-4a; Q 50, A 2, REP 3 7c-8a; Q 110, A 4, REP 4 350d-351d

28 HARVEY: *On Animal Generation*, 390c; 445c; 447a-b

31 DESCARTES: *Objections and Replies*, 228a-b

31 SPINOZA: *Ethics*, PART I, PROP 1 355d

35 LOCKE: *Human Understanding*, BK II, CH XIV, SECT 1-12 155b-157c passim, esp SECT 3-4 155c-156a, SECT 6 156b-c, SECT 12 157b-c

35 HUME: *Human Understanding*, SECT V, DIV 41-43 467d-468d

38 ROUSSEAU: *Social Contract*, BK II, 399c
42 KANT: *Pure Reason*, 72c-85d esp 72c-74b
51 TOLSTOY: *War and Peace*, EPILOGUE II, 691a-693d
53 JAMES: *Psychology*, 319b-322a passim, esp 319b; 346a-b; 399a-b; 547a-549a esp 547b [fn 1], 548b-549a; 571b-573a; 631b
54 FREUD: *Civilization and Its Discontents*, 779c

5a(1) The order of the causes or of cause and effect

7 PLATO: *Lysis*, 24b / *Phaedrus*, 124b-c / *Euthyphro*, 195c-d / *Gorgias*, 267c-268a / *Timaeus*, 455a-b; 465d-466a / *Theaetetus*, 521d-522b / *Philebus*, 617b-c / *Laws*, BK X, 762b-763b
8 ARISTOTLE: *Categories*, CH 12 [14^b10-22] 20b / *Posterior Analytics*, BK I, CH 2 [71^b33-72^a6] 98b-c; BK II, CH 12 129d-131b; CH 16-18 134b-136a / *Physics*, BK II, CH 6 [198^a5-13] 275a; CH 8-9 275d-278a,c; BK III, CH 2 [202^a2-12] 279c; BK VII, CH 1-2 326a-329a; BK VIII 334a-355d / *Heavens*, BK I, CH 7 [275^a1-$^b12$] 366a-d; [275^b18-29] 366d-367a / *Generation and Corruption*, BK I, CH 7 421d-423b / *Metaphysics*, BK II, CH 1 [993^b23]-CH 2 [994^b31] 512a-513b; BK V, CH 2 533b-534c; BK XI, CH 8 [1065^b2-4] 593d; BK XII, CH 3 [1070^a21-24] 599c; CH 4 [1070^b22-35] 600b; CH 5 [1071^a35-36] 601a; CH 6-8 601b-605a
9 ARISTOTLE: *Parts of Animals*, BK I, CH 1 [639^b 11-642^a24] 161d-165b esp [639^b11-31] 161d-162a; BK II, CH 1 [646^a25-$^b10$] 170b-c / *Motion of Animals*, CH 5 235c-d / *Generation of Animals*, BK II, CH 6 [742^a16-$^b17$] 283b-d / *Rhetoric*, BK II, CH 23 [1400^a28-35] 649a-b
10 GALEN: *Natural Faculties*, BK I, CH 4 169a
16 KEPLER: *Epitome*, BK IV, 854b; 959a-960a
17 PLOTINUS: *Sixth Ennead*, TR VII, CH 2 322b-323a
18 AUGUSTINE: *City of God*, BK XII, CH 24-25 358a-359a; BK XXII, CH 2 587b-588a; CH 24, 609b-610a
19 AQUINAS: *Summa Theologica*, PART I, Q 2, A 3 12c-14a; Q 3, A 1, ANS 14b-15b; A 2, ANS 15c-16a; A 4, ANS 16d-17c; A 6, ANS 18c-19a; A 7, ANS 19a-c; A 8, ANS and REP 1-2 19d-20c; Q 4, A 2, ANS 21b-22b; A 3, ANS and REP 4 22b-23b; Q 5, A 2, REP 1 24b-25a; A 4, ANS 25d-26c; Q 8, A 1 34d-35c; Q 13, A 5, REP 1 66b-67d; Q 14, A 7, ANS and REP 3 81d-82b; A 11, ANS 84c-85c; Q 18, A 3, ANS 106b-107c; Q 19, A 4, ANS 111c-112c; A 5, REP 2-3 112d-113c; A 6, ANS and REP 3 113c-114d; Q 22, A 2, REP 2 128d-130d; Q 23, A 5, ANS 135d-137d; Q 36, A 3, REP 4 194c-195d; Q 41, A 2, ANS and REP 1,3 218c-219d; Q 42, A 2, ANS 225d-227a; Q 44, A 2 239b-240a; Q 45, A 2, REP 2 242d-244a; A 3 244a-d; A 5, ANS 245c-247a; Q 46, A 1, REP 6 250a-252d; Q 52, A 3, ANS 280a-d; Q 63, A 8, REP 1 332c-333b; Q 65, A 3, ANS 341c-342b; Q 75, A 1, REP 1 378b-379c; Q 82, A 3, REP 1 433c-434c; A 4, ANS 434c-435c; Q 87, A 2, REP 3 466c-467b; Q 88, A 3, REP 2 472c-473a; Q 90, A 3 482c-483a; Q 103, A 6 532b-533a; Q 104, A 1, ANS 534c-536c; A 2 536c-537b; Q 105, A 1, REP 3 538d-539c; A 5, ANS and REP 3 542a-543b; Q 112, A 1, ANS 571d-573a; Q 114, A 3, ANS 583b-d; Q 115, AA 1-2 585d-588c; Q 118, A 2, REP 3 601c-603b; PART I-II, Q 1, A 2, ANS 610b-611b; Q 46, A 1, ANS 813b-814a
20 AQUINAS: *Summa Theologica*, PART I-II, Q 66, A 6, REP 3 80c-81b; Q 112, A 1, REP 1-3 356c-357b; PART II-II, Q 1, A 7, REP 3 385c-387a; PART III, Q 6, A 5, ANS 744a-d; Q 7, A 1, REP 3 745d-746c; A 7, REP 1 750a-d; Q 18, A 1, REP 2 810a-811c; Q 19, A 1, ANS and REP 2 816a-818b; Q 62, A 1 858c-859d; A 5, ANS 862b-863a; Q 64, A 5 874a-d; A 8, REP 1 876c-877c; PART III SUPPL, Q 70, A 3, ANS 897d-900d; Q 74, A 3, REP 2 927c-928d; Q 76, A 1, REP 1 939d-941a; A 2 941b-942b; Q 80, A 1, REP 1 956c-957c
21 DANTE: *Divine Comedy*, PARADISE, II [112-148] 109a-b
22 CHAUCER: *Tale of Melibeus*, par 37 417b
23 HOBBES: *Leviathan*, PART I, 78c-d; 79d-80a
28 GALILEO: *Two New Sciences*, FIRST DAY, 135c-136b
28 HARVEY: *On Animal Generation*, 390c-d; 416b-c; 426a-429b; 442c-443c; 445c; 447a-b
31 DESCARTES: *Discourse*, PART IV, 52a-d / *Meditations*, III 81d-89a esp 84b-85a, 87b-88c / *Objections and Replies*, 110a-112a esp 111d-112a; 120c-123a; DEF III-IV 130b; AXIOM I-V 131d-132a; AXIOM VIII 132b; PROP II 132c; 158b-161d passim; 212a; 213b-d
31 SPINOZA: *Ethics*, PART I, DEF I 355a; AXIOM 3-5 355d; PROP 3 356a; PROP 21-29 364a-366c; PROP 33 367b-369a; PROP 36 369b; APPENDIX 369b-372d; PART II, LEMMA 3 378d-379a; PROP 48, DEMONST 391a; PART III, DEF 2-3 395d-396a; PROP 1-3 396a-398c; PART IV, PREF, 422b,d-423c
33 PASCAL: *Pensées*, 505 261a-b
35 LOCKE: *Human Understanding*, BK II, CH XXI, SECT 1-4 178b-179c; CH XXII, SECT 11 203c-d; CH XXVI, SECT 1-2 217a-d
35 BERKELEY: *Human Knowledge*, SECT 25-33 417d-419a passim
35 HUME: *Human Understanding*, SECT III, DIV 18-SECT VIII, DIV 74 457c-484c passim, esp SECT VII, DIV 60 477a-c; SECT XI 497b-503c esp DIV 105 498d-499a
42 KANT: *Pure Reason*, 63b; 67d-68b [fn 1]; 76c-83b esp 81c-d; 95a-d; 140b,d-145c; 177b-179b; 187c-188c; 214b,d [fn 1] / *Practical Reason*, 311d-314d; 334b-337a,c; 339a-b / *Judgement*, 577c-578a
49 DARWIN: *Origin of Species*, 9b-10d / *Descent of Man*, 285b-c
51 TOLSTOY: *War and Peace*, BK X, 405a-b; EPILOGUE II 675a-696d
54 FREUD: *General Introduction*, 588c-589a

(*5a. The nature and types of order: inclusion and exclusion; succession and coexistence; priority, posteriority, and simultaneity.*)

5a(2) The order of goods or of means and ends: the order of loves

OLD TESTAMENT: *I Kings*, 3:5–14—(*D*) *III Kings*, 3:5–14

NEW TESTAMENT: *Matthew*, 13:44–46 / *Philippians*, 3:7–16

6 HERODOTUS: *History*, BK I, 6c-8a

7 PLATO: *Lysis*, 23a-c / *Euthydemus*, 69a-71a / *Symposium*, 165b-167d / *Meno*, 183b-184c / *Gorgias*, 262a-264b / *Republic*, BK II, 310c-d; BK VII, 401b; BK IX, 421a-427b / *Timaeus*, 465d-466a / *Philebus*, 635b-639a,c / *Laws*, BK I, 643c-644a; BK II, 656d-658c; BK III, 674b; BK V, 687c-688c; 689c-690c; 694d-695a; BK IX, 751c

8 ARISTOTLE: *Prior Analytics*, BK II, CH 22 [68^{a}25–^{b}8] 89d-90a / *Topics*, BK III, CH 1–4 162a-166b / *Metaphysics*, BK V, CH 2 [1013^{a}32–^{b}3] 533c; [1013^{b}25–28] 533d-534a

9 ARISTOTLE: *Ethics*, BK I, CH 1–2 339a-d; CH 4 [1095^{a}13–29] 340b-c; CH 5 [1095^{b}13]–CH 7 [1097^{b}22] 340d-343a; BK II, CH 8 354a-d; BK VII, CH 11–14 403c-406a,c; BK X, CH 6–7 430d-432c / *Politics*, BK I, CH 1 [1252^{a}1–6] 445a; BK III, CH 12 480c-481b; BK VII, CH 1 [1323^{a}22–^{b}21] 527a-c; CH 13 [1331^{b}24–38] 536b-c; [1332^{a}8–27] 536d-537a; CH 14 [1333^{a}17–37] 538a-b / *Rhetoric*, BK I, CH 7 604c-607d

12 EPICTETUS: *Discourses*, BK II, CH 19, 163a-c; BK III, CH 14, 189d

12 AURELIUS: *Meditations*, BK V, SECT 16 271c-d

14 PLUTARCH: *Solon*, 74c-75c / *Pericles*, 122a

17 PLOTINUS: *First Ennead*, TR IV 12b-19b esp CH 2–7 12d-16a, CH 14–16 18a-19b / *Second Ennead*, TR IX, CH 15 74d-75b

18 AUGUSTINE: *Confessions*, BK II, par 10–14 11a-12b / *City of God*, BK VIII, CH 8–9 270a-271a; BK XI, CH 16 331a-c; BK XII, CH 8 346d-347b; BK XV, CH 22 416a-c; BK XIX, CH 1–3 507a-511a; CH 11–17 516d-523a; CH 20 523d-524a / *Christian Doctrine*, BK I, CH 3–5 625b-626a; CH 22 629b-630a; CH 31–33 633b-634b; CH 35 634c-d

19 AQUINAS: *Summa Theologica*, PART I, Q 3, A 1, ANS 14b-15b; A 2, ANS 15c-16a; Q 5, A 6 27c-28b; Q 6, A 2 28d-29c; PART I–II, QQ 1–5 609a-643d; Q 20, AA 1–4 712a-715b

20 AQUINAS: *Summa Theologica*, PART I–II, Q 49, A 2, ANS 2b-4a; Q 114, A 4, REP 1 373a-d

21 DANTE: *Divine Comedy*, PURGATORY, XVII [82]–XVIII [75] 79b-80c; PARADISE, XXVI [1–69] 145d-146c

22 CHAUCER: *Tale of Melibeus* 401a-432a

23 HOBBES: *Leviathan*, PART I, 62a; PART II, 155b-c; PART III, 237d

30 BACON: *Advancement of Learning*, 71a-72c; 73d-74a; 75d-76a; 91d-92b

31 SPINOZA: *Ethics*, PART I, APPENDIX 369b-372d; PART IV, PREF 422b,d-424a; APPENDIX, V 447c

33 PASCAL: *Provincial Letters*, 94a-97a / *Pensées*, 505 261a-b; 793 326b-327a

35 LOCKE: *Human Understanding*, BK II, CH XXI, SECT 52–53 191d-192b; SECT 55–56 192c-193b; SECT 62 194c-d; SECT 72 198a-c

42 KANT: *Pure Reason*, 235a-b; 238c-239a / *Fund. Prin. Metaphysic of Morals*, 256a-b; 257c-d; 266a-267d; 268b; 271d-279d / *Practical Reason*, 316a-317d; 327d-329a / *Pref. Metaphysical Elements of Ethics*, 377d / *Judgement*, 478a-479d esp 478a-b; 557d [fn 2]; 584d-587a; 588b [fn 2]; 592a; 594b-595d esp 595a-d

43 FEDERALIST: NUMBER 23 85a-87a passim, esp 85b-c; NUMBER 41, 132b

43 MILL: *Utilitarianism*, 445a-447b; 448a-450a; 461c-463c

44 BOSWELL: *Johnson*, 378a-b

46 HEGEL: *Philosophy of Right*, PART I, par 61 27b-c; PART II, par 122 44a; PART III, par 294 98b-d; ADDITIONS, 38 122c-d / *Philosophy of History*, INTRO, 168a-d; PART II, 267a-b; PART III, 307b-308a; PART IV, 348b-c; 365b-c

48 MELVILLE: *Moby Dick*, 213b-214b

52 DOSTOEVSKY: *Brothers Karamazov*, BK VI, 164b-165a

53 JAMES: *Psychology*, 14b-15a; 199b-204b esp 202a-203a

5a(3) The order of quantities: the types of proportion

8 ARISTOTLE: *Physics*, BK VII, CH 4 330d-333a / *Metaphysics*, BK V, CH 6 [1016^{b}18–31] 537b; CH 13 541b-c; CH 15 542a-543a; BK X, CH 1 [1052^{b}15–1053^{b}9] 579a-580a; CH 5 583a-c; CH 6 [1056^{b}33–1057^{a}16] 584b-c; BK XIII, CH 2 [1077^{a}24–30] 608c; CH 6–9 611d-618c passim

9 ARISTOTLE: *Ethics*, BK V, CH 3–5 378c-381d passim / *Politics*, BK V, CH 1 [1301^{b}29–35] 503a

11 EUCLID: *Elements*, BK V 81a-98b; BK VI, PROP 23 117a-b; BK VII, DEFINITIONS, 20 127b

11 NICOMACHUS: *Arithmetic*, BK I–II, 821d-831d; BK II, 841c-848d

16 KEPLER: *Harmonies of the World*, 1078b-1079a

19 AQUINAS: *Summa Theologica*, PART I, Q 13, A 7, ANS 68d-70d

31 DESCARTES: *Discourse*, PART II, 47c / *Geometry* 295a-353b esp BK I, 295a-298b

34 NEWTON: *Principles*, BK I, LEMMA II, SCHOL, 31b-32a

38 ROUSSEAU: *Social Contract*, BK III, 407b-408b passim

42 KANT: *Pure Reason*, 73c-d / *Judgement*, 497a-498b

50 MARX: *Capital*, 19d-25d passim, esp 19d-20b, 25a-d

53 JAMES: *Psychology*, 551a-b

5a(4) The order of kinds: hierarchy; species and genus

7 PLATO: *Statesman*, 582d-583c; 594a-595a

8 ARISTOTLE: *Categories*, CH 5 [2^b6–3^a5] 6c-7b; CH 13 [14^b32–15^a12] 20c-d / *Topics*, BK IV, CH 2 [123^a13–19] 171c; BK VI, CH 4 [141^b15–34] 195a-b; CH 5 196b-d / *Physics*, BK IV, CH 3 [210^a17–19] 289a / *Metaphysics*, BK V, CH 25 545b-c; BK VII, CH 10–11 558a-561a; BK VIII, CH 6 569d-570d; BK X, CH 8–9 585b-586c

9 ARISTOTLE: *History of Animals*, BK VIII, CH 1 [588^b4–17] 114d-115a / *Parts of Animals*, BK I, CH 2–4 165d-168c

11 NICOMACHUS: *Arithmetic*, BK I, 813a-b

17 PLOTINUS: *Fourth Ennead*, TR III, CH 2 142a-143b

19 AQUINAS: *Summa Theologica*, PART I, Q 3, A 5, ANS 17c-18b; A 6, REP 2 18c-19a; Q 13, A 7, ANS 68d-70d; Q 15, A 3, REP 4 93b-94a; Q 28, A 1, ANS 157c-158d; Q 29, A 2, REP 4 163b-164b; Q 30, A 4, ANS 170c-171b; Q 47, A 2, ANS 257b-258c; Q 50, A 2, REP 1 270a-272a; A 4 273b-274b; Q 66, A 2, REP 2 345d-347b; Q 75, A 7 384d-385c; Q 76, A 3, ANS and REP 4 391a-393a; Q 77, A 1, REP 1 399c-401b; A 4, REP 1 403a-d; Q 85, A 3, ANS 455b-457a; A 4, ANS 457a-d; Q 88, A 2, REP 4 471c-472c; PART I–II, Q 18, A 7, REP 3 698c-699c; Q 23, A 1, ANS 723c-724c; Q 35, A 4, ANS 774d-775d; A 8, ANS and REP 3 779c-780c

20 AQUINAS: *Summa Theologica*, PART I–II, Q 54, A 1, REP 1 22d-23d; Q 61, A 1, REP 1 54d-55c; Q 72, A 7, ANS 117a-118a; PART III, Q 2, A 1, ANS 710a-711c

35 LOCKE: *Human Understanding*, BK III, CH III, SECT 6–9 255c-256c; CH VI, SECT 32 277c-278b; SECT 36–41 279a-280b

38 ROUSSEAU: *Inequality*, 341b-342b

42 KANT: *Pure Reason*, 193a-200c esp 196b-198d

49 DARWIN: *Origin of Species*, 30d-31b; 64a; 207a-208a; 210b-211b; 238b-c; 241d-242a

53 JAMES: *Psychology*, 870b-871a

5b. The order of the universe or of nature: the hierarchy of beings

APOCRYPHA: *Wisdom of Solomon*, 11:20—(*D*) OT, *Book of Wisdom*, 11:21

5 EURIPIDES: *Phoenician Maidens* [528–548] 382c-d

5 ARISTOPHANES: *Birds* [685–703] 551b-c

7 PLATO: *Symposium*, 155d-157a / *Gorgias*, 284a-285a / *Timaeus*, 446d-477a,c / *Philebus*, 618b-619d

8 ARISTOTLE: *Interpretation*, CH 13 [23^a18–26] 35b-c / *Physics*, BK II, CH 8–9 275d-278a,c; BK VIII, CH 1 [252^a5–23] 335d-336a / *Heavens*, BK I, CH 2 359d-360d; BK II, CH 9–10 382b-383a; CH 12 383b-384c; BK III, CH 2 [300^b16–301^a20] 392a-c / *Generation and Corruption*, BK II, CH 3–5 430c-433d; CH 9–11 436d-441a,c / *Metaphysics*, BK I, CH 3 [984^b8–22] 502d; CH 6 505b-506b; CH 7 [988^a34–$^b5$] 506c; CH 9 508c-511c; BK VIII, CH 3 [1043^b33–1044^a11] 568b-c; BK XI, CH 8 [1065^b2–4] 593d; BK XII, CH 6–8 601b-605a; CH 10 [1075^a12–24] 605d-606a; BK XIV, CH 3 [1090^b14–21] 623b / *Soul*, BK II, CH 2 [413^a20–$^b4$] 643b-c; BK III, CH 11 [433^b32–434^a9] 666d

9 ARISTOTLE: *History of Animals*, BK VIII, CH 1 114b,d-115b / *Parts of Animals*, BK I, CH 1 [641^b13–29] 164c-d; CH 5 [644^b22–645^a26] 168c-169a; BK IV, CH 5 [681^a12–14] 211d; CH 10 [686^b23–35] 218b-c / *Generation of Animals*, BK II, CH 1 [731^b24–33] 272a-b / *Politics*, BK I, CH 5 [1254^a24–35] 447d-448a; BK VII, CH 4 [1326^a29–35] 530b-c

12 LUCRETIUS: *Nature of Things*, BK I [418–448] 6b-c; BK II [167–183] 17a-b; [294–307] 18d-19a; [569–580] 22b; [865–930] 26a-d; [1023–1174] 28a-30a,c; BK V [146–234] 63a-64a; [783–836] 71b-72a

12 EPICTETUS: *Discourses*, BK II, CH 8, 146a-b; BK IV, CH 7, 234b

12 AURELIUS: *Meditations*, BK II, SECT 9 257d; BK IV, SECT 3–4 263b-264a; SECT 40 267a-b; SECT 45–46 267b-c; BK V, SECT 8 269d-270b; SECT 16 271c-d; SECT 30 273a; BK VI, SECT 1 274a; SECT 9 274b; SECT 11 274c; SECT 36 277c; SECT 38 277c-d; SECT 40–44 277d-278c; BK VII, SECT 11 280c; SECT 75 285c; BK VIII, SECT 26–27 287c; BK IX, SECT 9 292b-d; BK X, SECT 6 297a-b; BK XI, SECT 18, 304b-c

16 KEPLER: *Harmonies of the World*, 1023b-1080b

17 PLOTINUS: *Second Ennead*, TR III, CH 7 44c-45a; CH 13 46c-47b; CH 18 49c-50a / *Fourth Ennead*, TR IV, CH 10 163a-c; TR IX 205a-207a,c / *Fifth Ennead*, TR II 214c-215c; TR IX, CH 12–14 251a-d

18 AUGUSTINE: *Confessions*, BK VII, par 16–23 48c-50c / *City of God*, BK XI, CH 22 333d-334c; BK XII, CH 2–5 343c-345b; BK XIX, CH 11–17 516d-523a

19 AQUINAS: *Summa Theologica*, PART I, Q 2, A 3 12c-14a; Q 3, A 1, ANS 14b-15b; A 2, ANS 15c-16a; Q 5, A 5, ANS 26c-27c; Q 11, A 3, ANS 49a-c; Q 13, A 7, ANS 68d-70d; Q 18, A 3, ANS 106b-107c; Q 19, A 5, REP 2 112d-113c; A 8 116a-d; Q 21, A 1, REP 3 124b-125b; Q 23, A 5, REP 3 135d-137d; A 7, ANS 138d-140a; Q 42, A 1, REP 1–2 224b-225d; A 3 227a-d; Q 47 256a-259a; Q 48, A 1, REP 5 259b-260c; A 2, ANS and REP 3 260c-261b; Q 50, A 1, ANS and REP 1 269b-270a; A 2, REP 1 270a-272a; A 4 273b-274b; Q 57, A 1, ANS 295a-d; Q 61, AA 3–4 316a-317c; QQ 65–74 339a-377a,c; Q 75, A 1, REP 1 378b-379c; A 7 384d-385c; Q 76, A 1, ANS 385d-388c; A 3, ANS 391a-393a; A 6, REP 1–2 396a-d; Q 77, A 2 401b-d; A 4, REP 1 403a-d; Q 88, A 2, REP 4 471c-472c; QQ 103–119 528a-608d; PART I–II, Q 1, A 4, REP 1 612a-613a; A 8 615a-c; Q 2, A 5, REP 2–3 618d-619c; Q 22, A 2, REP 1 721c-722c

(5. *Order as a system of relationships or related things.* 5b. *The order of the universe or of nature: the hierarchy of beings.*)

20 AQUINAS: *Summa Theologica*, PART I–II, Q 52, A 1, ANS 15d-18a; PART II–II, Q 2, A 3, ANS and REP 1 392d-393c; Q 23, A 3, REP 3 485a-d; Q 26, A 1, REP 2 510c-511a; PART III SUPPL, Q 91 1016a-1025b

21 DANTE: *Divine Comedy*, PARADISE, I [103–142] 107b-d; II [46–148] 108b-109b; X [1–27] 120b-c; XIII [52–87] 126a-b; XXVII [97–120] 148b-c; XXVIII 148d-150b; XXIX [13–36] 150b-c

22 CHAUCER: *Troilus and Cressida*, BK III, STANZA 1–7 54b-55b; STANZA 250–253 87a-b / *Knight's Tale* [2987–3016] 209a-b

23 HOBBES: *Leviathan*, PART I, 78d-79a

26 SHAKESPEARE: *Julius Caesar*, ACT I, SC III [62–71] 573b

27 SHAKESPEARE: *Troilus and Cressida*, ACT I, SC III [75–139] 108d-109c

28 HARVEY: *On Animal Generation*, 400d-401a; 426b-429b passim, esp 426d-427a, 428a-c; 470a

30 BACON: *Novum Organum*, BK II, APH 17 149b-d; APH 27 157b-158d; APH 29–30 159b-d; APH 48 179d-188b

31 DESCARTES: *Discourse*, PART V, 54c-56a / *Meditations*, IV, 90a-b / *Objections and Replies*, 139b-c; 215a-b

31 SPINOZA: *Ethics*, PART I, PROP 29 366b-c; PROP 33 367b-369a; APPENDIX 369b-372d; PART II, PROP 6–7 374d-375c; PART III, 395a-d; PROP 2 396c-398b; PART IV, PREF 422b,d-424a; PROP 2 425a; PROP 4 425b-d

32 MILTON: *Paradise Lost*, BK V [397–505] 184a-186a; BK VIII [1–178] 232a-236a; [314–356] 239a-240a; BK IX [99–113] 249b

33 PASCAL: *Pensées*, 119–121 195a

34 NEWTON: *Principles*, BK III 269a-372a

35 LOCKE: *Human Understanding*, BK II, CH IX, SECT 12 140c; BK III, CH VI, SECT 11–12 271b-272b; BK IV, CH III, SECT 27 321d-322a; CH VI, SECT 11 334b-335b; CH XVI, SECT 12, 370c-371a

35 BERKELEY: *Human Knowledge*, SECT 29–33 418c-419a passim; SECT 146–153 442a-444a passim

35 HUME: *Human Understanding*, SECT V, DIV 44 468d-469c; SECT VIII, DIV 79–80 486b-d

38 MONTESQUIEU: *Spirit of Laws*, BK I, 1a-2b

42 KANT: *Pure Reason*, 93c-99a; 133a-c; 187c-189a; 199c-200c; 220a-b; 237b / *Fund. Prin. Metaphysic of Morals*, 256d-257a; 264d-265a / *Practical Reason*, 292a-d; 301d-302d; 307d-314d / *Judgement*, 467a-470c esp 467d-468c; 578d-580a esp 579b-c

45 FOURIER: *Theory of Heat*, 173b

46 HEGEL: *Philosophy of Right*, ADDITIONS, 168 145c-d / *Philosophy of History*, INTRO, 160b-162a; PART I, 220c; PART IV, 361a-b

49 DARWIN: *Origin of Species*, 55b-62a; 63d-64d; 96b-98a,c esp 96b-c; 179b-180d; 228c-229a,c; 238b-239a; 241b-c; 243b-d / *Descent of Man*, 340d-341d

53 JAMES: *Psychology*, 95b-98a; 314a; 571b-572a; 641a-643a; 862b-863b [fn 2]; 873a-b; 882a-886a; 889a-890a

54 FREUD: *Civilization and Its Discontents*, 779c

5c. Order as a principle of beauty

7 PLATO: *Republic*, BK III, 333b-334b; BK IV, 342b-c / *Timaeus*, 474d-475a / *Statesman*, 594a-c / *Philebus*, 637d

8 ARISTOTLE: *Physics*, BK VII, CH 3 [246^{a}10–^{b}19] 329c-330a / *Metaphysics*, BK I CH 3 [984^{b}8–22] 502d; BK XIII, CH 3 [1078^{a}39–^{b}5] 610a

9 ARISTOTLE: *Parts of Animals*, BK I, CH 5 [645^{a}4–26] 168d-169a / *Politics*, BK V, CH 9 [1309^{b}23–30] 512a; BK VII, CH 4 [1326^{a}29–35] 530b-c / *Poetics*, CH 7 685b-c

11 NICOMACHUS: *Arithmetic*, BK I, 814a; 826d-827a

16 KEPLER: *Epitome*, BK IV, 868b

17 PLOTINUS: *First Ennead*, TR VI, CH I, 21c-d / *Sixth Ennead*, TR VII, CH 22 332d-333b

18 AUGUSTINE: *Confessions*, BK IV, par 20 24b-c / *City of God*, BK II, CH 21, 161b-c; BK XVII, CH 14, 464d

19 AQUINAS: *Summa Theologica*, PART I, Q 5, A 4, REP 1 25d-26c; Q 96, A 3, REP 3 512a-c

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6. The absolute and the relative modes of consideration

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6a. Absolute and relative with respect to space, time, motion

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6b. Absolute and relative with respect to truth

7 PLATO: *Cratylus*, 86b-d / *Timaeus*, 447c-d / *Theaetetus*, 517b-532a
8 ARISTOTLE: *Metaphysics*, BK IV, CH 5-6 528c-531c; BK VII, CH 3 [1029^{b}1-11] 552a; BK X, CH 1 [1053^{a}31-^{b}3] 580a; CH 6 [1057^{a}7-11] 584b; BK XI, CH 6 [1062^{b}12-1063^{b}14] 590d-592a
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6c. Absolute and relative with respect to goodness or beauty

7 PLATO: *Cratylus*, 86d / *Symposium*, 167a-d / *Phaedo*, 242c-243a / *Gorgias*, 261a-c / *Republic*, BK IV, 350d-352b; BK VI, 383d-386c / *Theaetetus*, 528b-c; 531a-532a / *Philebus*, 630c-631d; 636a-639a,c
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CROSS-REFERENCES

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Another consideration of correlative terms, *see* OPPOSITION 1a.

The theory of proportionality or analogical similitude, *see* SAME AND OTHER 3b; and for the applications of analogy and proportion in metaphysics and mathematics, *see* IDEA 4b(4); MATHEMATICS 4c; QUANTITY 1b; SIGN AND SYMBOL 3d, 5f.

Other discussions of indefinable terms, *see* DEFINITION 1c; PRINCIPLE 2a(3).

The issues raised by a relational theory of judgment and reasoning, *see* IDEA 5b; JUDGMENT 5c, 6d, 7c; REASONING 2.

Discussions relevant to the conception of the categories as the transcendental concepts of the understanding, *see* FORM 1c; JUDGMENT 8c-8d; MEMORY AND IMAGINATION 6c(2); MIND 4d(3); PRINCIPLE 2b(3).

The consideration of the relations between ideas as objects of knowledge, *see* IDEA 1a; KNOWLEDGE 6a(3).

Other discussions of the association of ideas, *see* IDEA 5e; MEMORY AND IMAGINATION 2c.

Another discussion of the prior, the posterior, and the simultaneous, *see* TIME 5d.

The order of causes, *see* CAUSE 1b.

The order of goods, or of means and ends, *see* GOOD AND EVIL 5b-5c.

The relation of quantities and the relation of qualities, *see* QUALITY 4c; QUANTITY 1b; SAME AND OTHER 3c-3d.

The order of kinds, *see* ANIMAL 2a; EVOLUTION 1b; IDEA 4b(3); OPPOSITION 1c(2); SAME AND OTHER 3a(1)-3a(3); UNIVERSAL AND PARTICULAR 5b.

Order in the soul, in the state, and in the universe or nature, *see* MAN 5-5a; NATURE 3a-3b; ONE AND MANY 3b(5); SOUL 2b; STATE 5a-5c, 6a-6b; WORLD 1a-1c, 6a-6c.

For: The doctrine of the Trinity as concerned with order and relation in God, *see* GOD 9a.
The absolute and the relative in space, time, and motion, *see* CHANGE 7c(3); SPACE 2a; TIME 1.
The absolute and the relative in truth, goodness, and beauty, *see* BEAUTY 5; CUSTOM AND CONVENTION 9a–9b; GOOD AND EVIL 6d; OPINION 3c, 6a; PRINCIPLE 5; TRUTH 7–7b; UNIVERSAL AND PARTICULAR 7a–7c.

ADDITIONAL READINGS

Listed below are works not included in *Great Books of the Western World*, but relevant to the idea and topics with which this chapter deals. These works are divided into two groups:

I. Works by authors represented in this collection.
II. Works by authors not represented in this collection.

For the date, place, and other facts concerning the publication of the works cited, consult the Bibliography of Additional Readings which follows the last chapter of *The Great Ideas.*

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Chapter 79: RELIGION

INTRODUCTION

ARGUMENT is unprofitable—worse than that, unintelligible—when opponents do not share some common ground. Between the complete skeptic who denies reason's competence and the philosopher or scientist who appeals to it, no common ground exists. Between the man who obeys the rule not to contradict himself and the man who finds nothing repugnant in answering Yes and No to the same question, there can be no argument. There is an issue between them, but the position each takes reduces the other to silence.

Lack of a common measure for judging opposed views tends to render them incommunicable to one another. For men to be in this plight is the exception in science and philosophy, but it seems to be the typical situation where the basic issues of religion are concerned. Of all subjects the most controversial, religious issues seem to be the least capable of being settled by controversy. No divisions among men—certainly not those which separate philosophers or scientists—are as unbridgeable as the chasm between the faithful and those they call infidels, between Jew and gentile, or Christian and pagan. Faith and lack of faith, or the diversity of faiths, seem to render certain questions as imponderable as they are weighty.

On the definition of religion itself, the deepest issue lies between those who conceive it as having a supernatural foundation in God's revelation and authority, and those who think of religion as having a purely natural origin in certain human tendencies, which makes it no different from philosophy and science as an element of culture. But religion can be supernatural only for those whose faith declares it to be so. Those who deny that it is supernatural may offer many reasons for thinking so, and try in many ways to explain away faith. What they all come to is that it is an illusion to suppose faith is God's gift rather than man's own will to believe. To the man of faith this only means that his critic lacks the gift of faith or even the wish to have it.

Many consequences follow from this unarguable difference concerning the meaning of religion. Religion to the man of faith usually means much more than the acceptance of a creed. It means acts of piety and worship, recourse to prayer, the partaking of sacraments, the observance of certain rituals, the performance of sacrifices and purifications. It means rendering to God what is His due, obeying His commandments, beseeching and gaining the help of His grace, whereby to lead a life which shall seem worthy to Him. When religion is conceived as nothing more than a set of beliefs which men have adopted, it is restricted to one part of life. It may or may not involve action as well as thought, but it is not the fabric of a whole life. It does not qualify every other part of it. It does not demand that inner devotion and external conduct constitute the practice of a man's belief if he is to avoid hypocrisy.

ACCORDING TO THIS difference in the conception of religion as supernatural or natural, men seem to hold incommunicably different views of religious belief, of revelation, miracles, and prophecies. But those who agree that religion is not man-made, that it requires, in some form, divine authority and inspiration, do not all have the same faith, worship in the same way, or conform to the same rites. The issue, therefore, between men of different faiths—men who live according to the rules of different religious communities—is almost as difficult as that between the religious and the irreligious.

In the western tradition, the plurality of religions necessarily raises a question of truth and falsity for any religionist whose faith excludes

the possibility of several equally true religions. "Idolatrous" and "superstitious," "heretical" and "schismatic," are epithets which draw their special significance from controversies about religion and religions. The word "pagan," as Gibbon points out, comes to mean idolatry or the worship of false gods. "The Latin Christians," he says, "bestowed it on their mortal enemies, the Mahometans." The Mohammedans, in turn, held the view, according to Gibbon, that "all except themselves deserved the reproach of idolatry and polytheism." The charges of idolatry and superstition occur also in the conflict between Jew and Christian, between Protestant and Catholic, countered often by charges of infidelity or heresy and schism.

Quite apart from the general problem of church and state, with its issues of political toleration and freedom of worship, the very meaning of religion raises the question of tolerance in its most acute form. It is not a question of political rights and liberties, but of being right or wrong in one's religious beliefs and acts. To the extent that the communicants of one religion regard themselves as believing what God has revealed to them, and to the extent that they hold their religious practices to be prescribed by divine law, they are not free in conscience, it seems, to entertain contrary beliefs and practices as conceivably true alternatives.

The conflict between men of diverse faiths, alike in their understanding of faith as divinely inspired, somehow appeals beyond any human decision to God himself for judgment. The controversy between men of any religious faith and those who treat such faith as a purely human prejudice seems to be even less susceptible of resolution by the ordinary processes of discourse.

IF THESE OBSERVATIONS are accurate and just, the materials of this chapter cannot be assembled dialectically—either as opposed views or as belonging together—simply by reference to the content of the various opinions which can be found in the great books. In this chapter, as in no others except, perhaps, those which treat of matters connected with religion—such as GOD, IMMORTALITY, SIN, and THEOLOGY—it seems necessary to pay some attention to the opinion's author as well as to the opinion, and even in some cases to the community or culture in which the opinion arises. It is not as necessary, for example, to know whether the man who writes about virtue is himself virtuous as it is to know whether the man who writes about religion is religious and to know furthermore in what sense he conceives himself as being religious and what religion he espouses.

The distinction between sacred and profane, and between religious and secular, applies to books as well as to other things. In the tradition of the great books, only one book is set apart as sacred. None of the writers included in this set regard the Koran as sacred scripture, though Gibbon as an historian reports the Mohammedan belief in the Koran. Mohammedans believe that the Koran is the word of God revealed to His one and only prophet, as Jews believe that the Old Testament is divinely inspired writing, and Christians believe in both Testaments as Holy Writ.

But though the Bible is *the* traditionally sacred book of the west, it is not read as such by all who write about it. The historian or the philosopher who is not himself a religious Jew or Christian may acknowledge the belief of others without sharing it. He reads the Bible as a collection of human writings which have exercised an unparalleled influence upon western culture. Whatever the merit of these writings as wisdom, history, preachment, or poetry, they do not command a special kind of reading unless they are distinguished from all others by being the word of God, not man. Controversies over interpretations of the Bible may thus begin with each side begging the main question in issue. Is the Bible sacred scripture, or is it no different in kind from the poetry of Homer and the sayings of the Greek wise men?

The two ways of reading the Bible are incommensurable. If the Bible is not sacred, a critical reading may be expected to disclose inconsistencies in it, and many of the things it says may be questioned in fact or in principle. But if, though humanly recorded, it is the repository of divine revelation, then it has an authority which puts it above questioning, though not beyond the need for interpretation.

There is one sort of proposition, says Locke, which challenges "the highest degree of our assent upon bare testimony, whether the thing

proposed agree or disagree with common experience, and the ordinary course of things, or no. The reason whereof is, because the testimony is of such a one as cannot deceive, nor be deceived, and that is of God himself. This carries with it an assurance beyond doubt, evidence beyond exception. This is called by a peculiar name, revelation; and our assent to it, faith: which as absolutely determines our minds, and as perfectly excludes all wavering, as our knowledge itself; and we may as well doubt of our own being, as we can whether any revelation from God be true. So that faith is a settled and sure principle of assent and assurance, and leaves no manner of room for doubt or hesitation. Only we must be sure that it be a divine revelation, and that we understand it right."

Locke seems to be putting two qualifications upon his remark that "the bare testimony of revelation is the highest certainty." The first concerns our assurance that we are not mistaken in accepting something as revealed. The second concerns the correctness of our understanding of that which we take to be God's word.

On the first point, Hobbes, though he says that "faith is a gift of God, which man can neither give nor take away by promises of rewards or menaces of torture," also says that faith depends "only upon certainty or probability of arguments drawn from reason or from something men believe already." Faith does not come "by supernatural inspiration or infusion" but, according to Hobbes, "by education, discipline, correction, and other natural ways, by which God worketh them in his elect, at such time as he thinketh fit." The object of faith is not God, but the men whom God has appointed to instruct us; belief, which Hobbes distinguishes from faith, goes beyond faith to the acceptance as true of what they say. "Consequently," Hobbes writes, "when we believe that the Scriptures are the word of God, having no immediate revelation from God himself, our belief, faith, and trust is in the Church, whose word we take, and acquiesce therein."

On this same point, Aquinas gives a different answer. He distinguishes between the material and the formal aspects of the object of faith. As in the object of science, so in the object of faith there is "that which is known . . . and is the material object, so to speak," and "that whereby it is known, which is the formal aspect of the object. Thus, in the science of geometry, the conclusions are what is known materially, while the formal aspect of the science consists in the means of demonstration, through which the conclusions are known. Accordingly, if in faith we consider the formal aspect of the object, it is nothing else than the First Truth. For the faith of which we are speaking does not assent to anything, except because it is revealed by God." The articles of religious faith may be drawn from the content of Holy Writ, but that Holy Writ is the revealed truth of God must first be accepted by an act of faith. Aquinas seems to be meeting Locke's point by saying that it is faith itself which makes us sure that the propositions to which we assent by faith are the matter of divine revelation.

On Locke's other point concerning the rightness of our interpretation of Scripture, Locke himself remarks that "though everything said in the text be infallibly true, yet the reader may be, nay, cannot choose but be, very fallible in the understanding of it. Nor is to be wondered that the will of God, when clothed in words, should be liable to that doubt and uncertainty, which unavoidably attends that sort of conveyance." From which he concludes that since "the precepts of natural religion are plain, and very intelligible to all mankind, and seldom come to be controverted; and other revealed truths, which are conveyed to us by books and languages are liable to the common and natural obscurities incident to words, methinks it would become us to be more careful and diligent in observing the former, and less magisterial, positive, and imperious, in imposing our own ideas and interpretations of the latter."

That Scripture is difficult to interpret and subject to various interpretations Augustine also acknowledges, but he differs somewhat from Locke concerning the task or duty which that fact imposes upon the religious man. "Let no one then go on bothering me," Augustine writes, "with such words as 'Moses did not mean what you say, he meant what I say.' If he said to me: 'How do you know that Moses meant by these words what you say?'—I should

take the question with complete calmness. . . . But when he says: 'He did not mean what you say, he meant what I say,' yet does not deny that what each of us says is true, then, O Life of the poor, O my God, in whose bosom is no contradiction, rain down the gift of moderation upon my heart, that I may hear such talk with patience. For what they say, they say not because they are godly men and have seen it in the mind of Your servant Moses, but because they are proud men: it is not that they know the opinion of Moses, but that they love their own opinion, and this not because it is true but because it is their own."

Confronted by a variety of interpretations, each of which may be true, Augustine remarks "how foolish it is, in such a flood of true meanings . . . rashly to assert that Moses intended one or the other of them. . . . If I had been Moses . . . if I had been the same as he and You had given me the book of Genesis to write, I should have wished that You would grant me such skill in writing, such an art for the construction of what I had to say, that not even those who cannot yet grasp how God creates would reject my words as too much for their strength; and again that those who can grasp so much, would find fully contained in the few words of Your servant whatever truths they had arrived at in their own thinking." Those "who thirst for truth and not for vanity" honor the human dispensers of God's revelation, Augustine thinks, by believing that, when under God's inspiration they wrote these words, they "had in mind whatever is most excellent in them by the illumination of truth and their fruitfulness for our profit.

"Thus when one man says to me: 'Moses meant what I think,' and another 'Not at all, he meant what I think,' it seems to me," Augustine declares, "that the truly religious thing is to say: Why should he not have meant both, if both are true; and if in the same words some should see a third and a fourth meaning and any other number of true meanings, why should we not believe that Moses saw them all, since by him one God tempered Sacred Scripture to the minds of many who should see truths in it, yet not all the same truths."

Augustine's position combines belief in the truth of Scripture, which is a consequence of the faith that it is God's word, with latitude of interpretation in determining what that truth is, appealing here to the ordinary standards of what seems to be true to the thinking mind. In the course of commenting on Augustine's own interpretation of certain passages in Genesis, Aquinas summarizes what he takes to be Augustine's two rules. "The first is, to hold the truth of Scripture without wavering. The second is that since Holy Scripture can be explained in a multiplicity of senses, one should adhere to a particular explanation only in such measure as to be ready to abandon it, if it be proved with certainty to be false; lest Holy Scripture be exposed to the ridicule of unbelievers, and obstacles be placed to their believing."

As THE QUESTION whether the Bible is sacred writing affects the way it is to be read, so the distinction between religious and secular writing seems relevant to what the great books have to say about religion.

In the pagan tradition, for example, Herodotus in his *History* reports and discusses a great variety of religious doctrines and practices as characteristic of the peoples he visits or inquires about. There seems to be no indication that Herodotus is judging the truth or falsity of these various religions, either by reference to their reasonableness or from convictions born of his own adherence to one of these religions as against all the rest. For the most part, he is writing *about* religion rather than *religiously*, with the possible exception of those passages in which he expresses his own views, discussed in the chapter on PROPHECY, on the oracles, omens, and portents which reveal the will of the gods.

In contrast, the tragedies of Aeschylus, especially the Oresteian trilogy, are religious poetry, comparable to Dante's *Divine Comedy* and Milton's *Paradise Lost.* These are not books *about* religion, as, in a sense, the great poem of Lucretius *On the Nature of Things* is about religion—a passionate attack on religion by a man who is not religious. It may be thought that the aim of Lucretius is to purify religion when he wishes to banish "all belief in things degrading to the gods and inconsistent with their peace," so that men can "approach the sanctuaries of the gods with a calm breast," and "with tranquil peace of mind." But even a person who

thinks this will still find a marked contrast between Lucretius and poets like Aeschylus or Dante who are writing from religious convictions to which they adhere as members of a religious community.

Both kinds of writing may be found in the same author. Hobbes, for example, in examining the phenomena of religious belief, seems to make public acceptance the criterion of the distinction between religion and superstition. "Fear of a power invisible, feigned by the mind," he says, "or imagined from tales publicly allowed," is religion; when they are "not allowed, superstition." Still writing as an observer, he says that "this fear of things invisible is the natural seed of that which everyone in himself calls religion; and in them that worship or fear that power otherwise than they do, superstition." Originating from "natural seeds" which he enumerates, "religion," he says, "by reason of the different fancies, judgments, and passions of several men, has grown up into ceremonies so different, that those which are used by one man are for the most part ridiculous to another."

Yet Hobbes also writes religiously, when he treats all other religions from the standpoint of the special truth of his own. "These natural seeds of religion," he points out, "have received culture from two sorts of men. One sort have been they that have nourished and ordered them, according to their own invention. The other have done it by God's commandment and direction. . . . Of the former sort were all the founders of commonwealths and the law-givers of the Gentiles. Of the latter sort were Abraham, Moses, and our Blessed Saviour, by whom have been derived unto us the laws of the Kingdom of God."

It is as a Christian that Hobbes compares the state religion of the Romans with the divine religion of the Jews. The Romans, he writes, "made no scruple of tolerating any religion whatsoever in the city of Rome itself, unless it had something in it that could not consist with their civil government; nor do we read that any religion was there forbidden, but that of the Jews, who (being the peculiar Kingdom of God) thought it unlawful to acknowledge subjection to any mortal King or State whatsoever. And thus you see how the religion of the Gentiles was a part of their policy.

"But where God himself," Hobbes continues, "by supernatural revelation, planted religion; there he also made to himself a peculiar kingdom, and gave laws, not only of behavior toward himself, but also toward one another; and thereby in the Kingdom of God, the policy, and laws civil, are a part of religion; and therefore, the distinction of temporal and spiritual domination has there no place."

Again it is as a man of Christian faith that Hobbes ascribes belief in Christian teachings to that faith. "The causes why men believe any Christian doctrine are various," he writes. "For faith is the gift of God, and he worketh it in each man by such ways as it seemeth good to him. The most ordinary immediate cause of our belief, concerning any point of Christian faith, is that we believe the Bible to be the Word of God." But when Hobbes goes on to say that the "only article of faith, which the Scripture makes necessary to salvation, is this, that Jesus is The Christ," he becomes the theologian with whom other theologians within the Christian community may disagree, on this or other points of dogma.

The disagreements we find between Augustine or Aquinas and Hobbes or Locke, or the differences in dogma which appear in a comparison of the *Divine Comedy* and *Paradise Lost*, represent the division between Catholic and Protestant Christians. But such theological disagreements do not obliterate certain common tenets of religious belief among all who profess Christianity. Above all, they leave untouched the belief in religion itself as transcending all merely human teaching and as providing the precepts of life through which God himself directs and helps man to his salvation.

This belief—even if no other except the belief in one God Who created the universe and made man in His image—seems to be shared by Jews and Christians. It marks the difference between the religious writings of ancient polytheism and of those which draw their inspiration from the Pentateuch and the Gospels. It makes the issue, as Pascal suggests, between those who write about a religion which they themselves either have or seek, and those who, neither having nor seeking, oppose all religions equally or treat all with the same secular detachment.

WRITING AS A CHRISTIAN apologist, Pascal says that "it is the glory of religion to have for enemies men so unreasonable; and their opposition to it is so little dangerous that it serves on the contrary to establish its truths. For the Christian faith goes mainly to establish these two facts, the corruption of nature, and redemption by Christ. Now I contend that if these men do not serve to prove the truth of the redemption by the holiness of their behavior, they at least serve admirably to show the corruption of nature by sentiments so unnatural.

"Let them at least be honest men," he adds, "if they cannot be Christians. . . . Let them recognize that there are two kinds of people one can call reasonable: those who serve God with all their heart because they know Him, and those who seek Him with all their heart because they do not know Him. But as for those who live without knowing Him and without seeking Him, they judge themselves so little worthy of their own care, that they are not worthy of the care of others; and it needs all the charity of the religion which they despise, not to despise them even to the point of leaving them to their folly."

The very existence of other religions, according to Pascal, helps to prove the truth of the Christian religion. "I should equally have rejected the religion of Mahomet and of China, of the ancient Romans and of the Egyptians, for the sole reason, that none having more marks of truth than another, nor anything which should necessarily persuade me, reason cannot incline to one rather than the other." As for Judaism, it seems to Pascal to be divinely intended as the historic foundation and the prophetic forerunner of Christianity.

Apart from these comparative judgments, Pascal attributes certain unique signs of truth to the Christian religion. "Every religion is false," he writes, "which as to its faith does not worship one God as the origin of everything, and which as to its morality does not love only God as the object of everything. . . . The true religion must have as a characteristic the obligation to love God. This is very just, and yet no other religion has commanded this; ours has done so. It must also be aware of human lust and weakness; ours is so. It must have adduced remedies for this; one is prayer. No other religion has asked of God [the power] to love and follow him. . . . That we must love one God only is a thing so evident, that it does not require miracles to prove it." Yet Pascal also interprets Christ's saying, "Though you believe not Me, believe at least the works," as meaning that miracles are the strongest proof of a religion. "Miracles," he writes, "furnish the test in matters of doubt, between Jews and heathens, Jews and Christians, Catholics and heretics, the slandered and slanderers, between the two crosses."

After criticizing the evidence for miracles on rational grounds, Hume appears to agree that "the *Christian religion* not only was at first attended with miracles, but even at this day cannot be believed by any reasonable person without one." But his meaning seems to be that belief in miracles is itself the miracle of faith. "Mere reason," he says, "is insufficient to convince us" of the veracity of the Christian religion; "and whoever is moved by *Faith* to assent to it, is conscious of a continued miracle in his own person, which subverts all the principles of his understanding, and gives him a determination to believe what is most contrary to custom and experience."

HERE IS ANOTHER ISSUE on which philosophers and theologians disagree. Where Hume says that "our most holy religion is founded on *Faith*, not on reason"—with the further implication that to adhere to it with faith requires the abandonment of reason—Augustine and Aquinas think that there can be no conflict between faith and reason, though faith declares the truth of more than reason can prove; and that the support which reason can give to faith in no way lessens the merit of believing.

With this Hobbes seems to agree, at least to the extent of holding that it discredits supernatural religion to make it consist in believing impossibilities or contradictions. Revelation, he says, can consist "of nothing against natural reason." But for Hume the difference between supernatural and natural religion turns on what one must believe both without and against reason as contrasted to what one believes as the result of a reasonable interpretation of the evidence. Like philosophy, natural religion, "which is nothing but a species of philosophy, will nev-

er be able to carry us beyond the usual course of experience, or give us measures of conduct and behavior different from those which are furnished by reflections on common life."

Those who, like Marx and Freud, regard religion as a social imposture or the response to a neurotic need, not only impute falsity or worse to the traditional religions of the west; they also tend to reject natural religion. Science is enough—for truth's sake, for the conduct of life, for society's welfare. Yet in commenting on the following lines from Goethe,

> He who has Science and has Art,
> Religion, too, has he;
> Who has not Science, has no Art,
> Let him religious be!

Freud says that "on the one hand, these words contrast religion with the two highest achievements of man, and on the other, they declare that in respect of their value in life, they can represent or replace each other." In these terms Freud thinks the religion of the ordinary man is justified—"the only religion that ought to bear the name." If a man does not have science or art to live by, he must have religion, for "life as we find it is too hard for us" and "we cannot do without palliative remedies."

It is the religion of the philosophers and the theologians which Freud questions. He criticizes the philosophers for trying "to preserve the God of religion by substituting for him an impersonal, shadowy, abstract principle"; and he challenges the grounds on which he thinks the theologians hold it to be "an impertinence on the part of science to take religion as a subject for its investigations." They deny that science has any competence whatsoever "to sit in judgment on religion. . . . If we are not deterred by this brusque dismissal," Freud declares, "but inquire on what grounds religion bases its claim to an exceptional position among human concerns, the answer we receive, if indeed we are honored with an answer at all, is that religion cannot be measured by human standards, since it is of divine origin, and has been revealed to us by a spirit which the human mind cannot grasp. It might surely be thought," he continues, "that nothing could be more easily refuted than this argument; it is an obvious *petitio principii*, a 'begging of the question.' The point which is being called in question is whether there is a divine spirit and a revelation; and it surely cannot be a conclusive reply to say that the question cannot be asked because the Deity cannot be called in question."

Marx takes a similar view of the theologians. According to him, the theologians beg the question in much the same way as do the classical economists for whom there are "only two kinds of institutions, those of art and those of nature. Feudal institutions are artificial institutions, those of the bourgeoisie are natural institutions. In this," Marx says, "they resemble the theologians who establish two kinds of religion. Every religion but their own is an invention of men, while their own religion is an emanation from God."

Plato, on the other hand, excoriates those who think that "all religion is a cooking up of words and a make-believe." It is almost as if he had Marx and Freud in mind when, in the *Laws*, the Athenian Stranger carries on the discussion of religion in terms of the distinction between nature and art, and refers to those who "would say that the Gods exist not by nature, but by art, and by the laws of states, which are different in different places, according to the agreement of those who make them." They are the very same people who hold that "the honorable is one thing by nature and another by law, and that the principles of justice have no existence at all by nature."

In Plato's view, the justice of the state and its laws must be founded not only on nature rather than art, but also upon religion and a right belief in the gods. The Athenian Stranger answers those who think it is "dreadful that [we] should legislate on the supposition that there are Gods," by saying why "it is a matter of no small consequence . . . to prove that there are Gods, and that they are good and regard justice more than men do." The reason he gives is that "no one who in obedience to the laws believed that there were Gods, ever intentionally did any unholy act, or uttered an unlawful word, but those who did must have supposed one of three things—either that [the Gods] did not exist, which is the first possibility, or secondly, that if they did, they took no care of man, or thirdly, that they were easily appeased and turned aside

from their purpose by sacrifices and prayers." That is why the demonstration of the existence of the gods "would be the best and noblest prelude of all our laws."

Rousseau's legislator, like Plato's, is also concerned with the role which religion plays in the foundation and life of the state. But the question "Which religion?" arises at once for Rousseau, as it does not for Plato, who can treat the nature of the gods and the nature of the state as equally within the province of the political philosopher. But for Rousseau, living in a Christian civilization, the political philosopher cannot approach the subject of religion without being confronted by the theologian. He finds it necessary, therefore, to distinguish between a revealed religion like Christianity and the natural or civil religion of the citizen.

Christianity, says Rousseau, "not the Christianity of today, but that of the Gospel, which is entirely different," is the religion of man, not of the citizen. "So far from binding the hearts of the citizens to the State, it has the effect of taking them away from all earthly things. I know of nothing more contrary to the social spirit. We are told that a people of true Christians would form the most perfect society imaginable. I see in this supposition only one great difficulty: that a society of true Christians would not be a society of men. . . . The country of the Christian is not of this world."

What the state needs, Rousseau goes on to say, is "a purely civil profession of faith, of which the Sovereign should fix the articles, not exactly as religious dogmas, but as social sentiments without which a man cannot be a good citizen or a faithful subject." He then enumerates what he calls "the dogmas of civil religion" which "ought to be few, simple, exactly worded, without explanation or commentary," such as "the existence of a mighty, intelligent, and beneficent Divinity, possessed of foresight and providence, the life to come, the happiness of the just, the punishment of the wicked, the sanctity of the social contract and the laws."

Montesquieu takes the diametrically opposite view. "With regard to the true religion," he writes, "I have never pretended to make its interests submit to those of a political nature, but rather to unite them. . . . The Christian religion, which ordains that men should love each other, would, without doubt, have every nation blessed with the best civil, the best political laws; because these, next to this religion, are the greatest good that men can give and receive." Montesquieu meets the argument that "true Christians cannot form a government of any duration," by saying that the more men "believe themselves indebted to religion, the more they would think due to their country. The principles of Christianity, deeply engraved on the heart, would be infinitely more powerful than the false honor of monarchies, than the human virtues of republics, or the servile fear of despotic states."

ANY CONSIDERATION OF the political significance of religion tends to lead into the controversy over the relation between church and state. Three main positions seem to be taken: one which calls for the integration of church and state, one which calls for a subordination of either state to church or church to state, and one which insists upon the autonomy of each as a basis for their relation to one another, or carries separation even further, to the point of complete divorce.

The theocratic state of the Old Testament represents the Jewish version of the first position, distinguished by the fact that the priesthood was in the service of the king. Hobbes defines a Christian commonwealth in almost parallel terms. It is indifferent whether it is called a "church" or a "state," because it is "a company of men professing Christian religion, united in the person of one sovereign." It follows, Hobbes argues, that "there is on earth, no such universal church as all Christians are bound to obey; because there is no power on earth, to which all other commonwealths are subject. There are Christians in the dominions of several princes and states; but every one of them is subject to that commonwealth, whereof he is himself a member; and consequently, cannot be subject to the commands of any other person. And therefore a church, such a one as is able to command, to judge, absolve, condemn, or do any other act, is the same thing with a civil commonwealth, consisting of Christian men; and is called a *civil state*, for that the subjects of it are *men*; and a *church* for that the subjects thereof are *Christians*."

According to Hobbes, "*temporal* and *spiritual* government are but two words brought into the world, to make men see double, and mistake their lawful *Sovereign*. . . . There is therefore no other government in this life, neither of state, nor religion, but temporal." Agreeing with Hobbes on the unity of government and the integration of church and state, writers like Augustine and Roger Bacon place kings in the service of the priesthood, and make the supreme pontiff, who governs both spiritually and temporally, the only earthly sovereign. Gilson summarizes their view by saying that for them "the definition of the Church includes the State," and that the church has a universality which embraces "the temporal and the spiritual domains alike."

The position of Aquinas is indicated in the Treatise on Law, in the passage in which he declares that no civil law can be valid or binding if what it commands is contrary to divine law. It is more explicitly developed in his little tract *On the Governance of Rulers*. "It is not the ultimate end," he writes, "of an assembled multitude to live virtuously, but through virtuous living to attain to the possession of God. Furthermore, if it could attain this end by the power of human nature, then the duty of a king would have to include the direction of men to this end." But, Aquinas holds, men attain this end by divine, not human, power and therefore divine, not human, government is needed to direct men to their end. "Consequently," he maintains, "in order that spiritual things might be distinguished from earthly things, the ministry of this kingdom has been entrusted not to earthly kings, but to priests, and in the highest degree to the chief priest, the successor of St. Peter, the Vicar of Christ, the Roman Pontiff, to whom all the kings of Christian peoples are to be subject as to our Lord Jesus Christ Himself. For those to whom pertains the care of intermediate ends should be subject to him to whom pertains the care of the ultimate end, and be directed by his rule."

This last statement indicates that Aquinas, unlike Augustine and Roger Bacon, assigns to the state a subsidiary dominion and to the king a subordinate jurisdiction. The opponent of Aquinas is usually thought to be Marsilius of Padua, whose *Defensor Pacis* separates church and state, but subordinates priest to king, in a manner which corresponds to the Averroistic subordination of theology to philosophy. Agreeing with both that church and state are distinct, Dante agrees with neither on the relation which should obtain between the temporal and the spiritual domains, or between civil and ecclesiastical government.

Whereas Aquinas holds that only man's spiritual end is ultimate and that all temporal ends are intermediate, Dante insists that man has two ultimate goals. "Man exists for a double purpose," he says in *De Monarchia*. "Since he alone among beings partakes of both corruptibility and incorruptibility, he alone among beings belongs in two final orders—one of which is his goal as a corruptible being, the other as incorruptible." Man has two beatitudes, or two forms of happiness—an earthly perfection which consists in the complete realization throughout time of the intellectual powers of mankind, and a heavenly perfection which consists in the vision of God. "These two states of bliss," Dante argues, "like two different goals, man must reach by different ways. For we come to the first as we follow the philosophical teachings, applying them to our moral and intellectual capacities; and we come to the second as we follow the spiritual teachings, which transcend human reason according to our theological capacities, faith, hope, and charity."

In terms of this theory of man's two ends, and of the distinct spheres of reason and faith, or philosophy and civil law on the one hand, and religion and divine law on the other, Dante formulates his doctrine of the autonomy of state and church. "The reins of man," he writes, "are held by a double driver according to man's two-fold end: one is the supreme pontiff, who guides mankind with revelations to life eternal, and the other is the emperor, who guides mankind with philosophical instructions to temporal happiness." Church and state may be related as sun and moon in the sense that the state receives some illumination from the church even about matters within its own jurisdiction; but, according to Dante, the state has its own source of light in reason. "Temporal power," he maintains, "receives from spiritual power neither its being, nor its power or authority, nor even its functioning, strictly

speaking; but what it receives is the light of grace, which God in heaven and the pope's blessing on earth cause to shine on it in order that it may work more effectively."

All these mediaeval theories of what should be the relation between church and state—with the exception, perhaps, of the doctrine of Marsilius of Padua—conceive religion as having a supernatural source and the church as having a supernatural foundation, both being instituted for the sake of guiding man to his supernatural end. They differ from one another according to the view they take of man's earthly or temporal goods, the power of his reason, and the jurisdiction of his laws. Their difference, according to Gilson, verifies the principle that "the manner in which one conceives the relationship of the State to the Church, that in which one conceives the relationship of philosophy to theology, and in which one conceives the relationship of nature to grace, are necessarily correlated."

These mediaeval theories of church and state persist, with certain modifications, in modern times. But the characteristically modern view of the matter begins with a different view of religion itself. Its mediaeval prototype is to be found in the rationalism of Marsilius. Within the secular state, the church is a purely human institution, religion is defended by philosophy for the contribution it makes to the peace of the civil community—or, perhaps, condemned by the apostles of earthly progress as "the opiate of the masses." The principle of religious tolerance involves not merely tolerance of religion, but tolerance for a diversity of religions and often the complete rejection of all religion.

"I esteem it above all things necessary," writes Locke in his *Letter Concerning Toleration*, "to distinguish exactly the business of civil government from that of religion, and to settle the just bounds that lie between the one and the other. ... The commonwealth," Locke continues, "seems to me to be a society of men constituted only for the procuring, preserving, and advancing their own civil interests." A church is "a voluntary society of men, joining themselves together of their own accord in order to the public worshipping of God in such manner as they judge acceptable to Him, and effectual to the salvation of their souls."

Locke's doctrine of the separation of church and state is reflected in the Constitution of the United States. In the form which Jefferson gives it, it appears in the declaration that "Congress shall make no law respecting an establishment of religion, or prohibiting the free exercise thereof." Mill carries out the same principles in his attack on "Sabbatarian legislation." Such laws, he thinks, exceed the power of civil government. They represent an "illegitimate interference with the rightful liberty of the individual. ... The notion that it is one's duty that another should be religious" is, in Mill's opinion, "the foundation of all the religious persecutions ever perpetrated." Hegel, on the other hand, holds that "the state should require all citizens to belong to a church," but he points out that "*a* church is all that can be said, because since the content of a man's faith depends on his private ideas, the state cannot interfere with it."

The positions men take on the great issues of church and state thus seem to be determined in part by the diverse conceptions men have of religion. This is no less true of opposing views on religious liberty, on the treatment of heresy and schism, on religious education, the missionary calling, and the conversion of infidels. In the discussion of religion, perhaps more than anywhere else, the first Yea or Nay seems to determine all other affirmations or denials.

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REFERENCES

To find the passages cited, use the numbers in heavy type, which are the volume and page numbers of the passages referred to. For example, in 4 HOMER: *Iliad*, BK II [265–283] 12d, the number 4 is the number of the volume in the set; the number 12d indicates that the passage is in section d of page 12.

PAGE SECTIONS: When the text is printed in one column, the letters a and b refer to the upper and lower halves of the page. For example, in 53 JAMES: *Psychology*, 116a-119b, the passage begins in the upper half of page 116 and ends in the lower half of page 119. When the text is printed in two columns, the letters a and b refer to the upper and lower halves of the left-hand side of the page, the letters c and d to the upper and lower halves of the right-hand side of the page. For example, in 7 PLATO: *Symposium*, 163b-164c, the passage begins in the lower half of the left-hand side of page 163 and ends in the upper half of the right-hand side of page 164.

AUTHOR'S DIVISIONS: One or more of the main divisions of a work (such as PART, BK, CH, SECT) are sometimes included in the reference; line numbers, in brackets, are given in certain cases; *e.g.*, *Iliad*, BK II [265–283] 12d.

BIBLE REFERENCES: The references are to book, chapter, and verse. When the King James and Douay versions differ in title of books or in the numbering of chapters or verses, the King James version is cited first and the Douay, indicated by a (*D*), follows; *e.g.*, OLD TESTAMENT: *Nehemiah*, 7:45—(*D*) *II Esdras*, 7:46.

SYMBOLS: The abbreviation "esp" calls the reader's attention to one or more especially relevant parts of a whole reference; "passim" signifies that the topic is discussed intermittently rather than continuously in the work or passage cited.

For additional information concerning the style of the references, see the Explanation of Reference Style; for general guidance in the use of *The Great Ideas*, consult the Preface.

1. Faith as the foundation of religion

OLD TESTAMENT: *Isaiah*, 7:9—(*D*) *Isaias*, 7:9 / *Habakkuk*, 2:4—(*D*) *Habacuc*, 2:4

NEW TESTAMENT: *Matthew*, 21:31–32 / *Mark*, 16:16–18 / *John*, 1:12–13; 3:14–18; 5:24; 6:35, 40,47; 8:24; 10:27–28; 11:25–26; 12:36; 14:1–14; 16:27; 20:24–31 / *Acts*, 10:43; 16:25–33 / *Romans* passim, esp 1:16–17, 3:21–5:2, 9:30–33, 10:8–17 / *I Corinthians*, 13:2 / *II Corinthians*, 1:24; 4:13–18; 5:6–8 / *Galatians* passim, esp 2:16–3:27, 5:5–6 / *Ephesians*, 2:8–9; 3:11–12 / *Philippians*, 3:8–9 / *Colossians*, 1:21–23; 2:5–7,12 / *I Timothy*, 1:5; 4:10; 6:10–12 / *Hebrews* passim, esp 10:22–23, 10:38–39, 11:1–40 / *James*, 2 esp 2:5, 2:17–26 / *I Peter*, 1:7–9; 2:6–7 / *I John*, 3:23; 5:1,4–5,9–10

18 AUGUSTINE: *Confessions*, BK I, par 1 1a-b; BK VI, par 6–8 36c-37c / *City of God*, BK XI, CH 2 323a-c

19 AQUINAS: *Summa Theologica*, PART I, Q I, A I 3b-4a

20 AQUINAS: *Summa Theologica*, PART I-II, Q 62, A 4, ANS 62b-63a; Q 65, AA 4–5 73d-75a; Q 66, A 6 80c-81b; PART II-II, QQ 1–7 380a-416d; PART III SUPPL, Q 99, A 4, ANS and REP 1 1083a-1084a

21 DANTE: *Divine Comedy*, PARADISE, XXIV [52–81] 143b-c

23 HOBBES: *Leviathan*, PART I, 83a-b

25 MONTAIGNE: *Essays*, 209a-215b passim; 238c-239c; 293d-294b

30 BACON: *Advancement of Learning*, 19b-c; 95d-96c; 100b

33 PASCAL: *Pensées*, 248–252 219a-220a; 286–288 224a-b

35 LOCKE: *Toleration*, 3b-4a; 10c-11b

35 HUME: *Human Understanding*, SECT X, DIV 100–101 496d-497b; SECT XII, DIV 132, 509c

42 KANT: *Practical Reason*, 344c-349b esp 345c-d, 347b-c

44 BOSWELL: *Johnson*, 395a-b; 482a

46 HEGEL: *Philosophy of History*, INTRO, 196d-197b; PART IV, 349b-350a

52 DOSTOEVSKY: *Brothers Karamazov*, BK V, 127b-137c passim

1*a*. The nature, cause, and conditions of faith: its specific objects

NEW TESTAMENT: *Mark*, 9:13–29; 11:20–24 / *Luke*, 8:4–15 / *John*, 1:12–13; 6:29; 10:37–38; 12:44–46; 14:1,7–11; 16:27; 20:24–31 / *Romans* passim, esp 3:21–5:2, 9:30–33 / *I Corinthians*, 2:4–10 / *II Corinthians*, 4:3–4 / *Galatians*, 3; 5:22 / *I Thessalonians*, 2:13; 5:8 / *Hebrews* esp 4:2, 11:1–12:3 / *James*, 2 esp 2:17–26 / *I Peter*, 1:7–9,21 / *I John*, 2:23–24; 4:1–3; 5:4–5

(1. *Faith as the foundation of religion.* 1a. *The nature, cause, and conditions of faith: its specific objects.*)

18 AUGUSTINE: *Confessions*, BK I, par I 1a-b; par 17-18 5b-d; BK III, par 6-10 14b-15d; BK III, par 19-BK IV, par I 18b-19c; BK V, par 12-13 30a-c; par 23-25 33c-34c; BK VI, par 7-8 36d-37c; BK VII, par 24 50d-51a; BK VIII 52c-61c esp par 29-30 60d-61c; BK IX, par 14 65a-c; par 23-25 68a-c / *City of God*, BK X, CH 2 299d-300a; BK XI, CH 2 323a-c; BK XIX, CH 18 523a-b; BK XXI, CH 5, 564b-d

19 AQUINAS: *Summa Theologica*, PART I, Q I 3a-10c; Q 2, A 2, REP I 11d-12c; Q 12, A 13 61c-62b

20 AQUINAS: *Summa Theologica*, PART I-II, Q 62, A 3, ANS and REP 2 61c-62b; Q 67, A 3 83b-84d; Q 100, A 4, REP I 253d-255a; Q 108, A 2, REP I 332b-333d; Q 110, A 3, REP I 350a-d; Q 112, A 5, ANS and REP 2 359c-360c; PART II-II, QQ 1-9 380a-426c

21 DANTE: *Divine Comedy*, PURGATORY, III [34-45] 56b; PARADISE, II [37-45] 108a; XIX [69-77] 135d; XXIV 142d-144b

23 HOBBES: *Leviathan*, PART I, 63b; 66a-c; 78d-80d; 83a-84c; PART II, 149c-d; PART III, 209b; 209d; 240a-246a,c passim, esp 241a-242a

25 MONTAIGNE: *Essays*, 98b-99a; 209a-c; 211b-213a; 239b-c; 267c-268a; 293d-294b

30 BACON: *Advancement of Learning*, 19b-c; 55b-d; 95d-97c; 100c / *Novum Organum*, BK I, APH 65 114b-c; APH 89 124a-d

31 DESCARTES: *Rules*, III, 4d-5a / *Meditations*, 69a-d / *Objections and Replies*, 125c-126a; 168c; 232b; 284d

33 PASCAL: *Provincial Letters*, 147b; 163a-166b passim / *Pensées*, 242-245 217b-218b; 248 219a; 254-256 220a; 262 221a; 265-290 221b-225a esp 278-282 222b-223b; 425 243b-244b; 523 264a; 543 266a; 561-567 272b-273b; 585-588 277a-b; 619-620 284b-286a; 794-796 327b

35 LOCKE: *Toleration*, 3b-4a; 10c-d; 15b / *Human Understanding*, BK IV, CH VII, SECT 11, 340b-c; CH XVI, SECT 14 371b-c; CH XVII, SECT 23-24 380b-d; CH XVIII 380d-384b passim

35 HUME: *Human Understanding*, SECT X, DIV 101, 497b

37 FIELDING: *Tom Jones*, 379c-380a

38 MONTESQUIEU: *Spirit of Laws*, BK XXV, 208a-209a

40 GIBBON: *Decline and Fall*, 179a-181c; 186c-191a

41 GIBBON: *Decline and Fall*, 151d; 227d-228a

42 KANT: *Pure Reason*, 179a-b; 242a-243a / *Practical Reason*, 320c-321b; 344c-348b esp 347b-c; 353a-354d / *Judgement*, 599d-600a; 604d-606d esp 606a-d; 607d-609b

44 BOSWELL: *Johnson*, 84d-85a; 121c-d; 129b; 394d-395b

46 HEGEL: *Philosophy of History*, PART I, 228d; 234d-235c; 236a-c; PART II, 268b-271c; PART III, 290b-292a; 307b-308a; 311b-d; 312d-313a; PART IV, 349b-350a

47 GOETHE: *Faust*, PART I [3414-3468] 83b-84b; PART II [10,113-121] 246b-247a

49 DARWIN: *Descent of Man*, 302b-303d; 593b-c

51 TOLSTOY: *War and Peace*, BK V, 196a-198b

52 DOSTOEVSKY: *Brothers Karamazov*, BK I, 11a-15a,c esp 11a-b, 13a-d; BK II, 21b-24d; 26b-27d; BK III, 64c-67a; BK V, 129c-132b; BK VI 146b,d-170d; BK VII, 171a-180a esp 172c-177b; 189a-191a,c; BK XI, 313c-314d; 337a-346a; BK XII, 396d-397a

53 JAMES: *Psychology*, 652a-659a passim; 661b; 826b-827a

1b. The sources of religious belief

1b(1) Revelation: the word of God and divine authority

OLD TESTAMENT: *Genesis*, 12:1-9; 13:14-17; 15; 17-18; 21:12-13; 22:1-18; 26:1-6,23-24; 28:10-22; 32:23-32; 35:1-15; 46:1-4 / *Exodus*, 3-4; 6:1-8,28-30; 7:1-5; 19-20; 24; 33-34 / *Numbers*, 12; 14:20-25 / *Deuteronomy*, 4:10-15,36; 5; 8:3; 18:18; 29:29; 31:14-21 / *Joshua*, 1:1-9—(*D*) *Josue*, 1:1-9 / *I Samuel*, 3—(*D*) *I Kings*, 3 / *I Kings*, 3:5-15; 9:1-9; 19:9-18—(*D*) *III Kings*, 3:5-15; 9:1-9; 19:9-18 / *Job*, 33:14-17; 38:1-42:5 / *Psalms*, 12:6; 119:81-82,103-105,114-116,130-133,147-148—(*D*) *Psalms*, 11:7; 118:81-82,103-105, 114-116,130-133,147-148 / *Proverbs*, 30:5 / *Isaiah*, 6; 48:3-8—(*D*) *Isaias*, 6; 48:3-8 / *Jeremiah*, 1; 26:1-6—(*D*) *Jeremias*, 1; 26:1-6 / *Ezekiel*, 1-3; 8-12—(*D*) *Ezechiel*, 1-3; 8-12 / *Amos*, 7 / *Zechariah*, 1-6—(*D*) *Zacharias*, 1-6

APOCRYPHA: *Wisdom of Solomon*, 16:26—(*D*) OT, *Book of Wisdom*, 16:26 / *Ecclesiasticus*, 17:6-14—(*D*) OT, *Ecclesiasticus*, 17:5-12

NEW TESTAMENT: *Matthew*, 3:16-17; 7:28-29; 10:1-20,26; 11:25-27; 13:10-23; 17:5; 21:23-27; 28:18-20 / *Mark*, 1:9-11,22; 4:1-2,10-23; 9:3-7; 11:27-33 / *Luke*, 2:25-26; 3:21-22; 4:4,31-32; 8:4-15; 9:33-35; 10:21-22; 12:1-3 / *John*, 2:22; 3:2,9-12; 4:41-42; 5:31-47 esp 5:39; 9:35-38; 10:26-27; 12:28-30; 15:15; 16:29-31; 17:6-8 / *Acts*, 1:15-16; 9:3-8; 22:6-16; 26:13-18 / *Romans*, 1:16-20; 10:17; 15:4 / *I Corinthians*, 2:9-10,13; 12:1-7; 15:1-2 / *II Corinthians*, 12:1-5 / *Galatians*, 1:11-17 / *Ephesians*, 1:3-9,17-23; 3:1-5 / *I Thessalonians*, 2:13 / *I Timothy*, 1:14-16 / *II Timothy*, 3:14-16 / *Hebrews*, 4:11-12 / *I Peter*, 1:10-12,22-25 / *II Peter*, 1:16-25 / *I John*, 2:20-21,27; 5:7-10

18 AUGUSTINE: *Confessions*, BK II, par 7, 10b; BK VI, par 6-8 36c-37c; BK IX, par 8-12 63c-65a; BK XI, par 2-5 89c-90c; BK XIII, par 16-18 114d-115c / *City of God*, BK X, CH 13 307b-c; BK XI, CH 2-4, 323b-324a; BK XIX, CH 18 523a-b; BK XX, CH 28, 556c / *Christian Doctrine*, BK II, CH 15 643c-644a

19 AQUINAS: *Summa Theologica*, PART I, Q 1 3a-10c passim; Q 12, A 13 61c-62b; Q 32, A 1 175d-178a; Q 46, A 2 253a-255a; Q 68, A 1, ANS 354a-355c; Q 117, A 2, REP 2 597c-598c
20 AQUINAS: *Summa Theologica*, PART I-II, Q 91, AA 4-5 210c-212c; Q 98, AA 2-6 240c-245b; Q 100, A 3, ANS 253a-d; Q 101, A 2, REP 1 267a-268a; PART II-II, Q 1, A 7, REP 3 385c-387a; AA 9-10 388d-390d; Q 2, A 1, REP 1 391a-392a; AA 2-4 392a-394b; A 10, ANS 399b-400b; Q 4, A 8 409a-d; Q 6, A 1, ANS 413d-414c; Q 16, A 1 454c-455c; PART III, Q 7, A 7, ANS 750a-d; Q 11, A 6, REP 2 775d-776b
21 DANTE: *Divine Comedy*, PURGATORY, XXX-XXXIII 99b-105d passim; PARADISE, V [73-78] 112d-113a; XXIV [52-114] 143b-d; XXV [64-96] 145a-b; XXVI [1-45] 145d-146b
23 HOBBES: *Leviathan*, PART I, 83a-b; PART II, 137b-138b; 160b-c; PART III, 165a-167b; 181a-188a; 241a-242a; CONCLUSION, 281d-282a
25 MONTAIGNE: *Essays*, 209a-c; 212a; 238c-239c; 267c-268a; 273a-b; 293d-294b
30 BACON: *Advancement of Learning*, 2c-4c; 19b-c; 38a; 98a-100b / *New Atlantis*, 203a-c
31 DESCARTES: *Discourse*, PART I, 43c / *Meditations*, 69a-d / *Objections and Replies*, 168c-169a
32 MILTON: *Paradise Lost*, BK VIII [267-318] 238a-239a; BK XII [106-151] 321b-322b; [173-269] 323a-325a / *Samson Agonistes* [472-478] 350a
33 PASCAL: *Provincial Letters*, 147b; 163a-166b passim / *Pensées*, 561-566 272b-273b; 622-628 286a-287a; 880-881 345b / *Vacuum*, 355b / *Geometrical Demonstration*, 440a-b
35 LOCKE: *Human Understanding*, BK III, CH IX, SECT 23 291b-c; BK IV, CH VII, SECT 11, 340b-c; CH XVI, SECT 14 371b-c; CH XVIII, SECT 2-3 381a-d; SECT 6-9 382d-383d; CH XIX 384c-388d passim, esp SECT 4 385b
35 HUME: *Human Understanding*, SECT XII, DIV 132, 509c
38 ROUSSEAU: *Inequality*, 366c-d
40 GIBBON: *Decline and Fall*, 179b-c; 186c-187b; 201a; 307d-308a; 346b-c
41 GIBBON: *Decline and Fall*, 227d-228a; 231a-d
43 MILL: *Liberty*, 311a-b / *Utilitarianism*, 455a-c
44 BOSWELL: *Johnson*, 347a; 394a-b
46 HEGEL: *Philosophy of History*, INTRO, 159b-160a; PART I, 245d-246c; PART III, 307b-308a
51 TOLSTOY: *War and Peace*, BK I, 50b-c
52 DOSTOEVSKY: *Brothers Karamazov*, BK V, 127b-137c passim, esp 129b-130a; BK VI, 150d-153d

1b(2) Miracles and signs as divine confirmation

OLD TESTAMENT: *Genesis*, 15 / *Exodus*, 4:1-9; 7-12; 14; 16:1-17:7; 19:1-20:22 esp 19:16-20, 20:18; 24:15-17; 33:8-10; 34:10,29-35 / *Numbers*, 11:24-25; 12; 16-17 / *Deuteronomy*, 4:10-15,36; 5 esp 5:22-26; 8:2-4 / *Joshua*, 3:7-4:24—(D) *Josue*, 3:7-4:24 / *Judges*, 6:11-24,36-40 / *I Samuel*, 12:15-19—(D) *I Kings*, 12:15-19 / *I Kings*, 17-18—(D) *III Kings*, 17-18 / *II Kings*, 1-2; 5; 6:25-7:20; 20:1-11—(D) *IV Kings*, 1-2; 5; 6:25-7:20; 20:1-11 / *Isaiah*, 38—(D) *Isaias*, 38 / *Daniel*, 2:1-5:31; 6:18-28—(D) *Daniel*, 2:1-3:23; 3:91-5:31; 6:18-28
APOCRYPHA: *Wisdom of Solomon*, 12:17-27; 16—(D) OT, *Book of Wisdom*, 12:17-27; 16 / *Bel and Dragon*, 31-42—(D) OT, *Daniel*, 14:30-41 / *II Maccabees*, 9—(D) OT, *II Machabees*, 9
NEW TESTAMENT: *Matthew*, 8:1-17,23-34; 9:1-8,18-34; 10:1; 12:22-29; 14:13-33; 15:22-39; 17:1-8,14-20; 20:29-34; 21:17-22 / *Mark*, 1:23-2:12; 4:37-40; 5; 6:34-56; 7:24-8:26; 9:1-10,16-29; 10:46-52; 15:31-32; 16:16-18 / *Luke*, 1:5-66; 4:31-5:26; 7:1-23; 8:22-56; 9:1-2,12-20,28-44; 14:1-6; 17:11-19; 18:35-43 / *John*, 1:43-51; 2:1-11,22; 3:2; 4:46-54; 5:1-9,36; 9; 11:1-48; 12:27-30,37-40; 13:19; 14:29; 20:1-9,24-31 / *Acts*, 2:1-22; 3:2-16; 5:1-24; 8:6-8,13; 9:3-20,33-42; 12:5-11; 13:9-12; 14:7-10; 19:11-20; 20:9-12; 22:6-16; 28:3-10 / *Hebrews*, 2:3-4
18 AUGUSTINE: *City of God*, BK X, CH 8-9 303a-304c; CH 12-13 306d-307c; CH 17 309c-310b; CH 32, 320c-321d; BK XXII, CH 5-10 589a-599b / *Christian Doctrine*, BK II, CH 41-42 656a-d
19 AQUINAS: *Summa Theologica*, PART I, Q 12, A 13, ANS and REP 2 61c-62b
20 AQUINAS: *Summa Theologica*, PART I-II, Q 112, A 5, ANS 359c-360c; PART II-II, Q 2, A 1, REP 1 391a-392a; A 9, REP 3 398c-399b; Q 5, A 2 411b-412a; Q 6, A 1, ANS and REP 2 413d-414c
21 DANTE: *Divine Comedy*, PARADISE, XXIV [52-114] 143b-d
22 CHAUCER: *Tale of Man of Law* [4869-4924] 242b-243b / *Prioress's Tale* [13,418-620] 392a-395b esp [13,537-599] 394a-395a / *Second Nun's Tale* [15,787-816] 467a-b; [15,987-16,021] 470b-471b
23 HOBBES: *Leviathan*, PART I, 83c-d; PART II, 137b-c; PART III, 166a-167b; 188a-191a
25 MONTAIGNE: *Essays*, 98b-99a
30 BACON: *Advancement of Learning*, 13d-14a; 19b; 33c-d; 38a; 41b-d; 55c-d / *New Atlantis*, 201d-203c
32 MILTON: *Paradise Lost*, BK XII [173-222] 323a-324a / *Samson Agonistes* [23-29] 340a
33 PASCAL: *Pensées*, 263 221a-b; 587-588 277a-b; 643-644 290b-291b; 744-745 319a-b; 803-856 328b-341b
35 LOCKE: *Human Understanding*, BK IV, CH XVI, SECT 13 371a-b; CH XIX, SECT 15 388a-c
35 BERKELEY: *Human Knowledge*, SECT 63 425b-c
35 HUME: *Human Understanding*, SECT X, DIV 86 488d-489b; DIV 98-101 495d-497b

(1b. The sources of religious belief. 1b(2) *Miracles and signs as divine confirmation.)*

40 GIBBON: *Decline and Fall*, 180b-c; 189b-190d; 294a-296d esp 295c-296b; 445d-446b; 465d-467b; 547a-b
41 GIBBON: *Decline and Fall*, 232a-c; 398b-399b
44 BOSWELL: *Johnson*, 126b-c; 359a; 481d-482a
46 HEGEL: *Philosophy of History*, PART III, 307a-b; PART IV, 338b-c
47 GOETHE: *Faust*, PART I [765-770] 20a
51 TOLSTOY: *War and Peace*, BK V, 219b-220a
52 DOSTOEVSKY: *Brothers Karamazov*, BK I, 11a-b; BK V, 127b-137c; BK VII, 171a-180a; 189a-191a,c; BK XI, 337a-346a passim

1b(3) The testimony of prophets: the anointed of God

OLD TESTAMENT: *Exodus* passim, esp 4:10-16, 6:28-7:2 / *Leviticus* passim / *Numbers* passim, esp 11:16-17, 11:24-30, 12:1-9 / *Deuteronomy* passim, esp 18:15-22, 34:9-12 / *Joshua*, 1; 3:7-4:14; 23-24—(*D*) *Josue*, 1; 3:7-4:14; 23-24 / *Judges*, 6:7-10 / *I Samuel*, 2:27-36; 7-13 passim, esp 10:1-13; 15-16; 28:7-20—(*D*) *I Kings*, 2:27-36; 7-13 passim, esp 10:1-13; 15-16; 28:7-20 / *II Samuel*, 7:4-17; 12:1-14; 23:1-2; 24:10-14—(*D*) *II Kings*, 7:4-17; 12:1-14; 23:1-2; 24:10-14 / *I Kings*, 14:1-18; 18; 20; 21:17-22:38—(*D*) *III Kings*, 14:1-18; 18; 20; 21:17-22:38 / *II Kings*, 1-2; 3:10-27; 6-9; 17:13; 19:1-7,20-34; 20; 21:10-16; 22:8-20; 24:1-4—(*D*) *IV Kings*, 1-2; 3:10-27; 6-9; 17:13; 19:1-7,20-34; 20; 21:10-16; 22:8-20; 24:1-4 / *I Chronicles*, 17:3-15; 21:9-26—(*D*) *I Paralipomenon*, 17:3-15; 21:9-26 / *II Chronicles*, 11:2-4; 15:1-15; 18; 20:14-27; 21:12-19; 25:5-16; 28:1-15; 34:14-33; 36:14-21—(*D*) *II Paralipomenon*, 11:2-4; 15:1-15; 18; 20:14-27; 21:12-19; 25:5-16; 28:1-15; 34:14-33; 36:14-21 / *Ezra*, 9:10-11—(*D*) *I Esdras*, 9:10-11 / *Nehemiah*, 9:30—(*D*) *II Esdras*, 9:30 / *Isaiah* passim, esp 6:1-13, 11:1-5, 61:1-3—(*D*) *Isaias* passim, esp 6:1-13, 11:1-5, 61:1-3 / *Jeremiah* passim, esp 1, 7:25-27, 23:5-6, 25:4-7, 25:13, 28:5-9, 38:14-23—(*D*) *Jeremias* passim, esp 1, 7:25-27, 23:5-6, 25:4-7, 25:13, 28:5-9, 38:14-23 / *Ezekiel* passim, esp 1-3, 8-11, 13—(*D*) *Ezechiel* passim, esp 1-3, 8-11, 13 / *Daniel*, 5; 6:18-28; 7-12 passim, esp 9:25-26, 10:5-19 / *Hosea* passim, esp 6:4-6, 12:9-10—(*D*) *Osee* passim, esp 6:4-6, 12:9-10 / *Joel* passim, esp 2:28-29 / *Amos* passim, esp 3:7-8 / *Obadiah*—(*D*) *Abdias* / *Jonah* esp 3—(*D*) *Jonas* esp 3 / *Micah* passim, esp 3:8—(*D*) *Micheas* passim, esp 3:8 / *Nahum* / *Habakkuk*—(*D*) *Habacuc* / *Zephaniah*—(*D*) *Sophonias* / *Haggai*—(*D*) *Aggeus* / *Zechariah* passim, esp 1:1-6, 7:12-14—(*D*) *Zacharias* passim, esp 1:1-6, 7:12-14

NEW TESTAMENT: *Matthew* passim, esp 1:18-23, 2:3-6, 2:19-23, 3:1-17, 4:12-16, 5:17-18, 8:14-17, 11:1-15, 12:14-21, 13:57-58, 21:1-5, 27:3-10, 27:35, 28:18-20 / *Mark* passim, esp 1:1-8, 6:4-6, 16:15-16 / *Luke* passim, esp 1:67-79, 4:16-21, 4:24, 11:48-50 / *John* passim, esp 1:6-8, 1:45, 4:43-44, 5:39, 7:37-52, 12:37-41 / *Acts* passim, esp 2:1-36, 3:18, 3:20-25, 7:35-60, 8:30-39, 9:15, 13:27-41, 15:13-17, 19:1-7, 24:14-15, 26:15-20, 28:16-27 / *Romans*, 10:12-11:36 / *I Corinthians*, 2:4-5; 3:5; 14; 15:10-11 / *Ephesians*, 1:12-13 / *Hebrews*, 1:1-2; 2:6-10; 4:3-7; 5:5-10; 8:4-12 / *II Peter*, 1:16-21 / *I John*, 5:9-13

18 AUGUSTINE: *City of God*, BK VII, CH 32 262a-b; BK X, CH 32, 320c-321d; BK XI, CH 2-4, 323a-324a; BK XV, CH 26 419b-420a; BK XVI, CH 2 422b-423d; CH 37-42 444b-448a; BK XVII 449a-472a,c esp CH 3 450c-451c; BK XVIII, CH 11 477c-d; CH 23 483d-485a; CH 28 486c-487a; CH 33-34 490c-491c; CH 44, 498a-d; CH 46 500a-d; BK XIX, CH 22 525b-c; BK XX, CH 29-30 557a-560a,c; BK XXII, CH 6, 590a-d
20 AQUINAS: *Summa Theologica*, PART II-II, Q 1, A 4, REP 4 382c-383b; Q 5, A 1, REP 3 410a-411b; A 2, ANS 411b-412a; Q 6, A 1, ANS 413d-414c; PART III, Q 26, A 1, REP 1 845b-846a
21 DANTE: *Divine Comedy*, PURGATORY, XXII [55-93] 87a-c; PARADISE, XXV [64-96] 145a-b; XXVI [1-45] 145d-146b
23 HOBBES: *Leviathan*, PART II, 137b-138b; 160b-c; PART III, 165a-167b; 176d-177c; 182d-188a; 244b-c; PART IV, 248a-b; CONCLUSION, 281d-282a
25 MONTAIGNE: *Essays*, 239b-c
30 BACON: *New Atlantis*, 202d-203c; 209a-b
32 MILTON: *Christs Nativity* [1-7] 1a / *Paradise Lost*, BK III [167-193] 139a-b; BK XI [656-749] 313b-315b; [802-834] 316b-317b; BK XII [235-248] 324b; [315-330] 326a-b
33 PASCAL: *Pensées*, 570-578 273b-276a; 598-600 278b-279a; 616-618 283b-284a; 637-641 289b-290a; 642-692 290b-301a passim; 693-741 301b-319a; 751-758 320a-321a; 761 321b-322a; 770 323a; 829-830 333b-334a
35 HUME: *Human Understanding*, SECT X, DIV 101 497a-b
40 GIBBON: *Decline and Fall*, 181b; 187a-188c; 206a-b; 297a; 307d-308a
41 GIBBON: *Decline and Fall*, 230c-231d
48 MELVILLE: *Moby Dick*, 30a-36b

2. The virtue and practice of religion: piety as justice to God

OLD TESTAMENT: *Genesis*, 26:4-5; 28:18-22 / *Exodus* passim, esp 20, 32, 34:12-14 / *Leviticus*, 18:1-5; 26 / *Numbers* passim / *Deuteronomy*, 4:1-40; 5-6; 8-11 esp 10:12-13; 12:28,32; 28-32 / *Joshua*, 22:1-6; 24:14-28—(*D*) *Josue*, 22:1-6; 24:14-28 / *I Kings*, 8:57-61—(*D*) *III Kings*, 8:57-61 / *II Kings*, 17:36-37; 21:8—(*D*) *IV Kings*, 17:36-37; 21:8 / *I Chronicles*, 22:12-13—(*D*) *I Paralipomenon*, 22:12-13 /

Nehemiah, 1:8-9—(*D*) *II Esdras*, 1:8-9 / *Psalms* passim, esp 22:22-31, 27:1-14, 29:2, 40:7-8, 45:11, 78:5-8, 89:15-32, 96:8-9, 99:1-9, 119:1-176—(*D*) *Psalms* passim, esp 21:23-32, 26:1-14, 28:2, 39:8-9, 44:12, 77:5-8, 88:16-33, 95:8-9, 98:1-9, 118:1-176 / *Ecclesiastes*, 12:13 / *Isaiah*, 1-3; 9-10; 29-30; 37:21-36; 42; 44; 48; 58; 64:1-7—(*D*) *Isaias*, 1-3; 9-10; 29-30; 37:21-36; 42; 44; 48; 58; 64:1-7 / *Jeremiah*, 1-44 passim, esp 7:22-23, 11:1-4—(*D*) *Jeremias*, 1-44 passim, esp 7:22-23, 11:1-4 / *Ezekiel*, 5-8; 11-16 passim; 20; 23-24—(*D*) *Ezechiel*, 5-8; 11-16 passim; 20; 23-24 / *Hosea* passim, esp 6:6—(*D*) *Osee* passim, esp 6:6 / *Amos* passim, esp 4:4-5, 5:4 / *Micah*, 6:8—(*D*) *Micheas*, 6:8 / *Zephaniah*—(*D*) *Sophonias* / *Zechariah* passim, esp 14:16-21—(*D*) *Zacharias* passim, esp 14:16-21 / *Malachi* esp 3:7-14—(*D*) *Malachias* esp 3:7-14

APOCRYPHA: *Rest of Esther*, 13:14—(*D*) OT, *Esther*, 13:14 / *Wisdom of Solomon* passim—(*D*) OT, *Book of Wisdom* passim / *Ecclesiasticus*, 2:15-18; 19:17-24; 35—(*D*) OT, *Ecclesiasticus*, 2:18-23; 19:17-21; 35 / *Baruch*, 4:1-3—(*D*) OT, *Baruch*, 4:1-3 / *I Maccabees*, 2:20-28—(*D*) OT, *I Machabees*, 2:20-28

NEW TESTAMENT: *Matthew*, 4:8-10; 22:21,34-40 / *Mark*, 12:17,28-34 / *Luke*, 4:6-8; 10:25-27; 17:7-10; 20:25 / *John*, 4:21-24 / *Romans*, 3:19-28; 4:1-8; 5:8-21; 8:1-17 / *Galatians*, 3:10-13; 5:1-5

4 HOMER: *Iliad*, BK I 3a-9a,c; BK IX [485-549] 62a-c / *Odyssey*, BK III [1-68] 193a-d

5 AESCHYLUS: *Suppliant Maidens* 1a-14a,c / *Seven Against Thebes* [1011-1084] 38b-39a,c / *Agamemnon* [351-402] 55d-56b; [681-829] 59b-61a

5 SOPHOCLES: *Oedipus the King* [863-910] 107b-c / *Antigone* 131a-142d esp [446-470] 134d-135a / *Ajax* [666-677] 148d; [1316-1421] 154b-155a,c / *Electra* [1058-1097] 164d-165a / *Philoctetes* [1440-1444] 195a,c

5 EURIPIDES: *Hippolytus* 225a-236d esp [983-1035] 233a-c / *Heracleidae* [748-783] 254d-255a / *Ion* 282a-297d esp [112-153] 283a-b, [585-647] 287d-288b / *Helen* [865-1031] 306c-308a passim / *Bacchantes* 340a-352a,c esp [977-1023] 348b-c

6 HERODOTUS: *History*, BK VI, 201d-202c

7 PLATO: *Euthyphro* 191a-199a,c / *Apology* 200a-212a,c passim / *Gorgias*, 284a-285a / *Republic*, BK I, 297a-b / *Laws*, BK IV, 682d-683b; BK X, 769d-771b

12 EPICTETUS: *Discourses*, BK I, CH 16, 122a-d; CH 27, 132c-133a; BK II, CH 16, 158b-d; BK III, CH 24, 204b-d; 208d-210a; BK IV, CH 3, 224d; CH 12, 243c-d

12 AURELIUS: *Meditations*, BK III, SECT 13 262c; BK IX, SECT 1 291a-c; SECT 40 295b

14 PLUTARCH: *Aemilius Paulus*, 214b-d

18 AUGUSTINE: *Confessions*, BK V, par 2 27b-c / *City of God*, BK I, CH 15 138c-139c; BK X 298b,d-322a,c; BK XIX, CH 19 523b-d; CH 21, 524c-525a; CH 25 528c-d / *Christian Doctrine*, BK I, CH 10 627b; CH 15 628b-c; CH 22-23 629b-630c; CH 26-27 631b-d; CH 29-30 632a-633b; CH 35 634c-d; BK II, CH 7 638d-639c; CH 38, 654c

20 AQUINAS: *Summa Theologica*, PART I-II, Q 60, A 3, ANS 51c-52b; QQ 99-108 245c-337d; PART II-II, QQ 186-189 650b-700d; PART III SUPPL, Q 99, A 4 1083a-1084a

21 DANTE: *Divine Comedy*, PURGATORY, XV [40-81] 75d-76a; PARADISE, III 109b-110c esp [67-87] 110a-b; V [13-84] 112b-113a; XX [94-138] 137d-138a; XXVI [1-81] 145d-146c

22 CHAUCER: *Second Nun's Tale* 463b-471b

23 HOBBES: *Leviathan*, PART II, 161b-163d

25 MONTAIGNE: *Essays*, 152b-156d; 209b-213a; 233a-b; 238c-239c; 242d; 267c-268a

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31 SPINOZA: *Ethics*, PART IV, PROP 37, SCHOL 1, 434d-435a; APPENDIX, XXII 449b

32 MILTON: *Comus* 33a-56b esp [416-475] 42b-44a / *Sonnets*, XIV 66a / *Paradise Lost*, BK IV [720-735] 168a-b; BK XI [251-262] 304b-305a / *Samson Agonistes* [1334-1409] 368b-370a / *Areopagitica*, 402a-b

33 PASCAL: *Pensées*, 470 256a; 476 256b-257a; 482 258a; 489,491 259a; 531 264b; 540 542 265b-266a

35 LOCKE: *Toleration* 1a-22d passim, esp 1b, 3b-4a

35 BERKELEY: *Human Knowledge*, SECT 155-156 444b-d

36 STERNE: *Tristram Shandy*, 255a-268a

37 FIELDING: *Tom Jones*, 187d-188a

38 MONTESQUIEU: *Spirit of Laws*, BK XXV, 208a

40 GIBBON: *Decline and Fall*, 81d-82d; 180c-182c; 190d-194a; 291d-292b; 302b-304a; 327d-328b

41 GIBBON: *Decline and Fall*, 232c-233c; 259b-260a

42 KANT: *Practical Reason*, 325a-327d; 344c-348b esp 347b-c / *Pref. Metaphysical Elements of Ethics*, 368c-d / *Judgement*, 504b-505a; 509a-c; 611a-c

43 MILL: *Liberty*, 290a-292a; 307d-309a; 311a-312a

44 BOSWELL: *Johnson*, 84b-c; 262b

46 HEGEL: *Philosophy of History*, INTRO, 175c-176c; PART I, 234d-235c; PART III, 290b-292a; 311b-d; PART IV, 346c-347b

47 GOETHE: *Faust*, PART I [3415-3468] 83b-84b

48 MELVILLE: *Moby Dick*, 30a-36b

51 TOLSTOY: *War and Peace*, BK I, 50a-d; BK III, 122b-c; BK V, 218b-220b; BK VI, 271c-274a,c; BK IX, 373b-377b

52 DOSTOEVSKY: *Brothers Karamazov*, BK I, 11a-15a,c; BK II, 24a-c; 37c-38a; BK VI, 146b,d-170b; BK XI, 313c-314d

53 JAMES: *Psychology*, 203a-204b

(2. *The virtue and practice of religion: piety as justice to God.*)

2a. Prayer and supplication: their efficacy

OLD TESTAMENT: *Genesis*, 4:26; 18:20–33; 19:17–22; 20:7,17; 21:33; 24:10–27; 25:20–21; 32:9–12; 33:1–4 / *Exodus*, 2:23–25; 3:7–10; 17:4–6; 32:30–33; 33:12–23; 34:8–9 / *Numbers*, 11:1–2,10–34; 14:11–20; 16:19–26; 20:16; 21:7–9 / *Deuteronomy*, 9:18–20,25–29 / *Joshua*, 7:6–15; 10:12–14—(*D*) *Josue*, 7:6–15; 10:12–14 / *Judges*, 13:8–9; 15:18–19; 16:27–30 / *I Samuel*, 1; 12:19–25—(*D*) *I Kings*, 1; 12:19–25 / *II Samuel*, 7:18–29; 22:4–20 esp 22:7; 24:10–25—(*D*) *II Kings*, 7:18–29; 22:4–20 esp 22:7; 24:10–25 / *I Kings*, 3:5–15; 8; 9:2–3; 13:6; 18:36–39—(*D*) *III Kings*, 3:5–15; 8; 9:2–3; 13:6; 18:36–39 / *II Kings*, 4:32–35; 6:17–18; 19:14–20:11—(*D*) *IV Kings*, 4:32–35; 6:17–18; 19:14–20:11 / *I Chronicles*, 4:10; 17:16–27; 21:8–27—(*D*) *I Paralipomenon*, 4:10; 17:16–27; 21:8–27 / *II Chronicles*, 6:14–42; 7:12–22; 14:10–13; 16:12; 20:1–25; 30:18–20,27; 32:19–24; 33:11–13,18–19—(*D*) *II Paralipomenon*, 6:14–42; 7:12–22; 14:10–13; 16:12; 20:1–25; 30:18–20,27; 32:19–24; 33:11–13,18–19 / *Ezra*, 8:22–23; 9:5–15—(*D*) *I Esdras*, 8:22–23; 9:5–15 / *Nehemiah*, 1:4–11; 9:27—(*D*) *II Esdras*, 1:4–11; 9:27 / *Job*, 6:8–9; 8:5–6; 9:13–16; 10; 16:17–22; 21:15; 22:27; 30:20; 33:26–28; 42:8–10 / *Psalms* passim, esp 4:1–3, 5:1–3, 6:9, 9:12, 17:1–6, 18:1–19, 21:1–4, 22:1–5, 28:1–9, 30:8–31:17, 31:22, 38:9–15, 39:12, 40:1–2, 42:8–11, 50:15, 54:2–55:2, 55:16–17, 61:1–3, 64:1, 66:17–20, 69:13–18, 81:7, 86:1–7, 88:1–13, 102:1–2, 102:17, 107:1–30, 116:1–6, 119:58, 119:170, 130:1–8, 140:6, 141:1–5, 142:1–143:1, 145:18–19—(*D*) *Psalms* passim, esp 4:2–4, 5:2–5, 6:10, 9:13, 16:1–6, 17:1–19, 20:2–5, 21:2–6, 27:1–9, 29:9–30:18, 30:23, 37:10–16, 38:13, 39:2–3, 41:9–12, 49:15, 53:4–54:3, 54:17–18, 60:2–4, 63:2, 65:17–20, 68:14–19, 80:8, 85:1–7, 87:2–14, 101:1–3, 101:18, 106:1–30, 114:1–6, 118:58, 118:170, 129:1–7, 139:7; 140:1–5, 141:2–142:1, 144:18–19 / *Proverbs*, 15:8,29; 28:9 / *Isaiah*, 1:15; 26:16; 37:14–38; 43:22; 55:6–7; 56:7; 58:7–9; 66:24—(*D*) *Isaias*, 1:15; 26:16; 37:14–38; 43:22; 55:6–7; 56:7; 58:7–9; 66:24 / *Jeremiah*, 7:16; 11:14; 14:11–15:1; 17:13–18; 29:7,12–14; 32:16–44; 42:1–6,20—(*D*) *Jeremias*, 7:16; 11:14; 14:11–15:1; 17:13–18; 29:7,12–14; 32:16–44; 42:1–6,20 / *Lamentations*, 3:8,44,55–57 / *Daniel*, 6:4–13; 9 / *Joel*, 2:32 / *Jonah*, 1:4–6; 2; 4:1–4—(*D*) *Jonas*, 1:4–6; 2:2–11; 4:1–4 / *Micah*, 3:1–4—(*D*) *Micheas*, 3:1–4 / *Zechariah*, 7 esp 7:12–13; 8:20–23; 10:1–2; 13:9—(*D*) *Zacharias*, 7 esp 7:12–13; 8:20–23; 10:1–2; 13:9

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NEW TESTAMENT: *Matthew*, 6:5–15; 7:7–11; 18:19–20; 21:17–22; 26:36–45 / *Mark*, 9:14–30 esp 9:28–29; 11:24–26; 13:33; 14:32–39 / *Luke*, 11:1–13; 18:1–14; 21:36; 22:40–46 / *John*, 4:10; 9:31; 14:13–16; 15:7; 16:23–26; 17 / *Acts*, 4:23–33; 6:4; 8:22–24; 9:36–41; 10:1–4,30–31 / *Romans*, 8:26–27; 10:12–13; 12:12 / *I Corinthians*, 11:4–5; 14:13–16 / *Ephesians*, 6:17–18 / *Philippians*, 4:6 / *Colossians*, 4:2–3 / *I Thessalonians*, 5:17 / *II Thessalonians*, 3:1–2 / *I Timothy*, 2:1–8; 4:4–5; 5:5 / *Hebrews*, 13:18 / *James*, 4:3; 5:13–18 / *I Peter*, 3:12; 4:7 / *I John*, 3:22; 5:13–16 / *Revelation*, 5:8—(*D*) *Apocalypse*, 5:8

4 HOMER: *Iliad*, BK I [1–100] **3a-4b**; BK II [394–421] 14a-b; BK IX [485–512] 62a-b; BK XVI [218–254] 114c-d / *Odyssey*, BK III [43–68] 193c-d; BK V [436–463] **212b-c**; BK XX [91–121] **297a-b**

5 AESCHYLUS: *Suppliant Maidens* 1a-14a,c esp [1–175] 1a-3a, [516–710] 7c-10b, [1018–1073] 13d-14a,c / *Persians* [215–225] 17c; [517–693] 20c-22b / *Seven Against Thebes* [69–282] 28a-30b / *Agamemnon* [351–398] 55d-56b; [810–854] 60d-61a

5 SOPHOCLES: *Oedipus the King* [151–218] 100c-101b; [863–910] 107b-c / *Oedipus at Colonus* [461–509] **118b-d** / *Ajax* [684–692] 149a

5 EURIPIDES: *Electra* [190–212] 328c-d

5 ARISTOPHANES: *Peace* [973–1016] 537a-c / *Thesmophoriazusae* [295–371] 603d-604c

6 HERODOTUS: *History*, BK I, 20d-21a; BK VI, 196d-197a; BK VII, 226c; 239d-240a; BK VIII, 270c

6 THUCYDIDES: *Peloponnesian War*, BK VI, 517d

7 PLATO: *Cratylus*, 94a / *Phaedrus*, 141c / *Republic*, BK II, 313c-314d / *Timaeus*, 447a / *Critias*, 478a-b / *Laws*, BK III, 669c-670a; BK VII, 719d-720b; BK X, 759b-c; 770d-771b

12 EPICTETUS: *Discourses*, BK II, CH 16, 156d-157a

12 AURELIUS: *Meditations*, BK V, SECT 7 269d; BK IX, SECT 40 295b

13 VIRGIL: *Aeneid*, BK III [84–120] 149b-150a; BK IV [206–237] 172b-173b; BK VI [42–76] 212a-213a; BK VIII [67–80] 260b-261a; [558–584] 274a-b; BK IX [621–633] 295b-296a; BK X [249–255] 309a; [417–431] 313b; BK XI [778–835] 349a-350b

14 PLUTARCH: *Camillus*, 104b-d; 107b-d

16 KEPLER: *Harmonies of the World*, 1011a

17 PLOTINUS: *Second Ennead*, TR IX, CH 14, 74b / *Fourth Ennead*, TR IV, CH 30 174b-c; CH 40-41 180b-d

18 AUGUSTINE: *Confessions*, BK I, par 1 1a-b; BK II, par 1 9a; BK V, par 1 27a-b; BK VI, par 1 34c-35a; BK IX, par 34–37 70c-71b; BK X, par 1–7 71c-73a; par 37–40 81a-c; par 42 82a; BK XI, par 1–4 89b-90b / *City of God*, BK X, CH 12 306d-307a; CH 19 310d-311b; CH 22 312a-b

20 AQUINAS: *Summa Theologica*, PART II-II, Q 181, A 3, REP 3 618c-619b; PART III, Q 21 823d-827c; PART III SUPPL, Q 71, A 1, ANS 901b-902b; A 9, ANS and REP 5 910d-912b; Q 72 917c-922b

21 DANTE: *Divine Comedy*, PURGATORY, III [133–145] 57b-c; V [1]–VI [48] 59a-61b; VII [112–123] 63d-64a; XI [1–36] 68d-69a; XIII [103–129] 73a-b; XXIII [76–96] 89a; PARADISE, XX [94–148] 137d-138b; XXXI [79–102] 154a-b; XXXII [139]–XXXIII [54] 156a-d

22 CHAUCER: *Knight's Tale* [2221–2419] 196b-199b / *Tale of Man of Law* [4869–4895] 242b-243a

23 HOBBES: *Leviathan*, PART II, 162d; 163b; PART III, 182d-183b

24 RABELAIS: *Gargantua and Pantagruel*, BK I, 32c-35a; 49c-d

25 MONTAIGNE: *Essays*, 152b-153d; 155c-156d

26 SHAKESPEARE: *Richard III*, ACT I, SC IV [66–74] 115b

27 SHAKESPEARE: *Hamlet*, ACT III, SC III [36–72] 53d-54a / *Measure for Measure*, ACT II, SC IV [1–17] 184c-d

32 MILTON: *Paradise Lost*, BK III [185–197] 139b; BK V [205–208] 179b; BK X [1086]–BK XI [71] 298a-300b / *Samson Agonistes* [356–367] 347b / *Areopagitica*, 402a-b

33 PASCAL: *Pensées*, 250 219a; 491 259a

40 GIBBON: *Decline and Fall*, 82a; 466c-467d

41 GIBBON: *Decline and Fall*, 232c-233a

42 KANT: *Judgement*, 504d

44 BOSWELL: *Johnson*, 52c-53a; 224b

46 HEGEL: *Philosophy of History*, PART I, 224a-b; PART III, 291c-d

47 GOETHE: *Faust*, PART I [3587–3619] 87b-88a

48 MELVILLE: *Moby Dick*, 130b-131a

51 TOLSTOY: *War and Peace*, BK VII, 281d-282a; BK IX, 373b-377b; BK X, 407c-d; 435c-436c; BK XII, 544b-545a; 553d-554a; BK XIII, 585b-d

52 DOSTOEVSKY: *Brothers Karamazov*, BK II, 21b-24d; BK VI, 167b-c

53 JAMES: *Psychology*, 203b-204a

2b. Worship and adoration: the rituals and ceremonials of religion

OLD TESTAMENT: *Genesis*, 4:2-16,26; 8:18-22; 12:7-8; 17:9-14,23-27; 21:3-4; 28:18-22 / *Exodus*, 12-13; 15:1-21; 16:29; 20:1-11; 23:10-19; 24-31 esp 31:12-17; 35-40 / *Leviticus* passim, esp 16:29-34, 19:3, 19:30, 23:1-44, 25:1-12, 26:2 / *Numbers*, 5:5-9:14; 15; 18-19; 28-29 / *Deuteronomy*, 5:6-15; 6:13; 12; 14; 15:19-17:1; 26; 32 passim / *Joshua*, 5:2-9; 22:9-34—(*D*) *Josue*, 5:2-9; 22:9-34 / *Judges*, 11:30-40 / *I Samuel*, 2:1-10—(*D*) *I Kings*, 2:1-10 / *II Samuel*, 6:1-15; 22—(*D*) *II Kings*, 6:1-15; 22 / *I Kings*, 8—(*D*) *III Kings*, 8 / *II Kings*, 17:36—(*D*) *IV Kings*, 17:36 / *I Chronicles*, 15:25-16:36; 17:16-27; 29:10-22—(*D*) *I Paralipomenon*, 15:25-16:36; 17:16-27; 29:10-22 / *II Chronicles*, 5:1-7:9; 15:1-15; 30; 35:1-19—(*D*) *II Paralipomenon*, 5:1-7:9; 15:1-15; 30; 35:1-19 / *Ezra*, 1-8 passim—(*D*) *I Esdras*, 1-8 passim / *Nehemiah*, 9 esp 9:14; 10:31; 13:22—(*D*) *II Esdras*, 9 esp 9:14; 10:31; 13:22 / *Esther*, 9:20-32 / *Psalms* passim / *Song of Solomon*—(*D*) *Canticle of Canticles* / *Isaiah*, 1:10-18; 2:2-3; 8:13-14,17; 12; 25-26; 27:13; 29:18-19; 40:9-31; 42:10-12; 44:23; 45:23-25; 49:13; 56:1-7; 58; 66:18-23—(*D*) *Isaias*, 1:10-18; 2:2-3; 8:13-14,17; 12; 25-26; 27:13; 29:18-19; 40:9-31; 42:10-12; 44:23; 45:23-25; 49:13; 56:1-7; 58; 66:18-23 / *Jeremiah*, 15:16; 17:21-27; 20:11-13—(*D*) *Jeremias*, 15:16; 17:21-27; 20:11-13 / *Ezekiel*, 20:12,20; 44:24; 46:3—(*D*) *Ezechiel*, 20:12,20; 44:24; 46:3 / *Hosea*, 6:6-7—(*D*) *Osee*, 6:6-7 / *Amos*, 5:21-24 / *Micah*, 6:6-8—(*D*) *Micheas*, 6:6-8 / *Habakkuk*, 3:18-19—(*D*) *Habacuc*, 3:18-19 / *Zephaniah*, 2:11—(*D*) *Sophonias*, 2:11 / *Zechariah*, 14:16-21—(*D*) *Zacharias*, 14:16-21

APOCRYPHA: *Judith*, 16—(*D*) OT, *Judith*, 16 / *Rest of Esther*, 13:14; 16:20-22—(*D*) OT, *Esther*, 13:14; 16:20-22 / *Wisdom of Solomon*, 10:19-20—(*D*) OT, *Book of Wisdom*, 10:19-20 / *Ecclesiasticus*, 1:11,25; 17:24-29; 35:1-7; 39:15-35; 47:8-10; 50-51—(*D*) OT, *Ecclesiasticus*, 1:11,31-32; 17:24-29; 35:1-7; 39:17-41; 47:8-12; 50-51 / *Song of Three Children*, 28-68—(*D*) OT, *Daniel*, 3:51-90 / *I Maccabees*, 2:15-48; 4:52-59—(*D*) OT, *I Machabees*, 2:15-48; 4:52-59 / *II Maccabees*, 15:1-5—(*D*) OT, *II Machabees*, 15:1-5

NEW TESTAMENT: *Matthew*, 2:1-12; 4:8-10; 12:1-12 / *Mark*, 2:23-3:4 / *Luke*, 2:21-24; 4:6-8; 6:1-9 / *John*, 4:19-26; 7:22-23 / *Acts*, 15:1-29; 21:19-25 / *Romans*, 2:25-29; 4:8-12; 14 esp 14:10-11, 14:17-19 / *I Corinthians*, 7:18-19 / *Galatians*, 4:9-11; 5:1-11; 6:12-15 / *Colossians*, 2:10-14; 3:9-11

4 HOMER: *Iliad*, BK II [394–431] 14a-b; BK VII [313–326] 49b; BK IX [527–549] 62c; BK XII [1–33] 82a-b; BK XXIV [64–76] 171d-172a / *Odyssey*, BK IX [543–555] 234d-235a; BK XII

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5 ARISTOPHANES: *Acharnians* [237–279] 458a-b / *Frogs* [312–459] 567d-569c / *Plutus* [627–747] 636d-637d

6 HERODOTUS: *History*, BK I, 31a-c; 32d-33a; 40d-41b; 45a-b; BK II, 56d-64c; BK III, 95a-c; BK IV, 129c-130b; 134b-d; 138a-b; 142b-c; 155c-156a; BK V, 176a-b; BK VI, 205c-d

7 PLATO: *Republic*, BK I, 297b; BK IV, 345d-346a / *Laws*, BK VII, 718d-719a; BK VIII, 731d-732c

9 ARISTOTLE: *Politics*, BK VI, CH 8 [1322^{b}19–29] 526c

12 LUCRETIUS: *Nature of Things*, BK II [600–660] 22c-23b; BK V [1194–1203] 76d; BK VI [56–79] 81a-b

13 VIRGIL: *Aeneid*, BK IV [504–521] 181a-b; BK V [42–103] 188a-190a

14 PLUTARCH: *Numa Pompilius* 49a-61d passim, esp 56d / *Camillus*, 104b-d; 110b-d / *Aemilius Paulus*, 214b-d / *Marcellus*, 247d-248b / *Nicias*, 424b-d / *Crassus*, 445d-446b / *Alexander*, 541b-c / *Demetrius*, 735c-d

15 TACITUS: *Histories*, BK IV, 282d-283b; BK V, 296a

18 AUGUSTINE: *Confessions*, BK V, par 1 27a-b; BK VI, par 2 35a-c; BK IX, par 14–16, 65c-66a; BK X, par 49–50 83c-84b / *City of God*, BK VII, CH 27–31 259c-262a; BK X, CH 1 298b,d-299d; CH 3 300b-301a; CH 15–17 308a-310b / *Christian Doctrine*, BK I, CH 6 626a-b; BK III, CH 9 661a-c

20 AQUINAS: *Summa Theologica*, PART I-II, Q 99, A 3 247a-248a; Q 100, A 4, REP 1 253d-255a; QQ 101–103 265d-304a; PART II-II, Q 3, A 1, ANS and REP 1 400c-401a; A 2, ANS 401a-d; PART III, Q 25 839c-845a; PART III SUPPL, Q 71 900d-917b

21 DANTE: *Divine Comedy*, PURGATORY, VIII [1–36] 64a-c

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24 RABELAIS: *Gargantua and Pantagruel*, BK III, 193d-194a

25 MONTAIGNE: *Essays*, 209b-c; 246c-d; 300c-d

28 HARVEY: *On Animal Generation*, 491a

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35 HUME: *Human Understanding*, SECT V, DIV 41, 468a-b

37 FIELDING: *Tom Jones*, 187d-188a

38 MONTESQUIEU: *Spirit of Laws*, BK XXV, 208a-209a; 211a-c

40 GIBBON: *Decline and Fall*, 59c-60a; 81d-82a; 93b-c; 98a; 180d-182c esp 181b-d; 184d-185d; 208a-211a passim; 349c-350b; 353b-c; 356d-357b; 457d-467d esp 457d-458c, 460a-b, 463a-c, 464c-467d; 547a-c; 583d-584b

41 GIBBON: *Decline and Fall*, 83d; 110b-d; 195a-198d; 207a-208c; 226a-227b; 232c-233a; 378b-d

42 KANT: *Judgement*, 504b-505a; 509a-510a

44 BOSWELL: *Johnson*, 27b; 290b

46 HEGEL: *Philosophy of History*, INTRO, 175c-176c; PART I, 225b; 227c-228c; 239b-c; 244c-245d; 246c-247a; 253c-254b; PART III, 290b-292a; PART IV, 322a-c; 331d-332c; 346c-347b

48 MELVILLE: *Moby Dick*, 25b-28a; 39a-b; 60b-65a

51 TOLSTOY: *War and Peace*, BK VIII, 323b; BK IX, 373b-377b; BK X, 435c-436c; BK XII, 553c-d

52 DOSTOEVSKY: *Brothers Karamazov*, BK I, 13a-d; BK V, 131c-d; BK VII, 171a-c; BK XI, 313c-314a

2c. The nature, institution, and uses of the sacraments

NEW TESTAMENT: *Matthew*, 3; 18:18; 19:4–6,10–12; 20:20–23; 26:26–29; 28:19 / *Mark*, 1:4,8–10; 10:2–12,35–40; 14:22–24; 16:16 / *Luke*, 3:3,16; 22:14–20 / *John*, 1:25–27,33; 3:3–7; 6 esp 6:32–35, 6:47–59; 19:33–34; 20:20–23 / *Acts*, 2:37–42; 8:12–17,26–40; 11:16; 19:1–7; 22:16 / *Romans*, 6:3–4 / *I Corinthians*, 1:12–17; 6:11; 7:8–14,34–39; 10:16–17; 11:23–30; 12:13; 15:28–29 / *Galatians*, 3:27 / *Ephesians*, 4:5; 5:21–33 esp 5:31–32 / *Colossians*, 2:11–12 / *Hebrews*, 5:1–6 / *James*, 5:14–16 / *I Peter*, 3:18–22

18 AUGUSTINE: *Confessions*, BK IX, par 12 64d-65a; par 14, 65a-b; par 36 71a; BK XIII, par 26–29 117c-118c / *City of God*, BK X, CH 6 302a-d; CH 19–20 310d-311c; BK XIII, CH 3–4 361a-362a; CH 7 362d-363b; BK XVI, CH 26–27 438c-439d; BK XX, CH 26 555a-556b; BK XXI, CH 16 573b-574a; CH 20 575c-d; CH 25 579d-581a / *Christian Doctrine*, BK II, CH 3 637c-d; CH 41 656a-c; BK III, CH 9 661a-c; BK IV, CH 21, 690d-691b

19 AQUINAS: *Summa Theologica*, PART I, Q 92, A 3, ANS 490c-491b; Q 113, A 5, ANS 579a-d

20 AQUINAS: *Summa Theologica*, PART I-II, Q 101, A 4, ANS and REP 1-2 269a-270b; Q 102, A 5 283c-292c; Q 103, A 1, REP 3 298b-299b; A 4, ANS 302a-304a; Q 108, A 2, ANS and REP 2 332b-333d; PART II-II, Q 1, A 1, REP 1 380b-381a; A 3, REP 4 381d-382c; A 8, REP 6 387a-388c; Q 2, A 7, ANS 396a-397c; Q 3, A 1, REP 1 400c-401a; Q 10, A 12, REP 5 436b-437d; Q 11, A 4, ANS 441b-442b; PART III, QQ 60-65 847a-884a,c; PART III SUPPL, Q 71, A 9, REP 3 910d-912b; Q 83, A 3, ANS and REP 4 978c-980d; Q 99, A 4 1083a-1084a

21 DANTE: *Divine Comedy*, HELL, XXVII [67-132] 40c-41a; PURGATORY, IX [73-145] 66c-67b; XXVII-XXXIII 94c-105d

22 CHAUCER: *Prologue* [653-662] 170b / *Wife of Bath's Prologue* [5583-5749] 256a-258b / *Merchant's Tale* [9193-9210] 320a-b / *Pardoners' Tale* [12,829-902] 381b-382b / *Parson's Tale* 495a-550a esp par 1-22 495a-510b, par 85-90 543a-546b

23 HOBBES: *Leviathan*, PART I, 71b; PART III, 177d-178a; 180c-d; 206c-207a; 208b; 211c-212c; PART IV, 249b-250c; 263d-264a

27 SHAKESPEARE: *Hamlet*, ACT I, SC V [74-79] 37d; ACT III, SC III [36-98] 53d-54b / *Othello*, ACT V, SC II [25-57] 239b-c

29 CERVANTES: *Don Quixote*, PART II, 427d-428a

30 BACON: *Advancement of Learning*, 101a

31 DESCARTES: *Objections and Replies*, 162d-165d

32 MILTON: *Paradise Lost*, BK XII [436-445] 328b-329a

33 PASCAL: *Provincial Letters*, 71b-80b; 128b-137b / *Pensées*, 554 270a; 862, 343a; 870 344a-b; 904-905 348b-349a; 923 351b

35 LOCKE: *Toleration*, 12a / *Human Understanding*, BK IV, CH XX, SECT 10 391c-392a

36 STERNE: *Tristram Shandy*, 221a-224a; 257a-259b; 260b-261a; 373b-376a

40 GIBBON: *Decline and Fall*, 193a-b; 297c-d

41 GIBBON: *Decline and Fall*, 329d; 334b-c

44 BOSWELL: *Johnson*, 173d-174a; 481c

46 HEGEL: *Philosophy of History*, PART IV, 331d-332c; 338a-d; 349d-350a

51 TOLSTOY: *War and Peace*, BK I, 38b; 43b-44b; BK IV, 183c-d; BK XI, 476c-478a

52 DOSTOEVSKY: *Brothers Karamazov*, BK II, 21d-22b; BK III, 80c-81a

2d. Sacrifices and propitiations

OLD TESTAMENT: *Genesis*, 4:1-16; 8:18-22; 15:6-17; 22 / *Exodus*, 8:1,25-29; 9:1; 10:3-11,24-26; 12:1-13:16; 20:24-26; 22:29-30; 23:19; 24:5-8; 29-30; 34:19-20,26; 35:20-21,29 / *Leviticus*, 1-10; 12; 14:1-32; 16-17; 19:5-7; 21-23; 27 / *Numbers*, 3:12-13; 5-9; 10:10; 15-16; 18:1-19:6; 28-29; 31:25-54 / *Deuteronomy*, 12; 14:22-29; 15:19-21; 16:1-17; 17:1; 21:1-9; 26:10-15 / *Joshua*, 8:30-31; 22:9-12,21-29 —(*D*) *Josue*, 8:30-31; 22:9-12,21-29 / *Judges*, 6:19-21,25-28; 11:28-40; 13:15-23 / *I Samuel*, 1:11,19-28; 2:12-17,27-29; 6:13-15; 7:8-10; 13:5-14; 15:1-23 esp 15:21-23—(*D*) *I Kings*, 1:11,19-28; 2:12-17,27-29; 6:13-15; 7:8-10; 13:5-14; 15:1-23 esp 15:21-23 / *I Kings*, 8:62-64; 9:25; 18:16-39—(*D*) *III Kings*, 8:62-64; 9:25; 18:16-39 / *II Kings*, 16:12-16 —(*D*) *IV Kings*, 16:12-16 / *I Chronicles*, 29:1-9,14,20-21—(*D*) *I Paralipomenon*, 29:1-9,14,20-21 / *II Chronicles*, 7:1-7; 29:20-35; 35:1-19—(*D*) *II Paralipomenon*, 7:1-7; 29:20-35; 35:1-19 / *Ezra*, 8:35—(*D*) *I Esdras*, 8:35 / *Nehemiah*, 10:29-39—(*D*) *II Esdras*, 10:29-39 / *Job*, 1:5 / *Psalms*, 4:5; 27:6; 40:6; 50; 51:16-19; 54:6; 66:15; 107:22—(*D*) *Psalms*, 4:6; 26:6; 39:7; 49; 50:18-21; 53:8; 65:15; 106:22 / *Proverbs*, 3:9-10; 15:8; 21:3,27 / *Isaiah*, 1:11-17; 43:23-24; 53:10; 66:20-21—(*D*) *Isaias*, 1:11-17; 43:23-24; 53:10; 66:20-21 / *Jeremiah*, 7:21-23—(*D*) *Jeremias*, 7:21-23 / *Ezekiel*, 43:18-27; 44:7,30; 45:13-46:24—(*D*) *Ezechiel*, 43:18-27; 44:7,30; 45:13-46:24 / *Hosea*, 6:6; 8:11-9:4—(*D*) *Osee*, 6:6; 8:11-9:4 / *Joel*, 2:12-14 / *Amos*, 4:4-5; 5:21-27 / *Micah*, 6:6-8—(*D*) *Micheas*, 6:6-8 / *Malachi*, 1:7-14; 3:3-10—(*D*) *Malachias*, 1:7-14; 3:3-10

APOCRYPHA: *Judith*, 16:16-19—(*D*) OT, *Judith*, 16:22-23 / *Ecclesiasticus*, 7:9,31; 14:11; 30:19; 34:18-20; 35:1-12—(*D*) OT, *Ecclesiasticus*, 7:11,33-35; 14:11; 30:19-20; 34:21-24; 35:1-15 / *Song of Three Children*, 14-17—(*D*) OT, *Daniel*, 3:37-40 / *Bel and Dragon*, 1-22—(*D*) OT, *Daniel*, 14:1-21 / *I Maccabees*, 4:49-56—(*D*) OT, *I Machabees*, 4:49-56 / *II Maccabees*, 1:18-36; 2:9-11; 3:31-35—(*D*) OT, *II Machabees*, 1:18-36; 2:9-11; 3:31-35

NEW TESTAMENT: *Matthew*, 5:22-24; 9:13; 12:7; 26:26-29 / *Mark*, 12:32-33,41-44; 14:22-25 / *Luke*, 2:22-24; 21:1-4; 22:14-20 / *John*, 11:51-52 / *Romans*, 5:7-11; 12:1 / *I Corinthians*, 5:7; 11:23-29; 15:3 / *II Corinthians*, 5:14-21 / *Ephesians*, 5:2 / *Hebrews*, 5:1-3; 7:26-27; 8:3-4; 9:1-10:22; 11:4,17; 13:9-16 / *I Peter*, 1:18-19; 2:5,24; 4:1 / *I John*, 1:7; 3:16

4 HOMER: *Iliad*, BK I [1-120] 3a-4b; [304-317] 6b; [364-392] 6d-7a; [428-471] 7c-8a; BK II [394-431] 14a-b; BK VI [263-311] 42d-43b; BK VII [313-326] 49b; BK IX [527-549] 62c; BK XII [1-33] 82a-b; BK XXIII [54-261] 161d-163d; BK XXIV [64-76] 171d-172a / *Odyssey*, BK III [1-11] 193a; BK IX [543-555] 234d-235a; BK XII [352-365] 253d-254a; BK XIV [233-261] 262c-d

5 AESCHYLUS: *Persians* [215-225] 17c; [517-693] 20c-22b / *Seven Against Thebes* [265-282] 30b / *Agamemnon* [40-257] 52c-54d esp [205-238] 54b-c; [1412-1425] 67a / *Choephoroe* [514-539] 75a-b

5 SOPHOCLES: *Oedipus at Colonus* [461-509] 118b-d / *Ajax* [646-692] 148c-149a / *Electra* [404-471] 159b-d

(*2. The virtue and practice of religion: piety as justice to God. 2d. Sacrifices and propitiations.*)

5 EURIPIDES: *Heracleidae* [403–629] 251c-253c / *Ion* [247–282] 284a-c / *Electra* [998–1034] 336b-c / *Hecuba* [501–582] 357a-d / *Phoenician Maidens* [896–1018] 386a-387b / *Iphigenia Among the Tauri* 411a-424d esp [1–41] 411a-b, [456–471] 414c-d / *Iphigenia at Aulis* 425a-439d esp [87–110] 425d-426a, [358–365] 428a, [1164–1208] 435d-436a

5 ARISTOPHANES: *Peace* [180–194] 528a; [362–426] 530b-d; [922–1022] 536c-537c / *Plutus* [1107–1209] 641a-642d

6 HERODOTUS: *History*, BK I, 6a; 32d-33a; 48c; BK II, 57b-58b; 59a; 72d-73a; 77c-d; BK IV, 125a-b; 134b-d; 142b-c; 157b; BK V, 174d-175b; BK VI, 199d-200a; 200d; BK VII, 226c; 235a; 248c-d; 250c-d; BK VIII, 267a; 282b-c

7 PLATO: *Phaedrus*, 122d-123a / *Symposium*, 163a / *Euthyphro*, 198a-c / *Phaedo*, 247a / *Republic*, BK I, 295d-296a; 297b-c; BK II, 313d-314d / *Critias*, 484d-485a / *Laws*, BK IV, 683a-b; BK VI, 712a; BK VII, 719b-d; 721b-c; 724a-b; BK VIII, 731d-732d; BK X, 768d-769c; 770d-771b; BK XII, 791d-792a

9 ARISTOTLE: *Ethics*, BK VIII, CH 9 [1160^{a}19–29] 412b-c / *Politics*, BK VI, CH 8 [1322^{b}19–29] 526c

12 LUCRETIUS: *Nature of Things*, BK I [80–101] 2a-b; BK V [1194–1203] 76d

13 VIRGIL: *Aeneid*, BK I [728–740] 123a-b; BK II [108–136] 127a-b; BK III [356–462] 157a-160a esp [404–440] 158a-159a; [525–550] 161b-162a; BK IV [48–67] 168b-169a; [195–237] 172a-173b; [450–456] 179b; BK V [42–103] 188a-190a; [762–778] 207a-b; BK VI [212–263] 216b-218a; BK XII [166–215] 358b-360a

14 PLUTARCH: *Theseus* 1a-15a,c passim / *Romulus*, 25b-26a / *Themistocles*, 94a-b / *Camillus*, 108d-109c / *Fabius*, 142d-143a / *Pelopidas*, 239d-240c / *Marcellus*, 248c-249d / *Aristides*, 273b-c / *Agesilaus*, 483a-b

15 TACITUS: *Annals*, BK XIII, 140d-141a; BK XIV, 148d-149a; BK XV, 168a-b / *Histories*, BK II, 215a; BK IV, 282d-283b

18 AUGUSTINE: *City of God*, BK X, CH 1 298b,d-299d; CH 3–7 300b-303a; CH 11 305b-306d; CH 16–21 308b-312a; CH 24, 313a-b; CH 25–26, 314b-315b; CH 31 319b-d

20 AQUINAS: *Summa Theologica*, PART I-II, Q 101, A 4 269a-270b; Q 102, A 3 272b-276c; A 5, REP 2 283c-292c; Q 103, A 1, REP 1 298b-299b; A 2, ANS 299b-300d; PART II-II, Q 2, A 7, ANS and REP 2 396a-397c; Q 182, A 2, REP 3 621d-623a; PART III, Q 22 827c-833a; Q 62, A 5 862b-863a; PART III SUPPL, Q 71 900d-917b passim

21 DANTE: *Divine Comedy*, PARADISE, V [13–84] 112b-113a

23 HOBBES: *Leviathan*, PART II, 162d; 163b; PART III, 197d-198a; 204b-c

25 MONTAIGNE: *Essays*, 250b-251c

35 LOCKE: *Toleration*, 12a-13a

38 MONTESQUIEU: *Spirit of Laws*, BK XXV, 211a-c

40 GIBBON: *Decline and Fall*, 93b; 98a; 121a-b; 349c-350b; 397b; 460a-b; 461d; 463a-c; 547b

41 GIBBON: *Decline and Fall*, 226d-227b

44 BOSWELL: *Johnson*, 482a-b

46 HEGEL: *Philosophy of History*, PART I, 227c-228a; PART III, 305b-c

47 GOETHE: *Faust*, PART II [8568–8590] 208b-209a

2e. Fasting and almsgiving

OLD TESTAMENT: *Exodus*, 34:27-28 / *Leviticus*, 19:9-10; 23:22; 25:35-37 / *Deuteronomy*, 15:7-11; 24:17-22; 26:12-13 / *Judges*, 20:24-28 / *I Samuel*, 7:3-6—(*D*) *I Kings*, 7:3-6 / *II Samuel*, 12:15-23—(*D*) *II Kings*, 12:15-23 / *Ezra*, 8:21-23; 10:6—(*D*) *I Esdras*, 8:21-23; 10:6 / *Esther*, 4:1-3,15-17 / *Job*, 29:11-16; 31:16-22 / *Psalms*, 35:13; 41:1-3; 69:10-11; 109:21-24—(*D*) *Psalms*, 34:13; 40:2-4; 68:10-11; 108:21-24 / *Proverbs*, 3:27-28; 11:24; 14:21,31; 19:17; 21:13,26; 22:9; 28:27; 29:7 / *Ecclesiastes*, 11:1-2 / *Isaiah*, 58:3-12—(*D*) *Isaias*, 58:3-12 / *Jeremiah*, 14:12—(*D*) *Jeremias*, 14:12 / *Ezekiel*, 18:4-21—(*D*) *Ezechiel*, 18:4-21 / *Daniel*, 10:2-3 / *Joel*, 2:12-18 / *Zechariah*, 7—(*D*) *Zacharias*, 7

APOCRYPHA: *Tobit*, 1:16-17; 2; 4:7-11,16-17; 12:8-10; 14:10-11—(*D*) OT, *Tobias*, 1:19-20; 2; 4:7-12,17-18; 12:8-10; 14:10-11 / *Judith*, 4:13—(*D*) OT, *Judith*, 4:10-11 / *Ecclesiasticus*, 3:30; 4:1-8; 7:10,32-33; 12:1-7; 14:13; 17:22-23; 29:1-2,8-13,20; 34:26; 35:2; 40:24—(*D*) OT, *Ecclesiasticus*, 3:33; 4:1-8; 7:9-10,36-37; 12:1-5; 14:13; 17:18-19; 29:1-2,11-17,26; 34:31; 35:4; 40:24

NEW TESTAMENT: *Matthew*, 4:1-4; 5:42; 6:1-4,16-18; 9:14-15; 10:8,40-42; 17:14-22; 19:16-22 / *Mark*, 2:18-20; 9:24-29; 10:17-22; 12:41-44 / *Luke*, 3:11; 4:1-4; 5:33-35; 6:30,38; 11:41; 12:33; 14:12-14; 18:11-12,18-23; 21:1-4 / *Acts*, 10:1-4; 20:35 / *Romans*, 12:8 / *I Corinthians*, 13:3 / *II Corinthians*, 6:4-6; 8-9 / *Galatians*, 2:10 / *I Timothy*, 6:17-19

6 HERODOTUS: *History*, BK IV, 156d-157a

18 AUGUSTINE: *City of God*, BK XXI, CH 22 576a-c; CH 27, 583a-584c

20 AQUINAS: *Summa Theologica*, PART II-II, Q 3, A 1, ANS 400c-401a; Q 32 540a-550a; Q 187, A 2 665a-666a; A 3, ANS and REP 4 666a-669b; AA 4-5 669b-673b; PART III SUPPL, Q 71, A 9, ANS and REP 1-2,6 910d-912b

33 PASCAL: *Provincial Letters*, 66a; 91a-94a

40 GIBBON: *Decline and Fall*, 82a; 197b-d; 198b-d; 596c-597a

41 GIBBON: *Decline and Fall*, 110d-111c; 232c; 233a-c

42 KANT: *Science of Right*, 443b-d

48 MELVILLE: *Moby Dick*, 60b-65a

2f. Purificatory rites: the remission of sin by baptism and penance

OLD TESTAMENT: *Exodus*, 19:9–11,14–15; 30:17–21 / *Leviticus*, 4–6; 7:1–7; 9; 11–17; 19:20–22 / *Numbers*, 5:5–31; 6:9–12; 8:5–7; 15:22–29; 19; 31:19–24 / *Deuteronomy*, 21:1–9; 23:9–11 / *I Samuel*, 3:12–14—(*D*) *I Kings*, 3:12–14 / *II Chronicles*, 29–30—(*D*) *II Paralipomenon*, 29–30 / *Nehemiah*, 13:22—(*D*) *II Esdras*, 13:22 / *Psalms*, 51:1–2,7–10—(*D*) *Psalms*, 50:3–4,9–12 / *Isaiah*, 1:16–18—(*D*) *Isaias*, 1:16–18 / *Ezekiel*, 36:24–25; 43:18–27—(*D*) *Ezechiel*, 36:24–25; 43:18–27

APOCRYPHA: *Ecclesiasticus*, 34:25—(*D*) OT, *Ecclesiasticus*, 34:30 / *I Maccabees*, 4:38–61—(*D*) OT, *I Machabees*, 4:38–61 / *II Maccabees*, 1:18–36—(*D*) OT, *II Machabees*, 1:18–36

NEW TESTAMENT: *Matthew*, 3; 15:1–20; 16:19; 18:18; 20:20–23; 23:25–26; 28:18–20 / *Mark*, 1:4–8; 10:35–40; 16:16 / *Luke*, 2:22; 3:3,16; 12:50; 13:1–5 / *John*, 1:25–33; 3:5,22–27; 13:1–15; 15:1–3; 20:22–23 / *Acts*, 1:5; 2:37–41; 3:19; 5:31; 8:12–17,20–22,35–38; 10:47–48; 11:16,18; 13:23–24; 17:30–31; 19:1–5; 21:26; 22:16; 26:19–20 / *Romans*, 2:4–5; 6 / *I Corinthians*, 6:11; 12:13 / *II Corinthians*, 7:9–10 / *Galatians*, 3:27 / *Ephesians*, 4:5 / *I Peter*, 3:20–21

4 HOMER: *Iliad*, BK I [446–451] 7c; BK VI [263–285] 42d-43a; BK IX [173–181] 58d-59a; BK XXIV [281–313] 174b-c / *Odyssey*, BK III [430–446] 197c; BK XII [325–338] 253c; BK XXII [478–501] 310d-311a,c

5 AESCHYLUS: *Choephoroe* [1021–1076] 80a-d / *Eumenides* [276–298] 84a-b; [436–469] 86a-b

5 SOPHOCLES: *Oedipus at Colonus* [461–509] 118b-d / *Ajax* [646–692] 148c-149a

6 HERODOTUS: *History*, BK I, 8b-c; 45a; BK II, 56d-57a; BK IV, 136d

6 THUCYDIDES: *Peloponnesian War*, BK III, 442c-443a

7 PLATO: *Cratylus*, 96a-b

10 HIPPOCRATES: *Sacred Disease*, 154a-155d esp 155c-d

13 VIRGIL: *Aeneid*, BK III [270–283] 154b; BK IV [474–521] 180a-181b; BK VI [212–235] 216b-217b

14 PLUTARCH: *Solon*, 68a-d

15 TACITUS: *Histories*, BK IV, 282d-283a

18 AUGUSTINE: *Confessions*, BK I, par 17–18 5b-d; BK IV, par 8 21a-b; BK IX, par 12 64d-65a / *City of God*, BK X, CH 9–10 303d-305b; CH 26–28 314d-316d; BK XIII, CH 7 362d-363b; BK XXI, CH 16 573b-574a

20 AQUINAS: *Summa Theologica*, PART I–II, Q 81, A 1, ANS 163a-164d; Q 102, A 5, ANS and REP 3–9 283c-292c; Q 113, A 3, REP 1 362c-363c; PART II–II, Q 10, A 12, REP 5 436b-437d; PART III, Q 60, A 6, ANS 851b-852b; Q 65, A 1, ANS and REP 3 879c-881d; PART III SUPPL, Q 71, A 9, REP 3 910d-912b

21 DANTE: *Divine Comedy*, HELL, IV [23–42] 5c-d; PURGATORY, I 53a-54c; XXVII–XXXIII 94c-105d passim; PARADISE, XIX [58–85] 135c-d; XXX [1–105] 151d-152d; XXXII [61–84] 155b-c

22 CHAUCER: *Parson's Tale* 495a-550a esp par 1–22 495a-510b, par 85–103 543a-550a

23 HOBBES: *Leviathan*, PART III, 206c-207a; 211c-212b; 244d-245a

29 CERVANTES: *Don Quixote*, PART II, 427d-429d

32 MILTON: *Paradise Lost*, BK XII [436–445] 328b-329a

33 PASCAL: *Provincial Letters*, 71b-80b / *Pensées*, 870 344a-b; 923 351b

36 STERNE: *Tristram Shandy*, 221a-224a

37 FIELDING: *Tom Jones*, 89a-c

40 GIBBON: *Decline and Fall*, 191b; 199b; 297d

41 GIBBON: *Decline and Fall*, 384b-385b; 664c-d [n 53]

46 HEGEL: *Philosophy of History*, PART I, 238c-d; PART IV, 332b-333b

51 TOLSTOY: *War and Peace*, BK IV, 183c-d

2g. Profanations and sacrileges

OLD TESTAMENT: *Exodus*, 20:1–10,24–26; 19:10–13,21–24 / *Leviticus*, 7:18–21; 10; 17:1–9; 18:21; 19:5–8,12; 20:2–3; 21–22; 24:10–16 / *Numbers*, 15:32–36; 18:32 / *Deuteronomy*, 5:6–14; 23:1–4 / *I Samuel*, 2:12–7:17 passim; 21:1–6—(*D*) *I Kings*, 2:12–7:17 passim; 21:1–6 / *II Samuel*, 6:6–7—(*D*) *II Kings*, 6:6–7 / *I Kings*, 21:9–13—(*D*) *III Kings*, 21:9–13 / *I Chronicles*, 13:9–10; 15:12–13—(*D*) *I Paralipomenon*, 13:9–10; 15:12–13 / *II Chronicles*, 26:16–21; 36:14–21—(*D*) *II Paralipomenon*, 26:16–21; 36:14–21 / *Nehemiah*, 13—(*D*) *II Esdras*, 13 / *Job*, 1:9–11; 2:9–10 / *Psalms*, 74:1–10,18—(*D*) *Psalms*, 73:1–10,18 / *Proverbs*, 30:9 / *Isaiah* passim, esp 1:1–31, 28:1–29, 36:13–37:38, 43:22–28, 47:1–15, 52:5, 56:2, 57:1–59:21, 65:1–7, 66:3–4, 66:17—(*D*) *Isaias*, passim, esp 1:1–31, 28:1–29, 36:13–37:38, 43:22–28, 47:1–15, 52:5, 56:2, 57:1–59:21, 65:1–7, 66:3–4, 66:17 / *Jeremiah* passim, esp 2:1–3:25, 5:2, 5:12, 6:15, 7:1–34, 8:12, 13:27, 14:10–12, 17:21–27, 23:9–40, 27:14–15, 29:8–9, 34:15–16, 36:1–32, 42:1–22, 44:1–30—(*D*) *Jeremias* passim, esp 2:1–3:25, 5:2, 5:12, 6:15, 7:1–34, 8:12, 13:27, 14:10–12, 17:21–27, 23:9–40, 27:14–15, 29:8–9, 34:15–16, 36:1–32, 42:1–22, 44:1–30 / *Ezekiel* passim, esp 5:5–11, 6:11–7:9, 7:24, 8:1–9:11, 11:14–21, 13:1–14:11, 16:15–59, 20:1–49, 22:8, 22:24–31, 23:1–49, 28:18, 35:9–14, 36:16–24, 39:7, 43:7–8, 44:5–13—(*D*) *Ezechiel* passim, esp 5:5–11, 6:11–7:9, 7:24, 8:1–9:11, 11:14–21, 13:1–14:11, 16:15–59, 20:1–49, 22:8, 22:24–31, 23:1–49, 28:18, 35:9–14, 36:16–24, 39:7, 43:7–8, 44:5–13 / *Daniel*, 5:2–4,23; 11:30–31 / *Hosea* passim—(*D*) *Osee* passim / *Amos*, 2:6–8 / *Zephaniah*, 3:4—(*D*) *Sophonias*, 3:4 / *Malachi* esp 1:7–13, 2:10–12—(*D*) *Malachias* esp 1:7–13, 2:10–12

(2. *The virtue and practice of religion: piety as justice to God.* 2g. *Profanations and sacrileges.*)

APOCRYPHA: *Wisdom of Solomon*, 1:6–7; 14:22–31—(*D*) OT, *Book of Wisdom*, 1:6–7; 14:22–31 / *Ecclesiasticus*, 23:7–15—(*D*) OT, *Ecclesiasticus*, 23:7–20 / *I Maccabees* passim, esp 1:20–2:48, 4:38–46, 7:41–42, 9:54–56—(*D*) OT, *I Machabees* passim, esp 1:20–2:48, 4:38–46, 7:41–42, 9:54–56 / *II Maccabees* passim, esp 5:15–18, 6:1–9, 8:1–4—(*D*) OT, *II Machabees* passim, esp 5:15–18, 6:1–9, 8:1–4

NEW TESTAMENT: *Matthew*, 5:34–35; 9:2–6; 12:1–15; 16:18–20; 21:12–13; 26:63–67 / *Mark*, 2:5–7,23–28; 3:28–29; 11:15–17; 14:61–65 / *Luke*, 6:1–10; 19:45–46 / *John*, 2:13–16; 10:33–36 / *Acts*, 8:9–24; 21:26–30 / *I Corinthians*, 11:17–34 / *I Timothy*, 6:1 / *II Timothy*, 3:1–2 / *Titus*, 2:5 / *Revelation*, 13:1–6; 16:8–11,21—(*D*) *Apocalypse*, 13:1–6; 16:8–11,21

5 AESCHYLUS: *Suppliant Maidens* 1a-14a,c esp [418–479] 6a-7a, [748–929] 10d-12d / *Persians* [709–842] 22c-24b / *Agamemnon* [320–398] 55c-56b; [681–715] 59b-c; [905–957] 61c-62b

5 SOPHOCLES: *Oedipus the King* [863–910] 107b-c / *Antigone* 131a-142d esp [441–470] 134d-135a / *Ajax* [748–783] 149c-d; [1316–1421] 154b-155a,c / *Electra* [404–471] 159b-d / *Philoctetes* [1423–1444] 195a,c

5 EURIPIDES: *Bacchantes* 340a-352a,c

5 ARISTOPHANES: *Clouds* [1464–1510] 506c-d / *Frogs* [354–371] 568b-c / *Thesmophoriazusae* [574–729] 606d-608c / *Plutus* [627–747] 636d-637d

6 HERODOTUS: *History*, BK I, 4d; 36b-c; BK II, 70d-71a; 78d; BK III, 92c-93a; 95c; BK V, 173d-174b; 176c-d; BK VI, 200c-d; 203a-b; 204d-205a; 211b-c; BK VIII, 283d; BK IX, 313a-314a

6 THUCYDIDES: *Peloponnesian War*, BK I, 380a-d; BK II, 400c-d; BK III, 434c-435a; BK IV, 471b-472a; BK VI, 516b-c

7 PLATO: *Phaedrus*, 122d-123a / *Phaedo*, 220a-c / *Republic*, BK II, 321a-324c / *Laws*, BK VII, 719c-d; BK IX, 743a-744a

13 VIRGIL: *Aeneid*, BK III [219–269] 153a-154b

14 PLUTARCH: *Numa Pompilius*, 54c-55a / *Alcibiades*, 162d-165b / *Coriolanus*, 185b-186a / *Marcellus*, 255a-d / *Caius Marius*, 350a-b / *Lysander*, 357a-b / *Agesilaus*, 483a-b / *Caesar*, 580b-581b / *Phocion*, 615b-d / *Cato the Younger*, 639d / *Demetrius*, 729d-731a; 734b-735a / *Dion*, 801b-c

20 AQUINAS: *Summa Theologica*, PART II-II, QQ 13–14 444b-452a

21 DANTE: *Divine Comedy*, HELL, XIV [1–72] 19c-20b; XIX [1–123] 26d-28a; PARADISE, IX [127–142] 120a; XVIII [118–136] 134d-135a

22 CHAUCER: *Parson's Tale*, par 35–38, 520b-522b

23 HOBBES: *Leviathan*, PART I, 90d; PART II, 163a-b; PART III, 180b-c

30 BACON: *Advancement of Learning*, 100d

32 MILTON: *Lycidas* [108–131] 30a-b / *Samson Agonistes* [433–447] 349a

33 PASCAL: *Provincial Letters*, 94a-97a

36 STERNE: *Tristram Shandy*, 256a-b

38 MONTESQUIEU: *Spirit of Laws*, BK XII, 85d-86a

40 GIBBON: *Decline and Fall*, 180a; 353a; 357b-358a

41 GIBBON: *Decline and Fall*, 42b; 379b-c; 380c-d

43 MILL: *Liberty*, 307d-309a

52 DOSTOEVSKY: *Brothers Karamazov*, BK III, 64c-67a

3. The religious life: religious offices and the religious community

3a. The Jewish conception of the religious community: the Torah and the Temple

OLD TESTAMENT: *Genesis*, 13:14–17; 15; 17; 18:17–19; 22:15–18; 26:1–6; 27:22–29; 28; 32:24–28; 48–49 / *Exodus* passim, esp 2:23–3:22, 4:18–31, 6:1–8, 12:31–13:22, 19:5–6, 20:1–17, 25:1–31:18, 35:1–40:36 / *Leviticus* passim, esp 18:1–5, 26:1–45 / *Numbers* passim / *Deuteronomy* passim, esp 4–12, 23:1–8, 28:1–33:29 / *Joshua*, 1:8–15; 3–4; 22:1–6; 24:14–28—(*D*) *Josue*, 1:8–15; 3–4; 22:1–6; 24:14–28 / *I Samuel*, 8—(*D*) *I Kings*, 8 / *II Samuel*, 6–7—(*D*) *II Kings*, 6–7 / *I Kings*, 5:1–9:9—(*D*) *III Kings*, 5:1–9:9 / *II Kings*, 11:17; 17; 25:8–15—(*D*) *IV Kings*, 11:17; 17; 25:8–15 / *I Chronicles*, 13; 15–17; 22:1–29:10—(*D*) *I Paralipomenon*, 13; 15–17; 22:1–29:10 / *II Chronicles*, 2–7; 24:4–14; 29–31; 33:8; 34:1–35:19; 36:14–21—(*D*) *II Paralipomenon*, 2–7; 24:4–14; 29–31; 33:8; 34:1–35:19; 36:14–21 / *Ezra* passim—(*D*) *I Esdras* passim / *Nehemiah*, 1:5–9; 8–9—(*D*) *II Esdras*, 1:5–9; 8–9 / *Esther*, 3:8–4:17; 7–9 / *Psalms* passim, esp 5:7, 23:1–6, 27:1–14, 33:12, 40:8–10, 44:1–26, 50:1–7, 65:4, 68:1–35, 78:1–72, 79:1–13, 81:1–16, 84:1–12, 89:15–37, 105:1–106:48, 111:1–10, 119:1–176, 122:1–9, 124:1–8, 126:1–6, 132:1–18, 135:1–137:9, 138:2—(*D*) *Psalms* passim, esp 5:8, 22:1–6, 26:1–14, 32:12, 39:8–10, 43:1–26, 49:1–7, 64:5, 67:1–36, 77:1–72, 78:1–13, 80:1–17, 83:1–13, 88:16–38, 104:1–105:48, 110:1–10, 118:1–176, 121:1–9, 123:1–8, 125:1–7, 131:1–18, 134:1–136:9, 137:2 / *Proverbs*, 6:23 / *Isaiah* passim, esp 2:2–3, 14:1–3, 30:18–26, 35:1–10, 40:1–2, 42:1–6, 43:1–12, 43:22–28, 44:1–5, 44:21,46:3–4, 49:1–50:11, 54:1–17, 56:1–7, 60:1–63:19, 65:1–66:24—(*D*) *Isaias* passim, esp 2:2–3, 14:1–3, 30:18–26, 35:1–10, 40:1–2, 42:1–6, 43:1–12, 43:22–28, 44:1–5, 44:21, 46:3–4, 49:1–50:11, 54:1–17, 56:1–7, 60:1–63:19, 65:1–66:24 / *Jeremiah* passim, esp 2–5, 7:1–7, 7:28–34, 11:1–23, 17:12–13, 18:1–10, 26:1–7, 30:1–35:19—(*D*) *Jeremias* passim, esp 2–5, 7:1–7, 7:28–34, 11:1–23, 17:12–13, 18:1–10, 26:1–7, 30:1–35:19 / *Lamentations*, 2:7 / *Ezekiel* passim, esp 8:6–18, 11:15–20, 16:1–63,

20:1-49, 23:38-39, 33:1-37:28, 40:1-43:27—(D) *Ezechiel* passim, esp 8:6-18, 11:15-20, 16:1-63, 20:1-49, 23:38-39, 33:1-37:28, 40:1-43:27 / *Hosea* passim, esp 11—(D) *Osee* passim, esp 11 / *Amos* passim, esp 3:1-2 / *Jonah*, 2:4—(D) *Jonas*, 2:5 / *Micah*, 4:1-2—(D) *Micheas*, 4:1-2 / *Habakkuk*, 2:20—(D) *Habacuc*, 2:20 / *Zephaniah* passim, esp 3:8-20—(D) *Sophonias* passim, esp 3:8-20 / *Haggai*—(D) *Aggeus* / *Zechariah* passim, esp 2:10-13, 6:12-15, 8:9-23, 14:20-21—(D) *Zacharias* passim, esp 2:10-13, 6:12-15, 8:9-23, 14:20-21 / *Malachi* passim, esp 1:1-3, 3:1—(D) *Malachias* passim, esp 1:1-3, 3:1

APOCRYPHA: *Tobit*, 14:4-9—(D) OT, *Tobias*, 14:6-11 / *Judith*, 4-5; 7:19-10:10; 13-16—(D) OT, *Judith*, 4-5; 7:18-10:10; 13-16 / *Wisdom of Solomon*, 9:8—(D) OT, *Book of Wisdom*, 9:8 / *Ecclesiasticus*, 9:15; 17:11-21; 19:20,24; 24:23; 39:1-11; 42:1-2; 44:19-45:5; 49:12-50:21—(D) OT, *Ecclesiasticus*, 9:12; 17:9-17; 19:18,21; 24:32-33; 39:1-15; 42:1-2; 44:20-45:6; 49:14-50:23 / *Baruch*, 2:26—(D) OT, *Baruch*, 2:26 / *I Maccabees*, 1-9 passim—(D) OT, *I Machabees*, 1-9 passim / *II Maccabees* passim, esp 3—(D) OT, *II Machabees* passim, esp 3

15 TACITUS: *Histories*, BK V, 295d-296a; 297d-298a

18 AUGUSTINE: *City of God*, BK IV, CH 34 206d-207a,c; BK XVI, CH 16 433c-434a; CH 18 434c; CH 21-28 435a-440b passim; CH 32 441c-442c; BK XVII, CH 7 458c-459d; BK XIX, CH 22 525b-c

19 AQUINAS: *Summa Theologica*, PART I, Q 21, A 4, REP 2 126c-127c

20 AQUINAS: *Summa Theologica*, PART I-II, Q 98, AA 4-5 242b-244b; Q 99, AA 3-5 247a-250a; Q 101, A 4, ANS and REP 4 269a-270b; Q 102, A 4 276d-283c; A 6 292c-298a; QQ 104-105 304a-321a

23 HOBBES: *Leviathan*, PART I, 82d-83a; PART II, 137d-138a; 160b-c; PART III, 177c-180d; 182d-186c; 198b; 199b-204a; PART IV, 269a

32 MILTON: *Paradise Lost*, BK XII [101-269] 321b-325a; [315-356] 326a-327a

33 PASCAL: *Pensées*, 610-612 280b-282b; 619-641 284b-290a; 713-718 304b-308b

40 GIBBON: *Decline and Fall*, 179d-183a esp 180a-181a; 208a-c; 352c-354d esp 354a-b

46 HEGEL: *Philosophy of History*, PART I, 245d-247b; PART III, 305b-c; PART IV, 322a-b

3b. The Christian conception of the church: the doctrine of the mystical body of Christ

OLD TESTAMENT: *Song of Solomon*—(D) *Canticle of Canticles*

NEW TESTAMENT: *Matthew*, 4:18-22; 5:38-48; 8:21-22; 9:35-10:42; 13; 16:18-19,24; 18:15-20; 19:19; 20:25-28; 22:34-40; 24:14; 25; 28:16-20 / *Mark*, 10:42-45; 12:28-34; 13:10; 16:14-20 / *Luke*, 4:43-44; 6:27-38; 9:1-6; 10:16,25-37; 12:11-12; 22:24-30; 24:47 / *John*, 4:34-38; 10; 13:31-17:26; 20:20-23; 21:15-17 / *Acts* passim, esp 1:8, 2:1-47, 4:32-5:11, 16:1-40, 22:14-15 / *Romans* esp 1:8-16, 2:5-4:25, 8:14-17, 9:1-11:14, 12:1-15:7 / *I Corinthians* esp 4:9-13, 10:16-17, 12:28-29, 13:1-13, 15:1-11 / *II Corinthians* passim, esp 1-2, 5-9 / *Galatians*, 1:1-2:9 esp 1:15-16; 3-4; 5:14; 5:22-6:2 / *Ephesians* esp 1:22-23, 3:8-12, 4:1-5:2, 5:23-33 / *Philippians*, 1:27-2:4 / *Colossians* esp 1:15-2:3, 3:12-15 / *I Thessalonians*, 4:9-10 / *Hebrews*, 3:5-6; 10:24-25; 13:1-3 / *James*, 2:8-17 / *I Peter*, 1:22; 2:1-10 / *I John* / *II John*

18 AUGUSTINE: *City of God*, BK I, CH 35 149b-c; BK X, CH 20 311b-c; BK XI-XXII 322b,d-618d esp BK XIII, CH 21 371a-c, BK XVII, CH 9 461b-d, CH 11 462c-463a, CH 15-16 465b-466d, CH 20 469a-470c, BK XVIII, CH 47-50 500d-502d, BK XX, CH 7-12 535b-541d, BK XXII, CH 18 603c-604b / *Christian Doctrine*, BK I, CH 16 628c-d; CH 18 628d-629a; BK III, CH 31-32 669c-670a

20 AQUINAS: *Summa Theologica*, PART I-II, Q 102, A 4, REP 4 276d-283c; PART II-II, Q 1, AA 9-10 388d-390d; Q 2, AA 5-8 394b-398b; Q 5 410a-413c; QQ 183-189 625a-700d; PART III, Q 8 756c-763b; PART III SUPPL, Q 71, AA 9-11 910d-914b; Q 95 1042c-1049d esp A 3, ANS and REP 4 1045b-1046d, A 4, REP 5 1046d-1047d; Q 99, A 4 1083a-1084a

21 DANTE: *Divine Comedy*, PURGATORY, IX [73-145] 66c-67b; XVI [58-129] 77c-78a; XIX [127-141] 82d-83a; XXIX 97d-99b; XXXII-XXXIII 102b-105d; PARADISE, XXIII-XXIV 141b-144b; XXVII [1-66] 147b-148a; XXX [100]-XXXII [144] 152d-156a

23 HOBBES: *Leviathan*, PART II, 151a; PART III, 198a-199a; 204a-207b; PART IV, 247a-249b; 275a-278d

33 PASCAL: *Pensées*, 473-484 256b-258b; 646 291b; 857-861 342a; 867-905 343b-349a

35 LOCKE: *Toleration*, 4b-5d

38 ROUSSEAU: *Social Contract*, BK IV, 436a-438c

46 HEGEL: *Philosophy of History*, PART III, 307b-310c; PART IV, 315d

52 DOSTOEVSKY: *Brothers Karamazov*, BK V, 129c-135a

54 FREUD: *Group Psychology*, 674c-d; 691d-692a

3c. The nature and organization of the religious community

3c(1) The institution of the priesthood and other ecclesiastical offices

OLD TESTAMENT: *Genesis*, 14:18-20/*Exodus*, 19:6; 28-29; 30:17-21,30; 39; 40:12-15 / *Leviticus* passim, esp 4:3-12, 7:5-10, 8:1-10:20, 14:13, 16:1-34, 21:1-22:16, 24:1-9 / *Numbers*, 1:49-54; 3-5; 6:10-11,16-27; 8; 10:1-10; 15:24-28; 16:1-19:7; 20:23-29; 25:6-13; 27:18-23; 35:24-28,32 / *Deuteronomy*, 10:8-9; 12:18-19; 17:8-13; 18:5-7; 20:1-4; 21:5; 24:8; 26:1-

(3c. *The nature and organization of the religious community.* 3c(1) *The institution of the priesthood and other ecclesiastical offices.*)

4; 33:8–11 / *Joshua*, 3:3,6–17; 4:1–18; 6:1–20; 8:33; 19:51—(*D*) *Josue*, 3:3,6–17; 4:1–18; 6:1–20; 8:33; 19:51 / *I Samuel*, 2:12–17,27–36; 4:10–18; 21:1–9; 22:9–21—(*D*) *I Kings*, 2:12–17,27–36; 4:10–18; 21:1–9; 22:9–21 / *II Samuel*, 15:24–29—(*D*) *II Kings*, 15:24–29 / *I Kings*, 8:1–11; 12:30–32; 13:33–34—(*D*) *III Kings*, 8:1–11; 12:30–32; 13:33–34 / *II Kings*, 12:4–10; 16:10–16; 17:26–28,32; 22:3–14; 23:4–9,20—(*D*) *IV Kings*, 12:4–10; 16:10–16; 17:26–28,32; 22:3–14; 23:4–9,20 / *I Chronicles*, 15:11–27; 16:4–6,37–42; 23–26—(*D*) *I Paralipomenon*, 15:11–27; 16:4–6,37–42; 23–26 / *II Chronicles*, 5; 7:6; 8:14–15; 11:13–15; 13:9–12; 15:3; 19:8–11; 23:1–24:16; 29–31; 34:8–15; 35:1–9; 36:14—(*D*) *II Paralipomenon*, 5; 7:6; 8:14–15; 11:13–15; 13:9–12; 15:3; 19:8–11; 23:1–24:16; 29–31; 34:8–15; 35:1–9; 36:14 / *Ezra*, 1:1–5; 2; 6–12 passim, esp 6:16–20, 7:24–25, 8:24–30—(*D*) *I Esdras*, 1:1–5; 2; 6–12 passim, esp 6:16–20, 7:24–25, 8:24–30 / *Nehemiah*, 8; 10:37–39; 12:27–47; 13:4–11,28–31—(*D*) *II Esdras*, 8; 10:37–39; 12:27–46; 13:4–11,28–31 / *Psalms*, 110:4—(*D*) *Psalms*, 109:3 / *Isaiah*, 61:6; 66:20–21—(*D*) *Isaias*, 61:6; 66:20–21 / *Jeremiah*, 2:8; 5:30–31; 6:13; 8:10; 18:18; 23:1–4,11; 33:18–22—(*D*) *Jeremias*, 2:8; 5:30–31; 6:13; 8:10; 18:18; 23:1–4,11; 33:18–22 / *Lamentations*, 4:13,16 / *Ezekiel*, 7:26; 22:26; 34; 44:9–31; 45:4–5; 48:10–11—(*D*) *Ezechiel*, 7:26; 22:26; 34; 44:9–31; 45:4–5; 48:10–11 / *Hosea*, 4:4–10—(*D*) *Osee*, 4:4–10 / *Micah*, 3:11—(*D*) *Micheas*, 3:11 / *Zephaniah*, 3:4—(*D*) *Sophonias*, 3:4 / *Haggai*, 2:11–13—(*D*) *Aggeus*, 2:12–14 / *Zechariah*, 3; 6:9–13—(*D*) *Zacharias*, 3; 6:9–13 / *Malachi*, 1:6–2:9—(*D*) *Malachias*, 1:6–2:9

APOCRYPHA: *Ecclesiasticus*, 7:29,31; 45; 50—(*D*) OT, *Ecclesiasticus*, 7:31,33–35; 45; 50 / *I Maccabees*, 2:54; 4:42–53—(*D*) OT, *I Machabees*, 2:54; 4:42–53 / *II Maccabees*, 1:19–32; 3 passim; 4:7–29—(*D*) OT, *II Machabees*, 1:19–32; 3 passim; 4:7–29

NEW TESTAMENT: *Matthew*, 12:3–5; 16:18–19; 26:57–65 / *Mark*, 2:25–26; 14:53–64 / *Luke*, 6:3–4; 22:52–53,63–71 / *John*, 18:19–24 / *Acts*, 1:15–26; 6:1–8; 14:22–23; 20:28–35; 23:1–5 / *I Timothy*, 3; 5:17–22 / *II Timothy*, 1–3 / *Titus*, 1 / *Hebrews*, 2:17–3:2; 4:14–5:10; 6:18–9:28; 10:11–12,19–22 / *I Peter*, 2:5–10; 5 / *Revelation*, 1:5–6; 5:9–10; 20:6—(*D*) *Apocalypse*, 1:5–6; 5:9–10; 20:6

6 HERODOTUS: *History*, BK I, 32d-33a; BK II, 56d-57a; 60d-61b; BK IV, 125a-b; 135b-136a; BK V, 167d-168b; 171d-172a; 173d-174b; BK VI, 197d-198a; 200d; 211b-d; BK VII, 242d-243a; 250c-d; BK VIII, 278c; 284d-285b; BK IX, 295d-296c; 308a-c

7 PLATO: *Statesman*, 597c-598a / *Laws*, BK VI, 700d-701b; BK XII, 787b-c

9 ARISTOTLE: *Politics*, BK VI, CH 8 [1322^{b}19–29] 526c; BK VII, CH 9 [1329^{a}26–34] 533d

12 EPICTETUS: *Discourses*, BK I, CH 16, 122c-d

13 VIRGIL: *Aeneid*, BK II [108–136] 127a-b; [162–233] 128b-130b; BK III [356–462] 157a-160a; BK V [700–718] 205b-206a; BK VI [33–101] 212a-213b; BK VIII [280–305] 266b-267a

14 PLUTARCH: *Numa Pompilius*, 53d-56c / *Camillus*, 110b-d

15 TACITUS: *Annals*, BK IV, 67d-68a / *Histories*, BK IV, 285d-286a; 287a-b

18 AUGUSTINE: *City of God*, BK XVII, CH 4, 451c-d; CH 4–6, 455b-458a

20 AQUINAS: *Summa Theologica*, PART I-II, Q 91, A 5, CONTRARY 211c-212c; Q 98, A 5, REP 2–3 243c-244b; Q 103, A 1, REP 3 298b-299b; A 2, ANS and REP 1–2 299b-300d; PART II-II, Q 1, A 10 389d-390d; Q 11, A 2, REP 3 439a-440b; Q 184, AA 5–8 633c-639b; Q 185 639c-650b; Q 187, A 1 663c-665a; Q 189, A 7 695d-696c; PART III, Q 22 827c-833a; Q 26, A 1, REP 1 845b-846a; Q 64 870b-879c; Q 65, A 1, ANS and REP 3 879c-881d; A 2, ANS and REP 2 881d-882c; A 3, ANS and REP 2 882d-883d; A 4, ANS and REP 3 883d-884a,c

21 DANTE: *Divine Comedy*, PURGATORY, IX [73–145] 66c-67b

22 CHAUCER: *Prologue* [477–528] 167b-168a / *Prologue of Pardoner's Tale* 372a-374a / *Pardoner's Tale* [12,829–902] 381b-382b

23 HOBBES: *Leviathan*, PART I, 83a-84c; PART III, 177c-180d; 182d-186b; 199a; 200b-203b; 205a; 207b-240a; PART IV, 248b-250c; 266a-c; 272d-273a; 273d-274a; 275a-278d

24 RABELAIS: *Gargantua and Pantagruel*, BK II, 119b-122a passim; BK III, 186d-188c; 195d-196b; 219b-222b; BK IV, 273c-274b; 285c-297b

30 BACON: *Advancement of Learning*, 7d

32 MILTON: *Lycidas* [108–131] 30a-b

33 PASCAL: *Provincial Letters*, 160b-163b

35 LOCKE: *Human Understanding*, BK I, CH III, SECT 12, 115c-d

38 MONTESQUIEU: *Spirit of Laws*, BK XXV, 209d-210b

38 ROUSSEAU: *Social Contract*, BK IV, 436c

40 GIBBON: *Decline and Fall*, 82c-d; 194c-195a; 197a-b; 200b-c; 300d-301c; 350b-d; 457d-458b

41 GIBBON: *Decline and Fall*, 226d

44 BOSWELL: *Johnson*, 189a; 196a-c; 218c-220d; 313d-316d; 466b-467c

46 HEGEL: *Philosophy of History*, PART I, 224a-227d; 241a-b; PART III, 310a-c; PART IV, 332b-333b

48 MELVILLE: *Moby Dick*, 30a-36b esp 35a-36b

52 DOSTOEVSKY: *Brothers Karamazov*, BK V, 127b-137c passim; BK VI, 164a-165a; BK VII, 171a-180a passim

3c(2) Ecclesiastical government and hierarchy

OLD TESTAMENT: *Leviticus*, 21:10–15 / *Numbers*, 3:5–10 / *I Chronicles*, 23–24—(*D*) *I Paralipomenon*, 23–24 / *II Chronicles*, 19:11—(*D*) *II Paralipomenon*, 19:11

NEW TESTAMENT: *Matthew*, 16:18–19; 18:18; 20:25–28; 28:18–20 / *Mark*, 10:42–44; 13:34–35 / *Luke*, 22:24–30 / *Acts*, 1:21–26; 5:30–31; 6:1–6; 13:1–3; 15:1–30; 17:7,14–15; 20:28–35; 23:1–5; 26:9–12 / *I Timothy*, 3 / *Titus*, 1 esp 1:5 / *Hebrews*, 1:1–8; 3:1; 4:14–5:10; 6:19–10:21; 13:7 / *Revelation*, 11:15; 17:14—(*D*) *Apocalypse*, 11:15; 17:14

7 PLATO: *Laws*, BK XII, 787b-c

20 AQUINAS: *Summa Theologica*, PART II–II, Q 1, A 10 389d-390d; Q 2, A 6 395b-396a; Q 11, A 2, REP 3 439a-440b; PART III, Q 65, A 1, REP 3 879c-881d

21 DANTE: *Divine Comedy*, HELL, XXVII [67–132] 40c-41a; PURGATORY, XIX [127–141] 82d-83a

23 MACHIAVELLI: *Prince*, CH XI 16d-17d

23 HOBBES: *Leviathan*, PART III, 178c-180a passim, esp 179c; 198a-199a; 207b-240a; PART IV, 248a-249b; 266a-c; 273c-d; 275a-278d

24 RABELAIS: *Gargantua and Pantagruel*, BK IV, 288d-297b

30 BACON: *Advancement of Learning*, 101a

32 MILTON: *New Forcers of Conscience* 68a-b

33 PASCAL: *Pensées*, 871–877 344b-345a; 885 346a

35 LOCKE: *Toleration*, 4c-6a; 7c-8c

38 ROUSSEAU: *Social Contract*, BK IV, 436d [fn 1]

40 GIBBON: *Decline and Fall*, 194a-197b; 299b-300d; 302b-303c; 304a-d; 642d-643a

41 GIBBON: *Decline and Fall*, 154a-b; 214c-215c; 517a-d; 567c-569d; 582c-586a passim; 589b-d

44 BOSWELL: *Johnson*, 173b; 342a-b

46 HEGEL: *Philosophy of History*, PART I, 224a-227d; PART III, 310a-c

3c(3) The support of ecclesiastical institutions: tithes, contributions, state subsidy

OLD TESTAMENT: *Genesis*, 14:18–20; 28:18–22; 47:22,26 / *Exodus*, 13:2,12–13; 22:29–30; 23:18–19; 25:1–9; 29:27–34; 30:11–16; 34:19–20,25–26; 35:4–36:7 / *Leviticus*, 2:10; 5:13; 6:16–18,24–30; 7:6–15,30–36; 8:31; 10:12–20; 14:13; 22:10–13; 23 passim; 24:5–9; 25:32–34; 27 / *Numbers*, 3:12–13; 5:9–10; 7 passim, esp 7:3–9; 18:8–32; 31:25–54; 35:1–8 / *Deuteronomy*, 10:8–9; 12:5–6,19; 14:22–29; 16:16–17; 18:1–8; 26:1–16 / *Joshua*, 13:14,33; 14:3–5; 18:6–7; 21—(*D*) *Josue*, 13:14,33; 14:3–5; 18:6–7; 21 / *I Samuel*, 2:13–17—(*D*) *I Kings*, 2:13–17 / *II Kings*, 12; 22:3–7—(*D*) *IV Kings*, 12; 22:3–7 / *II Chronicles*, 24:4–14; 31:3–12; 34:8–13—(*D*) *II Paralipomenon*, 24:4–14; 31:3–12; 34:8–13 / *Ezra*, 8:24–30—(*D*) *I Esdras*, 8:24–30 / *Nehemiah*, 10:32–39; 12:44,47; 13:5,12—(*D*) *II Esdras*, 10:32–39; 12:43,46; 13:5,12 / *Proverbs*, 3:9–10 / *Isaiah*, 66:20–21—(*D*) *Isaias*, 66:20–21 / *Ezekiel*, 20:40–41; 44:27–31; 45:1–6; 48:8–21—(*D*) *Ezechiel*, 20:40–41; 44:27–31; 45:1–6; 48:8–21 / *Malachi*, 3:8–10—(*D*) *Malachias*, 3:8–10

APOCRYPHA: *Tobit*, 1:6–8—(*D*) OT, *Tobias*, 1:6–8 / *Ecclesiasticus*, 7:31; 35:8–11; 45:20–22—(*D*) OT, *Ecclesiasticus*, 7:33–35; 35:10–13; 45:25–27

NEW TESTAMENT: *Matthew*, 23:23 / *Luke*, 11:42; 18:12 / *I Corinthians*, 9:13–14 / *Hebrews*, 7:1–10

9 ARISTOTLE: *Politics*, BK II, CH 8 [1267^{b}30–36] 463c; CH 10 [1272^{a}18–21] 468c-d; BK VII, CH 10 [1330^{a}8–14] 534c; CH 12 [1331^{b}4–7] 536a

20 AQUINAS: *Summa Theologica*, PART II–II, Q 185, A 7 647c-649b; Q 187, AA 4–5 669b-673b; PART III, Q 65, A 1, REP 7 879c-881d

22 CHAUCER: *Prologue* [692–714] 171a-b / *Summoner's Tale* 285a-295a / *Prologue of Pardoner's Tale* 372a-374a / *Pardoner's Tale* [12,829–902] 381b-382b

23 HOBBES: *Leviathan*, PART III, 223a-224c; PART IV, 248d-249a; 278c

24 RABELAIS: *Gargantua and Pantagruel*, BK II, 99c-100a; BK IV, 295d-296a

26 SHAKESPEARE: *Henry V*, ACT I, SC I 533a-d

38 MONTESQUIEU: *Spirit of Laws*, BK XXV, 210b-211a; BK XXXI, 298b-302a

39 SMITH: *Wealth of Nations*, BK I, 56b-57a; BK V, 343b,d-356d esp 343b,d-346c, 347d-348a; 357c

40 GIBBON: *Decline and Fall*, 82d; 197b-198c; 301c-302b; 392c-393d; 597a-c

41 GIBBON: *Decline and Fall*, 417b-c

42 KANT: *Science of Right*, 444a-c

44 BOSWELL: *Johnson*, 219b-c; 342a-b

3d. The monastic life: the disciplines of asceticism

OLD TESTAMENT: *Numbers*, 6:1–21 / *Judges*, 13:5; 16:17 / *I Samuel*, 1:9–12,19–28—(*D*) *I Kings*, 1:9–11,19–28 / *Amos*, 2:11–12

NEW TESTAMENT: *Matthew*, 3:1–4; 4:1–2; 6:25–34; 19:10–12,21 / *Mark*, 1:2–6,12–13; 10:21 / *Luke*, 1:13–15,80; 3:2–4; 4:1–2; 12:22–36; 18:22 / *I Corinthians*, 7:1,7–8,25–40 / *II Corinthians*, 6:1–10

18 AUGUSTINE: *Confessions*, BK VIII, par 26–27 60b-c / *City of God*, BK I, CH 16–18 139c-140d

20 AQUINAS: *Summa Theologica*, PART I–II, Q 64, A 1, REP 3 66d-67c; Q 98, A 5, REP 2–3 243c-244b; Q 108, A 4 336b-337d; PART II–II, Q 184, A 5 633c-634c; AA 7–8 636a-639b; Q 185, A 6 646c-647c; A 8 649b-650b; QQ 186–189 650b-700d; PART III SUPPL, Q 89, A 2 1006b-1007c

21 DANTE: *Divine Comedy*, HELL, XXVII [67–132] 40c-41a; PARADISE, III 109b-110c; XI [28–139] 122b-123c; XII [31–126] 124a-125a

22 CHAUCER: *Prologue* [165–207] 162a-b / *Friar's Prologue* 277a-b / *Friar's Tale* 278a-284a / *Summoner's Prologue* 284b-285a / *Summoner's Tale* 285a-295a

(3. The religious life: religious offices and the religious community. 3d. The monastic life: the disciplines of asceticism.)

24 RABELAIS: *Gargantua and Pantagruel*, BK I, 32c-35a; 46a-54a; 60c-67d; BK II, 98b-d; 126a-d; BK III, 156d-158a; 165b-d; 168a-173d; 191a-b; 193d-194a; 195d-196b; BK IV, 253d-255a

26 SHAKESPEARE: *Midsummer-Night's Dream*, ACT I, SC I [67–78] 353a-b

30 BACON: *Advancement of Learning*, 7d; 71b-c

32 MILTON: *Il Penseroso* [156–176] 24b-25a

33 PASCAL: *Pensées*, 539 265b

38 MONTESQUIEU: *Spirit of Laws*, BK V, 19a; BK XIV, 105a-b

40 GIBBON: *Decline and Fall*, 191c-193c; 475d-476a; 533c-d; 593b,d-599a

43 MILL: *Liberty*, 290c-291c

44 BOSWELL: *Johnson*, 102a-b; 283a

46 HEGEL: *Philosophy of History*, PART I, 224b-d; 228b; 234d-235c; PART IV, 333b-d; 340d-341a; 353a-b

51 TOLSTOY: *War and Peace*, BK V, 218b-220b; BK VI, 273c-274a,c

52 DOSTOEVSKY: *Brothers Karamazov*, BK I, 11a-15a,c; BK II, 37c-38a; BK IV, 83c-84a; 85a-86b; BK VI 146b,d-170d passim, esp 164a-165a; BK VII, 171a-180a passim

4. Church and state: the issue concerning temporal and spiritual power

OLD TESTAMENT: *II Samuel*, 7—*(D) II Kings*, 7 / *I Kings*, 5-6; 8—*(D) III Kings*, 5-6, 8 / *I Chronicles*, 17—*(D) I Paralipomenon*, 17 / *II Chronicles*, 1-7; 19:11—*(D) II Paralipomenon*, 1-7; 19:11 / *Ezra*—*(D) I Esdras*

APOCRYPHA: *I Maccabees*, 11:26-27—*(D)* OT, *I Machabees*, 11:26-27 / *II Maccabees*, 7:30—*(D)* OT, *II Machabees*, 7:30

NEW TESTAMENT: *Matthew*, 17:24-27; 22:15-22—*(D) Matthew*, 17:23-26; 22:15-22 / *Mark*, 12:13-17 / *Luke*, 20:19-26 / *Acts*, 5:29 / *Romans*, 13:1-7 / *Titus*, 3:1 / *I Peter*, 2:13-17

9 ARISTOTLE: *Ethics*, BK VIII, CH 9 [1160a19-29] 412b-c

12 EPICTETUS: *Discourses*, BK I, CH 30 138a,c; BK II, CH 5, 143d-144a; BK IV, CH 3 224b-d

15 TACITUS: *Annals*, BK III, 59d-60c

18 AUGUSTINE: *Confessions*, BK III, par 15 17a-b / *City of God*, BK I, PREF 129a-d; BK IV, CH 33-34 206c-207a,c; BK V, CH 15-16 220d-221b; CH 25 228b-c; BK XI, CH 1 322b,d-323a; BK XV-XVIII 397b,d-507a,c esp BK XV, CH 1-5 397b,d-400c, BK XVII, CH 1-3 449a-451c, BK XVIII, CH 1-2 472b,d-473d; BK XIX, CH 5 513d-514b; CH 11 516d-517b; CH 14 520a-d; CH 17 522b-523a; CH 19-26 523b-529a

20 AQUINAS: *Summa Theologica*, PART I-II, Q 96, A 4, REP 2-3 233a-d; A 5, REP 2 233d-234d; PART II-II, Q 10, A 10 434c-435c; Q 12, A 2 443b-444b

21 DANTE: *Divine Comedy*, HELL, II [10–27] 2d; XXXIV [1–69] 51b-52a; PURGATORY, VI [58–151] 61b-62c; XIII [79–96] 72d; XVI [58–129] 77c-78a; XXXII [1]-XXXIII [78] 103c-105a esp XXXII [100–160] 102b-104a; PARADISE, VI [1–111] 113c-114d

23 HOBBES: *Leviathan*, PART I, 80d-81a; 82d-83a; 84a-c; PART II, 151a-c; 155d-156b; PART II-III, 159d-172a; PART III, 177c-191b; 193c-d; PART III-IV, 198a-258b; PART IV, 266a-c; 270c-d; 273c-274a; 274c-278d

26 SHAKESPEARE: *1st Henry VI*, ACT I, SC III 5b-6c; ACT III, SC I 14b-16b / *King John* 376a-405a,c esp ACT III, SC I [135–347] 387c-389d, ACT V, SC I [1–24] 399b-c, SC II 400a-401d / *2nd Henry IV*, ACT IV, SC II [1–42] 489d-490a

27 SHAKESPEARE: *Henry VIII* 549a-585a,c esp ACT III, SC II 568b-573d

30 BACON: *Advancement of Learning*, 27c

32 MILTON: *New Forcers of Conscience* 68a-b / *Lord Gen. Cromwell* 69a-b / *Paradise Lost*, BK XII [485–551] 329b-331a / *Samson Agonistes* [1334–1379] 368b-369b / *Areopagitica*, 386b-388a

33 PASCAL: *Pensées*, 870 344a-b

35 LOCKE: *Toleration*, 2d-21c esp 2d-3a, 7c, 13a-b, 20d-21c

38 MONTESQUIEU: *Spirit of Laws*, BK XII, 85c-86a; BK XIX, 144c-145a; BK XXIII, 196c-197c; BK XXIV-XXVI, 200a-215a; BK XXVI, 217c-219d; BK XXX, 284d-285c; BK XXXI, 298b-308c

38 ROUSSEAU: *Inequality*, 327a-c / *Social Contract*, BK II, 401c-402a; BK IV, 435a-439c

39 SMITH: *Wealth of Nations*, BK, V 347d-354a

40 GIBBON: *Decline and Fall*, 197a-b; 233d; 299b-304d passim, esp 299b-d; 390c-393d passim; 443d-446b esp 444c-445b; 452b-453a; 582c; 611d-612a; 623d-624b; 631d-632a; 642c-643a

41 GIBBON: *Decline and Fall*, 110b-111d; 138b-140a; 145d-150c passim, esp 147d-148b; 195a; 199c-202d; 204b-207a esp 205d-206b; 212d-213d; 214c-215c; 320d-321b; 356c; 360b-361b; 417b-418d; 557c-563d esp 560d-561c; 567c-569d; 582c-589d esp 586a-c, 588b-589d

42 KANT: *Science of Right*, 442c-d; 444a-c / *Judgement*, 509d-510a

43 CONSTITUTION OF THE U.S.: ARTICLE VI [591–599] 16d; AMENDMENTS, I 17a

43 FEDERALIST: NUMBER 52, 165c; NUMBER 57, 177b

44 BOSWELL: *Johnson*, 314c-315b

46 HEGEL: *Philosophy of Right*, PART III, par 270 84d-89c; ADDITIONS, 162 143b-144c / *Philosophy of History*, INTRO, 175c-177b; 192c-d; 205d-206a,c; PART III, 308b-c; 310c; PART IV, 316a-317a; 325d-326b; 330b-331d; 336c-337d; 345c-346c; 350b-c; 351b-354a; 365b-c

47 GOETHE: *Faust*, PART II [10,977–11,034] 267a-268b

52 DOSTOEVSKY: *Brothers Karamazov*, BK II, 28b-32c; BK V, 133c-135a

4a. Religion in relation to forms of government: the theocratic state

OLD TESTAMENT: *Numbers*, 27:12–23 / *Judges*, 8:22–23 / *I Samuel*, 8; 10:18–19,24; 12:12–14,17–19—(*D*) *I Kings*, 8; 10:18–19,24; 12:12–14,17–19 / *Isaiah*, 43:15—(*D*) *Isaias*, 43:15 / *Daniel*, 4:17,25,32—(*D*) *Daniel*, 4:14,22,29

APOCRYPHA: *Rest of Esther*, 14:3—(*D*) OT, *Esther*, 14:3

7 PLATO: *Statesman*, 597c-598a / *Laws*, BK VI, 700d-701b

9 ARISTOTLE: *Politics*, BK II, CH 8 [1267b30–36] 463c-d; BK III, CH 14 [1285a3–7] 483a-b; BK V, CH 11 [1314b35–1315a4] 517d; BK VI, CH 7 [1321a35–b1] 525a; CH 8 [1322b19–29] 526c; BK VII, CH 8 [1328b2–22] 532d-533a; CH 9 [1329a26–34] 533d; CH 10 [1330a8–14] 534c; CH 12 [1331a19–28] 535d; [1331b4–7] 536a

20 AQUINAS: *Summa Theologica*, PART I-II, Q 99, AA 4–5 248a-250a; QQ 104–105 304a-321a

23 MACHIAVELLI: *Prince*, CH XI 16d-17d

23 HOBBES: *Leviathan*, PART I, 82b-83a; PART II, 111b-112c; PART III, 177c-180d; 199b-204a; 208d; 228a-c

33 PASCAL: *Pensées*, 611 282b

35 LOCKE: *Toleration*, 14b-15a / *Civil Government*, CH XVIII, SECT 210 73b-c

38 MONTESQUIEU: *Spirit of Laws*, BK II, 7c-8c; BK III, 12d-13c passim; BK V, 27d; BK XIX, 138c-140c esp 139c-140a; BK XXIV, 201a-202b; BK XXV, 211c-212b; 214a,c

38 ROUSSEAU: *Social Contract*, BK II, 405d; BK IV, 435a-439c

40 GIBBON: *Decline and Fall*, 13b-c; 208a-c

41 GIBBON: *Decline and Fall*, 202c-d; 252c; 288a,c; 557c-563d passim, esp 558b-c, 561c-562b, 563c-d; 586c-589d esp 589b-d

43 MILL: *Representative Government*, 343a

44 BOSWELL: *Johnson*, 245c

46 HEGEL: *Philosophy of Right*, PART III, par 355 112d-113a / *Philosophy of History*, PART I, 207d-208c; 216b-217c; 246d-247b; PART IV, 316c-d; 365b-c

52 DOSTOEVSKY: *Brothers Karamazov*, BK II, 28b-32c

4b. The service of religion to the state and the political support of religion by the state

7 PLATO: *Statesman*, 597c-598a / *Laws*, BK VII, 718d-720b; BK XII, 789a-b

9 ARISTOTLE: *Politics*, BK II, CH 8 [1267b30–36] 463c-d; BK V, CH 11 [1314b35–1315a4] 517d; BK VI, CH 7 [1321a35–b1] 525a; BK VII, CH 8 [1328b2–22] 532d-533a; CH 10 [1330a8–14] 534c

13 VIRGIL: *Aeneid*, BK I [291–296] 111a; BK XII [175–194] 358b-359a; [829–842] 376a-b

14 PLUTARCH: *Numa Pompilius* 49a-61d esp 52d-53a, 57b / *Themistocles*, 92a-c / *Camillus*, 114c-116a / *Fabius*, 142d-143a / *Marcellus*, 247c-248b / *Lysander*, 365a-366a / *Sertorius*, 462a-c; 466d-467a / *Cleomenes*, 659d-660a

18 AUGUSTINE: *City of God*, BK I, CH 1–6 129d-132d; CH 34 149a; BK XIX, CH 26 528d-529a

20 AQUINAS: *Summa Theologica*, PART II-II, Q 187, A 2 665a-666a; Q 188, AA 2–4 675d-679d

23 HOBBES: *Leviathan*, PART I, 80d-81a; 82b-d; PART IV, 258d

25 MONTAIGNE: *Essays*, 306a-d; 324c-326b

26 SHAKESPEARE: *2nd Henry IV*, ACT I, SC I [187–215] 470a-b; ACT IV, SC I [30–87] 487c-488a; SC II [1–42] 489d-490a / *Henry V*, ACT I, SC I 533a-d

29 CERVANTES: *Don Quixote*, PART II, 290c

32 MILTON: *Areopagitica*, 397a

35 LOCKE: *Toleration*, 6b-7b; 7d-8c; 9c-10c; 20d-21c / *Civil Government*, CH XVIII, SECT 210 73b-c

35 HUME: *Human Understanding*, SECT V, DIV 43, 468c

38 MONTESQUIEU: *Spirit of Laws*, BK II, 7c-8c; BK III, 13b-c; BK V, 27d; BK XVIII, 134c-d; BK XXIV 200a-208a,c; BK XXV, 212a-b; 214a,c; BK XXVI, 214d-215a

38 ROUSSEAU: *Inequality*, 327a-c; 358d-359a; 366c-d / *Social Contract*, BK II, 401c-402a; BK IV, 435a-439c

39 SMITH: *Wealth of Nations*, BK I, 56b-57a; BK V, 343b,d-346c; 347d-348a; 357c

40 GIBBON: *Decline and Fall*, 13b-d; 229c-230a; 289b,d-294a esp 291d-292d; 328c-330a,c; 348a-361a,c esp 349c-351d; 382a-383b; 457b,d-460b passim; 601c-d; 611d-612a; 631d-632a

41 GIBBON: *Decline and Fall*, 147d-148b; 204b-207a; 352b-353b; 381a-383c

42 KANT: *Science of Right*, 444a-c / *Judgement*, 509d-510a

43 ARTICLES OF CONFEDERATION: III 5b

43 MILL: *Liberty*, 279a-d; 290c-291a / *Representative Government*, 341a-c; 437d-438b

44 BOSWELL: *Johnson*, 189c-d; 251c; 314c-315b; 445b-c

46 HEGEL: *Philosophy of History*, INTRO, 176b-177b; PART III, 287a-d; 311b-d; PART IV, 350b-c; 353a-b

47 GOETHE: *Faust*, PART II [4897–4916] 121b-122a

51 TOLSTOY: *War and Peace*, BK VIII, 304c-d; BK IX, 374d-377b; BK X, 435c-436c; 443b; BK XII, 534c-d; BK XIII, 572d; 574a

52 DOSTOEVSKY: *Brothers Karamazov*, BK II, 28b-32c; BK V, 127b-137c passim, esp 133c-135a

5. The dissemination of religion

5a. The function of preaching

NEW TESTAMENT: *Matthew* passim, esp 3:1–3, 4:17–25, 7:28–29, 9:35, 10:1–11:6, 13:10–11, 28:19–20 / *Mark* passim, esp 1:2–8, 1:21–22, 3:13–15, 6:7–13, 13:9–13, 16:14–20 / *Luke* passim, esp 4:16–21, 4:43–44, 8:1, 9:1–6, 9:59–60, 10:1–20, 16:16, 19:47–48, 24:46–47 / *John* passim, esp 1:6–8, 1:15–42, 18:20 / *Acts*

(5. *The dissemination of religion.* 5a. *The function of preaching.*)

passim, esp 4:18-20, 5:19-20, 8:4-12, 8:27-37, 9:15, 10:42-43, 13:23-24, 13:38, 13:44-47, 14:12-15, 18:24-28, 20:16-21, 26:16-18 / *Romans*, 1:9-15; 10:8,11-21; 16:25 / *I Corinthians*, 1:17-18,21; 2:1-5; 9; 12:27-31; 15:1-2 / *II Corinthians*, 3-4 esp 4:5-6 / *Galatians*, 1:1-2:9 esp 1:15-16 / *Ephesians*, 3 / *Colossians*, 1:23-29; 3:16; 4:3-4 / *I Timothy*, 2:5-7; 3:16; 4:6-13; 6:1-5 / *II Timothy*, 1:8-11; 2:2,24-26; 4 / *Titus*, 1:1-3; 1:7-3:11 / *Hebrews*, 4:1-11

18 AUGUSTINE: *Confessions*, BK I, par 1 1a-b; BK V, par 23-BK VI, par 3 33c-36a; BK VI, par 6, 36c / *Christian Doctrine* 621a-698a,c esp BK IV 675a-698a,c

20 AQUINAS: *Summa Theologica*, PART II-II, Q 6, A 1, ANS and REP 2 413d-414c; Q 10, A 12, REP 5 436b-437d; Q 187, A 3, REP 5 666a-669b; Q 188, A 4 678b-679d; PART III SUPPL, Q 96, A 7 1061b-1062a

21 DANTE: *Divine Comedy*, PARADISE, XXIX [67-126] 151a-c

22 CHAUCER: *Prologue* [477-528] 167b-168a / *Parson's Prologue* [17,333-371] 494a-b

23 HOBBES: *Leviathan*, PART III, 205b-d; 207b-211c; 215b-216b; 219d-221b; 224c-225d; 241d-242a; 242c-d; PART IV, 273d-274a

35 LOCKE: *Toleration*, 7d-8c

36 STERNE: *Tristram Shandy*, 253b-268a; 367b-368b

39 SMITH: *Wealth of Nations*, BK V, 343b,d-344b; 352b-c

40 GIBBON: *Decline and Fall*, 303c-304a; 529b-530b

41 GIBBON: *Decline and Fall*, 110b

46 HEGEL: *Philosophy of History*, PART IV, 340d-341a

48 MELVILLE: *Moby Dick*, 30a-36b

51 TOLSTOY: *War and Peace*, BK VI, 244d-245c

52 DOSTOEVSKY: *Brothers Karamazov*, BK I, 13a-d; BK VI, 150d-153d

5b. Religious conversion

OLD TESTAMENT: *Ruth*, 1:1-18 / *II Kings*, 5:1-15 —(*D*) *IV Kings*, 5:1-15 / *Psalms*, 51:13—(*D*) *Psalms*, 50:15 / *Daniel*, 2-4—(*D*) *Daniel*, 2:1-3:23; 3:91-4:34

APOCRYPHA: *Bel and Dragon*—(*D*) OT, *Daniel*, 14

NEW TESTAMENT: *Matthew*, 9:2-8; 15:30-31; 18:2-3; 27:50-54 / *Mark*, 2:3-12; 4:11-12; 9:16-27; 15:37-39 / *Luke*, 2:8-20; 5:18-26; 7:11-16; 13:11-13; 17:11-19; 18:35-43; 22:32; 23:44-47 / *John*, 2:22-23; 4; 6:5-14; 7:31,37-41; 8:28-32; 9; 11:41-45; 12:10-11; 16:29-30 / *Acts* passim, esp 2:38-47, 3:19, 8:25-9:20, 11:19-21, 13:4-43, 14:1, 16:14-15, 16:25-34, 18:7-8, 22:1-16, 26:9-20 / *I Corinthians*, 14:24-25 / *Galatians*, 1:13-19 / *Hebrews*, 4:1-6 / *James*, 5:19-20

18 AUGUSTINE: *Confessions*, BK I-IX 1a-71b esp BK I, par 17-18 5b-d, BK III, par 6-10 14b-15d, BK IV, par 1 19b-c, par 7-8 20d-21b, BK V, par 12-13 30a-c, par 23-25 33c-34c, BK VI, par 7-8 36d-37c, BK VII, par 24 50d-51a, BK VIII 52c-61c, BK IX, par 14 65a-c

19 AQUINAS: *Summa Theologica*, PART I, Q 62, A 2, REP 3 318d-319c; A 4, REP 2 320b-321b

20 AQUINAS: *Summa Theologica*, PART II-II, Q 10, A 8 432b-433b; A 9, ANS 433b-434c; A 12 436b-437d; Q 11, A 4 441b-442b

21 DANTE: *Divine Comedy*, PURGATORY, XXII [55-93] 87a-c

22 CHAUCER: *Tale of Man of Law* [4953-4959] 244a; [5100-5106] 246b-247a / *Second Nun's Prologue* 461a-463a / *Second Nun's Tale* 463b-471b

23 HOBBES: *Leviathan*, PART I, 83d-84a; PART III, 204a; PART IV, 264d; 265c-266a

30 BACON: *Advancement of Learning*, 41b-c

33 PASCAL: *Pensées*, 189-194 205b-209b; 769-770 323a

35 LOCKE: *Toleration*, 1a-2c; 3b; 3c-4a; 7d-8c; 10d-11a; 13b-15a; 15d-16a

37 FIELDING: *Tom Jones*, 165b-d; 379c-380a

39 SMITH: *Wealth of Nations*, BK V, 343b,d-344b

40 GIBBON: *Decline and Fall*, 179a-d; 180c-181c; 189a-b; 200a-206b; 296b-299a; 599d-602b

41 GIBBON: *Decline and Fall*, 152c-161a,c passim, esp 153c-155b; 234d-245a; 251d-252a; 285d-287c; 345d-347a,c

43 FEDERALIST: NUMBER 1, 30a

44 BOSWELL: *Johnson*, 174a-b; 372a-b; 394d-395b; 536c

46 HEGEL: *Philosophy of History*, PART IV, 322c-323a

51 TOLSTOY: *War and Peace*, BK V, 194a-203a; 216d-218b; BK XI, 476c-480a

52 DOSTOEVSKY: *Brothers Karamazov*, BK V, 127b-137c passim; BK VI, 153d-164a; BK XI, 313c-314c

5c. Religious education

OLD TESTAMENT: *Exodus*, 12:24-27; 18:19-20; 24:12 / *Leviticus*, 10:8-11 / *Deuteronomy*, 4:1-5,9-10,14; 5:31; 6:1,6-9,20-25; 11:18-21; 17:9-10; 24:8; 31:9-13 / *Joshua*, 8:30-35—(*D*) *Josue*, 8:30-35 / *II Kings*, 17:26-28; 23:1-2—(*D*) *IV Kings*, 17:26-28; 23:1-2 / *II Chronicles*, 17:7-9; 34:29-30—(*D*) *II Paralipomenon*, 17:7-9; 34:29-30 / *Nehemiah*, 8—(*D*) *II Esdras*, 8 / *Psalms*, 78:1-4—(*D*) *Psalms*, 77:1-4 / *Ezekiel*, 44:21-23—(*D*) *Ezechiel*, 44:21-23

NEW TESTAMENT: *Matthew*, 5-7; 10:1-31; 13:1-23 / *Mark*, 3:13-19; 4:1-25; 6:6-11 / *Luke*, 2:46-49; 6:12-49; 8:4-18; 9:1-6 / *John*, 7:14-17 / *Acts*, 22:3 / *I Corinthians*, 12:27-31 / *Ephesians*, 4:11-15; 6:4 / *I Timothy*, 1:5-7; 2:5-7; 3:2; 4:6-13; 6:1-5 / *II Timothy*, 1:10-11; 2:1-2; 12:15-16,23-25; 13:14-16; 14:1-5 / *Titus*, 1:7-3:11 esp 2:15 / *Hebrews*, 5:12

7 PLATO: *Laws*, BK X 757d-771b; BK XII, 797c-798b
18 AUGUSTINE: *Christian Doctrine* 621a-698a,c esp BK IV, CH 16 685d-686c
19 AQUINAS: *Summa Theologica*, PROLOGUE 1a-b
20 AQUINAS: *Summa Theologica*, PART I-II, Q 105, A 4, ANS 318b-321a; Q 111, A 1, ANS 351d-352d; AA 4-5 354c-356c; PART II-II, Q 2, A 6 395b-396a; Q 16, A 2, ANS and REP 2 455c-456d; Q 181, A 3 618c-619b; Q 188, AA 4-5 678b-681a; A 6, ANS 681b-682c; PART III SUPPL, Q 96, A 7 1061b-1062a; A 11, ANS 1063d-1064d
21 DANTE: *Divine Comedy*, PARADISE, XII [22-105] 123d-124d
23 HOBBES: *Leviathan*, PART II, 123a-b; 154b-156b; PART III, 208d-209b; 211b-c; 241d-242a; PART IV, 269a; 278b-c; CONCLUSION, 282d-283a
24 RABELAIS: *Gargantua and Pantagruel*, BK I, 24c-d; 27a; BK II, 82c-83b
30 BACON: *Advancement of Learning*, 41c-d
33 PASCAL: *Pensées*, 185-194 205a-209b; 285 224a
35 LOCKE: *Toleration*, 7a-b; 7d-8c; 17d-18a; 18c
38 MONTESQUIEU: *Spirit of Laws*, BK IV, 15c; BK XXIV, 202b-c
39 SMITH: *Wealth of Nations*, BK V, 343b,d-356d esp 343b,d-346c, 347d-348a, 348c-d, 352b-c, 354d-355d; 357c
40 GIBBON: *Decline and Fall*, 82d; 355b-d; 601b-c
41 GIBBON: *Decline and Fall*, 522d-523a
43 MILL: *Liberty*, 285b; 290a-292a passim / *Representative Government*, 437d-438b
44 BOSWELL: *Johnson*, 151b-d
52 DOSTOEVSKY: *Brothers Karamazov*, BK VI, 150d-153d; 164a-165a

6. Truth and falsity in religion

6a. The religious condemnation of idolatry, superstition, and other perversions of worship

OLD TESTAMENT: *Exodus*, 20:1-5,22-23; 22:20; 23:13; 32; 34:11-17 / *Leviticus*, 17:7; 19:4,31; 20:1-6,27; 26:1,28-30 / *Numbers*, 25:1-5,16-18; 33:51-52 / *Deuteronomy*, 4:14-28; 5:6-9; 6:14-15; 7:1-5,25-26; 8:19-20; 9:15-21; 11:16-17,28; 12:2-3; 12:29-13:18; 16:21-17:7; 18:9-14,20; 20:16-18; 27:15; 28:14-68; 29:16-29; 30:15-20; 31:16-21; 32:15-17,21,36-39 / *Joshua*, 22-23; 24:14-25—(*D*) *Josue*, 22-23; 24:14-25 / *Judges*, 2:10-23; 3:5-8; 6:24-32; 8:33-34; 10; 17-18 / *I Samuel*, 7:3-4; 15:22-23—(*D*) *I Kings*, 7:3-4; 15:22-23 / *I Kings*, 3:1-4; 9:6-9; 11-16; 18:16-40; 20:22-28; 21:25-29; 22:51-53—(*D*) *III Kings*, 3:1-4; 9:6-9; 11-16; 18:16-40; 20:22-28; 21:25-29; 22:51-54 / *II Kings* passim, esp 1:1-18, 8:16-9:10, 10:1-36, 11:17-18, 14:1-4, 15:1-18:37, 19:16-19, 21:1-24:20—(*D*) *IV Kings* passim, esp 1:1-18, 8:16-9:10, 10:1-36, 11:17-18, 14:1-4, 15:1-18:37, 19:16-19, 21:1-24:20 / *II Chronicles*, 12:1-8; 13:6-9; 15:8-16; 21:5-20; 26:16-21; 28:1-5,22-25; 33:1-13; 34:3-7; 36:11-21—(*D*) *II Paralipomenon*, 12:1-8; 13:6-9; 15:8-16; 21:5-20; 26:16-21; 28:1-5,22-25; 33:1-13; 34:3-7; 36:11-21 / *Psalms*, 81:8-14; 97:7; 106; 115:1-8; 135:15-18—(*D*) *Psalms*, 80:9-15; 96:7; 105; 113:1-8; 134:15-18 / *Isaiah*, 2:5-21; 10:10-11; 30-31; 40:18-20; 42:8,17; 44:9-20; 45:20-21; 46:1-7; 57:3-8; 65:3-5—(*D*) *Isaias*, 2:5-21; 10:10-11; 30-31; 40:18-20; 42:8,17; 44:9-20; 45:20-21; 46:1-7; 57:3-8; 65:3-5 / *Jeremiah* passim, esp 1-13, 16, 19:3-5, 23:20-39, 25:4-7, 44:1-30, 51:44-52—(*D*) *Jeremias* passim, esp 1-13, 16, 19:3-5, 23:20-39, 25:4-7, 44:1-30, 51:44-52 / *Ezekiel* passim, esp 5-6, 14, 16, 20, 22-23, 36:16-26, 37:23—(*D*) *Ezechiel* passim, esp 5-6, 14, 16, 20, 22-23, 36:16-26, 37:23 / *Daniel*, 3; 6—(*D*) *Daniel*, 3:1-23,91-97; 6 / *Hosea* passim, esp 2:8-13, 4:12-13, 8:1-14, 13:1-2—(*D*) *Osee* passim, esp 2:8-13, 4:12-13, 8:1-14, 13:1-2 / *Amos*, 2:4-16; 4:1-5; 5 esp 5:25-27 / *Nahum* passim, esp 1:14 / *Habakkuk*, 2:18-19—(*D*) *Habacuc*, 2:18-19 / *Zephaniah* passim, esp 1:4-6—(*D*) *Sophonias* passim, esp 1:4-6

APOCRYPHA: *Judith*, 3:8; 5:23-6:4; 8:16-18—(*D*) OT, *Judith*, 3:13; 5:19-6:4; 8:16-18 / *Rest of Esther*, 14:6-10—(*D*) OT, *Esther*, 14:6-10 / *Wisdom of Solomon*, 12-15—(*D*) OT, *Book of Wisdom*, 12-15 / *Ecclesiasticus*, 30:19; 34:1-7—(*D*) OT, *Ecclesiasticus*, 30:19-20; 34:1-7 / *Baruch*, 6—(*D*) OT, *Baruch*, 6 / *Bel and Dragon*—(*D*) OT, *Daniel*, 14 / *I Maccabees*, 1:41-2:28—(*D*) OT, *I Machabees*, 1:43-2:28 / *II Maccabees*, 2:1-2; 6-7; 12:39-45—(*D*) OT, *II Machabees*, 2:1-2; 6-7; 12:39-46

NEW TESTAMENT: *Matthew*, 23:1-33 / *Acts*, 7:39-44; 8:9-11; 12:21-23; 14:7-18; 15:20,28-29; 17:16-31 / *Romans*, 2:22 / *I Corinthians*, 5:9-11; 6:9; 8; 10:7,14-21; 12:2 / *II Corinthians*, 6:14-17 / *Galatians*, 5:19-20 / *Ephesians*, 5:5 / *Philippians*, 3:18-19 / *Colossians*, 3:5 / *I Thessalonians*, 1:9 / *I Peter*, 4:3 / *I John*, 5:20-21 / *Revelation*, 2:20; 9:20; 21:8; 22:14-15—(*D*) *Apocalypse*, 2:20; 9:20; 21:8; 22:14-15

6 HERODOTUS: *History*, BK I, 12d-13b; BK III, 95a-c
7 PLATO: *Laws*, BK X, 769d-771b
14 PLUTARCH: *Camillus*, 104d-105a / *Pericles*, 123c-124a / *Alexander*, 575a-576a / *Dion*, 781d-782a
15 TACITUS: *Histories*, BK V, 296a
18 AUGUSTINE: *City of God*, BK I-X 129a-322a,c; BK XVIII, CH 5-6 474d-475c; CH 8 475d-476b; CH 12 477d-478d; CH 18 480d-482a; CH 24 485a-b
19 AQUINAS: *Summa Theologica*, PART I, Q 17, A 4, REP 3 103c-104b; Q 67, A 4, ANS 352a-354a

(6. Truth and falsity in religion. 6a. The religious condemnation of idolatry, superstition, and other perversions of worship.)

20 AQUINAS: *Summa Theologica*, PART I-II, Q 98, A 2, ANS 240c-241b
21 DANTE: *Divine Comedy*, HELL, I [1-111] 1a-2b; VII [1-60] 9c-10a; XIX-XX 26d-29d; XXVII [55-136] 40a-41b; PURGATORY, III [103-145] 57a-c; XVI [58-129] 77c-78a; XXXII [37]-XXXIII [78] 102d-105a; PARADISE, V [64-84] 112d-113a; IX [109-142] 119d-120a; XI [118-139] 123b-c; XII [82-126] 124c-125a; XVIII [118-136] 134d-135a; XXI [121]-XXII [18] 139c-d; XXII [61-96] 140b-c; XXVII [1-66] 147b-148a; XXIX [67-126] 151a-c
22 CHAUCER: *Second Nun's Tale* [15,749-769] 466b / *Parson's Tale*, par 63-64 530a-531a
23 HOBBES: *Leviathan*, PART I, 51d-52b; 78d-83a passim; PART III, 172b-d; PART IV, 247a-267a
24 RABELAIS: *Gargantua and Pantagruel*, BK I, 53a-c
25 MONTAIGNE: *Essays*, 18d-20d; 91b-c; 152b-156d; 209b-213a; 246a-258b passim; 497d-501c
30 BACON: *Advancement of Learning*, 101a-b / *Novum Organum*, BK I, APH 46 110b-c
32 MILTON: *Christs Nativity* 1a-7b esp [165-228] 5b-7a / *Paradise Lost*, BK I [331-621] 100b-107a; BK XII [101-126] 321b-322a / *Samson Agonistes* [433-471] 349a-350a; [871-902] 358b-359a; [1139-1243] 364b-366b
33 PASCAL: *Provincial Letters*, 71b-80b; 87a-88a; 94a-97a
34 NEWTON: *Optics*, BK III, 543b-544a
35 LOCKE: *Toleration*, 13b-15a
35 BERKELEY: *Human Knowledge*, SECT 94 431b-c
37 FIELDING: *Tom Jones*, 20a-c
38 ROUSSEAU: *Social Contract*, BK IV, 437a-c
40 GIBBON: *Decline and Fall*, 184b-185d; 457b,d; 458d-459c; 460a-463c; 600d-601a
41 GIBBON: *Decline and Fall*, 195a-202a passim; 207a-208c; 229c-230b; 252b-c; 328a-334c passim, esp 329c-330b, 334c
42 KANT: *Judgement*, 504b-505a
44 BOSWELL: *Johnson*, 173d-174a; 301c
46 HEGEL: *Philosophy of Right*, PART III, par 270, 85b-c / *Philosophy of History*, INTRO, 196d-197d; PART I, 237d-238a; 243d; 245d-246c; PART III, 313c-d; PART IV, 322a-c

6b. Religious apologetics: the defense of faith

14 PLUTARCH: *Coriolanus*, 191d-192b
18 AUGUSTINE: *Confessions*, BK V, par 23-25 33c-34c; BK VI, par 3-8 35c-37c / *City of God* 129a-618d esp BK I, PREF 129a-d, BK I, CH 36-BK II, CH 2 149c-151b, BK IV, CH 1-2 188b,d-190a, BK VI, PREF-CH 1, 230b,d-231a, BK VII, PREF 243b,d-244a, BK VIII, CH 1 264b,d-265b, BK X, CH 32, 322c, BK XI, CH 1 322b,d-323a, BK XV, CH 1, 397b,d-398a, BK XVIII, CH 1 472b,d, BK XX, CH 1, 530a-b, BK XX, CH 30-BK XXI, CH 1, 560a-d / *Christian Doctrine*, BK IV, CH 2 675d-676a; CH 4-5 676d-677d
19 AQUINAS: *Summa Theologica*, PART I, Q 1, A 8 7c-8d; Q 2, A 2, REP 1 11d-12c; Q 32, A 1 175d-178a
20 AQUINAS: *Summa Theologica*, PART II-II, Q 2, A 10 399b-400b; PART III SUPPL, Q 96, A 11, ANS 1063d-1064d
25 MONTAIGNE: *Essays*, 208a-294b esp 208a-215b, 238c-239c, 250a-b, 270a-271a, 293d-294b
29 CERVANTES: *Don Quixote*, PART I, 122b-c
30 BACON: *Advancement of Learning*, 41b-d; 101a-b
31 DESCARTES: *Meditations*, 69a-71a,c / *Objections and Replies*, 125d-126a
33 PASCAL: *Pensées*, 219-241 212a-217b; 289-290 224b-225a; 430-609 245a-280b; 803-858 328b-342a
35 HUME: *Human Understanding*, SECT XI, DIV 107 499c-500b
38 MONTESQUIEU: *Spirit of Laws*, BK XXIV, 200b-201a; 202a-b
40 GIBBON: *Decline and Fall*, 206a-b; 348c-d; 670b-c
46 HEGEL: *Philosophy of History*, PART III, 309a-d

6c. The unity and tradition of a religion

6c(1) Orthodoxy and heresy: the role of dogma in religion; the treatment of heretics

NEW TESTAMENT: *Acts*, 4:1-22; 5:14-42; 6:7-8:3; 9:1-25 esp 9:1-2, 9:22-25; 13:43-50; 15:1-31; 17:5-14; 18:12-16; 21-26 passim / *I Corinthians*, 1:10; 11:18-19 / *Galatians*, 1:8-9; 5:19-20 / *Titus*, 3:10-11 / *II Peter*, 3:16 / *II John*, 9-11
18 AUGUSTINE: *Confessions*, BK III, par 10-18 15b-18b esp par 18 18b; par 21 19a-b; BK V 27a-34c passim; BK VII, par 25 51a-c / *City of God*, BK XVI, CH 2, 422b-d; BK XVIII, CH 51 502d-503d / *Christian Doctrine*, BK III, CH 33 670b-c
19 AQUINAS: *Summa Theologica*, PART I, Q 28, A 1, CONTRARY 157c-158d; A 3, CONTRARY 160a-c; Q 31, A 2, ANS 172b-173c
20 AQUINAS: *Summa Theologica*, PART I-II, Q 64, A 4, REP 3 69b-70a; Q 81, A 1, ANS 163a-164d; PART II-II, Q 1, A 9, REP 2,4 388d-389d; A 10, ANS and REP 1 389d-390d; Q 2, A 6, REP 2-3 395b-396a; A 10, REP 3 399b-400b; Q 5, A 3 412a-d; Q 10, A 5, ANS 429c-430c; A 6 430d-431b; A 8, ANS and REP 1,3-4 432b-433b; A 9, ANS and REP 2 433b-434c; Q 11 438a-442b; PART III SUPPL, Q 99, A 4 1083a-1084a
21 DANTE: *Divine Comedy*, HELL, VIII [106]-XI [12] 12a-15b; PURGATORY, XXXII 102b-104a esp [118-123] 103c-d; PARADISE, VI [10-27] 113d; XIII [112-142] 126c-d

23 HOBBES: *Leviathan*, PART I, 78a-b; PART III, 212d-215b; 238b-240a; PART IV, 248c-d; 273c-d
25 MONTAIGNE: *Essays*, 23b-c; 82a-b; 154a-155c; 208b-c; 242d; 250a-b
30 BACON: *Advancement of Learning*, 27a-c; 101a-b
32 MILTON: *Areopagitica*, 386a-b
33 PASCAL: *Provincial Letters*, 1a-7a; 117b-166b / *Pensées*, 775 323b-324a; 862–865 342b-343b; 891–896 347a-b; 903 348a
35 LOCKE: *Toleration*, 1a-2a; 6c-d; 21c-22d
38 MONTESQUIEU: *Spirit of Laws*, BK XII, 86d-87b; 87d
38 ROUSSEAU: *Social Contract*, BK IV, 438d-439c
39 SMITH: *Wealth of Nations*, BK V, 344a-b
40 GIBBON: *Decline and Fall*, 83a; 182d-184b; 198d-200a; 305a-313d esp 305a-d, 310b-312b; 438b-443d esp 438b-c, 441a-443d; 541a-c; 601d-605b
41 GIBBON: *Decline and Fall*, 134a-151c esp 134d-138a, 143c-145d; 198a-202a; 328a-335a,c esp 330b-334a; 421b,d-423c
43 FEDERALIST: NUMBER I, 30a
44 BOSWELL: *Johnson*, 221d-224a passim
46 HEGEL: *Philosophy of Right*, PART III, par 270, 88c-89a / *Philosophy of History*, PART I, 245d-246c; PART III, 313b-d; PART IV, 331d-332c; 340d; 355a-b
47 GOETHE: *Faust*, PART II [4897–4916] 121b-122a
52 DOSTOEVSKY: *Brothers Karamazov*, BK V, 128b-135a

6c(2) Sects and schisms arising from divergences of belief and practice

6 HERODOTUS: *History*, BK II, 52c-d
18 AUGUSTINE: *Confessions*, BK III, par 10–18 15b-18b; BK V 27a-34c passim; BK VII, par 25 51a-c / *Christian Doctrine*, BK III, CH 33 670b-c
20 AQUINAS: *Summa Theologica*, PART II-II, Q 1, A 10, ANS and REP 1 389d-390d; Q 10, A 8, REP 1 432b-433b; Q 11, A 1, REP 3 438a-439a; Q 39 574a-577d
21 DANTE: *Divine Comedy*, HELL, XXVIII 41b-43a
23 HOBBES: *Leviathan*, PART III, 229d
27 SHAKESPEARE: *Henry VIII*, ACT V, SC III [8–31] 581a-b
32 MILTON: *Areopagitica*, 404b-405a; 406a-b; 409b-410a
33 PASCAL: *Provincial Letters*, 7a-13a / *Pensées*, 862, 342b
35 LOCKE: *Toleration*, 22c-d / *Human Understanding*, BK II, CH XXXIII, SECT 18 251a-c; BK IV, CH XIX, SECT 11 386d-387c
36 SWIFT: *Gulliver*, PART I, 22a-b; PART IV, 149b-150b
36 STERNE: *Tristram Shandy*, 332a-334b
39 SMITH: *Wealth of Nations*, BK V, 344a-b; 345b-346c
40 GIBBON: *Decline and Fall*, 80d-81a; 181c-184b; 214a; 305a-328c esp 309c-313d; 382b-d; 391a-392c; 438d-441d; 541a-c; 601d-608a,c
41 GIBBON: *Decline and Fall*, 134a-161a,c esp 151d-161a,c; 195a-202a; 207a-208c; 306a-307a; 328a-335a,c; 421b,d-424a; 462c-464a; 510b,d-522b; 529c-534a; 544b-545c; 583c-586a
42 KANT: *Science of Right*, 444a-c
44 BOSWELL: *Johnson*, 114b; 189b-c; 359a; 536c-537a
46 HEGEL: *Philosophy of History*, INTRO, 193a-b; PART III, 313b-c; PART IV, 331d-332c; 348a-355b

6d. The relation of men of diverse faiths: the attitude of the faithful toward infidels

APOCRYPHA: *I Maccabees*, 1-2—(*D*) OT, *I Machabees*, 1-2 / *II Maccabees*, 6-7—(*D*) OT, *II Machabees*, 6-7
NEW TESTAMENT: *Acts* esp 7:54-8:3, 9:1-5, 9:22-24, 12:1-6, 12:18-20, 13:27-29, 13:44-50, 14:4-5, 16:19-40, 17:5-14, 18:12-16, 19:23-40, 28:17-29 / *Romans*, 8:35-36 / *I Corinthians*, 4:9-13; 15:9 / *II Corinthians*, 1:5-8; 12:9-10 / *Galatians*, 1:13-24; 2:1-5; 4:29; 5:10-12; 6:12 / *Philippians*, 1:28-30 / *I Thessalonians*, 2:14-16
6 HERODOTUS: *History*, BK III, 97c-98a; BK IV, 137a-c; 138a-c; BK VIII, 287c-d
15 TACITUS: *Annals*, BK II, 44b-c; BK XV, 168a-c
18 AUGUSTINE: *City of God*, BK I-X 129a-322a,c; BK XVIII, CH 14 479c-d; BK XIX, CH 17 522b-523a; CH 23 525c-528a; CH 26 528d-529a / *Christian Doctrine*, BK II, CH 40 655b-656a
20 AQUINAS: *Summa Theologica*, PART I-II, Q 98, AA 4-5 242b-244b; PART II-II, Q 1, A 5, REP 1 383b-384b; Q 3, A 2, REP 2-3 401a-d; Q 10 426c-437d esp AA 7-12 431b-437d; Q 12, A 2 443b-444b
21 DANTE: *Divine Comedy*, HELL, IV 5c-7a; PARADISE, XIX-XX 135a-138b
22 CHAUCER: *Troilus and Cressida*, BK V, STANZA 265-267 154b-155a / *Tale of Man of Law* 236b-255b esp [4638–4686] 238a-239a, [4750–4777] 240a-b, [4960–4970] 244a / *Prioress's Tale* [13,418–620] 392a-395b
23 HOBBES: *Leviathan*, PART I, 80d; PART III, 246a,c
25 MONTAIGNE: *Essays*, 116d-117c
26 SHAKESPEARE: *Merchant of Venice* 406a-433d esp ACT I, SC III 409c-411b
30 BACON: *Advancement of Learning*, 41b-d; 96c-d / *New Atlantis*, 209a-b
32 MILTON: *Samson Agonistes* [433–471] 349a-350a; [871–902] 358b-359a; [1139–1243] 364b-366b; [1334–1379] 368b-369b / *Areopagitica*, 386a-b; 388b
33 PASCAL: *Pensées*, 589–692 277b-301a passim; 852 341a-b

(6. *Truth and falsity in religion.* 6d. *The relation of men of diverse faiths: the attitude of the faithful toward infidels.*)

35 LOCKE: *Toleration* 1a-22d esp 6a-b, 13c-d / *Human Understanding*, BK II, CH XXXIII, SECT 18 251a-c; BK IV, CH XIX, SECT 11 386d-387c
36 STERNE: *Tristram Shandy*, 257a-268a passim
37 FIELDING: *Tom Jones*, 152a-153b; 379c-380a
38 MONTESQUIEU: *Spirit of Laws*, BK XV, 110a-d; BK XIX, 139d; BK XXI, 169b-c; BK XXIV, 201c-d; 206c; BK XXV, 208a-c; 209a-b; 212d-214a,c
38 ROUSSEAU: *Social Contract*, BK IV, 435a-436a; 437a-c; 439b-c
39 SMITH: *Wealth of Nations*, BK V, 344a-b; 345b-346c
40 GIBBON: *Decline and Fall*, 12a-d; 83a-b; 179d-181a; 188d-189a; 206b,d-234a,c esp 207b-211a, 225b-d; 290b-291a; 328c-330a,c; 348d-361a,c passim, esp 348d-349c, 352c-354d; 457b,d-464d passim; 607b-608a; 643c-d
41 GIBBON: *Decline and Fall*, 138d; 148c-149b; 227d-228a; 237c-243b; 285d-288a; 323a-c; 377b-380d esp 378d, 380c-d; 383c-384b; 386c-387a; 401b-d; 531b-534a
43 FEDERALIST: NUMBER 10, 50c
43 MILL: *Liberty*, 270c-271a; 307d-309a; 311a-312a / *Representative Government*, 437d-438b
44 BOSWELL: *Johnson*, 173b-174b; 285a-c; 299b-d; 313a; 347a-c; 431a-b; 436d-438b; 512a-d
46 HEGEL: *Philosophy of History*, PART III, 311d-312a; PART IV, 322c-323a
48 MELVILLE: *Moby Dick*, 39a-b; 60b-66a
52 DOSTOEVSKY: *Brothers Karamazov*, BK III, 64c-67a
54 FREUD: *Group Psychology*, 676c-d / *Civilization and Its Discontents*, 788c

6e. Religious liberty: freedom of conscience; religious toleration

OLD TESTAMENT: *Daniel*, 6
APOCRYPHA: *Rest of Esther*, 16—(*D*) OT, *Esther*, 16
20 AQUINAS: *Summa Theologica*, PART II-II, Q 10, A 9, ANS 433b-434c; A 11 435d-436b; A 12, ANS 436b-437d; Q 11, A 3 440b-441a
23 HOBBES: *Leviathan*, PART I, 82d; PART II, 102d-103a; 104a; 149b-c; 163c-d; PART III, 209a-211a; 245c-246a,c; PART IV, 249b; 273c-d
25 MONTAIGNE: *Essays*, 23b-c; 153d-155c; 208b-c; 324c-326b
32 MILTON: *New Forcers of Conscience* 68a-b
35 LOCKE: *Toleration* 1a-22d esp 5d-11a
36 STERNE: *Tristram Shandy*, 257a-258a
38 MONTESQUIEU: *Spirit of Laws*, BK XII, 85d-86a; 86d-87b; BK XIX, 144c-145a; BK XXV, 211d-213d; BK XXVI, 218d-219a
38 ROUSSEAU: *Social Contract*, BK IV, 439b-c
39 SMITH: *Wealth of Nations*, BK V, 345b-346c
40 GIBBON: *Decline and Fall*, 12b-14a; 231a-c; 290c-291c; 349a-c; 383a-b; 390c-391a; 464b-d; 603b; 607b-c; 642c-d; 643c-d
41 GIBBON: *Decline and Fall*, 227b-d; 285d; 333d-335a,c esp 334d-335a,c; 480d-481a
42 KANT: *Science of Right*, 444a-c
43 ARTICLES OF CONFEDERATION: III 5b
43 CONSTITUTION OF THE U.S.: ARTICLE VI [591-599] 16d; AMENDMENTS, I 17a
43 FEDERALIST: NUMBER 1, 30a
43 MILL: *Liberty*, 270c-271a; 274b-293b passim; 307d-309a; 310c-312a
44 BOSWELL: *Johnson*, 221d-224a; 421d; 436d-437a; 445b-c; 512c-d
46 HEGEL: *Philosophy of History*, PART IV, 353c-d; 367a-b
48 MELVILLE: *Moby Dick*, 39a-b
50 MARX-ENGELS: *Communist Manifesto*, 428b-c
52 DOSTOEVSKY: *Brothers Karamazov*, BK V, 127b-137c passim

6f. The rejection of supernatural foundations for religion: the criticism of particular beliefs and practices; the psychogenesis of religion

12 LUCRETIUS: *Nature of Things*, BK I [62-158] 1d-3a; BK II [167-183] 17a-b; BK III [417-1094] 35c-44a,c; BK V [146-234] 63a-64a; [1161-1240] 76b-77b; BK VI [43-79] 80d-81b; [379-422] 85b-d
23 HOBBES: *Leviathan*, PART I, 69c-71b; 78d-80d; 83b; 90c; PART II, 149c-d; 151a-c; 162a-163b; PART III, 165b-166a; 172b-d; 176d-177b; 188a-198a; 198d-199a; 212d-215b; 236b-238c; PART IV, 247a-278d passim
25 MONTAIGNE: *Essays*, 256c-d
35 HUME: *Human Understanding*, SECT X 488d-497b
40 GIBBON: *Decline and Fall*, 93b-c; 189d-190c; 200d-201b; 294a-297a esp 295c-296d; 345b-347a passim, esp 347a; 465b-467d; 599b-c
41 GIBBON: *Decline and Fall*, 334a-d; 449a-d; 452b; 476b-477a
46 HEGEL: *Philosophy of History*, PART I, 217b-c; 220c-221a; 227c-228a; 244c-245a; 253b-254b; PART III, 292b-d; 304b; PART IV, 348d-349b; 354d-355b; 361b-c
49 DARWIN: *Descent of Man*, 302b-303d
50 MARX: *Capital*, 31d; 35b-c; 181d [fn 3]; 305d-306b [fn 2]
50 MARX-ENGELS: *Communist Manifesto*, 428b-d; 430a-b
52 DOSTOEVSKY: *Brothers Karamazov*, BK II, 21d-22b; BK V, 123b-125c; 127b-137c passim, esp 129b-130b; BK XI, 312b-c; 313c-314d; 337a-346a passim
54 FREUD: *Psycho-Analytic Therapy*, 126c / *Interpretation of Dreams*, 138c-d / *Group Psychology*, 692a-693a / *Ego and Id*, 707c-d / *War and Death*, 763b-c / *Civilization and Its Discontents*, 767a-772a esp 767a-c, 770c-771b;

774c-d; 793b-c / *New Introductory Lectures*, 875d-879c

6g. The relation between sacred doctrine and secular learning: the conflict of science and religion

7 PLATO: *Laws*, BK VII, 729d-730d; BK XII, 797c-798b
8 ARISTOTLE: *Heavens*, BK II, CH I [284^b1-5] 376a
12 LUCRETIUS: *Nature of Things*, BK I [62-158] 1d-3a; BK III [1-93] 30a-31b; BK V [1-90] 61a-62b
14 PLUTARCH: *Nicias*, 435b-d
18 AUGUSTINE: *Confessions*, BK V, par 3-5 27c-28c / *City of God*, BK VIII, CH 1-12 264b,d-273a; BK XVIII, CH 41 495b-496c; BK XIX, CH 18 523a-b / *Christian Doctrine*, BK II, CH 18-40 646a-656a; CH 42 656c-d
19 AQUINAS: *Summa Theologica*, PART I, Q 1 3a-10c passim; Q 2, A 2, REP 1 11d-12c; Q 12, AA 12-13 60d-62b; Q 19, A 5, REP 2 112d-113c; Q 32, A 1 175d-178a; Q 39, A 7, ANS 209a-210a; Q 46, A 2, ANS 253a-255a; Q 84, A 5 446c-447c
20 AQUINAS: *Summa Theologica*, PART I-II, Q 109, A 1 338b-339c; PART II-II, Q 1, A 1 380b-381a; AA 3-5 381d-384b; Q 2, A 4 393c-394b; A 10 399b-400b; Q 4, A 1, ANS 402a-403d; A 8 409a-d
21 DANTE: *Divine Comedy*, PURGATORY, III [16-45] 56a-b
23 HOBBES: *Leviathan*, PART I, 70c; 83b; PART II, 163a-b; PART III, 165a-c; PART IV, 260b-c; 274c-d
25 MONTAIGNE: *Essays*, 80b-82b; 89c-d; 155a-c; 208d-209c; 212a-d; 238c-239c; 267c-268a; 272d-273b
30 BACON: *Advancement of Learning*, 2c-4c; 17b-20a; 33c-d; 39d-42a esp 41b-d; 95d-97c / *Novum Organum*, BK I, APH 65 114b-c; APH 79 119d-120a; APH 89 124a-d
31 DESCARTES: *Rules*, III, 4d-5a / *Discourse*, PART I, 43c / *Meditations*, 69a-d / *Objections and Replies*, 125b-126a; 162c-165d esp 164d-165d; 283d-284a; 284d
33 PASCAL: *Provincial Letters*, 163a-166a / *Pensées*, 226 212b-213a; 243-253 218a-220a; 265-290 221b-225a; 434 248a-250a; 561-564 272b-273a / *Vacuum*, 355b-356b; 365b-366a / *Geometrical Demonstration*, 440a-b
35 LOCKE: *Human Understanding*, BK IV, CH XVII, SECT 23-CH XVIII, SECT 11 380b-384b; CH XIX, SECT 4 385b; SECT 14 387d-388a
35 HUME: *Human Understanding*, SECT XI, DIV 102 497b-d; DIV 104, 498c; DIV 107 499c-500b
38 ROUSSEAU: *Inequality*, 333d-334a; 362d
39 SMITH: *Wealth of Nations*, BK V, 334c-335b; 336b-337a
40 GIBBON: *Decline and Fall*, 12d-13b; 159a-d; 190c-d; 200d-201a; 204d-205b; 205d-206a; 307a-309d; 599c; 658b-c; 670b-d
41 GIBBON: *Decline and Fall*, 335a,c
42 KANT: *Pure Reason*, 239d-240a / *Practical Reason*, 346b-347a
43 MILL: *Utilitarianism*, 455a-c
44 BOSWELL: *Johnson*, 102c-d
46 HEGEL: *Philosophy of Right*, PART III, par 270, 87c-d / *Philosophy of History*, INTRO, 158c-160b; PART IV, 361b-c
49 DARWIN: *Origin of Species*, 239c-d / *Descent of Man*, 593d
50 MARX: *Capital*, 305a-306b [fn 2]
51 TOLSTOY: *War and Peace*, BK V, 196a-197c; BK VI, 248d-249a; EPILOGUE II, 675a-677b; 680b-c; 684b-d; 696a-c
52 DOSTOEVSKY: *Brothers Karamazov*, BK IV, 87c-d; BK VI, 164b
53 JAMES: *Psychology*, 847b-848a
54 FREUD: *New Introductory Lectures*, 874a-881c esp 875a-d, 878d-880b, 881c

7. Historical observations concerning religious beliefs, institutions, and controversies

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I. Works by authors represented in this collection.
II. Works by authors not represented in this collection.

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Chapter 80: REVOLUTION

INTRODUCTION

MOST of the words commonly used as synonyms for "revolution," such as "insurrection," "uprising," "rebellion," or "civil war," carry the connotation of violence and the use of armed force. Most of the great revolutions in western history which come readily to mind—those in the city-states and empires of the ancient world, the Peasants' Revolt in Germany in the 15th century, the rebellion led by Cromwell in 17th century England, the American and French Revolutions in the 18th century, the Russian and the Spanish Revolutions in our own time—have been affairs of bloodshed. Yet neither in political theory nor in historic fact does revolution always involve the use of force or the resort to violence.

Thucydides describes both violent and nonviolent revolutions in the alternations of democracy and oligarchy in the constitution of the Greek city-states. In England, the Great Rebellion which, by civil war, succeeds in beheading one Stuart king, is followed by the Bloodless Revolution of 1688 which, without any war at all, unseats another. Some of the revolutions in the European states in the middle years of the 19th century are accompanied by barricades and fighting. Some, however, like the revolutions accomplished by the Reform Bills in England or by constitutional amendments in the United States, are fundamental changes in government effected by due process of law, by peaceful shifts in the distribution of political power.

A revolution may involve action in defiance of the law and yet be prosecuted without violence on the part of the revolutionists, as in the case of the rebellion which Gandhi led against British rule in India by the method of civil disobedience. The use of armed force may not, however, be the only technique of revolutionary violence. "Revolutions are effected in two ways," according to Aristotle, "by force and by fraud." Though fraud does no physical violence, it does violence to the will of those who are deceived. In some cases when fraud is used, "the citizens are deceived into acquiescing in a change of government, and afterwards," Aristotle observes, "they are held in subjection against their will." In other cases, they may subsequently be persuaded and their allegiance and good will won. But as Machiavelli's later consideration of these two techniques of seizing power indicates, the choice between force and fraud is one of expediency rather than of principle. He recommends guile as an alternative to force, with force held in reserve should cunning fail. Both methods, however, employ the strategy of warfare.

As opposed to both force and fraud, and even to the method of civil disobedience, which acts outside the law or in violation of it, the writers of *The Federalist* conceive the possibility of a revolutionary process which is at once peaceful and legal. It is precisely because they think that the Constitution of the United States affords the opportunity for achieving political change by constitutional amendment that they defend the clause which guarantees "to every State in this Union a republican form of government," and promises to protect each of them, upon application to the federal government, "against domestic violence." To the objection that such a guaranty may involve "an officious interference in the domestic concerns of the members," Hamilton replies: "It could be no impediment to reforms of the State constitutions by a majority of the people in a legal and peaceable mode. This right would remain undiminished. The guaranty could only operate against changes to be effected by violence. Towards the prevention of calamities of this kind, too many checks cannot be provided."

In another of the Federalist papers, Madison

considers the possibility of "an insurrection pervading all the States, and comprising a superiority of the entire force, though not a constitutional right." He thinks such a case beyond "the compass of human remedies." It is enough if the Constitution "diminishes the risk of a calamity for which no possible constitution can provide a cure." Nor does "a conflagration through a whole nation, or through a very large proportion of it, proceeding either from weighty causes of discontent given by the government or from the contagion of some violent popular paroxysm" seem to Hamilton to "fall within any ordinary rules of calculation." In his estimation, "no form of government can always either avoid or control" such revolutions. But, he adds, "where the whole power of the government is in the hands of the people, there is the less pretence for the use of violent remedies in partial or occasional distempers of the State."

WHEN ARISTOTLE THINKS of revolutions as taking place without violence, he does not have in mind the strictly modern device of constitutional amendment. Political change, he suggests, may be the result of accidents rather than of planned actions. "Political revolutions," he writes, sometimes "spring from a disproportionate increase in any part of the state. . . . And this disproportion may sometimes happen by accident, as at Terentum, from a defeat in which many of the notables were slain in a battle with the Iapygians just after the Persian War, the constitutional government in consequence becoming a democracy." Or "when the rich grow numerous or properties increase, the form of government changes into an oligarchy or a government of familes."

On the other hand, to writers like Hobbes and Locke, revolution means war and is inseparable from violence. Those who "deny the authority of the Commonwealth"—apart from which, according to Hobbes, men live in a state of war—by renouncing their subjection to the Sovereign, "relapse into the condition of war commonly called Rebellion. . . . For *rebellion* is but war renewed." Unlike bees and ants, the peace of whose societies is never threatened by rebellion, there are "amongst men . . . very many that think themselves wiser, and abler to govern the public, better than the rest; and these strive to reform and innovate, one this way, another that way; and thereby bring it into distraction and civil war."

Locke's principle seems to be that "whoever uses force without right—as everyone does in society who does it without law—puts himself into a state of war with those against whom he so uses it." Having entered into society "and introduced laws for the preservation of property, peace and unity amongst themselves," men who "set up force again in opposition to the laws, do *rebellare*—that is, bring back again the state of war—and are properly rebels."

Aquinas also seems to align revolution (which he calls "sedition") with war and strife, though he thinks it differs from them in two respects: "First, because war and strife denote actual aggression on either side, whereas sedition may be said to denote either actual aggression or the preparation for such aggression. . . . Secondly, they differ in that war is, properly speaking, carried on against external foes, being as it were between one people and another, whereas strife is between one individual and another, while sedition, in its proper sense, is between the mutually dissentient parts of one people, as when one part of the state rises in tumult against another part."

THOUGH THE WORD "revolution" may be used in both senses, it nevertheless seems to be the case that traditional discussions of the causes and prevention of revolution, theories of revolutionary strategy and tactics, and the great issue of the right of rebellion all seem to contemplate the resort to, or at least the threat of, force to gain an end. This also seems to be implied in the popular conception of the difference between revolution and evolution.

The contrast between revolution and evolution may explain why the note of violence, disorder, or disruption colors the idea of revolution. The word "evolution" usually signifies change which is gradual and which tends in one direction rather than another, that direction being for the most part toward a progressive development of changes already accomplished. Revolution is abrupt. Revolutions can occur in either direction, against the tide as well as with it. As action and reaction can be equal and opposite in physical motion, so in social change

revolution and counter-revolution can aim in opposite directions. In either case, whether revolution reverses the direction of change or precipitates a radical transformation toward which things are moving too slowly, revolution seems to involve *overthrowing* the established order rather than *developing* its latent tendencies.

It is in this sense that the revolutionist is a radical. He may also be a reactionary in the sense that the radical change he is willing to use force to achieve, is a return to some earlier condition rather than one which, in the judgment of his opponents, is in the line of progress or evolution. But whether reactionary or progressive the revolutionist is never conservative. If the established order does not submit readily to the radical change which a revolutionary person or party seeks, or if it resists, it must be forced to yield. The revolutionist can be reluctant to use force, but he can never forswear it entirely.

This seems to be the sense in which Marx and Engels conceive the program of the *Communist Manifesto* as a revolutionary program. Their conception of a revolutionary class or party is not, however, limited to the proletariat in their struggle against the bourgeoisie. They apply it to the bourgeoisie, not in the contemporary world when the established order of capitalism makes the bourgeoisie conservative or reactionary, but in the 18th century when the bourgeoisie overthrew the landed aristocracy.

"The bourgeoisie," they write, "historically has played a most revolutionary part. . . . The French revolution, for example, abolished feudal property in favor of bourgeois property." And again: "When Christian ideas succumbed in the 18th century to the rationalist ideas, feudal society fought its death-battle with the then revolutionary bourgeoisie." That the French Revolution represents the struggle not between the propertied and the propertyless classes, but between two propertied classes—the bourgeoisie and the aristocrats—seems evident to Marx in the fact that "during the very first storms of the revolution, the French Bourgeoisie dared to take away from the workers the right of association just acquired."

No less than the *Communist Manifesto*, the American Declaration of Independence is a revolutionary document. Its signers are prepared to use force to overthrow the established order which, in their view, has worked grievous iniquities and injustices upon the colonies. But in the Marxist view the rebellion of the colonists, unlike the French Revolution, is political rather than economic, even if it has economic as well as political motivations. This distinction between economic and political revolution seems to be peculiarly modern.

It is not that the ancients—Thucydides, Plato, and Aristotle, for example—fail to recognize the "class war," which is paramount for Marx. They observe (as is indicated in the chapter on Oligarchy) the struggle between the rich and the poor for control of the state. They know that the opponents, in the frequent and violent revolutions which disturbed the Greek city-states, are the oligarchs and the democrats —the men of great property and the men of little or none.

The revolt of the Helots in Sparta is the exceptional case of a rebellion of slaves against their masters. For the most part, the struggle is between free men belonging to different economic classes. The oligarchical and democratic revolutions which these classes in society foment are political in the sense of seeking to change the constitution rather than the economic system itself, even though the constitutional changes may have economic as well as political effects. "In the opinion of some," Aristotle reports, "the regulation of property is the chief point of all, that being the question upon which all revolutions turn."

Aristotle is willing to admit that "the equalization of property" may "prevent the citizens from quarrelling," but he does not think that economic injustice is the only cause of revolution, or economic justice its absolute cure. "The avarice of mankind," he writes, "is insatiable; at one time two obols was pay enough; but now, when this sum has become customary, men always want more and more without end; for it is of the nature of desire not to be satisfied, and most men live only for the gratification of it. The beginning of reform," in his opinion, "is not so much to equalize property as to train the nobler sorts of natures not to desire more, and to prevent the lower from getting more; that is to say, they must be kept

down, but not ill-treated." Such a reform would hardly cure the evil of chattel slavery. That requires a revolution which effects the equalization of political status, not the equalization of property.

If a rebellion of slaves in the ancient world had succeeded in abolishing the institution of slavery, it would have been, in the modern view, an economic as well as a political revolution, for it would have radically altered the mode of production. It is in this sense that what Adam Smith describes as the change from an agrarian to a manufacturing economy, is strictly an economic revolution, though it is Marx, not Smith, who gives currency to the word "revolution" as used in this sense. It is exemplified in our common understanding of the phrase "the industrial revolution" which refers to the radical change in an economy based on manufactures, when mass production by machines in factories replaces the system of production by workers using their own tools in their own homes.

"In manufacture," writes Marx, "the revolution in the mode of production begins with labor-power; in modern industry it begins with the instruments of labor. Our first inquiry then is, how the instruments of labor are converted from tools into machines, or what is the difference between a machine and the implements of a handicraft?" But for Marx the meaning of economic revolution is not limited to radical changes in the physical conditions of production. Such changes necessarily involve equally radical changes in the social relationships of economic classes, and in their possession of political power. In the *Manifesto*, "the modern bourgeoisie" is said to be "itself the product of a long course of development, of a series of revolutions in the modes of production and exchange." The bourgeoisie, in turn, "cannot exist without constantly revolutionizing the instruments of production, and thereby the relations of production, and with them the whole relations of society."

According to Marx and Engels, "each step in the development of the bourgeoisie was accompanied by a corresponding political advance of that class. An oppressed class under the sway of the feudal nobility, an armed and self-governing association in the mediaeval commune . . . afterwards in the period of manufacture proper, serving either the semi-feudal or the absolute monarchy as a counterpoise against the nobility . . . the bourgeoisie has at last, since the establishment of Modern Industry and of the world-market, conquered for itself in the modern representative State, exclusive political sway."

ON THE QUESTION whether economic revolutions, in their social and political aspects, require violence, the writers of the *Manifesto* seem to be unambiguous—at least so far as the communist program is concerned. Since "the Communist revolution is the most radical rupture with traditional property-relations," and "involves the most radical rupture with traditional ideas," it can hardly be expected to occur without open warfare, no less violent than the earlier struggle of the bourgeoisie against the aristocrats. Standing "face to face with the bourgeoisie today, the proletariat alone is a really revolutionary class," in whose development Marx and Engels see the transition from a "more or less veiled civil war, raging within existing society, up to the point where that war breaks out into open revolution, and where the violent overthrow of the bourgeoisie lays the foundation for the sway of the proletariat."

It is precisely on the use of force that the *Manifesto* distinguishes between communism and socialism, especially the "utopian" variety of the latter. The Socialists "reject all political, and especially all revolutionary action; they wish to attain their ends by peaceful means, and endeavor by small experiments, necessarily doomed to failure, and by the force of example, to pave the way for the new social Gospel. . . . They, therefore, endeavor, and that consistently, to deaden the class struggle and to reconcile the class antagonisms." Communist strategy, on the contrary, everywhere supports "every revolutionary movement against the existing social and political order of things. . . . The Communists disdain to conceal their views and aims. They openly declare that their ends can be attained only by the forcible overthrow of all existing social conditions."

Though fundamentally economic, the communist revolution cannot help having political effects. "Political power," according to Marx

and Engels, "is merely the organized power of one class for oppressing another." This applies to the proletariat's conquest of power. Yet they also seem to think that the dictatorship of the proletariat is only a temporary phase in the communist revolution. "If the proletariat during its contest with the bourgeoisie is compelled, by the force of circumstances, to organize itself as a class; if, by means of a revolution, it makes itself the ruling class, and, as such, sweeps away by force the old conditions of production, then it will, along with these conditions, have swept away the conditions for the existence of class antagonisms, and of classes generally, and will thereby have abolished its own supremacy as a class." In aiming at the economically classless society, with the consequent transformation of the state, the communist program seems to conceive its revolution as abolishing the possibility of or need for any further revolutions, peaceful or violent, economic or political.

In addition to the issues raised by the economic theory and history which underlie revolutionary communism, there is the debatable question whether an economically classless society means the withering away of the state, or at least such changes in political institutions that revolution would cease to be possible or necessary. Even a hypothetical consideration of this question seems to call for attention to the various ways in which political revolutions take place. With the advent of the "classless society," no opportunity would remain, at least in theory, for the type of revolution in which one ruling class replaces another. But in such a society it is still conceivable that the equivalent of a palace revolution might substitute one ruling individual for another—by the old-fashioned methods of assassination or usurpation.

For Aristotle, however, all revolutions which produce a change from one form of government to another also involve the replacement of one ruling class by another. He distinguishes between such revolutions as affect the constitution, "when men seek to change from an existing form into some other, for example, from democracy into oligarchy, or from oligarchy into democracy," and those revolutions which do not affect the constitution, when men, "without disturbing the form of government, whether oligarchy or monarchy or any other, try to get the administration into their own hands." To these two types of revolution Aristotle adds a third, which "may be directed against only a portion of the constitution, *e.g.*, the establishment or overthrow of a particular office; as at Sparta, it is said that Lysander attempted to overthrow the monarchy, and king Pausanias, the ephoralty."

Conceivably, any of these political changes might be accomplished without violence. In modern constitutional states, the basic principle of constitutions can be changed from oligarchy to democracy by amendments or legal reforms which extend the franchise. The structure of the government, as to its offices or their organization, can be changed by some form of peaceful plebiscite. As the Federalists point out, the polls provide a "natural cure for an ill-administration in a popular or representative constitution," namely, a change of men. But such changes of government in the ancient city-states, even when constitutional, appear to Aristotle to be revolutionary in the double sense of involving violence, or the threat of it, and of being radical transformations of the polity. What is true of constitutional changes in ancient republics is also true of monarchies and tyrannies, both ancient and modern.

When absolute power is concentrated in the hands of one man, his subjects are necessarily without juridical means for redressing their grievances by changing the occupant of the throne, much less for abolishing the monarchy entirely in favor of self-government. Machiavelli's advice to the prince on safeguarding his power against usurping rivals or rebellious subjects, seems to be written against the background of force and fraud as the normal methods of changing rulers or modes of rule. They are the very same methods which the prince in power must employ to maintain his position.

"There are two ways of contesting," Machiavelli writes, "the one by law, the other by force; the first method is proper to men, the second to beasts; but because the first is frequently not sufficient, it is necessary to have recourse to the second. Therefore it is necessary for a prince to understand how to avail himself of the beast and the man. . . . Being compelled knowingly to adopt the beast, [a prince] ought

to choose the fox and the lion; because the lion cannot defend himself against snares and the fox cannot defend himself against wolves." It follows, according to Machiavelli, that the prince seldom can be, though he should always try to *appear* to be, "merciful, faithful, humane, religious, upright. . . . A prince, especially a new one, cannot observe all those things for which men are esteemed, being often forced, in order to maintain the state, to act contrary to fidelity, friendship, humanity, and religion."

The stories of oriental despotism told by Herodotus, the account of the Caesars given by Tacitus and Gibbon, the chronicle of the English monarchy in the historical plays of Shakespeare, all seem to indicate that crowns seldom change heads without bloodshed. Machiavelli's rules for the prince do not greatly enlarge upon Aristotle's description of "the arts by which the tyrant preserves his power." Even when Aristotle proposes, as an alternative method, that the tyrant can try to be benevolent, he adds the Machiavellian suggestion that the tyrant should at least "appear to act" like a good king.

The tyrant, Aristotle writes, "should lop off those who are too high. He must put to death men of spirit. . . . He must be on his guard against anything which is likely to inspire either courage or confidence among his subjects. He must prohibit literary assemblies or other meetings for discussion, and he must take every means to prevent people from knowing one another." After enumerating many similar practices which he calls "Persian and barbaric arts," Aristotle concludes that "there is no wickedness too great for the tyrant" if he is to maintain himself in power.

These matters are more fully discussed in the chapter on TYRANNY. In our present consideration of the types of revolution, we must note one other political change which usually involves the widespread turbulence of civil war. That is the rebellion of subject peoples against their imperial masters. Unlike civil uprisings, which seek to overthrow governments or effect a change in the ruling classes or persons, these wars of rebellion seek to liberate one people from another or to establish the independence of colonies at the expense of empire.

Still another type of insurrection aims at the dissolution of the state itself. What Rousseau deals with in theory as the degeneration of the state into anarchy by the repudiation of the social contract, calls to mind no historic examples; but the few historic instances of "wars of secession" certainly illustrate the point. They aim to dissolve a federal state by severing ties of union which have something like a contractual character.

The distinction between these types of civil war may be clear in theory, yet difficult to apply to historic cases. Which sort of insurrection—a rebellion of colonies or a secession of states—does the Declaration of Independence announce? A theory current among American political writers in 1775 suggests that the thirteen colonies claimed the status of self-governing dominions in a confederacy united under the British crown. On this theory, does the principle stated in the Declaration—that it is sometimes "necessary for one people to dissolve the political bands which have connected them with another, and to assume among the powers of the earth the separate and equal station to which the laws of nature and of nature's God entitle them"—cover the secession of the Southern states from the American union, as well as the revolt of the American states from Great Britain, or the British Commonwealth of nations? Questions of fact are involved, of course, in any comparison of the Revolutionary War of 1776 and the war between the states in 1861; but the question of principle turns on the whole issue of whether revolution is a matter of might or right.

THE RIGHT OF REVOLUTION does not seem to be a central consideration in ancient political theory. The ancient discussion of revolutions appears to be more concerned with their causes, their methods, and their prevention. This does not mean that the ancients treat revolutions entirely as contests for power. On the contrary, Aristotle declares that "the universal and chief cause of the revolutionary impulse" is "the desire of equality, when men think that they are equal to others who have more than themselves; or, again, the desire of inequality and superiority, when conceiving themselves to be superior they think that they have not more but the same or less than their inferiors—pretensions which may or may not be just."

Nevertheless, Aristotle's elaborate treatise on revolution in the fifth book of his *Politics* deals alike with revolutions that spring from real and from fancied injustices. The object of his inquiry seems to be "what modes of destruction apply to particular states, and out of what and into what they mostly change; also what are the modes of preservation in states generally, or in a particular state, and by what means each state may be best preserved"—*not* how revolution can be justified or why rebellion is the crime of treason or the folly of anarchy. Such questions seem to come to the foreground in modern political theory, though they also have a certain prominence in mediaeval teaching.

Aquinas, for example, holds that sedition is "a special kind of sin" because it is "opposed to a special kind of good, namely, the unity and peace of a people." He qualifies this, however, in the case of an uprising against tyranny, even if it involves civil strife. Since in his view "a tyrannical government is not just, because it is directed, not to the common good but to the private good of the ruler . . . there is no sedition in disturbing a government of this kind, unless indeed the tyrant's rule be disturbed so inordinately that his subjects suffer greater harm from the consequent disturbance than from the tyrant's government. Indeed," Aquinas writes, "it is the tyrant rather who is guilty of sedition, since he encourages discord and sedition among his subjects, that he may lord over them more securely."

Holding that "the end of government is the good of mankind," Locke asks, in a similar vein, which is better: "that the people should be always exposed to the boundless will of tyranny, or that the rulers should be sometimes liable to be opposed when they grow exorbitant in the use of their power, and employ it for the destruction and not the preservation of the property of their people"? Since "force is to be opposed to nothing but unjust and unlawful force," Locke argues that a king may be resisted when he exceeds his authority or prerogative and uses his power unlawfully. Since such a king "has dethroned himself, and put himself in a state of war with his people, what shall hinder them from prosecuting him who is no king, as they would any other man who has put himself into a state of war with them?"

The right to resist a tyrant, or a king turned despot, may lead to regicide, but this seems no different to Locke from the punishment of any other criminal. "He who may resist must be allowed to strike"; and furthermore, Locke continues, "he has a right, when he prevails, to punish the offender, both for the breach of the peace, and all the evils that followed upon it." Rousseau is even less hesitant to condone tyrannicide. "The contract of government is so completely dissolved by despotism," writes Rousseau, "that the despot is master only so long as he remains the strongest; as soon as he can be expelled, he has no right to complain of violence. The popular insurrection that ends in the death or deposition of a Sultan is as lawful an act as those by which he disposed, the day before, of the life and fortunes of his subjects. As he was maintained by force alone, it is force alone that overthrows him."

Those who say that "it may occasion civil wars or intestine broils, to tell the people they are absolved from obedience when illegal attempts are made upon their liberties or properties . . . may as well say upon the same ground," in Locke's opinion, "that honest men may not oppose robbers and pirates because this may occasion disorder or bloodshed." Nor does Locke think that the right to resist injustice means that governments will be overthrown "upon every little mismanagement in public affairs. Great mistakes in the ruling part," he writes, "many wrong and inconvenient laws, and all the slips of human frailty will be borne by the people without mutiny or murmur. But if a long train of abuses, prevarications, and artifices, all tending the same way, make the design visible to the people . . . it is not to be wondered that they should then rouse themselves and endeavor to put the rule into such hands which may secure to them the ends for which government was at first erected."

Hence, to those who say that his revolutionary principle "lays a perpetual foundation for disorder," Locke replies that it will never operate until "the inconvenience is so great that the majority feel it, and are weary of it, and find it necessary to have it amended." Rebellions will occur only when the majority feel that "their laws, and with them their estates, liberties, and lives are in danger, and perhaps their religion

too," and so will exercise their natural right to resist, with force if necessary, the illegal force used against them. But strictly, it is not the people who rebel; rather it is they who put down the sedition of the tyrant.

What Locke states as a right of resistance, the Declaration of Independence seems to put more positively as a right of rebellion, apparently deducing it from other natural rights—of life, liberty, and the pursuit of happiness. It is to secure these rights that "governments are instituted among men," so that "whenever any form of government becomes destructive of these ends, it is the right of the people to alter or to abolish it and to institute a new government." The Declaration admits that "governments long established should not be changed for light and transient causes"; but when a people suffer "a long train of abuses and usurpations . . . it is their right, it is their duty, to throw off such government, and to provide new guards for their security."

AGAINST SUCH REVOLUTIONARY sentiments or principles Hobbes, Kant, and Hegel seem to take a stand, though in each case they place some qualification on their denial of a right of resistance or rebellion. Hobbes, for example, denies the right of men to change their form of government, or of subjects to resist their Sovereign, *except for the sake of self-preservation.* When men covenant to form a commonwealth, they are bound, Hobbes says, to uphold the actions and judgments of the Sovereign they have created; they "cannot lawfully make a new covenant amongst themselves, to be obedient to any other . . . without his permission. . . . They that are subjects to a monarch, cannot without his leave cast off monarchy, and return to the confusion of a disunited multitude."

Furthermore, "because every subject is by this institution, author of all the actions and judgments of the Sovereign instituted, it follows," according to Hobbes," that whatsoever he doeth, it can be no injury to any of his subjects; nor ought he to be by any of them accused of injustice." Yet "every subject has liberty in all those things, the right whereof cannot by covenant be transferred," such as the right of a man to defend his own body, "to resist those that assault him," or to have access to "food, air, medicine, or any other thing without which he cannot live."

Kant disallows rebellion as a matter of right, unless resistance is required to fulfill a moral duty outside the sphere of public right. " 'Obey the authority which has power over you' (in everything which is not opposed to morality) is a Categorical Imperative." Hence, though a juridical constitution "may be vitiated by great defects and coarse errors, it is nevertheless absolutely unallowable and punishable to resist it."

Since, in his view, public right is founded on the institution of "a *sovereign* will, uniting all particular wills by one law," Kant argues that "to allow a right of resistance to this sovereignty, and to limit its power, is a contradiction." It should be remembered also that for Kant the only legitimate form of government is a republic, resting on the foundation of popular sovereignty. Kant is not considering resistance to tyrannical or despotic power which lacks all juridical authority.

A similar qualification appears in Hegel's distinction between the rebellion of a conquered people and revolution in a well-organized state. Only the latter action is a crime, for only the latter situation corresponds to the Idea of the state—fully realized, for Hegel, only in a constitutional monarchy, never in a despotism or tyranny. "A rebellion in a province conquered by war," he says, "is a different thing from a rising in a well-organized state. It is not against their prince that the conquered are in rebellion, and they are committing no crime against the state, because their connexion with their master is not a connexion within the Idea, or one within the inner necessity of the constitution. In such a case, there is only a contract, no political tie."

With such qualifications on their position, those who disfavor revolution or deny its basis in right may not be completely opposed to those who apparently think rebellions can be justified. There may be qualifications on the other side too. Aquinas, for example, justifies sedition, not against any government or ruler, but only against tyranny. The signers of the Declaration of Independence speak of a right to alter or abolish "any form of government," but the writers of the Federalist papers do not seem equally willing to acknowledge a right to overthrow the Constitution of the United States.

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To find the passages cited, use the numbers in heavy type, which are the volume and page numbers of the passages referred to. For example, in **4** HOMER: *Iliad*, BK II [265-283] **12d**, the number **4** is the number of the volume in the set; the number **12d** indicates that the passage is in section d of page 12.

PAGE SECTIONS: When the text is printed in one column, the letters **a** and **b** refer to the upper and lower halves of the page. For example, in **53** JAMES: *Psychology*, **116a-119b**, the passage begins in the upper half of page 116 and ends in the lower half of page 119. When the text is printed in two columns, the letters **a** and **b** refer to the upper and lower halves of the left-hand side of the page, the letters **c** and **d** to the upper and lower halves of the right-hand side of the page. For example, in **7** PLATO: *Symposium*, 163b-164c, the passage begins in the lower half of the left-hand side of page 163 and ends in the upper half of the right-hand side of page 164.

AUTHOR'S DIVISIONS: One or more of the main divisions of a work (such as PART, BK, CH, SECT) are sometimes included in the reference; line numbers, in brackets, are given in certain cases; *e.g.*, *Iliad*, BK II [265-283] **12d**.

BIBLE REFERENCES: The references are to book, chapter, and verse. When the King James and Douay versions differ in title of books or in the numbering of chapters or verses, the King James version is cited first and the Douay, indicated by a *(D)*, follows; *e.g.*, OLD TESTAMENT: *Nehemiah*, 7:45—*(D) II Esdras*, 7:46.

SYMBOLS: The abbreviation "esp" calls the reader's attention to one or more especially relevant parts of a whole reference; "passim" signifies that the topic is discussed intermittently rather than continuously in the work or passage cited.

For additional information concerning the style of the references, see the Explanation of Reference Style; for general guidance in the use of *The Great Ideas*, consult the Preface.

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1*a*. The issue concerning violent and peaceful means for accomplishing social, political, or economic change

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46 HEGEL: *Philosophy of Right*, ADDITIONS, 172 146c-d
47 GOETHE: *Faust*, PART II [4812-4830] 119b-120a; [10,242-284] 249b-250b
51 TOLSTOY: *War and Peace*, BK VIII, 338c-d; BK XI, 483b-484a; 505a-511b; EPILOGUE I, 668a-669d

1c. Revolution and counter-revolution: civil strife distinguished from war between states

6 HERODOTUS: *History*, BK III, 102d-107c; BK V, 172c-174b; BK VIII, 260b-c
6 THUCYDIDES: *Peloponnesian War*, BK I, 355a-b; BK III, 434c-438c; BK IV, 459a-c; 463a-465c; BK V, 482d-483a; BK VIII, 575c-576c; 577b-d; 579c-583c; 585d-586b; 587a-589a; 590a-c
7 PLATO: *Laws*, BK I, 641c-643a / *Seventh Letter*, 806d-807b
9 ARISTOTLE: *Politics*, BK V, CH 4 [1304a18-39] 505d-506a / *Athenian Constitution*, CH 14-19 558d-561d; CH 29-41 566b-572a
14 PLUTARCH: *Pompey*, 533a-c / *Caesar*, 598b-d / *Otho*, 875b-d
15 TACITUS: *Histories*, BK III, 261d-262a
18 AUGUSTINE: *City of God*, BK XIX, CH 7 515a-c
20 AQUINAS: *Summa Theologica*, PART II-II, Q 42, A 1, ANS 583c-584b
23 MACHIAVELLI: *Prince*, CH XIX, 26b-d; CH XX, 31b-c
23 HOBBES: *Leviathan*, PART I, 85d-86a; PART II, 99d-100a; 114b-c; 147c
24 RABELAIS: *Gargantua and Pantagruel*, BK I, 54a-c
25 MONTAIGNE: *Essays*, 331a; 470a-b; 504c-506a
26 SHAKESPEARE: *1st Henry VI*, ACT II, SC IV-ACT III, SC I 11b-16b; ACT IV, SC I [182-194] 21d / *2nd Henry VI* 33a-68d esp ACT I, SC I [180-259] 35c-36b / *3rd Henry VI* 69a-104d esp ACT I, SC I 69a-72d / *Richard III* 105a-148a,c esp ACT V, SC V [16-41] 148a,c / *1st Henry IV*, ACT I, SC I 434b,d-435c / *Julius Caesar*, ACT III, SC I [253-275] 583b
35 LOCKE: *Civil Government*, CH XIII, SECT 155 60d-61a; CH XIX, SECT 224-243 76d-81d esp SECT 224-230 76d-78c
40 GIBBON: *Decline and Fall*, 48d-49a; 113b; 437d
41 GIBBON: *Decline and Fall*, 474a; 594b-595b
43 DECLARATION OF INDEPENDENCE: 1a-3b esp [80-94] 2b-3a
43 CONSTITUTION OF THE U.S.: ARTICLE IV, SECT 4 16b-c
43 FEDERALIST: NUMBER 16 66c-68d; NUMBER 28 96c-98b; NUMBER 29, 99b-101a; NUMBER 43, 141a-142d; NUMBER 46, 152a-153a
46 HEGEL: *Philosophy of History*, PART III, 297a-d
50 MARX-ENGELS: *Communist Manifesto*, 424d; 428a-b

2. The nature of political revolutions

2a. Change in the form of government or constitution

OLD TESTAMENT: *I Samuel*, 8—(*D*) *I Kings*, 8
6 HERODOTUS: *History*, BK I, 14a-c; BK III, 107c-108d; BK V, 167a-b; 171c-172c; 177d-180a; BK VI, 193b-c

6 THUCYDIDES: *Peloponnesian War*, BK II, 391c-d; BK VIII, 575c-576c; 577b-d; 579c-583c; 585d-586b; 587a-589a; 590a-c
7 PLATO: *Republic*, BK VII, 401c-d; BK VIII, 403a-404a; 405c-406a; 408b-409b; 411d-414b / *Seventh Letter*, 800b
9 ARISTOTLE: *Politics*, BK II, CH 12 [1273b36-1274a22] 470c-d; BK III, CH 3 [1276a35-b16] 473b-c; BK IV, CH 5 [1292b11-22] 492a; BK V, CH 1 [1301b4-26] 502d-503a; CH 3 [1303a14-24] 504c-d; CH 4 [1304b8-18] 506b; CH 12 [1316a1-b27] 518d-519d / *Athenian Constitution*, CH 1-41 553a-572a passim, esp CH 5 554d-555a, CH 14-19 558d-561d, CH 29 566b-d, CH 33-34 568b-569a, CH 38 570a-c
14 PLUTARCH: *Lycurgus*, 32d-35d / *Solon*, 68d-71d / *Timoleon* 195a-213d esp 205d-207a / *Lysander* 354b,d-368a,c esp 359c-361a / *Pompey* 499a-538a,c / *Caesar* 577a-604d / *Cato the Younger* 620a-648a,c / *Cleomenes*, 657a-663c / *Dion* 781b,d-802a,c
15 TACITUS: *Annals*, BK I, 1a-2a; 3a-b; 6a-b
23 MACHIAVELLI: *Prince*, CH XXVI 36b-37d
23 HOBBES: *Leviathan*, PART II, 150b-151a; 154b-c
25 MONTAIGNE: *Essays*, 47a-51a; 462c-465c; 504c-506a
35 LOCKE: *Civil Government*, CH XIII, SECT 149 59b-d; SECT 155 60d-61a; CH XIX 73d-81d passim
38 MONTESQUIEU: *Spirit of Laws*, BK VIII, 51a-53d; BK XI, 76c-78a
38 ROUSSEAU: *Social Contract*, BK III, 418a-420a; 424a-d
40 GIBBON: *Decline and Fall*, 24b,d-28b; 50b-51d; 153c-156a; 622d-623c
41 GIBBON: *Decline and Fall*, 73b-74d; 202a-d; 217a-219a; 561c-565a; 574b-582c esp 575a-577d
42 KANT: *Science of Right*, 438d-441d; 450d-452a
43 DECLARATION OF INDEPENDENCE: [1-23] 1a-b
43 CONSTITUTION OF THE U.S.: ARTICLE IV, SECT 4 16b-c
43 FEDERALIST: NUMBER 14, 62a-d; NUMBER 21, 78d-79b; NUMBER 43, 141a-142d; 143b-144a; NUMBER 49-50 159b-162c
43 MILL: *Liberty*, 267d-268b / *Representative Government*, 327b,d-332d; 350c-353b
46 HEGEL: *Philosophy of Right*, PART III, par 258, 81a-b; ADDITIONS, 166 145b-c / *Philosophy of History*, INTRO, 203b-206a,c; PART III, 294c-295a; 300c-301c; PART IV, 355d-357a; 364a-c
50 MARX-ENGELS: *Communist Manifesto*, 424c-d
51 TOLSTOY: *War and Peace*, BK VI, 238c-243d; 260a-262a; EPILOGUE I, 668a-669d

2b. Change in the persons holding power: deposition, assassination, usurpation

OLD TESTAMENT: *Judges*, 9 / *II Samuel*, 15-18—(*D*) *II Kings*, 15-18 / *I Kings*, 12:1-25; 16:8-20—(*D*) *III Kings*, 12:1-25; 16:8-20 / *II Kings*, 8:7-15; 9:1-10:11; 11:1-16; 12:19-21; 14:17-21; 15:8-10,13-14,23-26,30; 21:18-26—(*D*) *IV Kings*, 8:7-15; 9:1-10:11; 11:1-16; 12:19-21; 14:17-21; 15:8-10,13-14,23-26,30; 21:18-26 / *II Chronicles*, 10; 23—(*D*) *II Paralipomenon*, 10; 23
5 AESCHYLUS: *Prometheus Bound* [199-243] 42b-c
5 ARISTOPHANES: *Ecclesiazusae* 615a-628d esp [1-570] 615a-621b
6 HERODOTUS: *History*, BK I, 2c-3d; 12b-13b; BK II, 84a-86a; BK III, 120b-c; BK V, 164d-165a; 171c-172c; 177d-180a; 182a
6 THUCYDIDES: *Peloponnesian War*, BK VI, 523c-524d
7 PLATO: *Seventh Letter*, 813d-814c
9 ARISTOTLE: *Politics*, BK II, CH 10 [1272b2-10] 468d-469a; BK V, CH 1 [1301b4-13] 502d; CH 10 [1311a28-1312a39] 513c-514d; BK VII, CH 14 [1333b28-38] 538c-d
14 PLUTARCH: *Poplicola*, 77a-81c / *Caius Marius*, 344c-354a,c / *Sulla*, 369a-374a; 382a-387a,c / *Crassus*, 440a-445d / *Sertorius*, 469a-470d / *Pompey* 499a-538a,c / *Caesar* 577a-604d / *Cato the Younger* 620a-648a,c / *Tiberius Gracchus*, 678b-d / *Cicero*, 708a-713b / *Antony*, 749c-755c / *Marcus Brutus* 802b,d-824a,c esp 803d-811a / *Galba* 859a-869d / *Otho* 869b,d-876d
15 TACITUS: *Annals*, BK XI, 102d-103a; BK XII, 112a-113b; BK XV, 169a-176b / *Histories*, BK I-III 189a-266a
18 AUGUSTINE: *City of God*, BK III, CH 15-16 176d-178d
23 MACHIAVELLI: *Prince*, CH VIII 12d-14c; CH IX, 15d-16a
23 HOBBES: *Leviathan*, PART I, 78b; PART II, 152b-c; 159a-c
26 SHAKESPEARE: *1st Henry VI*, ACT II, SC V [33-129] 13b-14a / *2nd Henry VI*, ACT I, SC I [151-259] 35b-36b; ACT II, SC II 43c-44c; ACT III, SC I 47a-51a / *3rd Henry VI* 69a-104d / *Richard III* 105a-148a,c / *Richard II* 320a-351d / *1st Henry IV* 434a-466d / *2nd Henry IV* 467a-502d esp ACT IV, SC I 487b-489d / *Julius Caesar* 568a-596a,c esp ACT II, SC I [10-191] 574c-576c, ACT III, SC I 580b-583c
27 SHAKESPEARE: *Macbeth* 284a-310d esp ACT IV, SC III 303b-306b / *Tempest*, ACT I, SC II [16-148] 525b-526d; ACT II, SC I [270-296] 534c-d; ACT V, SC I [71-79] 545c
35 LOCKE: *Civil Government*, CH XVII 70c-71a; CH XIX 73d-81d passim
36 SWIFT: *Gulliver*, PART II, 80b
38 ROUSSEAU: *Inequality*, 361c-362a / *Social Contract*, BK III, 419a-c; 424a-d; BK IV, 432c-433a; 438a-b
40 GIBBON: *Decline and Fall*, 33d-49a passim, esp 39c-d, 41d-42a,c, 44b-c; 56a-61a esp 56b-c, 60c-61a; 63b-64a; 69a-79a passim, esp

(2. *The nature of political revolutions.* 2b. *Change in the persons holding power: deposition, assassination, usurpation.*)

69a-b, 70a-c, 76a, 78c; 111b-113a; 114b,d-115b; 128a,c; 159b,d-178d passim; 386a-387d; 436a-438a; 489d-491a; 515b-518a

41 GIBBON: *Decline and Fall*, 113c-117b; 161a-194d passim, esp 166a-167d, 189a-194d; 428a; 472b-476b

42 KANT: *Science of Right*, 440a-441b

43 FEDERALIST: NUMBER 16, 68a-c; NUMBER 20, 77b-c; NUMBER 21, 78d-79b; NUMBER 26, 93c-94d; NUMBER 28 96c-98b; NUMBER 29, 99b-101a; NUMBER 33, 108b-109a; NUMBER 38, 124b-125a; NUMBER 44, 146c-d; NUMBER 46, 152a-153a; NUMBER 48, 157b-c

43 MILL: *Liberty*, 268d; 274b,d [fn 1]

44 BOSWELL: *Johnson*, 195c-d

46 HEGEL: *Philosophy of History*, PART III, 294c-295a; 300c-301c; PART IV, 359a

51 TOLSTOY: *War and Peace*, BK I, 8d-9a

2c. Change in the extent of the state or empire: dissolution, secession, liberation, federation

OLD TESTAMENT: *Judges*, 3:14-4:24; 6; 10:1-11:33; 13:1-5,24-25; 14-16 / *II Chronicles*, 10-11—(*D*) *II Paralipomenon*, 10-11 / *Jeremiah*, 41—(*D*) *Jeremias*, 41

APOCRYPHA: *I Maccabees*, 1-9 passim—(*D*) OT, *I Machabees*, 1-9 passim / *II Maccabees*, 6-13 passim—(*D*) OT, *II Machabees*, 6-13 passim

6 HERODOTUS: *History*, BK III, 121c-123c; BK V 160a-185a,c passim; BK VI, 186a-191c

6 THUCYDIDES: *Peloponnesian War* 349a-593a,c

14 PLUTARCH: *Theseus*, 9a-d / *Romulus*, 20c-28a / *Agesilaus* 480b,d-499a,c

15 TACITUS: *Annals*, BK I, 17c-d; 18c-20b; BK III, 54d-56b; BK IV, 76a-77c; 82d-83b; BK XII, 116d-117d; BK XIV, 149a-151b / *Histories*, BK IV, 269b-277d esp 269d-270b; 283b-292b; BK V, 297a-302a

23 MACHIAVELLI: *Prince*, CH XXVI 36b-37d

23 HOBBES: *Leviathan*, PART II, 152d-153a

35 LOCKE: *Civil Government*, CH VIII, SECT 113-118 51b-52c; CH XIX, SECT 211 73d-74a

38 MONTESQUIEU: *Spirit of Laws*, BK VIII, 57b-c; BK IX, 59b

38 ROUSSEAU: *Social Contract*, BK II, 403a-404a

40 GIBBON: *Decline and Fall*, 144d-146a; 521a-b

41 GIBBON: *Decline and Fall*, 218c-219a; 439d-451c passim; 465a-466a; 577b-c

43 DECLARATION OF INDEPENDENCE: 1a-3b

43 ARTICLES OF CONFEDERATION: 5a-9d esp XI 9a

43 CONSTITUTION OF THE U.S.: ARTICLE IV, SECT 3 16b; AMENDMENTS, XIV, SECT 2-4 18d-19a

43 FEDERALIST: NUMBER 15-16 62d-68d; NUMBER 58, 181d-182a

43 MILL: *Representative Government*, 428b-430a

3. The process of political revolution

3a. The aims of political revolution: the seizure of power; the attainment of liberty, justice, equality

5 ARISTOPHANES: *Lysistrata* [476-597] 588d-591a / *Ecclesiazusae* [173-240] 617a-c

6 HERODOTUS: *History*, BK I, 29d-30c; BK V, 175b

7 PLATO: *Seventh Letter*, 800d; 813d-814c

9 ARISTOTLE: *Politics*, BK II, CH 7 461d-463c esp [1266^{a}31-^{b}14] 461d-462b; CH 10 [1272^{a}28-^{b}16] 468c-469a; BK V, CH 1-4 502a-506b; CH 12 [1316^{a}1-^{b}27] 518d-519d / *Athenian Constitution*, CH 2 553a-c; CH 5 554d-555a

14 PLUTARCH: *Timoleon* 195a-213d esp 205d-207a / *Pelopidas*, 233d-237b / *Agis* 648b,d-656d / *Cleomenes*, 657a-663c / *Tiberius Gracchus* 671b,d-681a,c esp 678b-d / *Caius Gracchus* 681b,d-689a,c / *Dion* 781b,d-802a,c / *Marcus Brutus* 802b,d-824a,c esp 811b-d, 813d

15 TACITUS: *Annals*, BK I, 4a-d; 6b-7a; 10d-11b; BK IV, 76a; 82d-83a; BK VI, 89c; BK XI, 104a-c; BK XII, 112a-b; 117c-d; BK XIV, 149a-b; BK XV, 169b; 174b-d / *Histories*, BK I, 191a-b; 195a-c; 198d-199c; 203b-c; BK II, 215d-216b; 224d-225a; 233d-235c; BK IV, 269c-270b; 290a-c

23 MACHIAVELLI: *Prince*, CH XXVI 36b-37d

23 HOBBES: *Leviathan*, PART II, 114b-115a

26 SHAKESPEARE: *Julius Caesar* 568a-596a,c esp ACT I, SC III [101-130] 573c-d, ACT II, SC I [10-34] 574c-d, [162-183] 576b, ACT III, SC I [164-176] 582b

35 LOCKE: *Toleration*, 18c-21c / *Civil Government*, CH XIV, SECT 166-168 63d-64c; CH XVIII-XIX 71a-81d passim

36 SWIFT: *Gulliver*, PART II, 80b

38 MONTESQUIEU: *Spirit of Laws*, BK V, 29a; BK VIII, 54b-c

38 ROUSSEAU: *Inequality*, 361a-362a / *Social Contract*, BK II, 402c-d; BK III, 418a-419c

40 GIBBON: *Decline and Fall*, 29c-d; 35a; 44b-47a esp 44c-45a, 45d-46a; 48d-49a; 73b-c

41 GIBBON: *Decline and Fall*, 216d-217b; 574b-575d

43 DECLARATION OF INDEPENDENCE: 1a-3b

43 FEDERALIST: NUMBER 45, 147d-148b

43 MILL: *Liberty*, 267d-268b

46 HEGEL: *Philosophy of History*, PART III, 299c-301c; PART IV, 364a-c

47 GOETHE: *Faust*, PART II [10,242-284] 249b-250b

51 TOLSTOY: *War and Peace*, BK I, 9d-10b; EPILOGUE I, 666c-669d; EPILOGUE II, 680b-684a

52 DOSTOEVSKY: *Brothers Karamazov*, BK V, 127b-137c passim, esp 131a-c, 133c-134d

3b. Ways of retaining power and combatting revolution

OLD TESTAMENT: *Exodus*, 1:7-22
APOCRYPHA: *I Maccabees*, 1:41-64; 10:22-46—(*D*) OT, *I Machabees*, 1:43-67; 10:22-46
5 ARISTOPHANES: *Wasps* [652-724] 515c-516d
6 HERODOTUS: *History*, BK I, 21b; 35c-36a; BK III, 99a-b; 106a-c; 118b; 123c; BK IV, 148a-b; BK V, 164a-c; 166c-d; 172c-174b; 178a-180a; BK VII, 243b-c
6 THUCYDIDES: *Peloponnesian War*, BK III, 425a-428d; BK V, 491b-c
7 PLATO: *Seventh Letter*, 806d-807b; 811b-813d
9 ARISTOTLE: *Politics*, BK II, CH 7 461d-463c; CH 11 [1273^{b}17-24] 470b; BK III, CH 13 [1284^{a}3-^{b}34] 482a-483a; BK V, CH 3 [1302^{b}15-20] 504a; CH 8-9 509d-512d; CH 11 515d-518c; BK VI, CH 5-6 523b-524c
14 PLUTARCH: *Romulus*, 27c-28d / *Poplicola*, 80d-81c / *Camillus*, 119a-121a,c / *Pericles*, 124a-130b / *Coriolanus*, 176b-184c / *Agesilaus*, 482a-484a; 489b-c; 495a-b / *Pompey*, 521a-b / *Caesar*, 580b / *Cato the Younger*, 636c-d / *Agis* 648b,d-656d / *Tiberius Gracchus* 671b,d-681a,c / *Caius Gracchus* 681b,d-689a,c / *Cicero*, 708a-713b / *Marcus Brutus*, 809b-811a
15 TACITUS: *Annals*, BK I, 2c-3a; 6d-15a; 21b-22b; BK II, 29b-d; 32d-33d; 35c-d; 38c-d; BK III, 58d-59a; BK IV, 68b-69c; 82a-b; BK XIV, 155b-156a; BK XV, 168a-c; 170d-176b / *Histories*, BK I, 192d-193a; 196d-198c; 200c-201b; 208b-c; 209d-210b; BK II, 222b-c; BK IV, 280c-281a
23 MACHIAVELLI: *Prince*, CH III, 3c-5a; CH V 8a-c; CH VI, 9b-10a; CH VII, 11b-c; CH VIII-X, 14a-16d; CH XV-XX 22b-31c
24 RABELAIS: *Gargantua and Pantagruel*, BK III, 131b,d-133b
25 MONTAIGNE: *Essays*, 51a-55d; 324c-326b esp 326a-b
26 SHAKESPEARE: *3rd Henry VI*, ACT II, SC VI [1-30] 83b-c; ACT IV, SC VII 96c-97c / *Richard II*, ACT III, SC IV [29-66] 340c-d / *2nd Henry IV*, ACT IV, SC V [178-225] 496b-d
29 CERVANTES: *Don Quixote*, PART I, 40d
30 BACON: *Advancement of Learning*, 78a-d
35 LOCKE: *Toleration*, 19a-d / *Civil Government*, CH XIX, SECT 218 75a-b; SECT 226 77a-b
36 SWIFT: *Gulliver*, PART I, 37a-b; PART III, 102b-103a
38 ROUSSEAU: *Political Economy*, 372a-377b / *Social Contract*, BK III, 424a-d; BK IV, 432b-433a
40 GIBBON: *Decline and Fall*, 14d-18b; 42b,d-43b; 50b-d; 501d-503a; 522c-523a,c; 525d-526c; 624c
41 GIBBON: *Decline and Fall*, 216c-d
43 CONSTITUTION OF THE U.S.: ARTICLE IV, SECT 4 16b-c
43 FEDERALIST: NUMBER 10, 49c-51b passim; NUMBER 21, 78d-79b; NUMBER 25, 90a-91d; NUMBER 28 96c-98b; NUMBER 43, 141a-142d; NUMBER 46, 152a-153a; NUMBER 55, 174c-d
43 MILL: *Representative Government*, 366a-c; 425b-426b
46 HEGEL: *Philosophy of History*, PART I, 226d-227b; PART II, 263b-d; 276d-277a
51 TOLSTOY: *War and Peace*, EPILOGUE I, 668a-669d

3c. The causes and effects of revolution under different forms of government

OLD TESTAMENT: *I Samuel*, 7:15-8:5—(*D*) *I Kings*, 7:15-8:5
6 THUCYDIDES: *Peloponnesian War*, BK III, 427d-428d; 436d-438b
7 PLATO: *Republic*, BK VIII 401d-416a / *Seventh Letter*, 801b-c
9 ARISTOTLE: *Politics*, BK II, CH 6 [1265^{b}10-12] 461a; CH 7 [1266^{a}37-1267^{a}16] 462a-d; BK IV, CH 11 [1295^{b}35-1296^{a}12] 496a-b; BK V 502a-519d
15 TACITUS: *Histories*, BK II, 224d-225a; BK III, 261b-262a; BK IV, 266b-c
23 HOBBES: *Leviathan*, PART I, 77a; 78c-d; 82b-d; PART II, 102d-103a; 103c-104d; 112b-d; 114d-115a; 116c-d; 121a-122b; 148c-153a; 159a-c; PART III, 240a-b; PART IV, 273a-c
27 SHAKESPEARE: *Troilus and Cressida*, ACT I, SC III [78-138] 109a-c
30 BACON: *Advancement of Learning*, 78a-d
36 SWIFT: *Gulliver*, PART III, 102b-103a
38 MONTESQUIEU: *Spirit of Laws*, BK VIII, 51a-54b; 57b-c; BK XV, 112c-114a
38 ROUSSEAU: *Inequality*, 361a-362a / *Social Contract*, BK II, 402b-d; 404c-d; BK III, 418a-420a
39 SMITH: *Wealth of Nations*, BK IV, 239a-240b; 262a-d; 269d-271a; BK V, 308b-c
40 GIBBON: *Decline and Fall*, 48d-49a; 436a-c
41 GIBBON: *Decline and Fall*, 559c-560d
42 KANT: *Science of Right*, 439a-441d
43 DECLARATION OF INDEPENDENCE: 1a-3b
43 FEDERALIST: NUMBER 27, 95b-c; 96b; NUMBER 48, 157b-c
43 MILL: *Liberty*, 321b-c
44 BOSWELL: *Johnson*, 195c-d
46 HEGEL: *Philosophy of History*, PART IV, 364a-c
50 MARX-ENGELS: *Communist Manifesto*, 423b-425b

3c(1) Revolution in monarchies

6 HERODOTUS: *History*, BK I, 21b; 24a-b; BK II, 84a-d; 85b-c; BK III, 107c-108c; 118b; BK IV, 138a-c; 148a
7 PLATO: *Laws*, BK III, 667c-672a esp 667c-d, 670c-672a

(*3c. The causes and effects of revolution under different forms of government.* 3c(1) *Revolution in monarchies.*)

9 ARISTOTLE: *Politics*, BK V, CH 10 [1310ª39]–CH 11 [1313ª33] 512d-516a
14 PLUTARCH: *Lycurgus*, 35c-d; 47a-48a / *Agesilaus*, 482a-485b / *Demetrius*, 732a-c
15 TACITUS: *Histories*, BK I, 190a-191a; 192d-193a; 193c-194a; 195c-198c; 201a-b; 208b-c; 209d-210b; 210d-212d; BK IV, 266b-c
18 AUGUSTINE: *City of God*, BK III, CH 15 176d-178a
23 MACHIAVELLI: *Prince*, CH IV 7a-8a; CH VI, 9b-d; CH VIII-IX, 14a-16a; CH XV-XX 22b-31c
23 HOBBES: *Leviathan*, PART II, 108d-109a; 148d-149b; 150c-151a; 153a-156c; 159a-c; PART IV, 273a-c
26 SHAKESPEARE: *1st Henry VI* 1a-32a,c esp ACT II, SC IV 11b-12d, ACT IV, SC I [30–113] 20a-21a / *2nd Henry VI* 33a-68d esp ACT I, SC I 33b,d-36b / *3rd Henry VI* 69a-104d esp ACT I, SC I 69a-72d / *Richard III* 105a-148a,c esp ACT V, SC V [15–41] 148a,c / *Richard II*, ACT IV, SC I [107–149] 342c-343a / *1st Henry IV*, ACT IV, SC III 459b-460b; ACT V, SC I [30–120] 461b-462a / *2nd Henry IV*, ACT IV, SC I 487b-489d
35 LOCKE: *Civil Government*, CH XIV, SECT 166–168 63d-64c; CH XVIII-XIX 71a-81d passim
36 SWIFT: *Gulliver*, PART III, 102b-103a
38 MONTESQUIEU: *Spirit of Laws*, BK V, 25d-26c; BK VII, 45c-46a; BK VIII, 53a-54a; 56d-57a; BK XI, 77b-78a; BK XXV, 212a-b
38 ROUSSEAU: *Social Contract*, BK III, 419b-c
40 GIBBON: *Decline and Fall*, 68b,d-69a
43 FEDERALIST: NUMBER 48, 157b-c
43 MILL: *Liberty*, 267d-268b
44 BOSWELL: *Johnson*, 120a-c
51 TOLSTOY: *War and Peace*, BK VI, 238c-243d; 260a-262a; EPILOGUE I, 668a-669d

3c(2) Revolutions in republics: aristocracies, oligarchies, and democracies

6 HERODOTUS: *History*, BK VI, 202d-203b
6 THUCYDIDES: *Peloponnesian War*, BK III, 434c-438c esp 436d-438b; BK IV, 459a-c; 463a-465c; 466a-469b; BK V, 482d-483a; 502d-504b esp 503d-504b; BK VI, 519c-520d; 533a-c; BK VIII, 574d-590c esp 575c-576c, 577b-d, 579c-583c, 585d-586b, 587a-589a, 590a-c
7 PLATO: *Republic*, BK VIII, 402a-413d / *Laws*, BK IX, 744c-d / *Seventh Letter*, 806d-807b
9 ARISTOTLE: *Politics*, BK II, CH 9 [1270ᵇ7–34] 466d-467a; CH 11 [1273ᵇ17–24] 470b; CH 12 [1273ᵇ36–1274ª22] 470c-d; BK III, CH 13 [1284ª3–ᵇ34] 482a-483a; CH 15 [1286ᵇ12–16] 485a; BK IV, CH 5 [1292ᵇ11–22] 492a; BK V, CH 1 [1302ª8–16] 503b; CH 3 [1302ᵇ21–1303ª24] 504a-d; [1303ᵇ5–18] 505a; CH 4 [1304ª18–29] 505d-506a; CH 5–9 506b-512d; CH 12 [1316ª19–ᵇ27] 519a-d; BK VI, CH 5–6 523b-524c / *Athenian Constitution*, CH 1–41 553a-572a passim, esp CH 5 554d-555a, CH 29 566b-d, CH 33–34 568b-569a, CH 38 570a-c
14 PLUTARCH: *Theseus*, 13a-14c / *Lycurgus*, 35c-d; 47a-48a / *Lycurgus-Numa* 61b,d-64a,c / *Solon*, 68d-70d; 75c-76d / *Themistocles*, 96b-c / *Camillus*, 117c-121a,c / *Coriolanus*, 176b-184c / *Lysander*, 361a-368a,c / *Crassus*, 444d-445d / *Pompey*, 521c-d; 525a-b; 533a-c / *Caesar*, 581d-582a; 588c-589a; 590d-591a / *Cato the Younger*, 631b-c; 636c-d / *Agis* 648b,d-656d / *Cleomenes*, 657a-663c / *Tiberius Gracchus* 671b,d-681a,c esp 680b-d / *Caius Gracchus* 681b,d-689a,c / *Cicero*, 708a-b / *Antony*, 750a-b
15 TACITUS: *Annals*, BK I, 1a-2a; 3a-b; BK VI, 97b-c / *Histories*, BK II, 224d-225a
23 HOBBES: *Leviathan*, PART II, 105c-106b; 149a-b; 152c
38 MONTESQUIEU: *Spirit of Laws*, BK II, 6c-7b; BK III, 10c-11a; BK V, 21d-22b; 23a-25a; BK VII, 44d-45b; BK VIII, 51a-53a; BK X, 64a-b; BK XII, 91c-92b; BK XV, 114c-115b
38 ROUSSEAU: *Social Contract*, BK III, 411b-c; 418c-419b
39 SMITH: *Wealth of Nations*, BK V, 308b-c; 420b-c
43 FEDERALIST: NUMBER 1, 30b; NUMBER 9–10 47a-53a; NUMBER 15–16 62d-68d; NUMBER 17–20, 70a-78b; NUMBER 21, 78d-79b; NUMBER 25, 90a-91d; NUMBER 27, 95b-c; NUMBER 29, 99b-101a; NUMBER 38, 124b-125a; NUMBER 43, 141a-142d; NUMBER 46, 152a-153a; NUMBER 48, 157b-c; NUMBER 58, 181b-182a; NUMBER 60, 184b-d; NUMBER 63, 194b-195b
43 MILL: *Representative Government*, 329b-330c; 350c-351d; 366a-367b
46 HEGEL: *Philosophy of History*, PART II, 276d-277a; 278d-279b; PART III, 300a-301c; PART IV, 355d-357a; 364a-c
50 MARX-ENGELS: *Communist Manifesto*, 423d-424b; 429c-430b; 432b-d

3c(3) Rebellion against tyranny and despotism

OLD TESTAMENT: *I Kings*, 12:1-25—(*D*) *III Kings*, 12:1-25 / *II Chronicles*, 10—(*D*) *II Paralipomenon*, 10
APOCRYPHA: *I Maccabees*, 1:1-2:44—(*D*) OT, *I Machabees*, 1:1-2:44 / *II Maccabees*, 6:1-11; 8:1-4—(*D*) OT, *II Machabees*, 6:1-11; 8:1-4
6 HERODOTUS: *History*, BK I, 21b; 24a-b; BK IV, 148a; BK V, 170c-172c; 178a-180a; BK VI, 187b-c
6 THUCYDIDES: *Peloponnesian War*, BK VI, 523c-524c
7 PLATO: *Republic*, BK VIII-IX, 411d-420d
9 ARISTOTLE: *Politics*, BK V, CH 4 [1304ª30–38] 506a; CH 10 [1310ª39]–CH 12 [1315ᵇ39] 512d-518d; CH 12 [1316ª25–35] 519b / *Athenian Constitution*, CH 14–19 558d-561d

14 PLUTARCH: *Galba*, 859a-c
15 TACITUS: *Annals*, BK I, 1a-4d; BK IV, 82a-b; BK XI, 102d-103a; BK XII, 112a-b; BK XV, 169a-176b / *Histories*, BK I, 200d; 202c-205a; BK II, 234b-235a
23 HOBBES: *Leviathan*, PART II, 150c-151a; PART IV, 273a-b; CONCLUSION, 280d
26 SHAKESPEARE: *Richard III*, ACT V, SC III [237–270] 146b-c / *Julius Caesar* 568a-596a,c esp ACT I, SC II [25–177] 569c-571a, [215–326] 571c-572c
27 SHAKESPEARE: *Macbeth*, ACT IV, SC III [1–49] 303b-304a
35 LOCKE: *Civil Government*, CH XIV, SECT 166–168 63d-64c; CH XVIII–XIX 71a-81d passim
38 MONTESQUIEU: *Spirit of Laws*, BK V, 25d-26c; 28b-29a; BK VIII, 54a-b; BK XIX, 137c-d; BK XXV, 212a-b; 214a,c
38 ROUSSEAU: *Inequality*, 361c-362a / *Social Contract*, BK II, 404c-d; BK III, 417b-c; 419b-c
40 GIBBON: *Decline and Fall*, 29b-31a esp 29c-30a; 35c-39d; 42b,d-44c; 49a; 50b-51d; 56a-59a; 63a-64d; 68c; 71b-76b; 126d-127c; 246a; 652d-655c
41 GIBBON: *Decline and Fall*, 113d-115a; 166a-167d; 464a-466b
43 DECLARATION OF INDEPENDENCE: 1a-3b
43 MILL: *Liberty*, 274b,d [fn 1] / *Representative Government*, 343b-344d
46 HEGEL: *Philosophy of History*, PART I, 230a-c

4. The nature of economic revolutions

4*a*. Change in the condition of the oppressed or exploited: the emancipation of slaves, serfs, proletariat

OLD TESTAMENT: *Exodus*, 1–14 / *Deuteronomy*, 26:5–9 / *Jeremiah*, 34:8–17—(*D*) *Jeremias*, 34:8–17
6 HERODOTUS: *History*, BK IV, 124a-d
6 THUCYDIDES: *Peloponnesian War*, BK III, 435b; BK IV, 467a-b; BK V, 482d-483a; 491b-c
7 PLATO: *Laws*, BK VI, 709d
9 ARISTOTLE: *Politics*, BK II, CH 9 [1269^{a}37–^{b}7] 465c; CH 10 [1272^{b}17–19] 469a; CH 12 [1273^{b}36–1274^{a}22] 470c-d; BK V, CH 11 [1315^{a}32–39] 518b / *Athenian Constitution*, CH 2 553a-c; CH 5–6 554d-555c
14 PLUTARCH: *Lycurgus*, 36a-37c / *Solon*, 68d-70c / *Agis* 648b,d-656d / *Cleomenes* 657a-671d / *Tiberius Gracchus* 671b,d-681a,c / *Caius Gracchus*, 681b,d-689a,c
15 TACITUS: *Annals*, BK IV, 70c-d; BK XIII, 132a-c; 133c; BK XIV, 151d-152b
27 SHAKESPEARE: *Coriolanus*, ACT I, SC I [1–167] 351a-353a
38 MONTESQUIEU: *Spirit of Laws*, BK XV, 112c-113a; 114c-115b
39 SMITH: *Wealth of Nations*, BK III, 165b-175b
40 GIBBON: *Decline and Fall*, 16d-17b; 144a-d; 505c; 509a; 628d
41 GIBBON: *Decline and Fall*, 82a-b; 452c-453a,c
43 CONSTITUTION OF THE U.S.: ARTICLE I, SECT 9 [260–266] 13d; ARTICLE IV, SECT 2 [529–535] 16b; AMENDMENTS, XIII, SECT I–XIV, SECT I 18c-d
43 FEDERALIST: NUMBER 42, 137b-c
43 MILL: *Representative Government*, 332c; 339d-340c; 351d-352b
46 HEGEL: *Philosophy of History*, PART II, 276d-277a; PART III, 295d-296c; 307b-308a
50 MARX: *Capital*, 7b-d; 79d-80b [fn 4]; 131a-146c esp 131a, 134d, 137a, 138b-c, 141c, 146b-c; 231b-248d passim, esp 242d-244a, 248c-d; 295a-d; 364a-368b esp 367b-368b
50 MARX-ENGELS: *Communist Manifesto*, 415a-417a,c esp 416b-d; 419b,d; 422c-425b esp 423c-d, 424b-425a; 426b-c; 428d-429c
51 TOLSTOY: *War and Peace*, BK V, 211a-213a; 216c-d; BK VI, 235a
52 DOSTOEVSKY: *Brothers Karamazov*, BK VI, 165b-c
54 FREUD: *Civilization and Its Discontents*, 787d-788a / *New Introductory Lectures*, 883d-884c

4*b*. Change in the economic order: modification or overthrow of a system of production and distribution

5 ARISTOPHANES: *Ecclesiazusae* 615a-628d esp [553–729] 621b-623c / *Plutus* 629a-642d esp [415–618] 633d-636d
6 THUCYDIDES: *Peloponnesian War*, BK I, 349b-d; 350d-351a; 352c
7 PLATO: *Republic*, BK II, 316c-319a; BK VIII, 404a; 405d-408a
9 ARISTOTLE: *Politics*, BK I, CH 4 [1253^{b}33–39] 447b-c; BK II, CH 5 458a-460a; CH 6 [1265^{a}28–^{b}25] 460c-461a; CH 7 461d-463c; BK III, CH 10 [1281^{a}11–28] 478d-479a
14 PLUTARCH: *Lycurgus*, 36a-d
36 SWIFT: *Gulliver*, PART III, 104b-106b
39 SMITH: *Wealth of Nations*, BK I, 27b-37b; BK III, 165b-175b; 178d-179a
41 GIBBON: *Decline and Fall*, 452c-453a,c
43 FEDERALIST: NUMBER 41, 135a-c
46 HEGEL: *Philosophy of History*, PART IV, 335a-336c
50 MARX: *Capital*, 80b-81a; 153b-d; 157a-188c esp 163a-c, 164a-165b, 176a-180d, 183b-184b, 187a-c; 205a-250c esp 218d-219a, 221c-223c, 226d-227d, 240c-241a; 290a-c; 308d-311b; 351a-c; 354a-378d esp 354a-355d, 377c-378d
50 MARX-ENGELS: *Communist Manifesto*, 416c-d; 419d-422c; 425c-427b; 428d-429c
54 FREUD: *Civilization and Its Discontents*, 787d-788a

5. The strategy of economic revolution

50 MARX-ENGELS: *Communist Manifesto*, 415c-416c; 417a,c; 425b-c; 428d-429b; 434a-d

(5. *The strategy of economic revolution.*)

5a. Revolution as an expression of the class struggle: rich and poor, nobles and commons, owners and workers

6 HERODOTUS: *History*, BK VI, 202c-203b; BK VII, 243b-c
6 THUCYDIDES: *Peloponnesian War*, BK III, 423a-b; 434c-438c; BK IV, 463a-465c; BK V, 482d-483a; 503d-504b; BK VI, 524d-525d; BK VIII 564a-593a,c passim, esp 568d-569a, 575c-576c, 579c-583c, 587a-590c
7 PLATO: *Republic*, BK IV, 343d
9 ARISTOTLE: *Politics*, BK II, CH 6 [1265^{b}6-12] 461a; CH 7 461d-463c; CH 9 [1269^{a}37-^{b}7] 465c; BK V, CH 3 [1303^{b}5-8] 505a; CH 4 [1304^{a}18-^{b}6] 505d-506a; CH 7 [1306^{b}22-1307^{a}2] 508c-d; CH 9 [1310^{a}19-25] 512c; CH 10 [1310^{b}9-15] 512d-513a; CH 12 [1316^{a}39-^{b}22] 519c-d / *Athenian Constitution*, CH 2 553a-c; CH 5 554d-555a
14 PLUTARCH: *Solon*, 68d-70c / *Pericles*, 124a-130b esp 126d-127a / *Coriolanus*, 176b-184c / *Agis* 648b,d-656d / *Cleomenes*, 657a-663c / *Tiberius Gracchus* 671b,d-681a,c / *Caius Gracchus* 681b,d-689a,c / *Cicero*, 708a-713b
15 TACITUS: *Histories*, BK II, 224d-225a
26 SHAKESPEARE: *2nd Henry VI*, ACT IV, SC II 57d-59d
27 SHAKESPEARE: *Coriolanus*, ACT I, SC I [1-47] 351a-d
38 MONTESQUIEU: *Spirit of Laws*, BK XI, 77b-79b
40 GIBBON: *Decline and Fall*, 126d-127c; 144a-c
41 GIBBON: *Decline and Fall*, 574b-582b passim, esp 575a-d, 578c-581a
46 HEGEL: *Philosophy of History*, PART II, 263b-d; 275b-276a; PART III, 295d-296c
50 MARX: *Capital*, 8d-9c; 113c; 131a-146c esp 131a, 134d, 137a, 138b-c, 141c, 146b-c; 209c-210c; 294b-295a
50 MARX-ENGELS: *Communist Manifesto* 415a-434d
51 TOLSTOY: *War and Peace*, BK X, 410c-421c
54 FREUD: *New Introductory Lectures*, 884a

5b. The organization of a revolutionary class: the bourgeoisie and the proletariat as revolutionary classes in relation to different economic systems

50 MARX: *Capital*, 9c; 354a-378d esp 356c-358a, 371d-372b, 378c, 378d-379b [fn 2]
50 MARX-ENGELS: *Communist Manifesto*, 416c-d; 419b,d-425b esp 419d-420c, 421d-422a, 422c, 423b-424b; 428d

5c. The classless society as the goal of economic revolution: the transformation of the state

50 MARX: *Capital*, 9c
50 MARX-ENGELS: *Communist Manifesto*, 416c-d; 424d-425b; 429b-c

6. The justice of revolution

6a. The right of rebellion: the circumstances justifying civil disobedience or violent insurrection

4 HOMER: *Iliad*, BK IX [50-64] 57c-d
5 SOPHOCLES: *Antigone* 131a-142d esp [441-470] 134d-135a
5 ARISTOPHANES: *Lysistrata* 583a-599a,c esp [476-597] 588d-591a
6 HERODOTUS: *History*, BK III, 103d-107c
7 PLATO: *Apology*, 210a-b / *Crito*, 216d-219a,c esp 216d-217d / *Seventh Letter*, 800c; 804a-b; 812d
9 ARISTOTLE: *Politics*, BK II, CH 10 [1272^{b}2-16] 468d-469a; BK V, CH 1 [1301^{a}38-^{b}2] 502b-c
14 PLUTARCH: *Tiberius Gracchus* 671b,d-681a,c esp 678b-d
15 TACITUS: *Annals*, BK I, 6b-7a; 10d-11d; BK XV, 174b-d / *Histories*, BK I, 198d-199c; 212a-b; BK II, 234b-d; BK IV, 290a-c
20 AQUINAS: *Summa Theologica*, PART I-II, Q 96, A 4 233a-d; PART II-II, Q 42, A 2, REP 3 584b-d
23 MACHIAVELLI: *Prince*, CH XXVI 36b-37d
23 HOBBES: *Leviathan*, PART I, 91b-92b passim; PART II, 101a-102c; 104b-d; 112b-c; 115a-116a; 153c; PART IV, 273a-b; CONCLUSION, 279d
25 MONTAIGNE: *Essays*, 47a-51a; 318c-319b; 462c-465c; 504c-506a
26 SHAKESPEARE: *Richard III*, ACT V, SC III [237-270] 146b-c / *1st Henry IV*, ACT IV, SC III [52-105] 459d-460b / *2nd Henry IV*, ACT I, SC I [187-215] 470a-b; ACT IV, SC I 487b-489d / *Julius Caesar*, ACT II, SC I [10-191] 574c-576c; ACT III, SC I [78-121] 581b-d
27 SHAKESPEARE: *Macbeth*, ACT IV, SC III 303b-306b
35 LOCKE: *Toleration*, 16d-17c / *Civil Government*, CH III, SECT 18 29b; CH XIII, SECT 149 59b-d; SECT 155 60d-61a; CH XIV, SECT 168 64b-c; CH XVI, SECT 176 66a-b; SECT 190-192 69b-d; SECT 196 70b-c; CH XVIII-XIX 71a-81d
38 MONTESQUIEU: *Spirit of Laws*, BK VIII, 54b-c
38 ROUSSEAU: *Inequality*, 361a-362a
40 GIBBON: *Decline and Fall*, 71b-74a esp 73b-c; 144a-c
41 GIBBON: *Decline and Fall*, 92d; 166a-167d; 473b-d
42 KANT: *Science of Right*, 439a-441d; 457a
43 DECLARATION OF INDEPENDENCE: 1a-3b
43 FEDERALIST: NUMBER 9, 47a-c; NUMBER 14, 62b-d; NUMBER 21, 78d-79b; NUMBER 26, 92a-94b; NUMBER 28 96c-98b; NUMBER 60, 184b-d
43 MILL: *Liberty*, 267d-268b; 274b,d [fn 1]
44 BOSWELL: *Johnson*, 120a-c; 195c-d; 219d-220a
46 HEGEL: *Philosophy of History*, PART IV, 342c-d; 364a-c
50 MARX-ENGELS: *Communist Manifesto*, 430a; 432b-c; 434d

51 TOLSTOY: *War and Peace*, BK I, 9d-10b; EPILOGUE I, 668a-669d; EPILOGUE II, 680b-684a

6b. The right to abrogate the social contract or to secede from a federation

6 THUCYDIDES: *Peloponnesian War*, BK I, 358d-360c; BK III, 418d-419d
7 PLATO: *Crito*, 216d-219a,c esp 217c-218b / *Laws*, BK VI, 706b-c
23 HOBBES: *Leviathan*, PART I, 91a-92b; PART II, 101a-102a
35 LOCKE: *Civil Government*, CH VIII, SECT 95-99 46c-47c passim; SECT 113-122 51b-53c passim; CH XIX, SECT 211 73d-74a; SECT 243 81d
38 ROUSSEAU: *Inequality*, 358b-359a / *Political Economy*, 374a-b / *Social Contract*, BK III, 419a-b; 424d
42 KANT: *Science of Right*, 449d; 450d-451c
43 DECLARATION OF INDEPENDENCE: 1a-3b
43 ARTICLES OF CONFEDERATION: XIII 9c
43 CONSTITUTION OF THE U.S.: AMENDMENTS, XIV 18d-19b
43 FEDERALIST: NUMBER 22, 84d-85a; NUMBER 43, 143b-144a; NUMBER 58, 181d-182a
46 HEGEL: *Philosophy of Right*, ADDITIONS, 172 146c-d

7. Empire and revolution: the justification of colonial rebellion and the defense of imperialism

6 HERODOTUS: *History*, BK I, 23a-31a; BK V-VI 160a-213a,c esp BK VI, 191a-d; BK IX, 307b-308a; 308d-310c
6 THUCYDIDES: *Peloponnesian War*, BK I, 358d-360c; 363a-b; 368a-d; 373d-374a; 378c-380a; BK II, 402d-404a; BK III, 418d-419d; 425a-428d; BK IV, 468a-469b; BK V, 504c-507c esp 505c, 506b-c; BK VI, 514b-d; 530d-531b; BK VIII 564a-593a,c passim
9 ARISTOTLE: *Politics*, BK II, CH 9 [1269^{a}37-^{b}7] 465c; [1271^{b}1-6] 467d; CH 10 [1272^{b}16-22] 469a; CH 11 [1273^{b}17-24] 470b; CH 12 [1274^{a}10-15] 470d; BK III, CH 13 [1284^{a}36-^{b}2] 482c; BK V, CH 3 [1303^{a}25-^{b}3] 504d-505a; CH 4 [1304^{a}18-39] 505d-506a; CH 7 [1307^{b}19-23] 509d; BK VII, CH 2 [1324^{b}2-1325^{a}15] 528c-529a; CH 14 [1333^{b}11-1334^{a}10] 538c-d / *Athenian Constitution*, CH 27, par 1-2 565a-b
14 PLUTARCH: *Flamininus* 302b,d-313a,c passim
15 TACITUS: *Annals*, BK I, 17c-d; BK IV, 76a; 82d-83a; BK XII, 117c-d; BK XIV, 149a-b / *Histories*, BK I, 191d-192a; BK IV, 269d-270b; 290a-d; BK V, 301c-d
18 AUGUSTINE: *City of God*, BK III, CH 14 175b-176d; BK IV, CH 3-4 190a-d; CH 15 196c-197a; BK V, CH 12, 216d-218a; BK XIX, CH 21, 524c-d
23 HOBBES: *Leviathan*, PART II, 110b-111a; CONCLUSION, 279d-281a
26 SHAKESPEARE: *1st Henry VI* 1a-32a,c esp ACT I, SC I 1b,d-3c / *2nd Henry VI* 33a-68d esp ACT I, SC I 33b,d-36b, ACT III, SC I [82-92] 47d-48a / *3rd Henry VI* 69a-104d esp ACT III, SC III 88a-91b / *Henry V* 532a-567a,c esp ACT I, SC II 534a-537b, EPILOGUE 567c
27 SHAKESPEARE: *Cymbeline*, ACT III, SC I 463c-464c
35 LOCKE: *Civil Government*, CH XVI, SECT 176 66a-b; SECT 192 69c-d; SECT 196 70b-c; CH XIX, SECT 211 73d-74a
36 SWIFT: *Gulliver*, PART IV, 182b-183a
38 MONTESQUIEU: *Spirit of Laws*, BK X, 62b-63d
38 ROUSSEAU: *Inequality*, 355c-d / *Social Contract*, BK II, 402d-403a; 403d-404a
39 SMITH: *Wealth of Nations*, BK IV, 255a-279b passim
40 GIBBON: *Decline and Fall*, 18a; 21c-23c; 71b-d; 144d-146a; 246a; 255c-d; 420b-422d esp 420b-d; 436c-438a; 449d-451a; 477b,d-491a esp 489d-491a; 521a-523a,c; 608b,d
41 GIBBON: *Decline and Fall*, 51a-54d passim; 216c-217b; 285a-c; 307a-c; 443b-444a; 464a-466b
42 KANT: *Science of Right*, 413d; 454a-455a; 456c-457a
43 DECLARATION OF INDEPENDENCE: 1a-3b
43 FEDERALIST: NUMBER 46, 152a-153a
43 MILL: *Liberty*, 272a / *Representative Government*, 339a-340d; 353c; 433b-442d
44 BOSWELL: *Johnson*, 179c
46 HEGEL: *Philosophy of Right*, ADDITIONS, 172 146c-d / *Philosophy of History*, PART I, 241d-242b; PART II, 281d-282a; PART III, 299c-301c; PART IV, 324d-326c
50 MARX: *Capital*, 379a-383d passim
51 TOLSTOY: *War and Peace*, BK X, 466b-d; BK XI, 498c-499a

CROSS-REFERENCES

For: The consideration of revolution as civil war, *see* OPPOSITION 5c; WAR AND PEACE 2a-2c.

Other discussions relevant to the process of political change by violent or peaceful means, *see* CONSTITUTION 7-7a, 8-8b; GOVERNMENT 6; LAW 7d; LIBERTY 6b-6c; MONARCHY 5a-5b; PROGRESS 4a; SLAVERY 6c-6d; STATE 3g; TYRANNY 1c, 6-8.

The cause and prevention of revolution under different forms of government, *see* ARISTOCRACY 3; CONSTITUTION 7, 7b; DEMOCRACY 7a; OLIGARCHY 3a-3b; TYRANNY 8.

For: Other discussions relevant to economic change and to the strategy of economic revolution, *see* HISTORY 4a(2); LABOR 7c(3); LIBERTY 6b; OPPOSITION 5b; PROGRESS 3b; SLAVERY 3c; STATE 5d(2)–5e; WAR AND PEACE 2c; WEALTH 9h.

The general problem of the right of rebellion or the right of secession, *see* JUSTICE 10b; LAW 6c; LIBERTY 6b; TYRANNY 3; and for the issue concerning anarchy and the condemnation of the rebel as an anarchist, *see* GOVERNMENT 1a; LIBERTY 1b; TYRANNY 3.

ADDITIONAL READINGS

Listed below are works not included in *Great Books of the Western World*, but relevant to the idea and topics with which this chapter deals. These works are divided into two groups:

I. Works by authors represented in this collection.
II. Works by authors not represented in this collection.

For the date, place, and other facts concerning the publication of the works cited, consult the Bibliography of Additional Readings which follows the last chapter of *The Great Ideas.*

I.

MACHIAVELLI. *The Discourses*, BK III, CH 1–8
——. *Florentine History*
F. BACON. "Of Seditions and Troubles," "Of Factions," in *Essays*
HOBBES. *Philosophical Rudiments Concerning Government and Society*, CH 12
——. *The Elements of Law, Natural and Politic*, PART II, CH 8
HUME. *Of Passive Obedience*
ENGELS. *The Peasant War in Germany*
——. *Germany: Revolution and Counter-Revolution*
J. S. MILL. "A Few Observations on the French Revolution" in VOL I, "Vindication of the French Revolution of February 1848" in VOL II, *Dissertations and Discussions*
——. *Thoughts on Parliamentary Reform*
DOSTOEVSKY. *The House of the Dead*
——. *The Possessed*
MARX and ENGELS. *The German Ideology*, PART I
MARX. *The Eighteenth Brumaire of Louis Bonaparte*
——. *The Civil War in France*

II.

POLYBIUS. *Histories*, VOL I, BK VI
SALLUST. *The War with Catiline*
APPIAN. *The Civil Wars*
LUTHER. *Address to the German Nobility*
——. *Against the Robbing and Murdering Hordes of Peasants*
——. *Whether Soldiers, Too, Can Be Saved*
BODIN. *The Six Bookes of a Commonweale*, BK IV
SPENSER. *The Faerie Queene*, BK I
HOOKER. *Of the Laws of Ecclesiastical Polity*
DIGGES. *Unlawfulness of Subjects Taking up Arms Against Their Soveraigne*
BENTHAM. *A Fragment on Government*, CH 1 (22–29)
PAINE. *Common Sense*
GODWIN. *An Enquiry Concerning Political Justice*, BK IV, CH 2
BURKE. *Reflections on the Revolution in France*
——. *Letter to a Noble Lord*
BURKE. *Thoughts on the Prospect of a Regicide Peace*
BYRON. *Prometheus*
SHELLEY. *Prometheus Unbound*
T. CARLYLE. *The French Revolution*
THOREAU. *Civil Disobedience*
TOCQEVILLE. *L'ancien régime* (*Ancient Regime*)
PROUDHON. *General Idea of the Revolution in the Nineteenth Century*
——. *De la justice dans la révolution et dans l'église*
DICKENS. *A Tale of Two Cities*
COSTER. *The Glorious Adventures of Tyl Ulenspiegl*
BAKUNIN. *God and the State*
HUGO. *Ninety-Three*
A. TOYNBEE. *Lectures on the Industrial Revolution*
RITCHIE. *Natural Rights*, PART II, CH 11
SHAW. *The Revolutionist's Handbook*
ANDREYEV. *The Seven Who Were Hanged*
SOREL. *Reflexions on Violence*
LENIN. *Collected Works*, VOL XXI, *Toward the Seizure of Power*
——. *The State and Revolution*
T. E. LAWRENCE. *Seven Pillars of Wisdom*
L. P. EDWARDS. *The Natural History of Revolution*
BERDYAYEV. *Christianity and the Class War*
TROTSKY. *Literature and Revolution*
——. *The History of the Russian Revolution*
MARITAIN. *Theonas, Conversations of a Sage*, IX
——. "On the Purification of Means," in *Freedom in the Modern World*
GORKY. *Mother*
——. *Forty Years—the Life of Clim Samghin*, VOL II, *The Magnet;* VOL III, *Other Fires;* VOL IV, *The Specter*
MALRAUX. *Man's Fate*
——. *Man's Hope*
BRINTON. *The Anatomy of Revolution*
B. RUSSELL. *Power*, CH 7
E. WILSON. *To the Finland Station*
ORTEGA Y GASSET. *The Revolt of the Masses*
——. *Toward a Philosophy of History*
LASKI. *Reflections on the Revolution of Our Time*
DIWAKAR. *Satyagraha: The Power of Truth*

Chapter 81: RHETORIC

INTRODUCTION

RHETORIC is traditionally regarded as one of the liberal arts. When the liberal arts are counted as seven, and divided into the three and the four—the *trivium* and the *quadrivium*—rhetoric is grouped with grammar and logic, not with the mathematical arts of arithmetic and geometry, astronomy and music. The implication of this grouping seems to be that rhetoric, like grammar, has something to do with language or discourse; and that, like logic, it is concerned with thought, with reasoning or argument. But if grammar is the art of writing or speaking correctly, and if logic is the art of thinking correctly, it may be wondered what rhetoric can add to these other arts, either on the side of language or of thought.

Logic by itself does not suffice to ensure that words are properly used to express thought; nor does grammar guarantee that discourse which is flawless in syntax also complies with the demands of rationality. Hence neither grammar nor logic seems to challenge the function of the other, as together they challenge the function of rhetoric.

Upon the way this challenge is met depends not only the definition of rhetoric, but also the value put upon it. In the tradition of the great books, rhetoric is both praised as a useful discipline which liberally educated men should possess, and condemned as a dishonest craft to which decent men would not stoop. Like the words "sophistical" and "dialectical," the epithet "rhetorical" carries, traditionally as well as currently, a derogatory implication. The three words sometimes even tend to merge in meaning, expressing the same reproach against trickery. Yet of the three, "sophistical" alone implies an unqualified rebuke.

We do not speak of good and bad sophistry. But dialectic has its defenders as well as its detractors; and even those who, like Plato, charge rhetoric with being an art of enchantment or a form of flattery also distinguish between a true and a false rhetoric, the one associated with dialectic as a wholly admirable pursuit, the other classed with sophistry as a vocation divorced from virtue. According to Bacon, the aim of rhetoric is to support reason, "not to oppress it." Rhetoric may be misused, but logic also has its abuses. "Rhetoric can be no more charged," in Bacon's opinion, "with the coloring of the worse part, than logic with sophistry, or morality with vice."

THE PURPOSE AND scope of rhetoric are capable of broad and narrow definitions. The broader view, which we shall consider subsequently, tends to merge rhetoric with poetics as together the art of eloquence in any sort of discourse. The narrower view tends to restrict rhetoric to the art of persuasion in the sphere of practical affairs. Rhetorical skill consists in getting others to embrace certain beliefs, to form the opinions or make the judgments which the speaker or writer wishes them to adopt. Usually action, not persuasion, is the ultimate goal. The rules of rhetoric are supposed to give one power not merely to move the minds of men to certain conclusions but, through persuasion of their minds, to move men to act or not act in a certain way.

The sphere of rhetoric, so conceived, is limited to moral and political problems. The things about which men deliberate before acting, the things on which they pass moral judgments or make political decisions, constitute the subject matter of oratory, or what Hobbes calls "exhortation and dehortation," that is, "counsel accompanied with signs in him that giveth it, of vehement desire to have it followed."

In the narrower conception, rhetoric seems to be confined to *oratory*. It is with oratory and

orators that Socrates seems to be concerned when he discusses rhetoric with Phaedrus or with Gorgias. Gorgias, who was a teacher of rhetoric, praises the power of the orator to persuade "the judges in the courts, or the senators in the council, or the citizens in the assembly, or at any other public meeting." In view of this Socrates asks him whether he will accept the definition of rhetoric as "the artificer of persuasion." When Gorgias admits that "persuasion is the chief end of rhetoric," Socrates goes on to ask whether rhetoric is "the only art which brings persuasion, or do other arts have the same effect? Does he who teaches anything persuade men of that which he teaches or not?" If so, "then arithmetic as well as rhetoric is an artificer of persuasion."

Gorgias reminds Socrates of his initial point about the orator, that "rhetoric is the art of persuasion in courts of law and other assemblies . . . about the just and unjust." But Socrates is still not satisfied that rhetoric has been sharply defined. He introduces the distinction between knowledge and belief or opinion, and gets Gorgias to agree that, whereas there cannot be false knowledge as well as true, beliefs and opinions may be either true or false. Persuasion can, therefore, be of two sorts—"one which is the source of belief without knowledge, as the other is of knowledge."

Gorgias is willing to limit rhetoric to that form of persuasion "which only gives belief," to which Socrates adds the emphatic negative that "the rhetorician does not instruct the courts of law or other assemblies about things just and unjust, but creates beliefs about them." If an assembly wishes to learn about matters connected with medicine or shipbuilding, it consults the physician or shipwright, not the orator. But, says Gorgias, "when a decision has to be given in such matters, the rhetoricians are the advisers; they are the men who win their point." He confirms this by reminding Socrates that the speeches of Themistocles and Pericles, not the suggestions of the builders, determined the Athenian assembly in the construction of the harbor, the docks and walls.

By way of further illustration, Gorgias tells of occasions when he has succeeded in getting patients to do what they would not do on the advice of their physicians. "I have persuaded the patient," he says, "to do for me what he would not do for the physician, just by the use of rhetoric." Similarly, in a contest for public office between a rhetorician and a man of any other profession, "the rhetorician more than any other would have the power of getting himself chosen, for he can speak more persuasively to the multitude than any of them, and on any subject. Such is the nature and power of the art of rhetoric!"

In comparing it with dialectic, Aristotle seems to have a different conception of the function of rhetoric. "Neither rhetoric nor dialectic," he says, "is the scientific study of any one separate subject; both are faculties for providing arguments." Both also are concerned with arguments which fall short of scientific demonstration, that is, with matters of opinion concerning which something probable can be said on either side of the issue.

Though for Aristotle rhetoric is the counterpart of dialectic, in that both deal with arguments on any subject, his differentiation between the two disciplines seems to indicate that rhetoric is limited to the consideration of oratory in the familiar sense of public speaking. The rhetorician is concerned with persuading an audience, not, as the dialectician is, with carrying on a dispute in which two individuals may be privately engaged. The persuasion, furthermore, is directed to obtaining a certain response from that audience—not merely agreement, but either action, or a decision to act, or approval which, charged with emotional force or enthusiasm, has practical significance.

The divisions of rhetoric, according to Aristotle, are determined by the kinds of oratory, as these, in turn, are determined by the types of audience to be addressed. "Of the three elements in speech-making—speaker, subject, and person addressed," Aristotle writes, "it is the last one, the hearer, that determines the speech's end and object. The hearer must be either a judge with a decision to make about things past or future, or an observer. A member of the assembly decides about future events, a juryman about past events; while those who merely decide on the orator's skill are observers.

"From this it follows that there are three divisions of oratory: (1) political, (2) forensic, and (3) the ceremonial oratory of display"—or,

as these three are sometimes named, deliberative, legal, and epideictic. "Political speaking urges us either to do or not do something. . . . Forensic speaking either attacks or defends somebody. . . . The ceremonial oratory of display either praises or censures somebody. These three kinds of rhetoric refer to three different kinds of time. The political orator is concerned with the future; he tries to persuade men about things to be done or not done hereafter. The party in a case at law is concerned with the past; one man accuses the other, and the other defends himself, with reference to things already done. The ceremonial orator is, properly speaking, concerned with the present, since all men praise or blame in view of the state of things existing at the time, though they often find it useful also to recall the past and to make guesses about the future.

"Rhetoric has three distinct ends in view, one for each of its three kinds. The political orator aims at establishing the expediency or the harmfulness of a proposed course of action. . . . Parties in a lawsuit aim at establishing the justice or injustice of some action. . . . Those who praise or attack a man aim at proving him worthy of honor or the reverse."

THIS CONCEPTION OF rhetoric as concerned with oratory or public speaking gives one answer to the question of what rhetoric adds to grammar and logic as arts of discourse. In oratory more is involved than the communication of ideas, the marshalling of arguments, the making of proofs. Discourse, whether written or spoken, has an effect upon the emotions as well as upon the mind, and disposes a man to act as well as the mind to assent.

"The communicating of ideas by words," Berkeley observes, "is not the chief and only end of language, as is commonly supposed. There are other ends, as the raising of some passion, the exciting to or deterring from an action, the putting the mind in some particular disposition—to which the former is in many cases barely subservient, and sometimes entirely omitted. . . . I entreat the reader to reflect with himself, and see if it doth not often happen, either in hearing or reading a discourse, that the passions of fear, love, hatred, admiration, disdain and the like, arise immediately in his mind upon the perception of certain words, without any ideas coming between."

Engaged in the oratorical task of persuading the people of New York to ratify the federal constitution, the writers of the Federalist papers are aware that "a torrent of angry and malignant passions will be let loose" in the debate of that issue. They realize that arguing for the adoption of certain political principles or conclusions is not like teaching geometry, the objects of which are "entirely abstracted from those pursuits which stir up and put in motion the unruly passions of the human heart."

Hamilton admits at once, in the opening paper, that "the plan offered to our deliberations affects too many particular interests, innovates upon too many local institutions, not to involve in its discussion, a variety of objects foreign to its merits, and of views, passions, and prejudices little favorable to the discovery of truth." Nevertheless, he tries to persuade his audience to judge the issue on the merits of the argument alone.

The opponents of the Constitution, he says, "may be actuated by upright intentions." The opposition may "spring from sources, blameless at least, if not respectable—the honest errors of minds led astray by preconceived jealousies and fears. So numerous indeed and so powerful are the causes which serve to give a false bias to the judgment, that we, upon many occasions, see wise and good men on the wrong as well as on the right side of questions of the first magnitude to society."

To recognize this, Hamilton tells his audience, is to be on guard "against all attempts, from whatever quarter, to influence your decision . . . by any impressions other than those which may result from the evidence of truth." He wishes them to consider him as relying upon nothing but the merits of his case. "I frankly acknowledge to you my convictions," he writes, "and I will freely lay before you the reasons on which they are founded. . . . My motives must remain in the depository of my own breast. My arguments will be open to all, and may be judged by all. They shall at least be offered in a spirit which will not disgrace the cause of truth."

We can detect here another element in the art of rhetoric. The orator seems to be concerned, not only with the strength of his argu-

ments and with the passions of the audience which he hopes to move by these arguments, but also with the impression he makes upon that audience as a person of good character and honest intentions, devoted to the truth and, above all, to the best interests of those whom he addresses.

The great speeches reported—or perhaps polished, if not invented—by Thucydides exemplify this effort on the part of the orator, as do also the orations written by Shakespeare for his characters, of which the speeches of Brutus and Antony in *Julius Caesar* are among the most notable as well as the most familiar. The point is also illustrated by the *Communist Manifesto*, which is denounced as "propaganda" by those who mistrust the writers, but to those who trust them is powerful and persuasive oratory.

Separating the use of witnesses and documents by the forensic orator from what he calls the strictly artistic means of persuasion—*i.e.*, the means intrinsic to the art of rhetoric—Aristotle divides the latter into the three elements already noted. Persuasion, he says, depends "on the personal character of the speaker ... on putting the audience into a certain frame of mind . . . [and] on the proof, or apparent proof, provided by the words of the speech itself. Persuasion is achieved by the speaker's personal character when the speech is so spoken as to make us think him credible. . . . Secondly, persuasion may come through the hearers when the speech stirs their emotions. . . . Thirdly, persuasion is effected through the speech itself when we have proved a truth or an apparent truth by means of the persuasive arguments suitable to the case in question."

These being the three technical means of effecting persuasion, Aristotle concludes that rhetorical skill must consist in the ability "(1) to reason logically, (2) to understand human character and goodness in their various forms, and (3) to understand the emotions . . . to know their causes and the way in which they are excited." The art of rhetoric, therefore, involves more than training in grammar and logic. It requires the study of ethics and psychology—particularly knowledge of the types of human character and knowledge of the passions.

The same consideration of the conditions of oratory seems to lead Socrates to tell Phaedrus that Thrasymachus or anyone else who teaches rhetoric ought "to give an exact description of the nature of the soul," to explain "the mode in which it acts or is acted upon." The rhetorician, he goes on, "having classified men and speeches, and their kinds and affections, and adapted them one to another," will be able to "tell the reasons of his arrangement, and show why one soul is persuaded by a particular form of argument, and another not."

THIS FACT ABOUT rhetoric—that it must adapt speech to persons as well as to subject matters—seems to occasion Socrates' definition of oratory as "the art of enchanting the soul." It is not, he tells Phaedrus, confined to courts and public assemblies. Whether this art is a good or evil thing depends on whether it requires the speaker to know—more than the nature of the person he is addressing—the truth about the matters spoken of. To engender probabilities in the minds of the many by the likeness of the truth, it is necessary, says Socrates, to know the truth. "He who knew the truth would always know best how to discover the resemblances of the truth." Such a man might be able, not only to please and so to persuade his audience, but also, perhaps, he might "be able to say what is acceptable to God."

The issue about rhetoric then—at least so far as that issue concerns its being an art consistent with virtue—seems to turn on the admixture of pleasure and truth. The question is whether, given a particular sort of audience to persuade, the orator does not have to choose between pleasing them and telling them the truth. Does the art of rhetoric extend to the persuasion of bad men as well as good? Is the skill of the orator to be measured by his success in persuading, without regard to the character of the audience he has persuaded and the means he has been forced to use? Does the goodness of the orator—and of his speech—depend upon his being morally virtuous as well as rhetorically skillful?

One view of rhetoric seems to identify persuasion with pleasure and to divorce it from truth. Pascal, for example, in his essay *On Geometrical Demonstration*, speaks of "two methods, the one of convincing, the other of pleasing" In order

to persuade, he writes, "one must consider the person with whom one has to deal, whose spirit and heart one must know, the principles he accepts, the things he loves." In view of such considerations, Pascal holds that "the art of persuasion consists more in pleasing than in convincing, to such an extent is it true that men are controlled more by whim than by reason." He does not doubt that "there are rules which are as reliable with respect to pleasing as there are for demonstrating"; nor does he seem to condemn rhetoric for being such an art, unless he writes with irony when he says that "pleasing is incomparably more difficult, more subtle, more useful, and more admirable."

Rhetoric so conceived appears to Locke to be a "powerful instrument of error and deceit"; and to Plato to be no art at all, but a form of flattery. As cookery tries to please the palate without caring what is good for the health of the body, so rhetoric, according to Plato, aims to delight without caring what is good for the soul or the state. Cookery and rhetoric are shams or simulations of the genuine arts of medicine and politics, which aim at the good, not at pleasure. "This is the sort of thing," Socrates tells Callicles, "which I term flattery, whether concerned with the body or the soul, or whenever employed with a view to pleasure and without any consideration of good and evil."

Socrates then asks Callicles whether he knows rhetoricians who "aim at what is best . . . and seek to improve the citizens by their speeches," or whether all "are bent upon giving them pleasure, forgetting the public good in the thought of their own interest, playing with the people as with children, and trying to amuse them, but never considering whether they are better or worse for this."

When Callicles replies that he thinks "there are some who have a real care for the public in what they say," Socrates says that he is "contented with the admission that rhetoric is of two sorts: one, which is mere flattery and disgraceful declamation; the other, which is noble and aims at the training and improvement of the souls of the citizens, and strives to say what is best, whether welcome or unwelcome, to the audience." But, he asks Callicles, "have you ever known such a rhetoric; or if you have, and can point out any rhetorician of this stamp, who is he?"

SOCRATES MAY NOT be asking a rhetorical question. He may be presenting the defenders of rhetoric with this critical dilemma: *either* the orator adheres to the truth and aims at the good, even if such highmindedness defeats his efforts at persuasion with an audience whom he thus displeases; *or* the orator takes persuasion as his end and subordinates everything else to the rhetorical means for succeeding with any sort of audience.

Bacon rises to the defense by rejecting the dilemma as ungenuine. "The duty and office of rhetoric," he writes, "is to apply reason to the imagination for the better moving of the will." He admits that rhetoric is controlled by other considerations than the truth. Though "logic handleth reason exact and in truth," and though "the proofs and demonstrations of logic are toward all men indifferent and the same . . . the proofs and persuasions of rhetoric ought to differ according to the auditors."

Nevertheless, Bacon thinks "it was great injustice in Plato, though springing out of a just hatred for the rhetoricians of his time, to regard rhetoric as a voluptuary art, resembling it to cookery that did mar wholesome meats, and help unwholesome by a variety of sauces to please the taste. For we see that speech is much more conversant in adorning that which is good than in coloring that which is evil; for there is no man but speaketh more honestly than he can do or think; and it was excellently noted by Thucydides in Cleon, that because he used to hold on the bad side in causes of state, therefore he was ever inveighing against eloquence and good speech knowing that no man can speak fair of courses sordid and base."

Aristotle's defense of rhetoric seems to be implied in the remark that "its function is not simply to succeed in persuading, but rather to discover the means of coming as near such success as the circumstances of each case allow." Just as, for him, the sophist differs from the dialectician not in the skills of argument or dispute, but in moral purpose or respect for truth, so the name "rhetorician" may be applied to two sorts of men. Rhetoric may signify "either the speaker's knowledge of his art, or his moral

purpose." For want of separate names, both the honest and the sophistical orator are called and can claim to be "rhetoricians," and it is this which confuses the issue.

IN THE TRADITION of the great books, Aristotle's *Rhetoric* occupies a place comparable to that which, as noted in the chapter on POETRY, his *Poetics* unquestionably fills. It seems to be not merely the first but the standard treatise on oratory. It divides rhetoric into three parts—the first concerned with invention, the second with the disposition or order of a speech, the third with problems of expression. To the last of these belongs the analysis of the orator's use of language and his style in speaking; to the second, the analysis of the structure of an oration into such parts as proem, statement, argument, and epilogue; and to the first, under the head of invention, belongs the consideration of the means of persuasion.

As we have already noted, the artistic means of persuasion are, according to Aristotle, threefold—emotions, character, and argument. The orator must consider how to arouse and use the passions of his audience, as well as calculate how far to go in displaying his own emotions. He must consider the moral character of the audience to which he is appealing, and in this connection he must try to exhibit his own moral character in a favorable light. Finally, he must know the various types and sources of rhetorical argument—not only what sorts of argument are available for a particular purpose, but also how to employ each argument most persuasively. In this last respect, Aristotle distinguishes rhetorical proof from rhetorical induction—the use of what he calls the "enthymeme" as opposed to the use of examples—and he relates this distinction to the difference between dialectical proof and induction which he treats in the *Topics*.

Cicero and Quintilian may extend Aristotle's analysis in certain directions, but neither they nor modern writers like Campbell and Whately depart far from the framework Aristotle sets up for the discussion of oratory. Even those who reject Aristotle's authority in logic, natural philosophy, and metaphysics pay him the tribute of following (as does Hobbes) his treatment of oratory, or of approving (as does Bacon) his contribution to rhetoric. In the case of this science, as with few others, Bacon finds no serious deficiencies in the accepted tradition. He calls rhetoric "a science excellent and excellently well labored," and places "the emulation of Aristotle" first among the causes why later writers "in their works of rhetorics exceed themselves."

Yet by another standard Aristotle's *Rhetoric* may be judged deficient. Because he confines his attention almost exclusively to oratory, Aristotle's discussion leaves rhetoric in a larger sense almost untouched. This limitation of rhetoric to the subject matter of oratory does not go unexplained. "Every other art," Aristotle writes, "can instruct or persuade about its own particular subject matter; for instance, medicine about what is healthy and unhealthy, geometry about the properties of magnitudes, arithmetic about numbers, and the same is true of the other arts and sciences. But rhetoric," he says, "we look upon as the power of observing the means of persuasion on almost any subject presented to us."

This last statement would seem to give rhetoric complete generality. Aristotle qualifies it, however. "People fail to notice," he says, "that the more correctly they handle their particular subject the further they are getting away from pure rhetoric." So far as knowing good arguments and knowing how to use them are concerned, the physicist and the mathematician need no help from rhetoric. The art of rhetoric is necessary only in dealing with such topics as do not fall within the subject matters or systems of the established arts and sciences. Such topics are precisely those with which the orator must deal. "The duty of rhetoric," Aristotle writes in summary, "is to deal with such matters as we deliberate upon without arts or systems to guide us, in the hearing of persons who cannot take in at a glance a complicated argument, or follow a long chain of reasoning." This is his answer to those who have given rhetoric "a far wider subject matter than strictly belongs to it."

But Aristotle's explanation of his limitation of rhetoric is itself limited to only one of its major parts, namely, the construction of arguments. As contrasted with the mathematician, the physician, and the philosopher, whose mastery of the subject matter of their arts or sci-

ences gives them a command of the relevant principles and methods of argument, only the orator needs the special art of rhetoric to provide him with the topics from which examples and enthymemes can be drawn and to give him skill in the use of such arguments. But it is not only the orator who must consider the character and emotions of his audience. It is not only the orator who must consider the best way in which to order the parts of an elaborate discourse. Above all, it is not only the orator who is faced with the problem of using language more or less effectively in the expression of thought, and especially in its communication to others. All these considerations and problems are common to the orator and the teacher. They are considerations and problems which must be faced not merely by the public speaker who tries to move an audience to action, but by anyone—poet, philosopher, or scientist—who tries to write whatever he has to say as effectively as possible.

Competence in a particular art or science may give a man competence with respect to arguments in the field of his particular subject matter, but it does not seem to give him competence with respect to these other considerations and problems, which he faces when he tries to communicate his knowledge or thought. Here, then, is the possibility of a broader conception of the art of rhetoric—an art concerned not merely with being persuasive in the sphere of action, but with eloquence or effectiveness in the expression of thought.

We find this view of rhetoric reflected in Chaucer's *Canterbury Tales*. In his Prologue, the Franklin asks his companions "to forgive his crude speech"; for, he explains, "I never learned rhetoric, to tell you the truth; whatever I say must be blunt and plain. I never slept on Mount Parnassus or studied Marcus Tullius Cicero." And the Squire apologizes for the inadequacy of his English to describe the beauty of Canace. "It would take an excellent rhetorician," he says, "who knew his colorful figures of speech, to describe her adequately." Though Aristotle's *Rhetoric* for the most part neglects this broader conception of rhetoric in order to expound the rules of oratory, the third book of his treatise, which deals with the use of language, indicates that problems of style are common to oratory and poetry and to other types of discourse as well.

Kant seems to hold this broader conception of rhetoric when he says that "the arts of speech are *rhetoric* and *poetry*." In the tradition of western thought, the two arts tend to become identified when each is separated from any particular subject matter. As appears in the chapter on POETRY, poetry like rhetoric has a broader and a narrower meaning. In the narrower meaning, it is the art of the narrative, just as in its narrower meaning, rhetoric is the art of oratory. The other sense in which poetics as an art can be understood is, according to Bacon, with respect to words, not matter. "In this sense," he writes, "it is but a character of style, and belongeth to arts of speech."

In this sense the poetic art is hardly distinguishable from the rhetorical art. The problems involved in composing a good speech are not the same as those involved in writing a good poem (or what Bacon calls a "feigned history"). But when poetics and rhetoric are each separated from such problems to become the arts of writing or speaking well about anything, then, in becoming as general as discourse itself, they tend to become one and the same art—an art of style or expression, an art of preaching or teaching the truth about any matter on which one mind seeks to communicate with another.

IN THE TRADITION of the great books, no book does for the art of rhetoric in general what Aristotle's *Rhetoric* does for that art in the limited sphere of oratory. But Augustine's treatise *On Christian Doctrine* engages in a general rhetorical analysis that is in a way comparable to Aristotle's analysis of oratory. In this work Augustine brings his own professional training as an orator to bear on the problems of reading, interpreting, and expounding Sacred Scripture. The fact that he is dealing with Sacred Scripture and hence, in his view, with the teaching of the most fundamental truths, lifts him above the limited concerns of the orator; but the fact that he limits himself to Sacred Scripture also prevents him from formulating his rules of interpretation and exposition with the complete generality they would have to possess in order to be the rules of a general art of rhetoric.

At the opening of the fourth book of *Chris-*

tian Doctrine, Augustine declares that, having considered in the preceding books "the mode of ascertaining the proper meaning" of Scripture, he will now treat "the mode of making known the meaning when it is ascertained." He disclaims any intention "to lay down rules of rhetoric"; he wishes merely "to engage it on the side of truth." To this end he tries to show how Scripture itself, and such holy men as St. Cyprian and St. Ambrose in commenting on Scripture, have employed the art of rhetoric.

"It is the duty," Augustine writes, "of the interpreter and teacher of Holy Scripture . . . both to teach what is right and refute what is wrong; and in the performance of this task to conciliate the hostile, to rouse the careless, and to tell the ignorant both what is occurring at present and what is probable in the future. But once his hearers are friendly, attentive, and ready to learn, whether he has found them so, or has himself made them so, the remaining objects are to be carried out in whatever way the case requires." The first rule of a general rhetoric would thus seem to be one of creating a receptive frame of mind in the persons being addressed. This accomplished, the teacher must proceed with various alternatives in mind.

"If the hearers need teaching," Augustine writes, "the matter treated of must be made fully known by means of narrative. On the other hand, to clear up points that are doubtful requires reasoning and the exhibition of proofs. If, however, the hearers require to be roused rather than instructed, in order that they may be diligent to do what they already know, greater vigor of speech is needed. Here entreaties and reproaches, exhortations and upbraidings, and all the other means of rousing the emotions, are necessary."

In Scripture and its great commentators, Augustine finds "wisdom not aiming at eloquence, yet eloquence not shrinking from wisdom." He also finds examples of the three kinds of style which Cicero had distinguished—the eloquence of those "who can say little things in a subdued style, moderate things in a temperate style, and great things in a majestic style." These three styles Augustine connects with the three ends which Cicero had assigned to eloquence—teaching, giving pleasure, and moving. The subdued style, he says, should be used "in order to give instruction," the temperate style "in order to give pleasure," and the majestic style "in order to sway the mind."

The great books of history, science, and philosophy provide additional materials for general rhetorical analysis. They offer us the light of examples at least, even if they do not, like Augustine's commentary on Scripture, give us the guidance of rules. Such historians as Herodotus, Thucydides, Tacitus, and Gibbon exhibit a diversity of styles in the writing of history. The diversity is not only on the grammatical level of the use of language, but also on the logical level of order and argument. Rhetorical principles control the way in which the language and the organization of the parts are suited to each other and to the historian's purpose—to the effect he wishes to produce upon his reader.

The way in which Euclid writes the *Elements* is a style of exposition, having rhetorical as well as logical features. In its rhetorical (if not its strictly logical) form it is applicable to other subject matters. This may be seen in Spinoza's adoption of it in his *Ethics* and in Newton's adaptation of it in his *Mathematical Principles of Natural Philosophy*. The dialogue form which Plato seems to have invented for writing philosophy appears to recommend itself rhetorically not only to other philosophers, but also to a scientist like Galileo in the composition of his *Two New Sciences*. If the doctrines of the *Summa Theologica* or of the *Critique of Pure Reason* were separated from the very special styles of these two works, they would probably not have the same effect upon the reader; and as they are written, they affect different readers differently, as differently as do the styles of Dante, Milton, Melville, Dostoevsky, Adam Smith, and Karl Marx.

Some methods of exposition may be more appropriate than others to certain subject matters. "There is a great difference in the delivery of mathematics," says Bacon, "and of politics." But in every subject matter or field of learning, there is the common problem of how to make language serve most effectively to enlighten or convince in the communication of thought. The problem arises in the writing of a single sentence as well as in the organization of a whole discourse.

THE CHOICE OF WORDS and the formation of new words, the invention and employment of figures of speech, by which abbreviation or amplification of discourse may be achieved and the imagination freshened—these are some of the considerations of style which Aristotle discusses (both in his *Rhetoric* and in his *Poetics*) and which Augustine illustrates in his analysis of Scripture. They suggest the rules of a general rhetoric, founded on principles as universal as Pascal's insight that "words differently arranged have a different meaning, and meanings differently arranged have a different effect."

This observation indicates a further answer to the question raised much earlier, namely, why the art of rhetoric is needed over and above the skills of grammar and logic. For oratory the question has been answered by reference to those rules of rhetoric which deal with the passions and with moral character. But for a more general rhetoric, concerned with all discourse, the answer must be in terms of rules of style of the sort Pascal's observation suggests.

If there were never more than one grammatically and logically correct way of saying anything, then grammatical and logical standards would suffice for the regulation of sound discourse. But if there are always several ways of stating something and if each of them satisfies the rules of grammar and logic, but differs in the impression it makes on the mind, then criteria other than those of grammar and logic will be needed to determine our choice of which to use.

Such criteria may take the passions and the imagination into account, but they may also look primarily to the manner in which the mind itself naturally works. The fact that there are several ways of presenting the same truth to the mind—and usually several ways in which the mind can interpret the same statement—defines the scope of a general rhetoric and the relation of its rules to those of grammar and logic.

Nevertheless, some of the great authors seem to doubt the worth of rhetoric in science or philosophy. Locke, for example, admits that "in discourses where we seek pleasure and delight rather than information and improvement, such ornaments"—as "figurative speeches and allusion in language"—"can scarce pass for faults. But," he adds, "if we would speak of things as they are, we must allow that all the art of rhetoric, besides order and clearness, all the artificial and figurative application of words eloquence hath invented, are for nothing else but to insinuate wrong ideas, move the passions, and so, indeed, are perfect cheats . . . and where truth and knowledge are concerned, cannot but be thought a great fault, either of the language or person that makes use of them."

Descartes also declares that "those who have the strongest power of reasoning, and who most skilfully arrange their thoughts in order to render them clear and intelligible, have the best power of persuasion even if they can but speak the language of Lower Britanny and have never learned rhetoric." Yet he qualifies this severity somewhat by identifying dialectic with rhetoric and granting its "possible use . . . to serve to explain at times more easily to others the truths we have already ascertained."

Plato for the most part tends in the opposite direction, keeping dialectic and rhetoric poles apart. But if there were a true as opposed to a false rhetoric, a rhetoric concerned with knowledge and truth, not merely opinion and pleasure, he would be willing, it seems, to admit it to the company of dialectic, and regard it as an aid in the teaching, if not the discovery, of the truth. The pedagogical utility of rhetoric as well as dialectic appears in the summary which Socrates gives to Phaedrus, after they have finished examining the speeches about love.

"Until a man knows the truth of the several particulars of which he is writing or speaking," Socrates says, "and is able to define them as they are, and having defined them again to divide them until they can no longer be divided, and until in like manner he is able to discern the nature of the soul, and discover the different modes of discourse which are adapted to different natures, and to arrange and dispose them in such a way that the simple form of speech may be addressed to the simpler nature, and the complex and the composite to the more complex nature—until he has accomplished all this, he will be unable to handle arguments according to rules of art . . . either for the purpose of teaching or persuading."

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To find the passages cited, use the numbers in heavy type, which are the volume and page numbers of the passages referred to. For example, in **4** HOMER: *Iliad*, BK II [265-283] **12d**, the number **4** is the number of the volume in the set; the number **12d** indicates that the passage is in section d of page 12.

PAGE SECTIONS: When the text is printed in one column, the letters **a** and **b** refer to the upper and lower halves of the page. For example, in **53** JAMES: *Psychology*, **116a-119b**, the passage begins in the upper half of page 116 and ends in the lower half of page 119. When the text is printed in two columns, the letters **a** and **b** refer to the upper and lower halves of the left-hand side of the page, the letters **c** and **d** to the upper and lower halves of the right-hand side of the page. For example, in **7** PLATO: *Symposium*, **163b-164c**, the passage begins in the lower half of the left-hand side of page 163 and ends in the upper half of the right-hand side of page 164.

AUTHOR'S DIVISIONS: One or more of the main divisions of a work (such as PART, BK, CH, SECT) are sometimes included in the reference; line numbers, in brackets, are given in certain cases; *e.g.*, *Iliad*, BK II [265-283] **12d**.

BIBLE REFERENCES: The references are to book, chapter, and verse. When the King James and Douay versions differ in title of books or in the numbering of chapters or verses, the King James version is cited first and the Douay, indicated by a (*D*), follows; *e.g.*, OLD TESTAMENT: *Nehemiah*, 7:45—(*D*) *II Esdras*, 7:46.

SYMBOLS: The abbreviation "esp" calls the reader's attention to one or more especially relevant parts of a whole reference; "passim" signifies that the topic is discussed intermittently rather than continuously in the work or passage cited.

For additional information concerning the style of the references, see the Explanation of Reference Style; for general guidance in the use of *The Great Ideas*, consult the Preface.

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31 DESCARTES: *Discourse*, PART I, 43b; PART VI, 66d
32 MILTON: *Vacation Exercise* 59a-61b
33 PASCAL: *Pensées*, 14-16 174a-b; 22-35 175a-177a; 48 178b
36 STERNE: *Tristram Shandy*, 209a-210b; 230b-231a; 287b-289b; 344b-345a
37 FIELDING: *Tom Jones*, 1a-2a; 49a-50c; 223a-225a; 246a-247a
40 GIBBON: *Decline and Fall*, 494d-495a,c; 529d
41 GIBBON: *Decline and Fall*, 300b; 327c; 522c-523c passim; 573a
42 KANT: *Judgement*, 513d-514b; 524a-b
44 BOSWELL: *Johnson*, 59c-61d; 167d-168b; 215b-c; 217a-b; 284b; 353c-354a; 381d-382a; 454a; 455b
53 JAMES: *Psychology*, 381a

2c. Methods of exposition in history, science, philosophy, and theology

6 THUCYDIDES: *Peloponnesian War*, BK I, 354b-c
7 PLATO: *Protagoras*, 50d-52d; 54c-55a; 57a-c / *Phaedrus*, 132b-140b / *Theaetetus*, 542a / *Statesman*, 590d-591c / *Seventh Letter*, 809a-c
8 ARISTOTLE: *Posterior Analytics*, BK II, CH 13 [97^{b}38-39] 133c / *Topics*, BK VIII, CH 3 [158^{b}8-17] 215b
9 ARISTOTLE: *Parts of Animals*, BK I, CH 1 161a-165d passim, esp [639^{a}1-^{b}12] 161a-d / *Rhetoric*, BK I, CH 2 [1358^{a}3-26] 597d-598b; CH 4 [1359^{b}1-18] 599d; BK III, CH 1 [1404^{a}1-12] 654a
12 LUCRETIUS: *Nature of Things*, BK I [921-950] 12b-c
12 EPICTETUS: *Discourses*, BK II, CH 23 170a-172d; BK III, CH 23, 203a-b
14 PLUTARCH: *Phocion*, 606c-d

(2. The function of rhetoric in expository, speculative, and poetic discourse. 2c. Methods of exposition in history, science, philosophy, and theology.)

18 AUGUSTINE: *Christian Doctrine*, BK II, CH 16 644a-645d; BK III, CH 5 659d-660a; CH 10-13 661c-663c; BK IV 675a-698a,c passim, esp CH 8-11 682a-683d, CH 14 684d-685b, CH 22-26 693c-696a
19 AQUINAS: *Summa Theologica*, PROLOGUE 1a-b; PART I, Q 1, A 9 8d-9c
23 HOBBES: *Leviathan*, PART I, 57d-58a; 67c; PART III, 169b-c; CONCLUSION, 282c-d
25 MONTAIGNE: *Essays*, 197b-198a; 198c-200d; 423c; 448b-449d; 455d-456a; 482b-d
28 GILBERT: *Loadstone*, PREF, 2b-c
28 HARVEY: *On Animal Generation*, 336d-337a,c
30 BACON: *Advancement of Learning*, 12a-c; 64b-c; 65a-c
33 PASCAL: *Pensées*, 797-800 327b-328a
35 LOCKE: *Human Understanding*, 87d-88a; BK III, CH X, SECT 34 299d-300a
35 HUME: *Human Understanding*, SECT VII, DIV 61, 478a
37 FIELDING: *Tom Jones*, 19a-20a; 49b-50c
38 MONTESQUIEU: *Spirit of Laws*, BK XXIX, 266b-c
38 ROUSSEAU: *Inequality*, 334a / *Social Contract*, BK II, 401c-402a
40 GIBBON: *Decline and Fall*, 213b-d passim; 471c-d
41 GIBBON: *Decline and Fall*, 40c-d; 186a-b; 526c-d
42 KANT: *Pure Reason*, 2d-4a,c / *Practical Reason*, 294b-c / *Pref. Metaphysical Elements of Ethics*, 376c-d / *Judgement*, 514a; 575b-c
44 BOSWELL: *Johnson*, 217a-b
45 LAVOISIER: *Elements of Chemistry*, PREF, 2b-d
45 FARADAY: *Researches in Electricity*, 758a; 777d 778c; 851b
49 DARWIN: *Origin of Species*, 40c-d
53 JAMES: *Psychology*, 121b-122b; 146b; 153b-154a; 235b
54 FREUD: *Beyond the Pleasure Principle*, 662a-b

2d. Principles of interpretation: the modes of meaning

7 PLATO: *Protagoras*, 52d-57a
9 ARISTOTLE: *Poetics*, CH 25 696d-698c
12 EPICTETUS: *Discourses*, BK I, CH 17 122d-124a
18 AUGUSTINE: *Confessions*, BK III, par 9 15a-b; BK V, par 24 34a-b; BK VI, par 6 36c-d; BK XII, par 32-36 107a-108c; par 41-43 110a-d; BK XIII, par 36-37 120c-121a / *City of God*, BK XI, CH 30-32 339c-340d; BK XIII, CH 21 371a-c; BK XV, CH 2-3 398c-399c; CH 25-27 419a-421d; BK XVI, CH 2 422b-423d; CH 6 426c-427a; CH 37 444b-445a; BK XVII, CH 3 450c-451c; BK XVIII, CH 42-44 496d-498c; BK XX, CH 21, 549d; CH 28-29 556c-557c / *Christian Doctrine*, BK I-III 624a-674d esp BK I, CH 35-37 634c-635c, BK II, CH 6 638a-d, CH 9-10 640c-641a, CH 12 641c-642b, CH 16 644a-645d, BK III, CH 5 659d-660a, CH 10-13 661c-663c, CH 24-37 666d-674d
19 AQUINAS: *Summa Theologica*, PART I, Q 1, AA 9-10 8d-10c
21 DANTE: *Divine Comedy*, HELL, IX [61-63] 13a; PURGATORY, VIII [19-21] 64c
23 HOBBES: *Leviathan*, PART III, 246c
24 RABELAIS: *Gargantua and Pantagruel*, BK I, 1b,d-3a,c
30 BACON: *Advancement of Learning*, 4c; 39b-d; 63a-b; 99b-c
33 PASCAL: *Provincial Letters*, 163b-164b / *Pensées*, 570-579 273b-276a; 642-692 290b-301a
40 GIBBON: *Decline and Fall*, 346a-b
41 GIBBON: *Decline and Fall*, 329d-330a
42 KANT: *Practical Reason*, 294b-c; 339b-d
43 MILL: *Liberty*, 290a-b
48 MELVILLE: *Moby Dick*, 151b-152a
54 FREUD: *Interpretation of Dreams*, 248c / *New Introductory Lectures*, 816a-b

3. The role of rhetoric as concerned with persuasion in the sphere of action: the analysis of oratory

7 PLATO: *Phaedrus*, 131b-138c / *Gorgias* 252a-294d
9 ARISTOTLE: *Politics*, BK IV, CH 4 [1292^{a}4-38] 491b-d; BK V, CH 4 [1304^{b}7-18] 506b / *Athenian Constitution*, CH 28, par 3-4 565d-566a / *Rhetoric* 593a-675a,c esp BK I, CH 1 [1354^{a}1]-CH 2 [1356^{a}35] 593a-596a, CH 3 598b-599c, BK II, CH 1 [1377^{b}21-1378^{a}19] 622b,d-623a, CH 18 [1391^{b}8-20] 639a-b, CH 26 [1403^{a}33-^{b}3] 653c, BK III, CH 1 [1403^{b}5-13] 653b, CH 16 [1416^{b}15-22] 670c-d
12 EPICTETUS: *Discourses*, BK I, CH 8 113d-114c
14 PLUTARCH: *Pericles*, 129b-130b
18 AUGUSTINE: *Christian Doctrine*, BK IV, CH 11-14 683c-685b; CH 23-26 693d-696a
23 HOBBES: *Leviathan*, PART I, 73b
25 MONTAIGNE: *Essays*, 147b-148a
32 MILTON: *Paradise Lost*, BK IX [664-678] 261b-262a
33 PASCAL: *Geometrical Demonstration*, 439b-446a esp 441a-b
35 BERKELEY: *Human Knowledge*, INTRO, SECT 20 410d-411a
42 KANT: *Judgement*, 535b-c
43 DECLARATION OF INDEPENDENCE: [1-6] 1a; [95-108] 3a
43 FEDERALIST: NUMBER 1, 29d-30c; NUMBER 58, 181b-c
43 MILL: *Representative Government*, 361b-362c
44 BOSWELL: *Johnson*, 374a-c
46 HEGEL: *Philosophy of History*, INTRO, 153d-154a; PART I, 250d-251a
50 MARX-ENGELS: *Communist Manifesto*, 429c-433d passim

51 TOLSTOY: *War and Peace*, BK X, 426a-430b passim; BK XI, 482b-484c; 504b-c; BK XIII, 572b-573b
52 DOSTOEVSKY: *Brothers Karamazov*, BK XII, 369a-398d
54 FREUD: *General Introduction*, 450b / *Group Psychology*, 668c

3a. The kinds of oratory: deliberative, forensic, epideictic

7 PLATO: *Phaedrus*, 137b
9 ARISTOTLE: *Rhetoric*, BK I, CH I [1354b22-1355a3] 593d-594a; CH 3-15 598b-622d esp CH 3 598b-599c; BK II, CH 18 639a-c; BK III, CH 12 [1413b3-1414a17] 666b-667a passim; CH 13-14 667b-669c passim; CH 16 [1416b15]-CH 17 [1418b23] 670c-673b passim
12 EPICTETUS: *Discourses*, BK III, CH 23 201a-203b
18 AUGUSTINE: *Christian Doctrine*, BK IV, CH 18 686d-687d
23 HOBBES: *Leviathan*, PART I, 67c; PART II, 127d
30 BACON: *Advancement of Learning*, 38b-c
40 GIBBON: *Decline and Fall*, 343a-b

3b. The structure of an oration: the order of its parts

7 PLATO: *Phaedrus*, 132c-135b
9 ARISTOTLE: *Rhetoric*, BK II, CH 26 [1403a33-b3] 653c; BK III, CH I [1403b5-13] 653b; CH 13-19 667b-675a,c
25 MONTAIGNE: *Essays*, 466a-c
30 BACON: *Advancement of Learning*, 58c-59a; 68a-b

3c. The use of language for persuasion: oratorical style

7 PLATO: *Protagoras*, 50d-52d; 57a-c / *Symposium*, 172c / *Apology*, 200a-c
9 ARISTOTLE: *Rhetoric*, BK III, CH 1-12 653b,d-667b esp CH 1 653b,d-654c
12 LUCRETIUS: *Nature of Things*, BK I [921-950] 12b-c; BK IV [1-25] 44a-b
12 EPICTETUS: *Discourses*, BK I, CH 8 113d-114c; BK III, CH 23 201a-203b
14 PLUTARCH: *Lycurgus*, 42c-43b / *Alcibiades*, 159a-b / *Marcus Cato*, 279d-281b / *Demosthenes*, 692d-695d / *Cicero*, 706a; 713b-715a
18 AUGUSTINE: *Confessions*, BK V, par 10-11 29b-30a / *Christian Doctrine*, BK II, CH 36 653d; BK IV, CH 10-12 682c-684c; CH 17-26 686c-696a
23 HOBBES: *Leviathan*, PART II, 127d; CONCLUSION, 282c-d
26 SHAKESPEARE: *King John*, ACT II, SC I [423-467] 384a-c
30 BACON: *Advancement of Learning*, 12a-c; 83d-84a
31 DESCARTES: *Discourse*, PART I, 43b
35 BERKELEY: *Human Knowledge*, INTRO, SECT 20 410d-411a
40 GIBBON: *Decline and Fall*, 206a-b; 343a-b; 529d
43 FEDERALIST: NUMBER I, 29d-30c
43 MILL: *Liberty*, 292b-293b
44 BOSWELL: *Johnson*, 130c-131a; 475b
47 GOETHE: *Faust*, PART I [522-557] 15a-b
51 TOLSTOY: *War and Peace*, BK II, 65d-66d; BK V, 194a-198b passim; BK VII, 302c-d; BK VIII, 308d; 326d-327a; BK IX, 347b-348a; 351c-d; BK X, 402b-403a; BK XI, 497c-499c; 504b-c; 505d-506a; BK XII, 536a-537b; 554b-555c; BK XIII, 565a-b; BK XV, 622a-c
52 DOSTOEVSKY: *Brothers Karamazov*, BK XII, 369a-370b; 386a-387d

4. The means of persuasion: the distinction between artistic and inartistic means

7 PLATO: *Phaedrus*, 131b-138c
9 ARISTOTLE: *Rhetoric*, BK I, CH 2 [1355b36-1356a25] 595b-d; CH 15 619d-622d; BK II, CH I [1377b21-1378a19] 622b,d-623a; BK III, CH I [1403b5-13] 653b; CH 7 659a-660a; CH 16 [1416b15-22] 670c-d; CH 19 [1419b10-13] 674c
18 AUGUSTINE: *Christian Doctrine*, BK IV, CH 4 676d-677a
47 GOETHE: *Faust*, PART I [522-557] 15a-b

4a. The orator's consideration of character and of the types of audience: the significance of his own character

4 HOMER: *Iliad*, BK III [203-224] 21a-b
6 HERODOTUS: *History*, BK VIII, 271c-d
6 THUCYDIDES: *Peloponnesian War*, BK I, 358d-360c; 365c-369a; 370a-c; 378c-d; 379b-d; 385a-b; BK II, 395d-399a; 402b-404a; BK III, 425a-429a; 429d-434a; BK IV, 478d-479b; BK V, 484a-c; 504c-507c; BK VI, 511c-d; 512c-513d; 519c-520d; 533a-c; 534b-c
7 PLATO: *Phaedrus*, 136a-137c / *Critias*, 478b-d
9 ARISTOTLE: *Rhetoric*, BK I, CH 2 [1356a1-25] 595b-d; CH 9 608c-611c; CH 15 [1376a24-32] 621a; BK II, CH I [1377b21-1378a19] 622b,d-623a; CH 12 [1388b31]-CH 18 [1391b22] 636a-639b; CH 21 [1395a18-b19] 643a-c; BK III, CH 7 [1408a10-37] 659a-c; CH 14 [1415a25-b21] 668c-669b; CH 16 [1417a16-b12] 671b-d; CH 17 [1418b23-33] 673b-c; CH 19 [1419b10-19] 674c
13 VIRGIL: *Aeneid*, BK I [142-156] 107a
14 PLUTARCH: *Pericles*, 129b-130b
15 TACITUS: *Annals*, BK I, 11a-b; 12d-13c
18 AUGUSTINE: *Christian Doctrine*, BK IV, CH 6, 678a; CH 27-28 696a-697a
25 MONTAIGNE: *Essays*, 345a-b
26 SHAKESPEARE: *Julius Caesar*, ACT III, SC II 583c-586c
27 SHAKESPEARE: *Coriolanus*, ACT I, SC I [51-192] 351d-353c; ACT II, SC III [44-162] 366b-367d
32 MILTON: *Areopagitica*, 381b-383b
33 PASCAL: *Pensées*, 47 178b / *Geometrical Demonstration*, 441a-442a

(4. The means of persuasion: the distinction between artistic and inartistic means. 4a. The orator's consideration of character and of the types of audience: the significance of his own character.)

40 GIBBON: *Decline and Fall*, 529d
43 FEDERALIST: NUMBER 1, 29d-30c
43 MILL: *Representative Government*, 331a; 349b-c
44 BOSWELL: *Johnson*, 374a-c
46 HEGEL: *Philosophy of History*, INTRO, 153d-154a
48 MELVILLE: *Moby Dick*, 30a-36b; 117a-122b
51 TOLSTOY: *War and Peace*, BK V, 194a-198b passim; BK XI, 497c-499c; 504b-c; 505d-506a; BK XII, 536a-537b; BK XV, 622a-c

4b. The orator's treatment of emotion: his display of emotion; the arousal of his audience

5 ARISTOPHANES: *Acharnians* [352–565] 459c-461c
6 HERODOTUS: *History*, BK VII, 214d-215c
6 THUCYDIDES: *Peloponnesian War*, BK V, 484a-c; BK VII, 557a-b; BK VIII, 584b-585a
7 PLATO: *Phaedrus*, 136b-137c / *Ion*, 145a-b / *Symposium*, 169c-170a / *Apology*, 208c-209b; 210b-d / *Gorgias*, 260a-262a
9 ARISTOTLE: *Athenian Constitution*, CH 28, par 3-4 565d-566a / *Rhetoric*, BK I, CH 1 [1354^{a}13–26] 593b; CH 2 [1356^{a}13–25] 595c-d; BK II, CH 1–11 622b,d-636a; BK III, CH 7 659a-660a; CH 14 [1415^{a}25–40] 668c-d; CH 16 [1417^{a}37–^{b}7] 671c-d; CH 19 [1419^{b}10–27] 674c-d / *Poetics*, CH 19 [1456^{a}33–^{b}8] 691d-692a
12 EPICTETUS: *Discourses*, BK III, CH 23 201a-203b
13 VIRGIL: *Aeneid*, BK I [142–156] 107a
14 PLUTARCH: *Pericles*, 129b-130b / *Nicias*, 427a / *Tiberius Gracchus*, 672b-c / *Caius Gracchus*, 682d-684a / *Demosthenes*, 692d-695d / *Cicero*, 719d-720a
15 TACITUS: *Annals*, BK I, 11a-b; 12d-13c / *Histories*, BK I, 198c-199c; 207d-208a
18 AUGUSTINE: *Confessions*, BK I, par 27 7c-d / *Christian Doctrine*, BK II, CH 36 653d; BK IV, CH 2 675d-676a; CH 4 676d-677a; CH 24 694b-d
23 HOBBES: *Leviathan*, PART I, 57d-58a; PART II, 127d-128a; 129b-c
25 MONTAIGNE: *Essays*, 147b-148a; 310c; 405a-b
26 SHAKESPEARE: *Julius Caesar*, ACT III 580b-587a
30 BACON: *Advancement of Learning*, 66c-67c
33 PASCAL: *Pensées*, 15–16 174a-b / *Geometrical Demonstration*, 441a-b
35 BERKELEY: *Human Knowledge*, INTRO, SECT 20 410d-411a
35 HUME: *Human Understanding*, SECT X, DIV 93, 492b-c
37 FIELDING: *Tom Jones*, 320c-321b
40 GIBBON: *Decline and Fall*, 529d
43 FEDERALIST: NUMBER 1, 29d-30c
43 MILL: *Liberty*, 292b-293b
44 BOSWELL: *Johnson*, 209a
49 DARWIN: *Descent of Man*, 570c-571b
51 TOLSTOY: *War and Peace*, BK V, 194a-198b passim; BK VIII, 326d-327a; 332a-b; BK IX, 347b-348a; BK XI, 497c-499c esp 498c-d; BK XII, 533a-534d; 536a-537b; BK XV, 622a-c
54 FREUD: *General Introduction*, 450b

4c. Rhetorical argument: the distinction between persuasion and demonstration

7 PLATO: *Protagoras*, 50d-52d; 57a-c / *Phaedrus*, 137b-138c / *Meno*, 176d-177a / *Gorgias*, 254d-256c / *Timaeus*, 457c / *Sophist*, 558a-561a
8 ARISTOTLE: *Prior Analytics*, BK II, CH 27 92a-93a,c / *Posterior Analytics*, BK I, CH 1 [71^{a}1–10] 97a / *Metaphysics*, BK IV, CH 5 [1009^{a}15–22] 528c
9 ARISTOTLE: *Ethics*, BK I, CH 3 [1094^{b}24–28] 339d-340a / *Rhetoric*, BK I 593a-622d esp CH 1 [1355^{a}4–^{b}22] 594b-595a, CH 2 [1356^{a}1–25] 595b-d; BK II, CH 18–26 639a-653a,c; BK III, CH 1 [1403^{b}5–13] 653b; CH 15 669d-670c; CH 17–19 672a-675a,c
10 GALEN: *Natural Faculties*, BK I, CH 16, 180c-181a
12 EPICTETUS: *Discourses*, BK I, CH 5 110b-c; CH 8 113d-114c
18 AUGUSTINE: *Christian Doctrine*, BK II, CH 36–37 653d-654b; BK IV, CH 4 676d-677a
19 AQUINAS: *Summa Theologica*, PART I, Q 83, A 1, ANS 436d-438a; PART I-II, Q 7, A 1, REP 1 651d-652c
23 HOBBES: *Leviathan*, PART I, 67c; PART II, 127d; 128d
25 MONTAIGNE: *Essays*, 446d-450a; 453c-454d
30 BACON: *Advancement of Learning*, 58c-59a; 66c-67c
31 DESCARTES: *Rules*, X, 16d-17a
33 PASCAL: *Geometrical Demonstration*, 440b-442a
35 LOCKE: *Human Understanding*, BK III, CH X, SECT 34 299d-300a
36 STERNE: *Tristram Shandy*, 227a-228a
37 FIELDING: *Tom Jones*, 261c-d
42 KANT: *Pref. Metaphysical Elements of Ethics*, 376c-d
43 FEDERALIST: NUMBER 14, 62a-d
43 MILL: *Liberty*, 284b-c
51 TOLSTOY: *War and Peace*, BK VI, 243b; EPILOGUE I, 672a-b

4c(1) Rhetorical induction: the use of examples

8 ARISTOTLE: *Prior Analytics*, BK II, CH 24 90c-91a / *Topics*, BK VIII, CH 1 [156^{b}10–18] 212c-d; CH 8 [160^{a}35–^{b}1] 217d / *Sophistical Refutations*, CH 5 [167^{a}9–13] 229d-230a / *Metaphysics*, BK II, CH 3 [995^{a}6–8] 513c
9 ARISTOTLE: *Rhetoric*, BK I, CH 2 [1356^{a}36–1358^{a}2] 596a-597d; CH 9 [1368^{a}29–31] 611b-c; BK II, CH 20 640d-641d; CH 23 [1398^{a}32–^{b}18]

646d-647a; CH 25 [1403a5-9] 652d; BK III, CH 17 [1418a1-3] 672b
12 EPICTETUS: *Discourses*, BK I, CH 8 113d-114c
30 BACON: *Advancement of Learning*, 99c
42 KANT: *Pref. Metaphysical Elements of Ethics*, 376c-d

4c(2) Rhetorical proof: the use of enthymemes

8 ARISTOTLE: *Prior Analytics*, BK II, CH 27 92a-93a,c
9 ARISTOTLE: *Rhetoric*, BK I, CH 1 [1355a4-17] 594b; CH 2 [1356a36-1358a35] 596a-598b; CH 9 [1368a31-33] 611c; BK II, CH 20 [1394a9]-CH 26 [1403b1] 641d-653a,c; BK III, CH 17 672a-673c
12 EPICTETUS: *Discourses*, BK I, CH 8 113d-114c
42 KANT: *Pref. Metaphysical Elements of Ethics*, 376c-d

4c(3) The topics or commonplaces which are the source of premises: the orator's knowledge of various subject matters

7 PLATO: *Phaedrus*, 131b-141a,c / *Euthyphro*, 193d-194b / *Gorgias*, 253b-262b esp 257a-d, 258b-d
8 ARISTOTLE: *Topics*, BK I-VII 143a-211a,c
9 ARISTOTLE: *Rhetoric*, BK I, CH 2 [1356a21-29] 595d; CH 2 [1358a2]-CH 15 [1377b13] 597d-622d; BK II, CH 18 [1391b23]-CH 19 [1393a20] 639b-640d; CH 22 [1395b20]-CH 26 [1403a34] 643c-653a,c
30 BACON: *Advancement of Learning*, 58c-59c; 68a-b; 83b-85a

5. The evaluation of oratory and the orator: the justification of rhetorical means by the end of success in persuasion

5 EURIPIDES: *Suppliants* [399-425] 261d-262a / *Orestes* [852-956] 402d-403d
5 ARISTOPHANES: *Acharnians* [352-384] 459c-d / *Knights* 470a-487a,c esp [1333-1383] 486c-487a / *Clouds* 488a-506d esp [882-1104] 499b-502a / *Wasps* [652-724] 515c-516d
6 THUCYDIDES: *Peloponnesian War*, BK II, 395d-396a; BK III, 425c-d; 427a-c
7 PLATO: *Euthydemus*, 74d-75a / *Phaedrus* 115a-141a,c esp 136a-141a,c / *Apology*, 200a-d; 208c-209b / *Gorgias* 252a-294d
9 ARISTOTLE: *Rhetoric*, BK I 593a-622d esp CH 1 [1354a1-1355b22] 593a-595a
12 EPICTETUS: *Discourses*, BK I, CH 8 113d-114c; BK II, CH 23 170a-172d
12 AURELIUS: *Meditations*, BK I, SECT 7 253b-d
15 TACITUS: *Histories*, BK IV, 290a-d
18 AUGUSTINE: *Confessions*, BK IV, par 2 19d; BK IX, par 2 61d-62a / *Christian Doctrine*, BK II, CH 36 653d; BK IV, CH 2 675d-676a; CH 4-6 676d-678c; CH 12 683d-684c; CH 23-26 693d-696a
25 MONTAIGNE: *Essays*, 67c-68a; 75a-76b; 147b-149a
30 BACON: *Advancement of Learning*, 12a-c
32 MILTON: *Areopagitica*, 382a-383a
33 PASCAL: *Geometrical Demonstration*, 439b-446a
35 LOCKE: *Human Understanding*, BK III, CH X, SECT 34 299d-300a
42 KANT: *Judgement*, 535b-c
44 BOSWELL: *Johnson*, 285c; 475b
46 HEGEL: *Philosophy of History*, PART II, 280a-b

5a. The purpose of oratory and the exigencies of truth

6 HERODOTUS: *History*, BK V, 169a-d; BK VI, 186b-c
6 THUCYDIDES: *Peloponnesian War*, BK III, 425a-d; BK VIII, 584b-585a
7 PLATO: *Phaedrus*, 131b-138c / *Symposium*, 161b-d / *Apology*, 200a-c / *Gorgias* 252a-294d / *Theaetetus*, 525c-526a; 544a-c / *Philebus*, 634b-635a
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32 MILTON: *Paradise Lost*, BK II [108-228] 113b-116a / *Areopagitica*, 382a-383a
35 LOCKE: *Human Understanding*, BK III, CH X, SECT 34 299d-300a
43 FEDERALIST: NUMBER 1, 29d-30c; NUMBER 29, 100a-c
44 BOSWELL: *Johnson*, 374a-c

5b. The orator's concern with justice, law, and the good: the moral virtue of the orator

6 HERODOTUS: *History*, BK VIII, 274b
6 THUCYDIDES: *Peloponnesian War*, BK I, 358d-360c; BK II, 395c-399a; BK III, 424d-428d esp 427a-c; 429d-434a; BK IV, 468a-469b; 469d-470b; BK V, 504c-507c; BK VI, 512d-513a
7 PLATO: *Apology*, 208c-209b / *Gorgias* 252a-294d / *Republic*, BK II, 314c / *Sophist*, 579a-d
9 ARISTOTLE: *Rhetoric*, BK I, CH 1 [1354a1-1355a3] 593a-594a; CH 2 [1356a1-13] 595b-c; CH 3-15 598b-622d; BK II, CH 1 [1377b21-1378a19] 622b,d-623a; CH 21 [1395a18-b19] 643a-c
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14 PLUTARCH: *Pericles*, 129b-130b / *Nicias*, 427a / *Phocion*, 604b,d-605c / *Cato the Younger*, 628b-d; 643a-644b / *Demosthenes*, 696a-697a / *Cicero*, 709a / *Demosthenes-Cicero* 724a-725d
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(5. *The evaluation of oratory and the orator: the justification of rhetorical means by the end of success in persuasion. 5b. The orator's concern with justice, law, and the good: the moral virtue of the orator.*)

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18 AUGUSTINE: *Christian Doctrine*, BK II, CH 37 653d-654b; BK IV, CH 18 686d-687d; CH 24, 694b-c; CH 27-30 696a-697d
19 AQUINAS: *Summa Theologica*, PART I-II, Q 7, A 2, REP 3 652d-653c
23 HOBBES: *Leviathan*, PART I, 77d; PART II, 106a-b; 127d-128b; 129b-c
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26 SHAKESPEARE: *Julius Caesar*, ACT III, SC II 583c-586c
30 BACON: *Advancement of Learning*, 66b-69c esp 66c-d
32 MILTON: *Areopagitica*, 382a-383a
43 FEDERALIST: NUMBER 1, 29d-30c
43 MILL: *Liberty*, 292b-293c / *Representative Government*, 361b-362c
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6. The education of the orator: the schools of rhetoric

7 PLATO: *Phaedrus*, 136a-138c; 141a-c
8 ARISTOTLE: *Sophistical Refutations*, CH 34 [183^{b}17 184^{b}1] 253a-c
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18 AUGUSTINE: *Confessions*, BK I, par 27-29 7c-8b; BK III, par 6-7 14b-d; BK IV, par 2 19d; BK V, par 22-23 33b-34a; BK IX, par 2 61d-62a / *Christian Doctrine*, BK IV, CH 3 676a-d; CH 5 677a-d
30 BACON: *Advancement of Learning*, 11b-12c; 31a-d; 66b-c
39 SMITH: *Wealth of Nations*, BK V, 338d-339a
40 GIBBON: *Decline and Fall*, 19b; 364a-b; 389d-390a; 529c; 669a-670b
41 GIBBON: *Decline and Fall*, 40b

7. The history of oratory: its importance under various social conditions and in different forms of government

5 ARISTOPHANES: *Knights* [211-222] 472c; [342-358] 474a-b; [815-880] 480a-481a
7 PLATO: *Phaedrus*, 141a-c / *Apology* 200a-212a,c / *Gorgias*, 285a-294d / *Republic*, BK VIII, 413d-416a
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32 MILTON: *Areopagitica*, 383a
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38 MONTESQUIEU: *Spirit of Laws*, BK XII, 89c-90c
38 ROUSSEAU: *Political Economy*, 369d
39 SMITH: *Wealth of Nations*, BK V, 338d-339a
40 GIBBON: *Decline and Fall*, 23d-24a; 303c-304a; 364a-c; 669a-d
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43 FEDERALIST: NUMBER 58, 181b-c
43 MILL: *Liberty*, 284b-d / *Representative Government*, 331a; 361b-362c; 375a-377a
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6 THUCYDIDES: *Peloponnesian War*, BK I, 357a-360d; 365a-371b; 378c-380a; 384c-386c; BK II, 389d-390b; 395c-399a; 402a-404d; 411b-412c; BK III, 418d-420c; 424d-429a; 429d-434c; BK IV, 449b-c; 451a-452c; 461b-463a; 468a-469b; 469d-470b; 478d-479b; BK V, 484a-c; 504d-507c; BK VI, 511c-516a; 518a-520d; 529b-534d; BK VII, 555b-557b; 559d-560b
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26 SHAKESPEARE: *Richard III*, ACT V, SC III [237-270] 146b-c / *Henry V*, ACT IV, SC III [16-67] 555d-556b / *Julius Caesar*, ACT III, SC II 583c-586c

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36 STERNE: *Tristram Shandy*, 255a-256a; 393a-395a

37 FIELDING: *Tom Jones*, 320c-321b

40 GIBBON: *Decline and Fall*, 25b-c; 64a-c; 269b-270a; 337a-b; 384d-385b; 427a-c; 564b-c

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48 MELVILLE: *Moby Dick*, 30a-36b

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CROSS-REFERENCES

For: The general consideration of the liberal arts, *see* ART 4; EDUCATION 5b; and for the relation of rhetoric to such liberal arts as grammar and logic, *see* LANGUAGE 1a-1b, 8; LOGIC 3b.

The role of rhetoric in the sphere of philosophy, and its relation to or distinction from dialectic and sophistry, *see* DIALECTIC 5; PHILOSOPHY 6b; TRUTH 4d.

The function of oratory in the sphere of politics, *see* DEMOCRACY 7a; EMOTION 5d; STATE 8d(2).

Discussions relevant to the broad conception of rhetoric as the art of achieving eloquence and effectiveness in any sort of discourse, and as concerned with problems of style and principles of interpretation, *see* LANGUAGE 3a, 6, 12; POETRY 8b-8c; SIGN AND SYMBOL 4c-4d.

Discussions relevant to the narrow conception of rhetoric as the art of oratory, and as concerned with the means of persuasion in the sphere of action, *see* EMOTION 5d; HONOR 3a-3b; INDUCTION 4b; REASONING 5d; TRUTH 4d.

ADDITIONAL READINGS

Listed below are works not included in *Great Books of the Western World*, but relevant to the idea and topics with which this chapter deals. These works are divided into two groups:

I. Works by authors represented in this collection.
II. Works by authors not represented in this collection.

For the date, place, and other facts concerning the publication of the works cited, consult the Bibliography of Additional Readings which follows the last chapter of *The Great Ideas*.

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TACITUS. *A Dialogue on Oratory*
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ISOCRATES. *Aegineticus*
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DEMETRIUS. *On Style*
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LA BRUYÈRE. "Of the Works of the Mind," in *Characters*
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SCHOPENHAUER. *The World as Will and Idea*, VOL II, SUP, CH II
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RICHARDS. *The Philosophy of Rhetoric*
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Chapter 82: SAME AND OTHER

INTRODUCTION

THE problems of identity and diversity—of sameness and otherness, similarity and difference—occur at that level of philosophical thought which deals with being and with unity. Plotinus, for example, says that in addition to Being, Motion, and Rest, "we are obliged to posit the further two, Identity and Difference, so that we have in all five genera."

In Aristotle's conception, terms like 'being,' 'one,' and 'same' have a greater universality than the terms he calls the highest genera, *e.g.*, 'substance,' 'quantity,' 'quality,' 'relation,' and so forth. These latter represent categories or classes under which certain things fall and others do not. Not everything is a substance or a quantity, but in Aristotle's opinion there is nothing of which it cannot be said that it is a being in some sense, that it has some kind of unity, that it is identical with itself, and that, compared with anything else in the whole universe, it is in certain respects the same, in others different.

The fundamental relation of quantities with one another, namely, equality, consists in their being the same. The fundamental relation of qualities consists in their being alike, or the same in spite of some difference in degree or intensity, *e.g.*, a brighter and a darker red of the same hue. The notion of relation itself seems to be as fundamental as that of sameness, since in comparisons one thing is said to be the same or different only in relation to something else; yet it also seems to be true that relations can be the same or similar, for the essence of proportion or analogy lies in one thing's being related to a second as a third is to a fourth. The sameness of two relationships is the object of the comparison.

Such considerations are sometimes called "metaphysical" with an invidious tone. But no one, not even those who would eliminate metaphysical discussion as indulging in "vicious abstractions" or as verging on the meaningless, can easily avoid such notions as identity and diversity. It is not merely that ordinary speech, as well as scientific discourse, must use such words as "same" and "other" almost as frequently as the words "is" and "not" or "one" and "many." Those who are critical of theorizing and who want to save discourse itself from becoming "too metaphysical" are still obliged to give some account of what it means for things to be the same or different and of how we know when they are.

Semantics currently has vogue as a critical instrument for safeguarding discourse from ambiguity and nonsense and perhaps also for spotting metaphysical legerdemain. But semantics itself cannot go far in its own analysis of words and meanings without having to explain how the *same* word can have *different* meanings or how the *same* meaning can be expressed by *different* words. It does not seem likely that an adequate explanation could be developed without some theory of sameness and otherness.

THE "SENSE OF SAMENESS," says William James, "is the very keel and backbone of our thinking." He is here speaking "of the sense of sameness from the point of view of the mind's structure alone, and not from the point of view of the universe. . . . Whether there be any *real* sameness in *things* or not, or whether the mind be true or false in its assumptions of it," he goes on, the point remains that "the mind makes continual use of the *notion* of sameness, and if deprived of it, would have a different structure from what it has. . . . Without the psychological sense of identity, sameness might rain down upon us from the outer world forever and we be none the wiser. With the psychological sense, on the other hand, the outer world might

be an unbroken flux, and yet we should perceive a repeated experience."

James distinguishes three principles of identity. In addition to the *psychological* law according to which we feel a later experience to be the same as an earlier one, he refers to the *ontological* principle which "asserts that every real thing is what it is, that *a* is *a*, and *b*, *b*"; and the *logical* principle which declares that "what is once true of the subject of a judgment is always true of that subject." James seems to think that "the ontological law is a tautological truism," whereas the logical and the psychological principles have further implications not immediately obvious. Locke appears to take a contrary view. He finds the identity of all *ideas* self-evident, while to him the real identity of *things* is much more difficult to grasp.

The principle of identity and its companion principle of contradiction are, according to Locke, expressed in the propositions 'Whatsoever is, is' and 'It is impossible for the same thing to be and not to be'—"these two general propositions amounting to no more, in short, but this, that the same is the same, and the same is not different." But, Locke adds, "the mind, without the help of any proof or reflection on either of these general propositions, perceives so clearly, and knows so certainly, that 'the idea of white is the idea of white, and not the idea of blue,' and that 'the idea of white, when it is in the mind, is there and is not absent,' that the consideration of these axioms can add nothing to the evidence or certainty of its knowledge. . . . I appeal to everyone's own mind, whether this proposition 'A circle is a circle' be not as self-evident a proposition as that consisting of more general terms 'Whatsoever is, is.'"

But unlike the comparing of an idea with itself, real identity, according to Locke, requires us to consider a thing "as existing at any determined time and place" and to "compare it with itself existing at another time. . . . When, therefore, we demand whether anything be the same or no? it refers always to something that existed at such a time in such a place, which, it was certain, at that instant, was the same with itself and no other; from whence it follows that one thing cannot have two beginnings of existence, nor two things one beginning, it being impossible for two things of the same kind to be or exist in the same instant in the very same place, or one and the same thing, in different places. That, therefore, that had one beginning is the same thing; and that which had a different beginning in time and place from that, is not the same, but diverse." In short, across a lapse of time a thing remains identical, in Locke's view, or maintains its identity, if existence having made it "one particular thing under any denomination, the same existence continued preserves it the same individual under the same denomination."

This understanding of real identity Locke applies without difficulty to an atom of matter which, being at a given instant "what it is and nothing else . . . is the same and so must continue as long as its existence is continued; for so long it will be the same, and no other. In like manner, if two or more atoms be joined together into the same mass, every one of those atoms will be the same by the foregoing rule; and whilst they exist united together, the mass consisting of the same atoms, must be the same mass or the same body, let the parts be ever so differently jumbled. But," Locke continues, "if one of these atoms be taken away, or one new one added, it is no longer the same mass or the same body."

The problem of identity in living organisms Locke does not find so easy to solve. "In the state of living creatures," he says, "their identity depends not on a mass of the same particles, but on something else. For in them the variation of great parcels of matter alters not the identity; an oak growing from a plant to a great tree, and then lopped, is still the same oak; and a colt grown up to a horse, sometimes fat, sometimes lean, is all the while the same horse, though in both these cases there may be a manifest change of the parts, so that truly they are not, either of them, the same masses of matter."

The problem of the real identity or continuity of living things through time and change is, as we shall see presently, only a special case of the larger problem of whether anything at all remains identical for more than an instant in the universal flux of things. But supposing that problem solved in favor of en-

during substances, or things which somehow remain continuously the same while changing in this or that respect, the point of Locke's observation about living things still holds, for their identity does not seem to lie in the continuity or permanence of the matter—the particles—of which they are composed.

The familiar riddle about the pipe—whether it is in any respect the same after it has its broken bowl replaced by a new one, and then has a new stem added to the new bowl—may be propounded for living organisms. But in their case, Locke argues, a principle of identity can be found. A plant, he says, "continues to be the same plant as long as it partakes of the same life, though that life be communicated to new particles of matter vitally united to the living plant, in a like continued organization conformable to that sort of plant."

The principle, he thinks, applies to animals and men. "The case is not so much different in brutes but that anyone may hence see what makes an animal and continues it the same. Something we have like this in machines, and may serve to illustrate it. For example, what is a watch? It is plain it is nothing but a fit organization or construction of parts to a certain end, which, when a sufficient force is added to it, it is capable to attain. If we would suppose this machine one continued body, all whose organized parts were repaired, increased, or diminished by a constant addition or separation of insensible parts, with one common life, we should have something very much like the body of an animal. . . . This also shows wherein the identity of the same man consists; *viz.*, in nothing but a participation of the same continued life by constantly fleeing particles of matter, in succession, vitally united to the same organized body."

IN THE CASE OF MAN, however, Locke thinks we must face the additional problem of personal identity. What makes a man the same person from moment to moment, sleeping and waking, remembering or not remembering his past? In what does the continuity of the self consist, on the identity of which, Locke insists, "is founded all the right and justice of reward and punishment"? His answer seems to be that, as a living organism is identical throughout one and the same life, it is the continuity of the same consciousness which "makes a man be himself to himself" and establishes his personal identity.

"Whatever has the consciousness of present and past actions," Locke writes, "is the same person to whom they both belong. . . . That with which the consciousness of this present thinking thing *can* join itself, makes the same person, and is one self with it, and with nothing else. . . . If the same Socrates, waking and sleeping, do not partake of the same consciousness, Socrates, waking and sleeping, is not the same person. And to punish Socrates waking for what sleeping Socrates thought, and waking Socrates was never conscious of, would be no more right than to punish one twin for what his brother twin did, whereof he knew nothing, because their outsides were so like that they could not be distinguished."

William James also attributes the sense of personal identity to continuity of consciousness, but for him there still remains a problem of explaining that continuity. In the flow of consciousness from moment to moment, "continuity," he thinks, "makes us unite what dissimilarity might otherwise separate; similarity makes us unite what discontinuity might hold apart. . . . The sense of our personal identity, then, is exactly like any one of our other perceptions of sameness among phenomena. It is a conclusion grounded either on the resemblance in a fundamental respect, or on the continuity before the mind, of the phenomena compared."

In his opinion, "*resemblance among the parts of a continuum* of feelings (especially bodily feelings) experienced along with things widely different in all other regards, *thus constitutes the real and verifiable 'personal identity' which we feel.* There is no other identity than this in the 'stream' of subjective consciousness. . . . Its parts differ, but under all their differences they are knit in these two ways; and if either way of knitting disappears, the sense of unity departs. If a man wakes up some fine day unable to recall any of his past experiences, so that he has to learn his biography afresh . . . he *feels* and he *says* that he is a changed person. He disowns his former me, gives himself a new name, identifies his present life with nothing from out of

the older time. Such cases are not rare in mental pathology."

In the tradition of the great books, other solutions are offered to the problem of personal identity. Kant thinks, for example, that a "transcendental unity of apperception" is necessary to constitute "in all possible phenomena which may come together in our experience, a connection of all these representations according to laws. Unity of consciousness," he writes, "would be impossible if the mind, in the knowledge of the manifold, could not become conscious of the identity of function by which it unites the manifold synthetically in one knowledge. Therefore, the original and necessary consciousness of the identity of one's self is at the same time a consciousness of the equally necessary unity of the synthesis of all phenomena according to concepts."

Where Kant posits a transcendental ego to account for the experienced identity of the self, other philosophers who hold one or another theory of the soul as an imperishable substance or an unchanging principle seem to find no special subtleties in the problem of the identity of living organisms or persons. So far as such theories bear upon that problem, the consideration of them belongs to the chapter on SOUL. Here we are concerned with the notions of same and other as they apply to everything in the universe. Hence we must face all the problems of how two things can be the same, not merely the problem of self-sameness or the identity of a thing with itself.

THE WORD "IDENTICAL" is sometimes used as a synonym for "same," as when we say that two things are identical in a certain respect. But without the qualification expressed by "in a certain respect," it is seldom if ever said that two things are identical, for if they can be discriminated from one another in any respect at all, they are two, not one, and therefore not identical. This seems to be the sense of Leibnitz's principle of the identity of indiscernibles, concurred in by all who understand identity as the self-sameness of that which is one in number and existence. A plurality of things involves a numerical diversity—each of the many being an *other*. To this extent at least, the traditional discussion of same and other tends to merge with matters discussed in the chapter on ONE AND MANY.

For both Plato and Aristotle, the relation between these two pairs—*one and many* and *same and other*—seems to be much closer. In the comparison of two things, Aristotle appears to treat sameness as a kind of oneness, referring to the various ways in which two things can be "one and the same." Of sameness, he says that "it is a unity of the being, either of more than one thing or of one thing when it is treated as more than one"; and of the one he says that to it "belong . . . the same and the like and the equal, and to plurality belong the other and the unlike and the unequal."

The enumeration he gives of kinds of unity seems to be paralleled by his enumeration of kinds of similitude. As a thing may be one essentially or one by accident, so two things may be the same essentially or by accident. Aristotle's statement that "some things are one in number, others in species, others in genus, others by analogy," finds its counterpart in his statement that "'different' is applied to those which, though other, are the same in some respect, only not in number, but either in species or in genus or by analogy."

As indicated in the chapter on RELATION, a distinction is traditionally made between relationships which really exist among things apart from the mind, and logical relationships which occur in thought alone. This distinction seems to separate self-sameness or identity from all relations of similitude which obtain between two things. "The relation signified by the term *the same*," Aquinas says, "is a logical relation only if it is taken in regard to absolutely the same thing, because such a relation can exist only in a certain order observed by reason as regards the order of anything to itself. The case is otherwise, however, when things are called the same, not numerically, but generically or specifically."

Nevertheless, identity seems to underlie all other relations of sameness, for among things or ideas lacking identity no comparisons can be made. Those who deny identity on the ground that everything is in flux, nullify all further discussion of sameness. The theory of a universal flux, which Plato attributes to Heraclitus, permits nothing ever to remain stationary or the

same for an instant; and "the professed Heraclitean," Cratylus, went even further, according to Aristotle: he "criticized Heraclitus for saying that it is impossible to step twice into the same river; for *he* thought one could not do it even once."

In saying of men that "they are *nothing but a bundle or collection of different perceptions*, which succeed each other with an inconceivable rapidity, and are in a perpetual flux and movement," Hume does more than deny personal identity. He affirms an utter diversity—"as if there were no manner of relation" at all—between distinct perceptions, each of which is for him a distinct existence. The opposite point of view affirms things which have an enduring existence and which can, as Aristotle says of substances, undergo change in many respects "while remaining numerically one and the same."

TIME AND CHANGE raise the question of how any one thing can be the same from moment to moment. The question of how two things can be one and the same in any respect arises from the simple fact that, at the instant of comparison, they are two. If they were the same only for the comparing mind, then their sameness would be a logical and not a real relationship. For two things to be the same in reality seems to imply that, although two in number, they are one in some respect. To use Hegel's language, there is identity in diversity; or, in the language of Aquinas, a real community exists, according to which some one thing is common to two.

The problem of the sameness of two things can be stated in terms of the significance of what Hobbes, Berkeley, and Hume call common or general names. Denying that such words as "man" or "tree" or "stone" express abstract or general ideas, they seem to say that common names like these signify what is common to two or more individuals—whether things, perceptions, or ideas. Those who, like Aristotle, Aquinas, and Locke, take general or common names to signify abstract ideas, seem to say such ideas themselves signify that in reality two or more things have something in common. Still another view is that, apart from all individual things, real universals exist as the objects of the mind's conceptions.

If the latter alternative is chosen, then two individuals—two men, for example—may be thought alike only because both somehow resemble, as Plotinus suggests, the separate archetype Man. What is common to the two men lies in a third and separate reality, of which Plotinus says that it is "present in multiplicity," as if "in multi-impression . . . from one seal." But as Parmenides observes, in Plato's dialogue of that name, if a separate idea of Man is required to explain how two individuals are alike in being men, then still another idea is needed to account for the likeness between each individual man and the idea Man.

On the other hand, the view that the real sameness of two individuals, or the reality of the one kind to which both belong, resides in them—in their common possession of the same nature, quality, or other attribute—seems to lead to the difficulty already intimated, namely, the difficulty of understanding how distinct existences can have anything in common—how they can be two in number and yet also one in nature. If John and James are alike as men because they share a common humanity, then can it be said that each has *his own* human nature? If their natures and properties are as individual as their existences, how can two things be *really the same* in any respect? Must not kinds or universals—or whatever is supposed to be common to many and the source of their sameness—exist only in the general meaning of words, or in the mind's abstract concepts, or as separate archetypes? But, then, what truth is there in the familiar statement that two individual things are in some respect *really* alike or the same?

THESE QUESTIONS indicate that the traditional discussion of the same and the other tends to involve not merely the theory of the one and the many, but also, in certain issues at least, the problem of the individual and the universal. As the chapter on UNIVERSAL AND PARTICULAR shows, the several positions traditionally taken with regard to universals afford different answers to the problem of how any sameness between two or more things exists. The factor of similitude in knowledge (the nature of the likeness between image or idea and its object) and the function of similitude in love (the attrac-

tion, or repulsion, of like by like) also extend the consideration of sameness and diversity into the field of problems dealt with in other chapters. Here attention must be given to the meaning of sameness itself, as that is affected by the distinction between the same and the similar, by the enumeration of various kinds or degrees of likeness, and by the range of opposite meanings in the notions of diversity and difference.

Discussing discrimination and comparison, William James, for example, draws a sharp line between the simple and complex components of our experience. Simple impressions, he seems to think, are either absolutely alike or absolutely unlike. Here there can be no degrees of resemblance or similarity. "Two resembling things," he writes, "owe their resemblance to their absolute identity in respect to some attribute or attributes, combined with the absolute non-identity of the rest of their being. This, which may be true of compound things, breaks down when we come to simple impressions." The latter, apart from their numerical non-identity or otherness, are either the same in quality or diverse. But compound things may be more or less alike, varying in degree of similarity or difference according to the number of simple respects in which they are or are not the same.

"Similarity, in compounds," says James, "is partial identity," and he gives the following illustrations. "The moon is similar to a gas-jet, it is also similar to a foot-ball; but a gas-jet and a foot-ball are not similar to each other.... Moon and gas-jet are similar in respect of luminosity and nothing else; moon and foot-ball in respect of rotundity, and nothing else. Foot-ball and gas-jet are in no respect similar—that is, they possess no common point, no identical attribute."

Other writers seem to agree on this distinction between the same and the similar, the diverse and the different. The latter in both cases combine elements of sameness and diversity to give degrees of likeness. Aquinas, for example, says that "we seek for difference where we also find resemblance. For this reason, things which differ must in some way be composite, since they differ in some respect and in some respect they resemble each other. In this sense, although all things that differ are diverse, yet all things that are diverse do not differ.... For simple things are diverse through themselves, and do not differ from one another by differences as their components. For instance, a man and an ass differ by the difference of rational and irrational, but we cannot say that these again differ by some further difference."

The specific difference between man and ass with respect to rationality, accompanied by their generic sameness with respect to animality, makes them similar. If they were utterly diverse, *i.e.*, the same in no respect, they would not be said to differ; just as if they were identical in all respects except number, they would not be called similar. "The other and the same," writes Aristotle, "are thus opposed. But difference is not the same as otherness. For the other and that which it is other than need not be other in some definite respect ... but that which is different is different from some particular thing in some particular respect, so that there must be something identical by which they differ."

But within the area of this agreement on fundamental terms, there seems to be some disagreement about whether two things can be utterly diverse. Since they are two, they cannot be the same in *all* respects—certainly not in number—but can they be totally incomparable? James appears to say Yes in his remark about the football and the gas jet having "no common point, no identical attribute." Yet he also seems to hold that no two things are ever absolutely incomparable. They may not differ or be similar as the diverse species of the same genus, *e.g.*, man and ass; but regarding them as "'thinkables' or 'existents,'" he writes, "even the smoke of a cigarette and the worth of a dollar bill are comparable—still more so as 'perishables' or as 'enjoyables.'" The gas jet and the football would appear to be comparable also as 'existents' or 'usables'—or even, perhaps, as 'bodies.'

The question thus arises whether—all things being somehow comparable—they are all the same in genus, as, for example, all three-dimensional material things may be said to belong to the genus 'body' no matter how much else they differ as species or subordinate kinds within this genus. Kant answers this question by affirming a principle of ultimate homogeneous-

ness. According to this principle, "there are no different original and first *genera*, as it were isolated and separated from each other, but all diverse *genera* are divisions only of one supreme and general *genus*." Kant states a correlative principle of variety or specification, according to which "every *genus* requires *species*, and these again *sub-species*, and as none even of these *sub-species* is without a sphere . . . reason in its utmost extension requires that no species or sub-species should in itself be considered as the lowest."

Aristotle's theory of species and genera appears to be exactly opposite to Kant's on both points. For Aristotle, there is no single all-embracing genus, but rather a number of diverse yet supreme genera, such as substance, quantity, quality, etc. There is a finite, not an infinite variety of species. The lowest species is further divisible only into kinds which differ, as individuals of the same species do, in accidental, not essential respects, *e.g.*, white man and red man differ in the same way as John and James do within the species 'man,' not as the species 'man' and 'ass' differ within the genus 'animal.' Furthermore, where Kant insists upon a third principle of continuity, according to which between any two species "there always remain possible intermediate species, differing from the first and the second by smaller degrees than those by which these differ from each other," Aristotle seems to find no intermediates possible between the contrary species of a single genus. The order of species is for him a discontinuous series like the order of the whole numbers, between proximate members of which no fractions are admitted.

Does Aristotle's position with respect to the *heterogeneity* of an animal and the color blue—the one in the genus 'substance,' the other in the genus 'quality'—mean that such things, *absolutely diverse in genus*, are absolutely incomparable? His answer seems to be twofold. In one place he says that things which are diverse in genus may still be the same by analogy: "things that are one by analogy are not all one in genus." In another, he gives us an example of analogical resemblance (between the soul and the hand): "As the hand is a tool of tools, so the mind is the form of forms and sense the form of sensible things."

If the example seems inappropriate on the ground that the soul and the hand are of the same genus, *i.e.*, both substances or parts of the same substance *man*, it may be necessary to introduce the distinction between natural and logical genera. According to this distinction, a material and a spiritual substance can both be called "substances" as a matter of logical classification, but they are not in the same genus by their own natures. In this sense, Aquinas assigns a geometrical solid and a physical body to the same logical genus 'body' but regards them as of heterogeneous natures; and Descartes, calling an extended and a thinking substance both "substances," insists upon the utter diversity of their natures.

An easier example, however, may not be too difficult to find. A man and a number belong to different genera, according to Aristotle—one a substance, the other a quantity. But the man can be related to his sons as the number *one* is related to any other whole number. The relation which is the same in both cases is that of priority, according to which the man and unity are the principles or generators respectively of his sons and other numbers. Here, then, we see two heterogeneous things—a substance and a quantity—which are, nevertheless, the same by analogy, *each standing to another in the same relationship*; both, therefore, can be called "principle" or "generator" analogically.

Aristotle's other indication that a special mode of similitude obtains between heterogeneous things, occurs in all those passages in which he says that terms like 'being' can be predicated of things in every category or genus. Just as James seems to think that any two things may be comparable as 'thinkables' or 'existents,' so Aristotle seems to hold that all things, though otherwise heterogeneous, are at least alike in *being*, *i.e.*, in having some mode of existence. Yet the term 'being' cannot be equated with Kant's single supreme genus. Though Aristotle agrees with Kant that every genus must be capable of division into species, he does not think that 'being' can be so divided by specific differences.

TWO POINTS MUST be observed concerning Aristotle's theory of the predication of a term like 'being' of everything in the universe.

First, he repeatedly asserts that 'being' is not said *in the same sense* of substances, quantities, qualities, and so forth. Hence when such heterogeneous things are all called 'beings,' the implication cannot be that, as beings, they are all the *same*. The point seems to be that they are somehow *at once both the same and diverse*. As, to use an example from Aristotle's *Physics*, a tone and a taste can both be sharp, though the sharpness of a tone is as diverse from the sharpness of a taste as tone and taste are qualitatively diverse from each other; so a man and a number can both have being, though their modes of being are as diverse as substance is from quantity. If the word "similarity" were to be used to signify not the combination of separable elements of sameness and diversity, but rather the inseparable fusion of the two to constitute a *diversified sameness*, then heterogeneous things should be called *similar*, not the same, in being.

Second, Aristotle does not identify such similarity of heterogeneous things with the sameness by analogy which heterogeneous things can have. 'Being' is not a relative term and therefore it cannot be predicated analogically, as 'principle' or 'generator' can be. Terms which are predicated analogically, as 'principle' can be predicated of a father and the number one, may signify *similarity* (in the sense of *diversified sameness*) rather than simple sameness in a single respect. The relation of generation which creates the analogical similitude between a father and the number one seems to be the same relation in the two cases (between a father and his sons, and between one and other numbers); it is not, however, simply the same, for that relation is diversified according as the things related—substances in the one case, quantities in the other—are absolutely diverse in genus. But in Aristotle's analysis it does not follow that because some analogical predicates signify *diversified* rather than *simple* sameness, all do; or that because some instances of *diversified sameness* happen to be analogical (*i.e.*, sameness in a relation), all are.

The interest in Aristotle's separation of these two points lies in the fact that Aquinas combines them in a theory which states that, when being and other terms (which are not genera and yet are above all genera) are predicated of heterogeneous things, they must be predicated analogically of them. The existence which is found in all things, he says, "is common to all only according to some sort of analogy," not "according to the same specific or generic formality." This is most easily seen in the "likeness of creatures to God," which is "solely according to analogy, inasmuch as God is essential being, whereas other things are beings by participation."

Aristotle's statement that "things which are one by analogy are not all one in genus," seems to be converted by Aquinas into the proposition that *things which are not one in genus, and yet are alike in some way, are all one by analogy*. For Aristotle, sameness by analogy may be either simple sameness or diversified sameness (*i.e.*, similarity); and diversified sameness may or may not be analogical, that is, it may be the kind of similarity which two heterogeneous things have in respect to being or in respect to some relation in which they stand to other things. For Aquinas, on the other hand, whenever heterogeneous things are the same in any single respect, their diversified sameness is *always analogical*; and whenever the similitude between two things is truly analogical, then it is *always similarity*, that is, a diversified, not a simple sameness. Likeness in being, according to Aquinas, affords us the prime example of a similitude which is at once an analogical and a diversified sameness.

Aquinas applies his theory of the analogy of being to the great traditional issue, which puts all theories of similitude to the test—the question of the resemblance between God and creatures, or between infinite and finite being. Against the answer first given by Maimonides, and later expressed by Spinoza when, of all comparisons between God and man, he says that "His essence . . . could resemble ours in nothing except in name"; and against those, on the other hand, who think that whatever names apply to both God and creatures (such as "being" or "good" or "one"), apply simply in the *same* sense, Aquinas seems to take the middle ground. The names which are properly applicable to both God and creatures, according to him, are said of them, not equivocally and not univocally, but analogically.

This threefold distinction of univocal, equiv-

ocal, and analogical names, especially as it concerns the names of God, is discussed in the chapter on SIGN AND SYMBOL. The theological problem of the similitude between God and creatures confronts us with three basic alternatives in man's speculation about the sameness and diversity which exists among all things. We can say, (1) that infinite and finite being are utterly diverse, and have no similarity *even* in being. We can say, (2) that they are homogeneous—that, with respect to being, for example, they have the kind of sameness which things have when they belong to the same genus. Or we can say, (3) that they are only similar in the sense of a diversified sameness, whether such similarity is or is not always analogical in character.

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REFERENCES

To find the passages cited, use the numbers in heavy type, which are the volume and page numbers of the passages referred to. For example, in **4** HOMER: *Iliad*, BK II [265–283] **12d**, the number **4** is the number of the volume in the set; the number **12d** indicates that the passage is in section d of page 12.

PAGE SECTIONS: When the text is printed in one column, the letters **a** and **b** refer to the upper and lower halves of the page. For example, in **53** JAMES: *Psychology*, **116a-119b**, the passage begins in the upper half of page 116 and ends in the lower half of page 119. When the text is printed in two columns, the letters **a** and **b** refer to the upper and lower halves of the left-hand side of the page, the letters **c** and **d** to the upper and lower halves of the right-hand side of the page. For example, in **7** PLATO: *Symposium*, **163b-164c**, the passage begins in the lower half of the left-hand side of page 163 and ends in the upper half of the right-hand side of page 164.

AUTHOR'S DIVISIONS: One or more of the main divisions of a work (such as PART, BK, CH, SECT) are sometimes included in the reference; line numbers, in brackets, are given in certain cases; *e.g.*, *Iliad*, BK II [265–283] **12d**.

BIBLE REFERENCES: The references are to book, chapter, and verse. When the King James and Douay versions differ in title of books or in the numbering of chapters or verses, the King James version is cited first and the Douay, indicated by a *(D)*, follows; *e.g.*, OLD TESTAMENT: *Nehemiah*, 7:45—*(D) II Esdras*, 7:46.

SYMBOLS: The abbreviation "esp" calls the reader's attention to one or more especially relevant parts of a whole reference; "passim" signifies that the topic is discussed intermittently rather than continuously in the work or passage cited.

For additional information concerning the style of the references, see the Explanation of Reference Style; for general guidance in the use of *The Great Ideas*, consult the Preface.

1. The principle of identity: the relation of a thing to itself

7 PLATO: *Theaetetus*, **518d-519b**; **521b-522b** / *Sophist*, **571d-574c** esp **572d-573b**
8 ARISTOTLE: *Topics*, BK I, CH 7 **146a-c**; BK VII, CH 1 **206b,d-208a** / *Metaphysics*, BK IV, CH 5 **528c-530c**; BK X, CH 3 **581a-d**
17 PLOTINUS: *Sixth Ennead*, TR IX, CH 1–2 **353d-355a**
19 AQUINAS: *Summa Theologica*, PART I, Q 13, A 7, ANS **68d-70d**; Q 28, A 1, REP 2 **157c-158d**; A 2, REP 1 **158d-160a**; A 3, REP 1 **160a-c**; A 4, REP 1 **160c-161d**; Q 40, A 1, REP 1–2 **213b-214b**
31 DESCARTES: *Objections and Replies*, **159d-160a**
35 LOCKE: *Human Understanding*, BK I, CH III, SECT 3–5 **113a-c**; BK II, CH XXVII, SECT 1 **218d-219b**; BK IV, CH I, SECT 4 **307b-c**; CH III, SECT 8 **315b-c**; CH VII, SECT 4 **337b-338b**; CH VIII, SECT 2–3 **345a-346b**
53 JAMES: *Psychology*, **299a-301a** esp **299b** [fn 1]

1*a*. Oneness in number or being: numerical diversity or otherness

7 PLATO: *Republic*, BK VII, **392a-394a** / *Theaetetus*, **537b-c** / *Sophist*, **561d-574c** esp **564d-574c**
8 ARISTOTLE: *Topics*, BK VII, CH 1 **206b,d-208a** / *Generation and Corruption*, BK II, CH 11 [$338^{b}12$–19] **440d-441a,c** / *Metaphysics*, BK III, CH 4 [$1001^{a}5$–$^{b}25$] **519d-520c**; BK V, CH 4 [$1014^{b}22$–26] **535a**; CH 9 [$1017^{b}26$–$1018^{a}14$] **538c-d**; BK VIII, CH 6 **569d-570d**; BK X, CH 3 [$1054^{a}33$–34] **581a**; BK XII, CH 8 [$1074^{a}31$–39] **604d**; BK XIV, CH 1 [$1088^{a}8$–14] **620b** / *Soul*, BK II, CH 1 [$412^{b}6$–9] **642c**
11 EUCLID: *Elements*, BK VII, DEFINITIONS, 1 **127a**
11 NICOMACHUS: *Arithmetic*, BK II, **838c**; **839d-840a**
17 PLOTINUS: *Fourth Ennead*, TR IX, CH 2 **205c-206a**; CH 5 **206d-207a,c** / *Sixth Ennead*, TR II, CH 9–11 **273c-275d**; TR VI, CH 5 **312c-313b**; CH 11–16 **315d-319d**; TR IX, CH 1–2 **353d-355a**
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20 AQUINAS: *Summa Theologica*, PART III, Q 17 **806d-809d**; Q 79 **951b-956b** passim
31 DESCARTES: *Objections and Replies*, **152d-156a**; **224d-225d**
33 PASCAL: *Pensées*, 512 **262a**

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1b. The identity of the changing yet enduring individual: personal identity, the continuity of self; the denial of identity in the realm of change

7 PLATO: *Cratylus*, 94c-d; 99b; 113c-114a,c / *Theaetetus*, 517d-534b

8 ARISTOTLE: *Categories*, CH 5 6a-9a / *Physics*, BK I 259a-268d; BK IV, CH 11 [219^{b}12-32] 299b-d / *Metaphysics*, BK IV, CH 5 [1010^{a}6-38] 529c-530a; BK XI, CH 6 [1063^{a}10-28] 591b-c

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42 KANT: *Pure Reason*, 49c-51d esp 51c-d; 74b-76c; 120c-129c esp 121a-124d, 126a-128b; 200c-204c

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2. The sameness of things numerically diverse

2a. The being of sameness or similitude: the reality of kinds or universals

7 PLATO: *Cratylus*, 87d-89a; 113c-114a,c / *Phaedo*, 228d-230c; 231c-232a; 240b-246c esp 242c-244b / *Republic*, BK X, 427c-429c / *Timaeus*, 457c-d / *Parmenides* 486a-511d / *Theaetetus*, 535a-536b / *Sophist*, 570a-574c / *Philebus*, 610d-613a / *Seventh Letter*, 809c-810b

8 ARISTOTLE: *Posterior Analytics*, BK I, CH 11 [77^{a}5-9] 105d-106a; CH 24 [85^{a}31-^{b}3] 116c; [85^{b}15-22] 117a / *Sophistical Refutations*, CH 22 [178^{b}37-39] 246c / *Metaphysics*, BK I, CH 6 505b-506b; CH 9 508c-511c; BK III, CH 1 [995^{b}13-18] 514a; [995^{b}31-38] 514b; [996^{a}4-9] 514c; CH 2 [997^{a}34-^{b}12] 516a-b; CH 3 [998^{b}14] -CH 4 [999^{b}24] 517b-518c; CH 4 [1001^{a}4-^{b}25] 519d-520c; CH 6 [1002^{b}11-31] 521b-d; BK VII, CH 8 [1033^{b}19-1034^{a}8] 556d-557b; CH 10 [1035^{b}28-32] 559b; CH 11 [1037^{a}5-9] 560c; CH 13-14 562a-563c; CH 15 [1040^{a}8-^{b}4] 564a-c; CH 16 [1040^{b}16-1041^{a}4] 564d-565a; BK IX, CH 8 [1050^{b}35-1051^{a}2] 576d-577a; BK X, CH 10 586c-d; BK XI, CH 1 [1059^{a}39-^{b}8] 587b-c; BK XII, CH 3 [1070^{a}4-30] 599b-d; BK XIII, CH 4-5 610a-611d; CH 10 618c-619a,c

11 NICOMACHUS: *Arithmetic*, BK I, 811b-d

19 AQUINAS: *Summa Theologica*, PART I, Q 3, A 3, ANS 16a-d; Q 15, A 3, REP 4 93b-94a; Q 16, A 7, REP 2 99a-d; Q 29, A 2, REP 4 163b-164b; Q 30, A 4 170c-171b; Q 84, A 1, ANS and REP 1 440d-442a; A 2, ANS 442b-443c; A 5 446c-447c; Q 85, A 1, ANS and REP 1-2 451c-453c; A 2, REP 2 453d-455b; A 3, REP 1,4 455b-457a; PART I-II, Q 29, A 6, ANS and REP 1 748b-749a

20 AQUINAS: *Summa Theologica*, PART III, Q 2, A 5, REP 2 715a-716b

23 HOBBES: *Leviathan*, PART I, 55b-56a; 59d

31 SPINOZA: *Ethics*, PART II, PROP 40, SCHOL 1 387b-388a

35 LOCKE: *Human Understanding*, BK III, CH III, SECT 6-20 255c-260a; CH VI, SECT 26-51 274d-283a esp SECT 36-37 279a-b; BK IV, CH III, SECT 31 323c-d; CH VI, SECT 4 331d-332b

35 BERKELEY: *Human Knowledge*, INTRO, SECT 6-19 405d-410c passim

35 HUME: *Human Understanding*, SECT XII, DIV 125, 507b [fn 1]

53 JAMES: *Psychology*, 299b-300a; 305a-314a; 873a-b

2b. The relation between sameness and unity: sameness as a participation in the one

7 PLATO: *Parmenides*, 493b-d; 498a-499a

8 ARISTOTLE: *Metaphysics*, BK V, CH 6 536a-537c; CH 9 538c-539a; BK X, CH 3 581a-d

11 NICOMACHUS: *Arithmetic*, BK II, 838c; 839c-840a

2c. The distinction between sameness and similarity and their opposites, diversity and difference: the composition of sameness and diversity; degrees of likeness and difference

7 PLATO: *Protagoras*, 49a-b

8 ARISTOTLE: *Topics*, BK I, CH 16-17 152a-b / *Physics*, BK VII, CH 4 330d-333a / *Metaphysics*, BK V, CH 9 538c-539a; CH 28 [1024^{b}10-16] 546c; BK X, CH 3 [1054^{b}3-1055^{a}3] 581b-d; CH 8-9 585b-586c

19 AQUINAS: *Summa Theologica*, PART I, Q 3, A 8, REP 3 19d-20c; Q 4, A 3 22b-23b; Q 11, A 1, REP 2 46d-47d; Q 13 62b-75b passim, esp A 5 66b-67d; Q 57, A 2, REP 2 295d-297a; Q 93 492a-501c passim; PART I-II, Q 27, A 3 738c-739c

20 AQUINAS: *Summa Theologica*, PART III SUPPL, Q 69, A 1, REP 2 885c-886c; Q 92, A 1, ANS and REP 7 1025c-1032b

30 BACON: *Novum Organum*, BK II, APH 22 153b-c; APH 27 157b-158d

35 LOCKE: *Human Understanding*, BK II, CH XXVIII, SECT 1 228c

53 JAMES: *Psychology*, 319b-322a; 344b-348a esp 347a-348a; 378b

(2. *The sameness of things numerically diverse.*)

2d. The distinction of things in terms of their diversities and differences: real and logical distinctions

7 PLATO: *Phaedrus*, 134b-c / *Phaedo*, 227d-228a / *Theaetetus*, 548c-549d / *Statesman*, 595a

8 ARISTOTLE: *Topics*, BK I, CH 7 146a-c; CH 16 152a-b; BK VII, CH I 206b,d-208a / *Metaphysics*, BK X, CH 3 581a-d

9 ARISTOTLE: *Parts of Animals*, BK I, CH 2-4 165d-168c

19 AQUINAS: *Summa Theologica*, PART I, Q 3, A 8, REP 3 19d-20c; Q 11, A 1 46d-47d; Q 13, A 7, ANS 68d-70d; Q 14, A 6, ANS 80a-81c; Q 28, A 3 160a-c; A 4, REP 1 160c-161d; Q 30, A 1, REP 2 167a-168a; Q 31 171b-175c; Q 36, A 2, ANS 192a-194c; Q 40, A 2, ANS and REP 3 214b-215b; Q 47, AA 1-2 256a-258c; Q 50, A 2, ANS 270a-272a; A 4, REP 1-2 273b-274b; Q 75, A 3, REP 1 380c-381b; Q 76, A 3, REP 4 391a-393a; Q 77, A 3, ANS 401d-403a; Q 85, A 7, REP 3 459c-460b

20 AQUINAS: *Summa Theologica*, PART III, Q 2, A 3, REP 1 713a-714c; Q 17, A 1, REP 7 807a-808d

31 DESCARTES: *Meditations*, III, 87c-d / *Objections and Replies*, 114d-115a,c; 119d-120c; 136a-b; 152d-156a; 224d-225d; 231a-232d

31 SPINOZA: *Ethics*, PART I, AXIOM 5 355d; PART II, PROP 1-2 373d-374a; PROP 7, COROL and SCHOL 375a-c

35 LOCKE: *Human Understanding*, BK III, CH III, SECT 13-14 257c-258b; CH VI, SECT 7-25 270b-274d; SECT 36-42 279a-280c; BK IV, CH I, SECT 4 307b-c; CH III, SECT 8 315b-c

42 KANT: *Pure Reason*, 99a-108a,c esp 100a-b, 102b-c, 105a-106b; 193a-200c esp 197b-198a

49 DARWIN: *Origin of Species*, 25d-29a esp 28b-29a; 30d-31b; 241d-242a

53 JAMES: *Psychology*, 315a-336a esp 319a, 320a-322b, 324a-b, 327a-334a; 550b-551b [fn 2]; 867a-874a; 878a; 880b

2e. The limits of otherness: the impossibility of utter diversity

8 ARISTOTLE: *Categories*, CH 4 [1^b25-2^a4] 5d-6a / *Metaphysics*, BK III, CH 3 517a-518a; BK X, CH 3 [1054^b14-23] 581b-c

19 AQUINAS: *Summa Theologica*, PART I, Q 3, A 5 17c-18b; A 8, REP 3 19d-20c; Q 11, A 1, REP 2 46d-47d; Q 90, A 1, REP 3 480d-481d

25 MONTAIGNE: *Essays*, 516b-c; 518d-519a

31 SPINOZA: *Ethics*, PART I, AXIOM 5 355d; PROP 2-3 355d-356a; PROP 17, SCHOL 362c-363c; PART III, PROP 5 398d

42 KANT: *Pure Reason*, 107b-c; 197b-198a

53 JAMES: *Psychology*, 320a-322a esp 321a-b; 344b-345b

3. The modes of sameness and otherness or diversity

3a. Essential sameness or difference and accidental sameness or difference

7 PLATO: *Republic*, BK V, 358a-360a

8 ARISTOTLE: *Topics*, BK I, CH 5 [101^b37-102^a17] 144d-145a; CH 6 [102^b27-35] 145d; BK VI, CH 1 [139^a24-$^b2$] 192a-b; CH 4 194c-196a; CH 5 [142^b30-143^a8] 196b-c; CH 6 [144^a23-27] 197d; CH 6 [144^b3]-CH 7 [146^a35] 198a-200b; BK VII, CH 2 208a / *Metaphysics*, BK V, CH 9 538c-539a; BK VII, CH 12 [1038^a8-30] 561d-562a; BK X, CH 3 [1054^a33-$^b2$] 581a-b

9 ARISTOTLE: *History of Animals*, BK I, CH 1 [486^a15-487^a1] 7b-d / *Parts of Animals*, BK I, CH 2-4 165d-168c / *Generation of Animals*, BK V, CH 1 [778^a15-$^b20$] 320a-321a

19 AQUINAS: *Summa Theologica*, PART I, Q 3, A 3 16a-d; Q 4, A 3, ANS 22b-23b; Q 29, A 1, REP 3 162a-163b; Q 57, A 2, REP 2 295d-297a; Q 75, A 3, REP 1 380c-381b; Q 77, A 1, REP 7 399c-401b; Q 93, A 2, ANS 493a-d; PART I-II, Q 17, A 4, ANS 688d-689c; Q 35, A 8 779c-780c

20 AQUINAS: *Summa Theologica*, PART III, Q 2, A 3, REP 1 713a-714c; Q 17, A 1, REP 7 807a-808d; Q 79, A 1, REP 2,4 951b-953b; A 2, REP 1-2 953b-955c

31 DESCARTES: *Objections and Replies*, 136a-b; 152d-156a; 224d-225d; 231a-232d

31 SPINOZA: *Ethics*, PART I, PROP 4-5 356a-b

35 LOCKE: *Human Understanding*, BK III, CH III, SECT 13-14 257c-258b; CH VI 268b-283a passim, esp SECT 22 273d-274a, SECT 49 282c; CH X, SECT 20-21 296d-297b; BK IV, CH VI, SECT 4 331d-332b

42 KANT: *Pure Reason*, 193a-200c

49 DARWIN: *Origin of Species*, 212d-213c

3a(1) Specific and generic sameness: natural and logical genera

8 ARISTOTLE: *Topics*, BK I, CH 7 [103^a6-23] 146a-b / *Physics*, BK V, CH 4 [227^b3-21] 308b-c; BK VII, CH 1 [242^a32-$^b4$] 326c-d; CH 4 330d-333a / *Generation and Corruption*, BK II, CH 11 [338^b12-19] 440d-441a,c / *Metaphysics*, BK III, CH 3 517a-518a; BK V, CH 6 [1016^a24-$^b1$] 536d-537a; [1016^b32-1017^a3] 537c; CH 9 [1018^a4-11] 538d; CH 10 [1018^a38-$^b8$] 539b-c; CH 28 [1024^b10-16] 546c; BK X, CH 1 [1052^a28-37] 578d; CH 3 [1054^a33-$^b2$] 581a-b; CH 8-9 585b-586c

9 ARISTOTLE: *History of Animals*, BK I, CH 1 [486^a15-487^a1] 7b-d / *Parts of Animals*, BK I, CH 1 [639^a12-$^b9$] 161b-d; CH 2-4 165d-168c

12 LUCRETIUS: *Nature of Things*, BK II [1077-1089] 28d

19 AQUINAS: *Summa Theologica*, PART I, Q 3, A 5 17c-18b; Q 4, A 3 22b-23b; Q 11, A 1, REP 2 46d-47d; Q 15, A 3, REP 4 93b-94a; Q 28, A 1, REP 2 157c-158d; Q 29, A 2, REP 4 163b-164b;

Q 30, A 4, ANS and REP 3 170c-171b; Q 50, A 2, REP 1 270a-272a; Q 57, A 2, REP 2 295d-297a; Q 66, A 2, REP 2 345d-347b; Q 75, A 3, REP 1 380c-381b; Q 76, A 3, REP 4 391a-393a; Q 77, A 4, REP 1 403a-d; Q 79, A 5, REP 3 418c-419b; Q 85, A 3, ANS and REP 4 455b-457a; A 5, REP 3 457d-458d; Q 88, A 2, REP 4 471c-472c; Q 93, A 1, REP 3 492a-d; A 2, ANS 493a-d

20 AQUINAS: *Summa Theologica*, PART I-II, Q 61, A 1, REP 1 54d-55c; PART III SUPPL, Q 92, A 1, ANS 1025c-1032b

30 BACON: *Novum Organum*, BK II, APH 25 155a-d; APH 28 158d-159a

35 LOCKE: *Human Understanding*, BK III, CH III, SECT 6-20 255c-260a; CH IV, SECT 16 263b-c

38 ROUSSEAU: *Inequality*, 341b-342b

42 KANT: *Pure Reason*, 197b-198a

49 DARWIN: *Origin of Species*, 28b-29a; 207a-208a esp 207d / *Descent of Man*, 332b-c; 347a-b

53 JAMES: *Psychology*, 344b-345b; 870a-871a

3a(2) The otherness of species in a genus: the diversity of contraries

8 ARISTOTLE: *Physics*, BK I, CH 5 [188a18-25] 263c; CH 6 [189a11-14] 264c; [189b23-27] 265b; BK IV, CH 14 [224a2-16] 303d-304a,c / *Metaphysics*, BK V, CH 10 [1018a25-b7] 539a-b; BK X, CH 4 581d-582d; CH 8-9 585b-586c / *Soul*, BK I, CH 1 [402b1-9] 631c-d

9 ARISTOTLE: *History of Animals*, BK I, CH 1 [486a15-487a1] 7b-d / *Parts of Animals*, BK I, CH 2-4 165d-168c / *Politics*, BK IV, CH 4 [1290b25-36] 489d-490a

17 PLOTINUS: *Sixth Ennead*, TR III, CH 18-20 291a-293a

19 AQUINAS: *Summa Theologica*, PART I, Q 4, A 3, ANS 22b-23b; Q 11, A 1, REP 2 46d-47d; Q 50, A 4 273b-274b; Q 75, A 3, REP 1 380c-381b; PART I II, Q 23, A 1, ANS 723c-724c

20 AQUINAS: *Summa Theologica*, PART I-II, Q 54, A 1, REP 1 22d-23d; Q 72, A 7, ANS 117a-118a

35 LOCKE: *Human Understanding*, BK III, CH VI, SECT 39 279c-280a

42 KANT: *Pure Reason*, 197b-198a

49 DARWIN: *Origin of Species*, 30d-31b; 241d-242a

53 JAMES: *Psychology*, 344b-345b; 387b

3a(3) Generic otherness or heterogeneity

8 ARISTOTLE: *Categories*, CH 4 [1b25-2a4] 5d-6a / *Topics*, BK I, CH 15 149d-152a passim; CH 16 [107b37]-CH 17 [108a14] 152a-b / *Physics*, BK VII, CH 4 330d-333a esp [249a3-24] 331d-332b / *Metaphysics*, BK III, CH 3 517a-518a; BK V, CH 28 [1024b10-16] 546c

19 AQUINAS: *Summa Theologica*, PART I, Q 3, A 5 17c-18b; Q 4, A 3 22b-23b; Q 88, A 2, REP 4 471c-472c

42 KANT: *Pure Reason*, 197b-198a

3b. Relational sameness: sameness by analogy or proportional similitude

7 PLATO: *Gorgias*, 267c-268a / *Timaeus*, 448b-d

8 ARISTOTLE: *Posterior Analytics*, BK I, CH 10 [76a36-b2] 105a; BK II, CH 14 [98a20-23] 134a; CH 17 [99a16] 135b / *Topics*, BK I, CH 17 [108a6-14] 152b; BK IV, CH 4 [124a15-20] 172d; BK V, CH 7 [136b33-137a20] 189a-c; CH 8 [138b23-27] 191b-c / *Physics*, BK I, CH 7 [191a 8-12] 266d; BK VII, CH 4 [249a22-24] 332b / *Generation and Corruption*, BK II, CH 6 [333a 27-34] 434a / *Meteorology*, BK IV, CH 9 [387b1-6] 491c / *Metaphysics*, BK V, CH 6 [1016b32-1017a3] 537c; CH 9 [1018a12-13] 538d; BK IX, CH 1 [1046a4-8] 570d-571a; CH 6 [1048a31-b8] 573d-574a; BK XII, CH 4-5 599d-601a passim / *Soul*, BK III, CH 7 [431a20-b1] 663d-664a; CH 8 [431b20-432a2] 664b-c

9 ARISTOTLE: *History of Animals*, BK I, CH 1 [486a15-487a1] 7b-d; BK VIII, CH 1 [588a18-b5] 114b,d / *Parts of Animals*, BK I, CH 4 167d-168c; CH 5 [645b1-646a5] 169b-d / *Generation of Animals*, BK I, CH 1 [715b17-26] 255d; BK III, CH 10 [760a9-17] 301b / *Ethics*, BK I, CH 6 [1096b27-30] 342a; BK V, CH 3 378c-379b; BK VIII, CH 7 [1158b29-33] 410d / *Politics*, BK V, CH 1 [1301b29-36] 503a / *Rhetoric*, BK I, CH 2 [1357b25-1358a2] 597c-d; BK II, CH 20 [1393a 22-1394a8] 640d-641d; BK III, CH 4 657b-d; CH 10-11 662c-666b / *Poetics*, CH 21 [1457b6-33] 693a-c

11 EUCLID: *Elements*, BK V 81a-98b esp DEFINITIONS, 5-6 81a; BK VII, DEFINITIONS, 20 127b

11 NICOMACHUS: *Arithmetic*, BK II, 841c-d

16 KEPLER: *Harmonies of the World*, 1078b-1080a passim

19 AQUINAS: *Summa Theologica*, PART I, Q 4, A 3 22b-23b; Q 13, AA 5-6 66b-68c; A 10 72c-73c; Q 14, A 3, REP 2 77d-78b; Q 16, A 6, ANS 98b-d; Q 44, A 3, ANS 240b-241a; Q 66, A 2, ANS 345d-347b; Q 93, A 1, REP 3 492a-d; PART I-II, Q 20, A 3, REP 3 713c-714c; Q 27, A 3, REP 2 738c-739c

20 AQUINAS: *Summa Theologica*, PART I-II, Q 61, A 1, REP 1 54d-55c; PART III, Q 60, A 1, ANS and REP 3 847b-848a; PART III SUPPL, Q 69, A 1, REP 2 885c-886c; Q 92, A 1, ANS and REP 6-7 1025c-1032b

24 RABELAIS: *Gargantua and Pantagruel*, BK I, 12d-13b

28 HARVEY: *On Animal Generation*, 336b-d; 449a-b; 469d-470d

30 BACON: *Novum Organum*, BK II, APH 27 157b-158d

31 DESCARTES: *Objections and Replies*, 158b-161d

35 LOCKE: *Human Understanding*, BK II, CH XXVIII, SECT 1 228c

35 HUME: *Human Understanding*, SECT IX, DIV 82 487b-c

42 KANT: *Pure Reason*, 72c-74a / *Judgement*, 601d-603a

(3. *The modes of sameness and otherness or diversity.* 3b. *Relational sameness: sameness by analogy or proportional similitude.*)

49 DARWIN: *Origin of Species*, 212d-213c
53 JAMES: *Psychology*, 549b-550a; 688a-689b passim

3c. Sameness in quality, or likeness: variations in degree of the same quality

7 PLATO: *Parmenides*, 493d-494a
8 ARISTOTLE: *Categories*, CH 5 [3^b32-4^a9] 8a-b; CH 6 [6^a27-35] 10d-11a; CH 8 [10^b26-11^a19] 15d-16b / *Topics*, BK III, CH 5 166b-c / *Physics*, BK IV, CH 9 [217^a34-$^b11$] 297b / *Generation and Corruption*, BK II, CH 6 [333^a27-34] 434a / *Metaphysics*, BK V, CH 9 [1018^a15-19] 538d-539a; CH 15 [1021^a8-14] 542b-c; BK X, CH 3 [1054^b8-13] 581b
9 ARISTOTLE: *History of Animals*, BK I, CH 1 [486^a15-487^a1] 7b-d; BK VIII, CH 1 [588^a18-31] 114b,d / *Parts of Animals*, BK II, CH 2 [648^b12-649^b9] 173a-174a
17 PLOTINUS: *First Ennead*, TR II, CH 2, 7b / *Fourth Ennead*, TR IX, CH 4, 206c-d / *Sixth Ennead*, TR III, CH 15 289a-c
18 AUGUSTINE: *City of God*, BK XI, CH 10, 328b
19 AQUINAS: *Summa Theologica*, PART I, Q 4, A 3, ANS 22b-23b; Q 42, A 1, REP 1 224b-225d; PART I-II, Q 27, A 3 738c-739c; Q 28, A 1, REP 2 740b-741a
20 AQUINAS: *Summa Theologica*, PART I-II, Q 52 15d-19c; Q 72, A 7, ANS 117a-118a; PART III SUPPL, Q 69, A 1, REP 2 885c-886c; Q 92, A 1, ANS and REP 7 1025c-1032b
30 BACON: *Novum Organum*, BK II, APH 13 145b-148d
31 SPINOZA: *Ethics*, PART III, PROP 57, SCHOL 415b
35 LOCKE: *Human Understanding*, BK II, CH XXVIII, SECT 1 228c; BK IV, CH II, SECT 11-13 311c-312b
42 KANT: *Pure Reason*, 73c-74a / *Judgement*, 602b-603a esp 602b,d [fn 1]
53 JAMES: *Psychology*, 319b-322a; 329a-b; 346a-348a; 378b

3d. Sameness in quantity, or equality: kinds of equality

7 PLATO: *Phaedo*, 228a-229c / *Parmenides*, 494b-c; 500c-502a; 508c-d; 510b-511a
8 ARISTOTLE: *Categories*, CH 6 [6^a27-35] 10d-11a / *Generation and Corruption*, BK II, CH 6 [333^a 27-34] 434a / *Metaphysics*, BK V, CH 15 [1021^a 8-14] 542b-c; BK X, CH 3 [1054^b1-3] 581b; CH 5 583a-c
9 ARISTOTLE: *Ethics*, BK V, CH 3-5 378c-381d
11 EUCLID: *Elements*, BK I, COMMON NOTIONS 2a; PROP 4 4a-b; PROP 8 6b-7a; PROP 26 16a-17b
11 NICOMACHUS: *Arithmetic*, BK I, 821d-822b
16 KEPLER: *Harmonies of the World*, 1012b-1014b
17 PLOTINUS: *Sixth Ennead*, TR III, CH 15 289a-c
19 AQUINAS: *Summa Theologica*, PART I, Q 42, A 1, ANS and REP 1 224b-225d; Q 47, A 2, REP 2 257b-258c
20 AQUINAS: *Summa Theologica*, PART I-II, Q 113, A 9, ANS 368d-369c
35 LOCKE: *Human Understanding*, BK IV, CH II, SECT 9-10 311b-c
50 MARX: *Capital*, 19a-25d esp 19d-20b, 25a-d
53 JAMES: *Psychology*, 874a-875a

4. Sameness and diversity in the order of knowledge

4a. Likeness or sameness between knower and known: knowledge as involving imitation, intentionality, or representation

7 PLATO: *Phaedrus*, 124c-126c esp 126a-c / *Phaedo*, 231b-232b / *Republic*, BK III, 333b-d; BK VI-VII, 383d-398c esp BK VII, 397a-398c; BK X, 427c-431b / *Theaetetus*, 521d-522b; 538d-541a / *Seventh Letter*, 809c-810d
8 ARISTOTLE: *Interpretation*, CH 1 [16^a4-9] 25a / *Metaphysics*, BK XII, CH 7 [1072^b17-24] 602d-603a; CH 9 [1074^b36-1075^a11] 605c-d / *Soul*, BK I, CH 5 [409^b18-411^a7] 639c-641a; BK II, CH 5 [416^b32-417^a2] 647b; [417^a17-21] 647d; [418^a2-6] 648c-d; BK III, CH 2 [425^b17-26] 657d-658a; CH 3 [427^a16-$^b6$] 659c-d; CH 4 661b-662c; CH 5 [430^a14-16] 662c; [430^a20-22] 662d; CH 7 [431^a1-8] 663c; CH 8 [431^b20-432^a2] 664b-c / *Memory and Reminiscence*, CH 1 [450^a25-451^a19] 691a-692b
12 LUCRETIUS: *Nature of Things*, BK IV [26-109] 44b-45c; [722 817] 53d-54d
17 PLOTINUS: *Third Ennead*, TR VIII, CH 6, 132a; CH 8, 132d-133b; CH 9, 134a-b / *Fifth Ennead*, TR I, CH 4, 210b-c; TR III, CH 4-5 217b-218c; CH 10-13 221b-224b; TR V, CH 1-2 228b-229d; TR IX, CH 7 249b-c / *Sixth Ennead*, TR VII, CH 36-41 339c-342c
18 AUGUSTINE: *Confessions*, BK X, par 17 75c-d; par 19 76a-b; par 22-24 76d-77c; par 27-28 78b-d / *City of God*, BK VIII, CH 6, 269b
19 AQUINAS: *Summa Theologica*, PART I, Q 12, A 2 51c-52c; A 4, REP 1 53b-54c; A 9 58b-59a; Q 14, A 2, REP 2 76d-77d; A 5 79a-80a; A 6, REP 1,3 80a-81c; A 9, REP 2 83b-d; Q 15 91b-94a passim; Q 18, A 4 107d-108c; Q 27, A 4, REP 2 156b-d; Q 30, A 2, REP 2 168a-169b; Q 34, A 1, REP 3 185b-187b; Q 55, A 2, ANS and REP 1 289d-290d; A 3, REP 1,3 291a-d; Q 57, A 2, ANS and REP 2-3 295d-297a; Q 58, A 2 301b-d; Q 75, A 1, REP 2 378b-379c; Q 85, A 8, REP 3 460b-461b; Q 87, A 1, REP 3 465a-466c; Q 93, A 2, REP 4 493a-d; PART I-II, Q 28, A 1, REP 3 740b-741a
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42 KANT: *Pure Reason*, 7b-d; 12c-d [fn 1]; 15d-16c; 23a-24a; 34a-35b; 55a-56c; 88b-91d; 99a-101b; 101d-102a; 115b-c / *Judgement*, 550a-551a,c

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53 JAMES: *Psychology*, 126b-129a; 142a-143b; 153b-154a; 307a-311a esp 307a, 309a; 325b-327a esp 326a-b [fn 1]; 851b-852a

4b. The role of differentiation in definition: the diversity of differences

7 PLATO: *Phaedrus*, 134b-d / *Theaetetus*, 548c-549d / *Sophist* 551a-579d esp 552b-561d / *Statesman* 580a-608d / *Philebus*, 610d 613a

8 ARISTOTLE: *Topics*, BK I, CH 5 [$101^{b}37$-$102^{a}17$] 144d-145a; CH 18 [$108^{a}38$-$^{b}6$] 152d; BK VI, CH 6 196d-199c; BK VII, CH 3 [$153^{a}13$-$^{b}24$] 208b-209a / *Metaphysics*, BK III, CH 3 [$998^{b}21$-27] 517c; BK VII, CH 10-12 558a-562a

9 ARISTOTLE: *Parts of Animals*, BK I, CH 2-4 165d-168c

17 PLOTINUS: *Sixth Ennead*, TR III, CH 8-10 285a-286d; CH 16-18 289c-291d

19 AQUINAS: *Summa Theologica*, PART I, Q 1, A 1, REP 3 162a-163b; Q 75, A 3, REP 1 380c-381b; Q 77, A 1, REP 7 399c-401b; A 3, ANS 401d-403a

20 AQUINAS: *Summa Theologica*, PART I-II, Q 49, A 2, REP 3 2b-4a; PART III, Q 2, A 1, ANS 710a-711c

30 BACON: *Novum Organum*, BK II, APH 24 154c-155a

35 LOCKE: *Human Understanding*, BK III, CH III, SECT 10 256c-257a; CH VI 268b-283a passim

42 KANT: *Pure Reason*, 193a-200c; 215d-216c

49 DARWIN: *Origin of Species*, 28b-29a; 30d-31b; 241d-242a

53 JAMES: *Psychology*, 344b-345b; 669a-671a

4c. Sameness and diversity in the meaning of words or the significance of terms: the univocal and the equivocal

7 PLATO: *Euthydemus* 65a-84a,c / *Sophist*, 551a-552c / *Philebus*, 609d-610a / *Seventh Letter*, 809c-810b

8 ARISTOTLE: *Categories*, CH 1 5a-b / *Interpretation*, CH 1 [$16^{a}3$-8] 25a / *Topics*, BK I, CH 18 [$108^{a}17$-37] 152b-d; BK VI, CH 10 [$148^{a}23$-25] 202b; [$148^{a}38$-$^{b}4$] 202c; BK VIII, CH 3 [$158^{b}8$-$159^{a}2$] 215b-c / *Sophistical Refutations*, CH 1 [$165^{a}5$-13] 227b-c; CH 33 [$182^{b}13$-21] 251d / *Physics*, BK I, CH 2 [$185^{a}20$]-CH 3 [$187^{a}10$] 260a-262a; BK VII, CH 4 [$249^{a}3$-24] 331d-332b / *Metaphysics*, BK I, CH 9 [$990^{a}33$-$991^{a}8$] 508c-509b; BK IV, CH 2 [$1003^{a}33$-$^{b}12$] 522b-c; BK VII, CH 4 [$1030^{a}32$-$^{b}3$] 553a-b; BK VIII, CH 3 [$1043^{a}29$-$^{b}4$] 567d; BK IX, CH 1 [$1046^{a}4$-8] 570d-571a; BK XI, CH 3 [$1060^{b}34$-$1061^{a}10$] 589a-b; BK XII, CH 4-5 599d-601a / *Soul*, BK III, CH 2 [$425^{b}26$-$426^{a}26$] 658a-c

9 ARISTOTLE: *Parts of Animals*, BK II, CH 2 [$648^{b}1$]-CH 3 [$649^{b}22$] 172d-174b

10 GALEN: *Natural Faculties*, BK I, CH 2, 168c

19 AQUINAS: *Summa Theologica*, PART I, Q 1, A 10, REP 1 9c-10c; Q 3, A 2, REP 1-2 15c-16a; A 6, REP 1 18c-19a; Q 13 62b-75b; Q 16, A 6, ANS 98b-d; Q 29, A 4, ANS and REP 4 165c-167a; Q 32, A 1, REP 2 175d-178a

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31 SPINOZA: *Ethics*, PART I, PROP 17, SCHOL 362c-363c; PART II, PROP 40, SCHOL 1-2 387b-388b

35 LOCKE: *Human Understanding*, BK II, CH IV, SECT 5, 131a; CH XIII, SECT 18 152a-c; CH XXIX, SECT 6-12 234d-236c; BK III, CH VI, SECT 28 276a-b esp 276b; SECT 47-51 282a-283a; CH IX 285a-291c; CH X, SECT 5 292d-293a; CH XI, SECT 3-7 300b-301c; BK IV, CH VII, SECT 15 343d-344a; CH VIII, SECT 11 348b-c

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36 STERNE: *Tristram Shandy*, 307b-308b

42 KANT: *Practical Reason*, 315d-316a / *Science of Right*, 400d / *Judgement*, 547b-548c; 602b-603a

53 JAMES: *Psychology*, 332b-334a; 549b-550a; 689a-b; 875b-876a

54 FREUD: *Interpretation of Dreams*, 277d-278a / *General Introduction*, 517c-518b

5. The principle of likeness in love and friendship

7 PLATO: *Lysis*, 19d-21b / *Symposium*, 167a-c / *Gorgias*, 285d-286b / *Statesman*, 608b

9 ARISTOTLE: *Ethics*, BK VIII, CH 1 [$1155^{a}33$-$^{b}15$] 406d-407a; CH 3 [$1156^{b}6$-24] 408a-b; CH 4 [$1156^{b}33$-$1157^{a}15$] 408c-d; CH 5 [$1157^{b}25$-37] 409c-d; CH 6 [$1158^{a}17$-21] 410a; [$1158^{a}38$-$^{b}3$] 410b; CH 7-9 410c-412c; CH 13 [$1162^{a}34$-$^{b}4$] 414d-415a; BK IX, CH 3 418c-419a; CH 4 [$1166^{a}29$-$^{b}2$] 419c / *Rhetoric*, BK I, CH 11 [$1371^{b}12$-25] 615a-b; BK II, CH 4 [$1381^{a}8$-19] 626d-627a

12 EPICTETUS: *Discourses*, BK II, CH 22 167d-170a

18 AUGUSTINE: *Confessions*, BK IV, par 22-23 24d-25a

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20 AQUINAS: *Summa Theologica*, PART II-II, Q 26, A 2, REP 2 511a-d

25 MONTAIGNE: *Essays*, 83a-d; 395b-398c passim

30 BACON: *Advancement of Learning*, 89a

31 SPINOZA: *Ethics*, PART III, PROP 31 405d-406a; PROP 33 406c; PROP 45-46 410b-c; PROP 52 412b-d; PROP 55, COROL, DEMONST and SCHOL 413d-414a; PART IV, PROP 29-40 431d-437a

36 SWIFT: *Gulliver*, PART IV, 165b-166a

49 DARWIN: *Descent of Man*, 317c-d

51 TOLSTOY: *War and Peace*, BK I, 15a-b; BK VI, 242c-243c; 270b-c; BK VII, 278c-279b; 296a-300c; BK VIII, 311a-313a; 314c-316a; 326b-c; 330d-332a; BK XII, 543b-544b; BK XIII, 576a-b; BK XV, 616a; 617c; 631c-633a; 640a; EPILOGUE I, 669d-672a

54 FREUD: *Narcissism*, 404d-406c esp 405a / *Group Psychology*, 677c-678b; 678d-684a esp 680b, 681b,d [fn 4], 682c, 684a; 685b-686a

6. Similitude between God and creatures: the degree and character of the similitude; traces or images of God in creatures

OLD TESTAMENT: *Genesis*, 1:26-27; 5:1; 9:6 / *Job*, 12:7-9 / *Psalms*, 19:1; 75:1; 107:23-24—(*D*) *Psalms*, 18:2; 74:2; 106:23-24

APOCRYPHA: *Wisdom of Solomon*, 2:23; 13:1-5—(*D*) OT, *Book of Wisdom*, 2:23; 13:1-5 / *Ecclesiasticus*, 17:1-3; 42:15-43:33—(*D*) OT, *Ecclesiasticus*, 17:1-3; 42:15-43:37

NEW TESTAMENT: *Romans*, 1:20 / *I Corinthians*, 11:7; 15:49 / *II Corinthians*, 3:18 / *Colossians*, 3:9-10 / *James*, 3:9 / *II Peter*, 1:3-4 / *I John* passim, esp 2:29, 3:7, 3:9-10, 3:16, 3:24, 4:7-11, 4:16, 4:19 / *II John*

16 KEPLER: *Epitome*, BK IV, 849a-b; 853b-854a; 860a / *Harmonies of the World*, 1038a; 1048a; 1080b-1085b passim

18 AUGUSTINE: *Confessions*, BK II, par 14 12a-b; BK IV, par 26 25c-d; par 31 26c-27a; BK VI, par 4 36a-b; BK XIII, par 32 119a-b / *City of God*, BK XI, CH 25-28 336b-338d; BK XII, CH 23 357d-358a / *Christian Doctrine*, BK I, CH 22 629b-630a

19 AQUINAS: *Summa Theologica*, PART I, Q 3, A 1, REP 1-5 14b-15b; A 2, REP 1-2 15c-16a; A 3, REP 1-2 16a-d; A 5, REP 2 17c-18b; A 7, ANS and REP 1 19a-c; Q 4, A 3 22b-23b; Q 6, A 2, ANS and REP 3 28d-29c; Q 8, A 1, REP 3 34d-35c; Q 13, AA 2-6 63c-68c; Q 14, A 2, REP 3 76d-77d; A 6 80a-81c; Q 15, A 2, ANS 92a-93b; Q 18, A 4 107d-108c; Q 26, A 4 151c-152a,c; Q 27, A 1, ANS 153b-154b; Q 44, AA 3-4 240b-241d; Q 47, A 1, ANS and REP 2-3 256a-257b; Q 50, A 1, ANS 269b-270a; Q 55, A 3, REP 3 291a-d; Q 57, A 2, ANS and REP 2 295d-297a; Q 59, A 1, CONTRARY 306c-307b; Q 65, A 2, REP 1 340b-341b; Q 72, A 1, REP 3 368b-369d; Q 77, A 2, ANS and REP 1 401b-d; Q 84, A 2, ANS and REP 3 442b-443c; Q 88, A 2, REP 4 471c-472c; A 3, REP 3 472c-473a; Q 91, A 4, REP 1-2 487d-488c; Q 93 492a-501c; Q 103, A 4, ANS 530d-531b; PART I-II, Q 1, A 8 615a-c; Q 2, A 4, REP 1 618a-d; A 5, REP 3 618d-619c

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25 MONTAIGNE: *Essays*, 238d

27 SHAKESPEARE: *Hamlet*, ACT II, SC II [314-322] 43d

30 BACON: *Advancement of Learning*, 41b-d; 80b-81a

31 DESCARTES: *Meditations*, III, 88c-d; IV, 90b-91b / *Objections and Replies*, 122a-b; 214a-d; 228a-c

31 SPINOZA: *Ethics*, PART I, PROP 17, SCHOL 362c-363c

32 MILTON: *Paradise Lost*, BK II [345-353] 118b-119a; BK IV [288-294] 158b; BK VII [150-173] 220b-221a; [519-528] 228b; BK XI [466-522] 309b-310b / *Areopagitica*, 384a

33 PASCAL: *Pensées*, 430-431, 246b-247b; 434-435, 249b-251a; 537 265b; 555 270a

35 HUME: *Human Understanding*, SECT XI, DIV 113, 502c

46 HEGEL: *Philosophy of Right*, ADDITIONS, 90 130b-d / *Philosophy of History*, PART II, 270d-271c; PART III, 306a-c; 310d

48 MELVILLE: *Moby Dick*, 84b-85a

52 DOSTOEVSKY: *Brothers Karamazov*, BK VI, 153b-d

CROSS-REFERENCES

For: Other discussions of the principle of identity and of its significance for being, change, and thought, *see* BEING 2b, 7b(5); CHANGE 2; LOGIC 1a; ONE AND MANY 2a; PRINCIPLE 1c, 3a(3); RELATION 1a; and for the problems of personal identity and the identity of a state, *see* SOUL 1d; STATE 3g.

For: Other considerations of sameness or similarity, and of the problem of the reality of kinds or universals, *see* FORM 2a; IDEA 1a, 6b; ONE AND MANY 1c; UNIVERSAL AND PARTICULAR 2a–2c.

Matters relevant to the analysis of essential and accidental sameness, specific and generic sameness, and otherness in species or in genus, *see* EVOLUTION 1b; IDEA 4b(3); NATURE 1a(1); ONE AND MANY 3b(1); OPPOSITION 1c(2); RELATION 5a(4); UNIVERSAL AND PARTICULAR 5b.

The nature of the similitude between heterogeneous things, and for the problem of signifying such similitude, *see* BEING 1; SIGN AND SYMBOL 3d; and for the related distinction between univocal, equivocal, and analogical terms, *see* IDEA 4b(4); SIGN AND SYMBOL 3b–3d.

Another discussion of sameness by analogy or relational sameness, *see* RELATION 1d, 5a(3); and for sameness in quality and quantity, *see* QUALITY 3c, 4c; QUANTITY 1b.

Similitude in the relation of knower and known, of lover and loved, and in imitation, *see* ART 3; FORM 1d(1); KNOWLEDGE 1, 4d; LOVE 4a; NATURE 2a; ONE AND MANY 4f.

The principle of similarity in the association of ideas, *see* IDEA 5e; MEMORY AND IMAGINATION 2c; RELATION 4f; SENSE 3d(1).

The theory of definition as constituted by the statement of genus and difference, *see* DEFINITION 2b; NATURE 4a; OPPOSITION 1c(2).

The problem of the similitude between God and creatures, and for its bearing on the significance of the names we apply to God, *see* GOD 3f, 6a–6b; MAN 11a; NATURE 1b; ONE AND MANY 1b; SIGN AND SYMBOL 5f; WORLD 3a–3b.

ADDITIONAL READINGS

Listed below are works not included in *Great Books of the Western World*, but relevant to the idea and topics with which this chapter deals. These works are divided into two groups:

I. Works by authors represented in this collection.
II. Works by authors not represented in this collection.

For the date, place, and other facts concerning the publication of the works cited, consult the Bibliography of Additional Readings which follows the last chapter of *The Great Ideas.*

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HOBBES. *Concerning Body*, PART II, CH 11, 13
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II.

CAJETAN. *De Nominum Analogia*
SUÁREZ. *Disputationes Metaphysicae*, IV–VI, XV (10), XXVIII (3), XXX (10), XXXII (2), XXXIII (2), XXXIV, XXXIX (3), XLIV (11), XLVI (1), XLVII (11, 14–15, 17)
——. *On the Various Kinds of Distinctions (Disputationes Metaphysicae*, VII)
JOHN OF SAINT THOMAS. *Cursus Philosophicus Thomisticus, Ars Logica*, PART II, Q 2 (3); Q 13 (2–5); Q 14 (2–3)
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VOLTAIRE. "Identity," in *A Philosophical Dictionary*
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JEVONS. *The Substitution of Similars*
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Chapter 83: SCIENCE

INTRODUCTION

IN our time, science, philosophy, and religion have come to represent three quite distinct intellectual enterprises. Each appeals for allegiance not merely on the ground that it can answer fundamental questions, but also because of its contribution to human life and culture. In other periods, philosophy and religion competed for supremacy, though, as appears in the chapter on PHILOSOPHY, some philosophers and theologians tried to remove this conflict by arguing for the complete compatibility of reason and faith. Nevertheless, before the 19th century, the issue, if one existed, was between philosophy and religion. Science had not yet become sufficiently distinct from philosophy to complicate the picture.

When science and philosophy are not themselves sharply distinguished, men are not confronted with three separate claims upon their intellectual allegiance. Modern science as something quite distinct in method and subject matter from traditional philosophy may actually make its appearance as early as the 17th century. But not until Kant are two kinds of science plainly set apart. Not until then are they so defined that one becomes identified with what men have always called "philosophy" and the other gradually appropriates the name of "science" and regards itself as a quite separate enterprise.

Kant differentiates between the empirical and the rational sciences. This differentiation tends to correspond with the distinction by others before him of experimental and abstract philosophy. It also corresponds with a later division into the experimental or inductive and the philosophical or deductive sciences. But Kant does not seem to contemplate the possibility of conflict between science and philosophy—between the experimental study of nature and metaphysics or, what is for him the same, between empirical and rational physics.

Hume is willing to admit only mathematics to the status of a rational science, capable of demonstrating its conclusions with certainty. He insists upon experimental reasoning in the study of nature, wherein only probable conclusions can be attained. But he does not make these critical points in terms of science versus philosophy. If the traditional metaphysics is to be rejected, it is not because it is philosophy rather than science, but because it represents a failure in philosophy *or* science, resulting from the wrong method of dealing with matters of fact.

In the 19th century, however, Auguste Comte formulates a doctrine which, under the title of *Positive Philosophy*, explicitly declares that only the positive sciences—the study of natural, mental, and social phenomena by empirical methods—deserve to be called "sciences" in the eulogistic sense of that term. In contrast, philosophy is mere speculation, and religion is superstition. The word "speculation" is for the positivist only slightly less invidious than "superstition." Whereas superstition implies irrational belief, speculation represents a futile attempt by reason to go behind the phenomena in order to discover ultimate causes or substances. This cannot result in anything but guesswork or conjecture—never in knowledge or science, which are the same for the positivist. For all its show of logic and system, philosophy cannot produce conclusions which have the validity or objectivity of science, because it tries to do more than explore and describe the phenomena and because it tries to do whatever it does without investigation or experiment.

From many sources in addition to Comte similar views converge to form an attitude generally prevalent in the world today under the name of positivism. All its current varieties

seem to have this much in common: the identification of science with knowledge of fact, and further, the restriction of such knowledge to conclusions obtained and verified empirically. Whatever does not accord with this conception of science is either, like mathematics or logic, a purely formal discipline or, like philosophy and religion, it is conjecture, opinion, or belief—personal, subjective, even wishful.

IT SEEMS APPROPRIATE that the most recent author in the set of great books should provide us with a declaration of positivism and that he should set science against philosophy and religion. It is also fitting that he should be a scientist in the field of psychology, since psychology is a late-comer among the disciplines which, once branches of philosophy, now claim to be positive sciences. Not only late, but last, according to Freud, for "sociology, which deals with the behavior of man in society, can be nothing other than applied psychology. Strictly speaking, indeed, there are only two sciences—psychology, pure and applied, and natural science."

In his *New Introductory Lectures on Psycho-Analysis*, Freud concludes with a statement of what he calls the "scientific *Weltanschauung*." In essence, he thinks, "it asserts that there is no other source of knowledge of the universe, but the intellectual manipulation of carefully verified observations, in fact, what is called research, and that no knowledge can be obtained from revelation, intuition, or inspiration." Freud makes the drastic implications of this statement quite explicit. "It is inadmissible to declare," he writes, "that science is one field of human intellectual activity, and that religion and philosophy are others, at least as valuable, and that science has no business to interfere with the other two, that they all have an equal claim to truth, and that everyone is free to choose whence he shall draw his convictions and in which he shall place his belief.

"Such an attitude," he goes on, "is considered particularly respectable, tolerant, broad-minded, and free from narrow prejudices. Unfortunately, it is not tenable; it shares all the pernicious qualities of an entirely unscientific *Weltanschauung*, and in practice comes to much the same thing. The bare fact is that truth cannot be tolerant and cannot admit compromise or limitations, that scientific research looks on the whole field of human activity as its own, and must adopt an uncompromisingly critical attitude towards any other power that seeks to usurp any part of its province."

As a threat to the dominion of science over man and society, "religion alone is a really serious enemy." Philosophy, Freud thinks, "has no immediate influence on the great majority of mankind"; whereas "religion is a tremendous force which exerts its power over the strongest emotions of human beings." Religion and science might be compatible if religion, offering men something "incomparably more beautiful, more comforting, and more ennobling than anything they could ever get from science," would only say: 'It is a fact that I cannot give you what men commonly call truth; to obtain that, you must go to science.' "

But religion cannot say that, Freud thinks, without losing "all influence over the mass of mankind," and science cannot, on its side, yield at all in its claim to being the *only* avenue to truth. Employing a method which "carefully examines the trustworthiness of the sense perceptions on which it bases its conclusions," which "provides itself with new perceptions . . . not obtainable by everyday means," and which "isolates the determinants of these new experiences by purposely varied experimentation," science alone can "arrive at correspondence with reality." It is "this correspondence with the real external world we call truth"; and thus when "religion claims that it can take the place of science and that, because it is beneficent and ennobling, it must therefore be true, that claim is, in fact, an encroachment, which, in the interests of everyone, should be resisted."

Philosophy does not seem to Freud to offer men a genuine alternative to scientific truth. Unlike religion, it is not in his view necessarily opposed to science; at times it even behaves "as if it were a science," and to some extent makes "use of the same methods." But insofar as it parts company with science by clinging "to the illusion that it can produce a complete and coherent picture of the universe," philosophy must be regarded as an impostor in the halls of knowledge.

The picture philosophy tries to construct, Freud says, "must needs fall to pieces with

every new advance in our knowledge." Not itself knowledge, but mere opinion or speculation, philosophy does not, any more than religion, offer a substitute for science. Both together fall under Freud's interdict. Both together would be outcasts from human culture if what he calls "our best hope for the future," that is, "the intellect—the scientific spirit, reason—should in time establish a dictatorship over the human mind."

WILLIAM JAMES, ALMOST contemporary with Freud, also draws a sharp line between science and philosophy. Writing his *Principles of Psychology* at a time when the experimental methods of the natural sciences, especially physiology, have just been introduced into the study of mental phenomena, he is at pains to define the scope of psychology as a natural science, and to separate the questions which can be properly considered by a scientist from those which belong to the philosopher. But, unlike Freud, James does not seem to regard the philosopher as engaged in a futile effort to solve problems which are either insoluble or better left until science finds means for solving them.

For James the distinction between science and philosophy does not seem to lie only in the methods they employ, though the empirical or experimental approach does have a bearing on the kind of problems scientists can undertake to solve and the conclusions they can reach. The problems and the conclusions are themselves characteristically different from those of the philosopher.

The scientist *describes* the phenomena, according to James, as precisely as possible and as comprehensively, but without any implication of finality or totality. He recognizes that his descriptive formulations are tentative and incomplete, always subject to the discovery of new data or a more refined presentation of the evidence. Above all, he admits that he is only describing, not *explaining*—not laying bare the ultimate reality which gives the phenomena their deepest intelligibility, or ascertaining the causes which show why, not merely how, things happen as they do.

In the Preface to his *Principles*, James says that he has "kept close to the point of view of natural science throughout the book . . . This book, assuming that thoughts and feelings exist and are vehicles of knowledge, thereupon contends that psychology, when she has ascertained the empirical correlation of the various sorts of thought or feeling with definite conditions of the brain, can go no farther—can go no farther, that is, as a natural science. If she goes farther, she becomes metaphysical. All attempts to *explain* our phenomenally given thoughts as products of deeper-lying entities . . . are metaphysical."

This scientific point of view, James admits, "is anything but ultimate. . . . The data assumed by psychology, just like those assumed by physics, must sometime be overhauled. The effort to overhaul them clearly and thoroughly is metaphysics." James does not imply that metaphysics cannot "perform her task well," but he does think that "she . . . spoils two good things when she injects herself into a natural science."

Science and metaphysics should be kept quite separate, even though the sciences, in accumulating "a mass of descriptive details," run "into queries which only a metaphysics alive to the weight of her task can hope successfully to deal with. That will perhaps be centuries hence; and meanwhile the best mark of health that a science can show is this unfinished-seeming front."

The variance of James' conception of metaphysics and its future from other traditional views on that subject is discussed in the chapter on METAPHYSICS. Here it is relevant to observe that James has a conception of science broad enough to include both the empirical natural sciences and what he calls the "pure or *a priori* sciences of Classification, Logic, and Mathematics." Yet in his view metaphysics does represent philosophy as opposed to science, because it aims at ultimate reality or underlying causes. For example, he rejects the theory of a soul, not because he knows it to be false, but because he thinks it has no place in "a psychology which contents itself with verifiable laws" and which is to "remain positivistic and non-metaphysical."

James seems to embrace the positivist view, prevalent in the 19th century and our own day. He limits science to, as well as excludes philosophy from, the domain of empirical

knowledge. In discussing the possibility of free will, he says that "Psychology will be Psychology and Science, Science, as much as ever (as much and no more) in this world, whether free-will be true in it or not. Science, however, must be constantly reminded that her purposes are not the only purposes, and that the order of uniform causation which she has use for, and is therefore right in postulating, may be enveloped in a wider order, in which she has no claims at all."

THOSE MODERN SCIENTISTS and philosophers who do not make a sharp distinction between science and philosophy and who antedate any explicit formulation of the positivist doctrine, nevertheless do for the most part conceive natural science as experimental in its method and as having for its goal the formulation of general laws describing and correlating the phenomena. They do not all exclude causes from the consideration of the natural scientist; nor do they all, as stringently as James, rule out explanation in favor of description or correlation. Furthermore, the almost universal emphasis by modern writers upon the experimental character of the natural sciences does not mean a universal identification of science with the experimental disciplines.

Mathematics, for example, is usually regarded as a science in spite of its being nonexperimental. For Locke and Hume, as well as for Descartes, it exhibits certain characteristics —the self-evidence of principles, the certainty of demonstrations—which make it more genuinely worthy of the high name of science than are the tentative hypotheses and probable conclusions of experimental physics. Other disciplines are called "sciences" by comparison with mathematics rather than physics. Descartes, for instance, seems to think that metaphysics can as surely be made a science as mathematics can be. Locke argues that demonstration from axioms is not limited to the science of quantity. As much clarity and certainty is attainable in reasoning about moral matters. Ethics is no less a science than mathematics.

Hobbes appears to take a similar view of politics, though it must be noted in his case that he differs from Descartes and Locke, from Bacon, Hume, and others in not distinguishing mathematics from physics with respect to the latter's need for experimental evidence. All the sciences are for him alike in being "the demonstrations of consequences of one affirmation to another," regardless of "the diversity of the matter." The "certain and infallible" sign that a man is a scientist in any field of subject matter is that he can "demonstrate the truth thereof perspicuously to another."

Hobbes, furthermore, seems to think that what is true of geometry is true of every science, namely, that it must begin with definitions. "In geometry," he says, "men begin at settling the signification of their words; which settling of significations, they call *definitions.*" Without definitions, science is impossible. "In the right definition of names," Hobbes maintains, "lies the first use of speech, which is the acquisition of science; and in the wrong, or no definitions, lies the first abuse, from which proceed all false or senseless tenets."

Freud expresses the opposite view, which is generally more characteristic of the attitude of the modern scientist, especially the experimentalist or empiricist in method. "The view is often defended," he writes, "that sciences should be built on clear and sharply defined basal concepts." But "in actual fact, no science, not even the most exact, begins with such definitions. The true beginning of scientific activity," Freud holds, "consists rather in describing phenomena and then proceeding to group, classify and correlate them. Even at the stage of description, it is not possible to avoid applying certain abstract ideas to the material in hand, ideas derived from various sources and certainly not the fruit of new experience only. . . . They must at first necessarily possess some measure of uncertainty; there can be no question of any clear limitation of their content. So long as they remain in this condition, we come to an understanding about their meaning by repeated references to the material of observation, from which we seem to have deduced our abstract ideas, but which is in point of fact subject to them."

The basic concepts or definitions of a science are, according to Freud, "in the nature of conventions; although," he adds, "everything depends on their being chosen in no arbitrary manner, but determined by the important

relations they have to the empirical material. . . . It is only after more searching investigation of the field in question that we are able to formulate with increased clarity the scientific concepts underlying it. . . . Then indeed, it may be time to immure them in definitions. The progress of science, however, demands a certain elasticity even in these definitions." This may not be true of mathematical concepts or definitions, but, Freud points out, the science of physics illustrates "the way in which even those 'basal concepts' that are firmly established in the form of definitions are constantly being altered in their content."

WITH THE EXCEPTION OF HOBBES, the notion that scientific conclusions can be drawn from definitions or can be established without recourse to experiment, is not usually extended by modern writers from mathematics and metaphysics to physics. As the chapter on PHYSICS shows, the basic division of the study of nature into philosophical and scientific physics becomes equivalent, in modern times, to a separation of the philosophy of nature from the experimental natural sciences. We shall return presently to that sense of "science" in which physics is associated with mathematics and metaphysics as a branch of theoretic philosophy or as one of the speculative sciences. All three disciplines are thought of as proceeding in the same way: by the demonstration of conclusions from principles obtained by induction from experience—ordinary sense-experience, that is, not the special experiences artificially contrived in a laboratory under experimental conditions. But it should be observed that, in the modern period, even those authors who use "science" in the foregoing sense when they discuss mathematics and metaphysics, treat physics differently. They hold that physics must be experimental if it is to be scientific.

In proportion as modern physics becomes more and more the model of science, the meaning of the word "science" tends to become reserved for experimental study, or at least for empirical investigation, so that non-experimental disciplines, like metaphysics or ethics, are questioned when they call themselves "sciences." Other disciplines try to establish themselves as sciences by imitating physics. Marx, for example, in presenting his own work as economic *science*, seeks to explain how it can be scientific even if it is not experimental.

"The physicist," he writes, "either observes physical phenomena where they occur in their most typical form and most free from disturbing influence, or, wherever possible, he makes experiments under conditions that assure the occurrence of the phenomenon in its normality." If experiment, in the strict sense, is impossible in economics, at least the student of economics can be scientific in his effort to observe the phenomena "in their most typical form." England, Marx thinks, offers the most typical example of "the capitalist mode of production, and the conditions of production and exchange corresponding to that mode." Hence, for scientific purposes, he has used England "as the chief illustration in the development of [his] theoretical ideas."

THE EXPERIMENTAL CHARACTER of modern physics, whether it is called natural science or natural philosophy, is discussed in the chapter on PHYSICS. The distinction between the construction or use of experiments and the appeal to experience—apart from experiment—either as a source or as a test of scientific formulations, is discussed in the chapter on EXPERIENCE, as well as in the chapters on HYPOTHESIS and INDUCTION. Here it seems pertinent to note that neither the distinction between induction and deduction, nor the distinction between hypotheses and axioms, unequivocally marks the line which separates science from philosophy.

Aristotle and Bacon, for example, regard induction as the source of axioms in metaphysics or *philosophia prima* as well as in physics or the philosophy of nature. They may have different theories of induction, but only insofar as one conceives induction as an intuitive generalization from *ordinary sense-experience*, and the other makes induction an inference from *experiments*, does the difference between them seem to have a bearing on the distinction between philosophy and science.

Similarly, the difference between the scientist's and the philosopher's consideration of hypotheses seems to lie not in the role they play in reasoning or argument, but rather in their having or not having a special relation to experi-

mentation, either to guide it or to submit to its test.

Experiment, then, seems to be the distinguishing mark of science on the side of method; and, by an extension of meaning, even in those subject matters where experiments in the strict sense—in laboratories, with apparatus, under controlled conditions—are impossible, the scientist differs from the philosopher in an analogous point of method. The scientist investigates, does research, makes observations which go beyond the experiences which ordinary men have in the course of daily life.

It seems to be in this spirit that Newton opens the *Optics* with the statement that "my design in this book is not to explain the properties of light by hypotheses, but to propose and prove them by reason and experiments." In the same spirit Faraday says of himself: "As an experimentalist, I feel bound to let experiment guide me into any train of thought which it may justify; being satisfied that experiment, like analysis, must lead to strict truth if rightly interpreted; and believing also that it is in its nature far more suggestive of new trains of thought and new conditions of natural power."

Lavoisier imposes upon himself the rule "never to form any conclusion which is not an immediate consequence necessarily flowing from observation and experiment." Gilbert criticizes those who write about magnetism without recourse to experiments—philosophers who are not themselves investigators and have no first-hand acquaintance with things. Referring to "what has been held by the vulgar and by tradition" concerning the motion of the heart and arteries, Harvey proposes to separate true from false opinions "by dissection, multiplied experience and accurate observation."

Even a scientist like Fourier, who conceives physical theory as a kind of applied mathematics, says that "no considerable progress can hereafter be made which is not founded on experiments . . . for mathematical analysis can deduce from general and simple phenomena the expression of the laws of nature; but the special application of these laws to very complex effects demands a long series of exact observations." Like Fourier, Galileo also combines mathematics and experiment in the study of nature. But though he is willing to introduce experiments where they are necessary in order to test rival hypotheses or alternative mathematical formulations of the laws of motion, he seems to express a preference for the rigor of purely mathematical physics.

In the Fourth Day of the *Two New Sciences*, discussing the parabolic path of projectiles, one person in the dialogue, Sagredo, says that "the force of rigid demonstrations such as occur only in mathematics fills me with wonder and delight." The understanding thus derived, he adds, "far outweighs the mere information obtained by the testimony of others or even by repeated experiment." Agreeing with this, Salviati, another person in the dialogue, claims that "the knowledge of a single fact acquired through a discovery of its causes prepares the mind to understand and ascertain other facts without need of recourse to experiment, precisely as in the present case, where by argumentation alone the Author proves with certainty that the maximum range occurs when the elevation is 45°. He thus demonstrates what has perhaps never been observed in experience, namely, that of other shots those which exceed or fall short of 45° by equal amounts have equal ranges."

THE CONCEPTION OF SCIENCE as consisting in a rigorous demonstration of conclusions from axioms—whether in mathematics or other subject matters—seems to be modern as well as ancient. It is found in Descartes and Spinoza, in Hobbes and Locke, as well as in Plato and Aristotle. Holding that "science in its entirety is true and evident cognition," Descartes may add that "it has been mathematicians alone who have been able to succeed in making any demonstrations, that is to say, producing reasons which are evident and certain"; yet he also hopes to make metaphysics a science after the model of mathematics.

This conception of science is somewhat qualified by Descartes when he discusses the study of nature. Here he tends toward experimentalism. Here he says that "experiments . . . become so much the more necessary the more one is advanced in knowledge." Referring to particular effects which "might be deduced from the principles in many different ways," he thinks that the only way to overcome the difficulty of discovering the principles on which the effects

do depend is "to try to find experiments of such a nature that their result is not the same if it has to be explained by one of the methods, as it would be if explained by the other."

On the other hand, the conception of science as knowledge founded upon experiment, or at least upon extended observation, seems to be ancient as well as modern. Aristotle criticizes those of his predecessors in physics whose "explanation of the observations is not consistent with the observations." The test of principles "in the knowledge of nature," he says, "is the unimpeachable evidence of the senses as to each fact." It is for this reason that he praises the method of Democritus as scientific.

"Lack of experience," Aristotle writes, "diminishes our power of taking a comprehensive view of the admitted facts. Hence those who dwell in intimate association with nature and its phenomena grow more and more able to formulate, as the foundations of their theories, principles such as to admit of a wide and coherent development; while those whom devotion to abstract discussions has rendered unobservant of the facts are too ready to dogmatize on the basis of a few observations. The rival treatments of the subject now before us will serve to illustrate how great is the difference between a 'scientific' and a 'dialectical' method of inquiry. For whereas the Platonists argue that there must be atomic magnitudes 'because otherwise "The Triangle" will be more than one,' Democritus would appear to have been convinced by arguments appropriate to the subject, *i.e.*, drawn from the science of nature."

There are many passages in which Aristotle rejects an astronomical hypothesis because it does not account for the observations, or favors one theory against all others because it alone seems to fit the sensible phenomena. So, too, in his biological works, he makes experience the test of theories. Speaking of the generation of bees, for example, he says that if we ever learn the truth about this matter, "credit must be given to observation rather than to theories, and to theories only if what they affirm agrees with the observed facts." And in his treatise *On the Motion of Animals*, he calls for "reference to particulars in the world of sense, for with these in view we seek general theories, and with these we believe that general theories ought to harmonize."

But Aristotle also defines science as the certain demonstration of universal and necessary conclusions from self-evident principles. "Scientific knowledge," he writes, "is judgment about things that are universal and necessary; and the conclusions of demonstration . . . follow from first principles (for scientific knowledge involves apprehension of a rational ground)." The emphasis here is on knowledge of causes, and on the certainty and necessity of conclusions which can be demonstrated from axiomatic truths.

By these criteria, metaphysics and mathematics are, in Aristotle's conception of the three philosophical sciences, perfect examples of scientific knowledge; physics as a general philosophy of nature is also scientific knowledge in this sense; but the particular natural sciences, such as astronomy or zoology, are more empirical than philosophical in character. At least they involve admixtures of demonstration from principles with the verification of hypotheses by observation. To the extent that they are empirical, they are qualified by an uncertainty and a tentativeness in formulation which do not seem to be present in Aristotle's conception of the purely philosophical sciences.

It might even be said that the knowledge of nature which depends on empirical research is not strictly scientific at all. Locke appears to say just that. "How far soever human industry may advance useful and experimental philosophy in physical things," he writes, "scientifical will still be out of our reach." Holding that "our knowledge of bodies is to be improved only by experience," Locke adds: "I deny not but a man accustomed to rational and regular experiments, shall be able to see farther into the nature of bodies, and guess righter at their yet unknown properties, than one that is a stranger to them; but yet, as I have said, this is but judgment and opinion, not knowledge and certainty. This way of getting and improving our knowledge in substances only by experience and history . . . makes me suspect that natural philosophy is not capable of being made a science."

WHETHER THE EXPERIMENTAL study of nature is the type of all scientific knowledge (in its object, its method, and the character of its conclusions) or whether, according to another conception, the philosophical disciplines are the

more perfect, perhaps even the only examples of science, there seems to be no question that different values attach to these two meanings of science—or, as it is currently expressed, to science and philosophy.

The philosophical sciences may be either theoretic or practical according as they aim at wisdom or at action, but they are seldom praised as being useful productively. The practical sciences which are also traditionally regarded as branches of moral philosophy—such as ethics, politics, and economics—may be knowledge put to use in the guidance of individual conduct or the affairs of society, but apart from poetics, which may direct production in the sphere of the fine arts, there does not seem to be any philosophical science, or branch of philosophy, that provides a mastery of matter or some control over nature. None has applications in the sphere of the useful arts.

As indicated in the chapters on ART, KNOWLEDGE, and PHILOSOPHY, Bacon appears to take a contrary view. Using the word "practical" to mean productive rather than moral or civil, he divides the philosophy of nature into speculative and practical branches. He regards mechanics as the application of physics to useful purposes, and finds a productive counterpart to metaphysics in what he calls "magic."

Nor is Bacon's point merely that "the real and legitimate goal of the sciences is the endowment of human life with new inventions and riches," in opposition to those whom he criticizes for thinking that "the contemplation of truth is more dignified and exalted than any utility or extent of effects." In addition he thinks that the truth of science can be tested by its productive utility. "That which is most useful in practice," he writes, "is most correct in theory."

Bacon's position with regard to the productive utility of science would not be contrary to the traditional view if by "the philosophy of nature" he meant science in the experimental rather than the philosophical sense. His emphasis upon experimentation in all parts of the study of nature suggests that that is the case. The fact that he places equal emphasis upon machinery and inventions and power over nature also suggests that technology is the other face of any science which is experimental in method.

Bacon and Descartes seem to be the first to perceive that knowledge which is experimental in origin must be by its very nature capable of technological applications. The instruments and apparatus which Bacon regards as necessary implements of science, no less than the machinery and inventions which science can be expected to produce, represent the very same techniques of operating upon nature. Experimental science is thus seen to be at once the creature and creator of technology. As Plato's *Republic* projects a society which cannot be realized unless it is ruled by the science of the philosopher, so Bacon's *New Atlantis* prophesies a civilization which the dominance of experimentalism and technology have brought to present reality.

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REFERENCES

To find the passages cited, use the numbers in heavy type, which are the volume and page numbers of the passages referred to. For example, in 4 HOMER: *Iliad*, BK II [265–283] 12d, the number 4 is the number of the volume in the set; the number 12d indicates that the passage is in section d of page 12.

PAGE SECTIONS: When the text is printed in one column, the letters a and b refer to the upper and lower halves of the page. For example, in 53 JAMES: *Psychology*, 116a-119b, the passage begins in the upper half of page 116 and ends in the lower half of page 119. When the text is printed in two columns, the letters a and b refer to the upper and lower halves of the left-hand side of the page, the letters c and d to the upper and lower halves of the right-hand side of the page. For example, in 7 PLATO: *Symposium*, 163b-164c, the passage begins in the lower half of the left-hand side of page 163 and ends in the upper half of the right-hand side of page 164.

AUTHOR'S DIVISIONS: One or more of the main divisions of a work (such as PART, BK, CH, SECT) are sometimes included in the reference; line numbers, in brackets, are given in certain cases; *e.g.*, *Iliad*, BK II [265–283] 12d.

BIBLE REFERENCES: The references are to book, chapter, and verse. When the King James and Douay versions differ in title of books or in the numbering of chapters or verses, the King James version is cited first and the Douay, indicated by a (*D*), follows; *e.g.*, OLD TESTAMENT: *Nehemiah*, 7:45—(*D*) *II Esdras*, 7:46.

SYMBOLS: The abbreviation "esp" calls the reader's attention to one or more especially relevant parts of a whole reference; "passim" signifies that the topic is discussed intermittently rather than continuously in the work or passage cited.

For additional information concerning the style of the references, see the Explanation of Reference Style; for general guidance in the use of *The Great Ideas*, consult the Preface.

1. Conceptions of science

1*a*. Science as a philosophical discipline: certain or perfect knowledge

7 PLATO: *Republic*, BK V, 370d-373c; BK VI, 383d-388a; BK VII, 391b-398c / *Sophist*, 570a-574c esp 571a-c / *Philebus*, 633a-635a esp 634b-635a

8 ARISTOTLE: *Posterior Analytics* 97a-137a,c esp BK I, CH 2 97d-99a / *Physics*, BK I, CH I [184^{a}10-16] 259a; BK II, CH 7 275b-d / *Metaphysics*, BK I, CH 2-3 500b-502d; BK II, CH I 511b,d-512b; BK IV, CH 2 [1004^{b}18-27] 523d; BK VI, CH I 547b,d-548c; BK XI, CH 7 592b-593a

9 ARISTOTLE: *Ethics*, BK VI, CH 3 388b-c; CH 6 389d

18 AUGUSTINE: *City of God*, BK VIII, CH 2-9 265b-271a

19 AQUINAS: *Summa Theologica*, PART I, Q I, AA 1-8 3b-8d passim; PART I-II, Q 14, A 1, REP 2 677b-678a

20 AQUINAS: *Summa Theologica*, PART I-II, Q 54, A 4, REP 3 25b-d; Q 57, A 2 36a-37b; Q 66, A 5, REP 3 79b-80c; PART II-II, Q 9, A 2, ANS 424b-425a

23 HOBBES: *Leviathan*, PART I, 60a-d; 65c-d; 71c-d; 72a-d; PART IV, 267a-c

31 DESCARTES: *Rules*, II-III 2a-5a / *Discourse*, PART I, 43d; PART II, 47a-48a; PART IV, 51b-52a / *Meditations*, I 75a-77c

31 SPINOZA: *Ethics*, PART II, PROP 40-43 387a-389b; PART V, PROP 25-28 458d-459b; PROP 31 459d-460b

35 LOCKE: *Human Understanding*, BK IV, CH III, SECT 26 321b-c; SECT 29 322c-323a

35 HUME: *Human Understanding*, SECT IV, DIV 20 458a-b

42 KANT: *Pure Reason*, 1a-13d; 211c-218d; 243c-250a,c / *Fund. Prin. Metaphysic of Morals*, 253b-c; 264b-d; 270c-d / *Practical Reason*, 360d-361d / *Pref. Metaphysical Elements of Ethics*, 365a-366a; 376c-d / *Judgement*, 463a-467a; 560d-561a; 603a-b

1*a*(1) The intellectual virtue of science: its relation to understanding and wisdom

7 PLATO: *Republic*, BK VI, 386d-388a

9 ARISTOTLE: *Ethics*, BK VI, CH I-II 387a-393b

20 AQUINAS: *Summa Theologica*, PART I-II, Q 54, A 4, REP 3 25b-d; Q 57, A 2 36a-37b; Q 64, A 3 68b-69b; Q 66, A 5 79b-80c

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31 DESCARTES: *Rules*, I 1a-2a

31 SPINOZA: *Ethics*, PART II, PROP 40-43 387a-389b; PART V, PROP 25-28 458d-459b; PROP 31 459d-460b

(1a. Science as a philosophical discipline: certain or perfect knowledge.)

1a(2) The division and hierarchy of the philosophical sciences

7 PLATO: *Republic*, BK VII, 391b-398c / *Philebus*, 634b-635b

8 ARISTOTLE: *Posterior Analytics*, BK I, CH 7 103c-d; CH 9 104b-d; CH 11 [77a26]-CH 12 [77b15] 106b-d; CH 13 [78b31-79a16] 108b-c; CH 27-28 119b-c / *Topics*, BK I, CH 14 [105b19-29] 149c / *Sophistical Refutations*, CH 9 [170a20-b3] 234b-c / *Physics*, BK I, CH 9 [192a33-b2] 268c-d; BK II, CH 2 270a-271a; CH 7 [198a22-31] 275b-c / *Heavens*, BK III, CH 1 [298b13-24] 390a-b / *Metaphysics*, BK I, CH 2 500b-501c; CH 9 [992a29-b9] 510c-d; BK II, CH 3 [994b31]-BK III, CH 2 [997a34] 513c-516a; BK IV, CH 1-3 522a-525a; BK VI, CH 1 547b,d-548c; BK VII, CH 11 [1037a13-21] 560d; BK XI, CH 1 587a-588a; CH 3-4 589a-590a; CH 7 592b-593a; BK XII, CH 1 [1069a30-b2] 598b-c; CH 8 [1073b3-7] 603d; BK XIII, CH 3 [1078a9-b6] 609c-610a / *Soul*, BK I, CH 1 [403a25-b19] 632b-d

9 ARISTOTLE: *Parts of Animals*, BK I, CH 1 [639b32-640a10] 162a-b; [641a33-b10] 164b-c

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53 JAMES: *Psychology*, 867a

1b. Science as the discipline of experimental inquiry and the organization of experimental knowledge: the scientific spirit

16 PTOLEMY: *Almagest*, BK I, 5a-6b

28 GILBERT: *Loadstone*, PREF, 1a-2b; BK I, 6a-7a; BK II, 27b-c

28 GALILEO: *Two New Sciences*, FIRST DAY, 171a-d; THIRD DAY, 202d-203a; 207d-208a; 214d

28 HARVEY: *Motion of the Heart*, 267b,d-268d / *On Animal Generation*, 331a-337a,c; 411c-d

30 BACON: *Advancement of Learning*, 13a-c; 16a; 42a-c; 57d-58b / *Novum Organum* 105a-195d passim, esp BK I, APH 9 107d, APH 46 110b-c, APH 49 111a, APH 51 111c, APH 54 111c-d, APH 63-64 113d-114b, APH 67 115d-116a, APH 74 118b, APH 95 126b-c, APH 98-106 126d-128c, APH 126 134b / *New Atlantis*, 210d-214d

31 DESCARTES: *Discourse*, PART VI 60d-67a,c passim

33 PASCAL: *Vacuum*, 356a-357a; 361a / *Weight of Air*, 429a

34 NEWTON: *Principles*, 1b-2a; BK III, RULE III-IV 270b-271b; GENERAL SCHOL, 371b-372a / *Optics*, BK I, 379a; BK III, 542a; 543a-b

34 HUYGENS: *Light*, CH I, 553a-b

35 BERKELEY: *Human Knowledge*, SECT 105-109 433b-434b

35 HUME: *Human Understanding*, SECT V, DIV 36, 465a-d [fn 1]; DIV 38 466b-c; SECT XII 503c-509d passim, esp DIV 116, 504a, DIV 129-130 508a-d

36 SWIFT: *Gulliver*, PART III, 103b-115b

42 KANT: *Pure Reason*, 5a-13d esp 5c-6c; 146a-149d; 248d-250a,c / *Judgement*, 567c-568a

45 LAVOISIER: *Elements of Chemistry*, PREF, 1c-2c; 6d-7a,c; PART III, 87b-c

45 FOURIER: *Theory of Heat*, 175b

45 FARADAY: *Researches in Electricity*, 276d [fn 5]; 318d-319a,c; 332b; 440b,d; 659a; 774d-775a; 848c; 851a-c

46 HEGEL: *Philosophy of History*, PART IV, 361a-b

49 DARWIN: *Descent of Man*, 253d

53 JAMES: *Psychology*, xiva; 3b-4a; 89b-90b; 862a-866a passim; 882a-884b

54 FREUD: *General Introduction*, 463d; 503c-d / *New Introductory Lectures*, 818c-819b; 874a-c; 879b-882b esp 879c, 881b-c, 882b

1b(1) The utility of science: the applications of experimental knowledge in the mastery of nature; machinery and inventions

5 AESCHYLUS: *Prometheus Bound* [442-506] 44c-45a

5 SOPHOCLES: *Antigone* [332-375] 134a-b

11 NICOMACHUS: *Arithmetic*, BK I, 812d-813a

13 VIRGIL: *Georgics*, I [121-146] 40b-41a

14 PLUTARCH: *Marcellus*, 252a-255a

16 COPERNICUS: *Revolutions of the Heavenly Spheres*, BK I, 510b

23 HOBBES: *Leviathan*, PART I, 73b; PART IV, 267a-b

28 GILBERT: *Loadstone*, BK III, 75a-b; BK IV, 85c-89c; BK V, 100c-101d

28 GALILEO: *Two New Sciences*, FIRST DAY, 154c-155b; 160d-161a; SECOND DAY, 191b-193b

28 HARVEY: *Motion of the Heart*, 289d / *Circulation of the Blood*, 305a-d

30 BACON: *Advancement of Learning*, 14b-15a; 34b; 56b / *Novum Organum*, BK I, APH II 107d; APH 81 120b-c; APH 124 133c-d; APH 129 134d-135d; BK II, APH 39 169d-170c; APH 44-51 175d-194c passim / *New Atlantis* 199a-214d esp 210d-214d
31 DESCARTES: *Discourse*, PART VI 60d-67a,c esp 61b-d, 66d-67a,c
33 PASCAL: *Equilibrium of Liquids*, 392b-393a
34 NEWTON: *Optics*, BK I, 412a-423b
34 HUYGENS: *Light*, CH VI, 607a-b
36 SWIFT: *Gulliver*, PART III, 106a-107a
38 ROUSSEAU: *Inequality*, 363b
39 SMITH: *Wealth of Nations*, BK I, 5d-6a; BK V, 308d-309a,c
40 GIBBON: *Decline and Fall*, 661c-663c
41 GIBBON: *Decline and Fall*, 291d-292c; 509d-510a,c
43 MILL: *Representative Government*, 346c-347a / *Utilitarianism*, 452a-b
45 LAVOISIER: *Elements of Chemistry*, PART I, 26c-27a; 41a-44d; 45c-d
45 FOURIER: *Theory of Heat*, 170a; 183b-184a; 213b
45 FARADAY: *Researches in Electricity*, 390b; 433a-440a,c
46 HEGEL: *Philosophy of History*, PART II, 267a-b; PART IV, 347d-348a
47 GOETHE: *Faust*, PART II [6835-6860] 167b-168a
49 DARWIN: *Origin of Species*, 19c-d
50 MARX: *Capital*, 170a-c; 180d-188c esp 181c-184b, 186b-188c; 190d [fn 2]; 239c-d
50 MARX-ENGELS: *Communist Manifesto*, 420d-421a; 421d
54 FREUD: *Civilization and Its Discontents*, 777a-c; 778b-779a; 802a,c

1b(2) The effects of science on human life: the economic and social implications of technology

5 AESCHYLUS: *Prometheus Bound* [442-506] 44c-45a
5 SOPHOCLES: *Antigone* [332-375] 134a-b
30 BACON: *Novum Organum*, BK I, APH II 107d; APH 81 120b-c; APH 124 133c-d; APH 129 134d-135d; BK II, APH 49-51 188b-194c
31 DESCARTES: *Discourse*, PART VI, 61b-d; 66d-67a,c
35 LOCKE: *Human Understanding*, BK IV, CH XII, SECT 10-12 361b-362c passim
35 HUME: *Human Understanding*, SECT I, DIV 5 452d-453b esp 453a-b
36 SWIFT: *Gulliver*, PART II, 78a-b; PART III, 106a-107a
38 MONTESQUIEU: *Spirit of Laws*, BK XXIII, 191b-c
38 ROUSSEAU: *Inequality*, 363a-366d passim, esp 363a-b
39 SMITH: *Wealth of Nations*, BK V, 308d-309a,c
40 GIBBON: *Decline and Fall*, 633c
41 GIBBON: *Decline and Fall*, 291d-292c; 509d-510a,c
42 KANT: *Judgement*, 586a-587a esp 586d-587a
43 CONSTITUTION OF THE U.S.: ARTICLE I, SECT 8 [214-217] 13b
43 MILL: *Utilitarianism*, 452a-b
45 FOURIER: *Theory of Heat*, 170a; 172a; 174b-175a; 184a; 213b
46 HEGEL: *Philosophy of History*, PART IV, 343d-344a
50 MARX: *Capital*, 170a-c; 176d-178d esp 177a; 180d-250c esp 180d-181a, 181d [fn 3], 186b-d, 188b-c, 190d [fn 2], 192d-195c, 197a-200a, 205c-207a, 211a-212b, 214a-215a, 216d-217b, 219d-220a, 239b-241a; 299b-301b esp 299b-d
50 MARX-ENGELS: *Communist Manifesto*, 421d-423a
52 DOSTOEVSKY: *Brothers Karamazov*, BK VI, 158c; 164b-d; BK XI, 311d-312d
53 JAMES: *Psychology*, 866a-b [fn 2]
54 FREUD: *Psycho-Analytic Therapy*, 127a,c / *Civilization and Its Discontents*, 777a-779a / *New Introductory Lectures*, 882d-883a

1c. The issue concerning science and philosophy: the distinction and relation between experimental and philosophical science, or between empirical and rational science

7 PLATO: *Republic*, BK VII, 391b-398c
8 ARISTOTLE: *Prior Analytics*, BK I, CH 30 [46^{a}18-27] 64a / *Heavens*, BK II, CH 13 [293^{a}15-31] 384d; BK III, CH 7 [306^{a}1-18] 397b-c / *Generation and Corruption*, BK I, CH 2 [316^{a}5-14] 411c-d
9 ARISTOTLE: *Parts of Animals*, BK I, CH 1 161a-165d; CH 5 [644^{b}21-645^{a}37] 168c-169b
28 GILBERT: *Loadstone*, PREF, 1a-b; BK II, 27b-c
28 GALILEO: *Two New Sciences*, THIRD DAY, 202d-203a; 214d
28 HARVEY: *On Animal Generation*, 331a-337a,c
30 BACON: *Advancement of Learning*, 43a-d; 48d-49b / *Novum Organum*, PREF 105a-106d; BK I 107a-136a,c esp APH 15 108a, APH 51 111c, APH 63-64 113d-114b, APH 66 114d-115c, APH 95 126b-c, APH 109 128d-129c; BK II, APH 9 140b-c
31 DESCARTES: *Discourse*, PART I, 43d; PART VI 60d-67a,c passim, esp 61d-62c / *Objections and Replies*, 285b-d
34 NEWTON: *Principles*, 1a-2a; BK III, 269a; RULE III-IV 270b-271b; GENERAL SCHOL, 371b-372a / *Optics*, BK III, 542a-543b
35 LOCKE: *Human Understanding*, BK IV, CH III, SECT 26 321b-c; SECT 29 322c-323a; CH VI, SECT 13 335c-d; CH XII, SECT 9-13 360d-362d esp SECT 10 361b-c
35 HUME: *Human Understanding*, SECT IV, DIV 20-SECT V, DIV 38 458a-466c passim; SECT XII, DIV 131-132 508d-509d
39 SMITH: *Wealth of Nations*, BK V, 336b-c
41 GIBBON: *Decline and Fall*, 299a
42 KANT: *Pure Reason*, 5a-13d esp 5c-6c; 93d-94b; 175b [fn 1] / *Fund. Prin. Metaphysic of Morals*, 253a-d; 264d; 271a-c; 277d-279d /

(1. *Conceptions of science.* 1c. *The issue concerning science and philosophy: the distinction and relation between experimental and philosophical science, or between empirical and rational science.*)

Practical Reason, 331a-332d / *Judgement*, 463a-467a; 561c-562a,c; 578a-b

45 LAVOISIER: *Elements of Chemistry*, PREF, 1c-2d

46 HEGEL: *Philosophy of History*, INTRO, 182d-183c

51 TOLSTOY: *War and Peace*, BK V, 197b; EPILOGUE II, 694c-d

53 JAMES: *Psychology*, xiiib-xiva; 89b-90b; 882a-886a passim

54 FREUD: *Narcissism*, 400d / *General Introduction*, 545c-d / *Inhibitions, Symptoms, and Anxiety*, 722a-b / *New Introductory Lectures*, 874a-875b

2. The relation of science to other kinds of knowledge

2a. The relation between science and religion: the conception of sacred theology as a science

7 PLATO: *Republic*, BK IV, 345d-346a / *Theaetetus*, 528c-531a / *Laws*, BK XII, 797c-798b

8 ARISTOTLE: *Heavens*, BK II, CH 1 [284^{b}1-5] 376a / *Metaphysics*, BK I, CH 2 [982^{b}28-983^{a}11] 501a-b

12 LUCRETIUS: *Nature of Things*, BK I [62-158] 1d-3a; BK III [1-93] 30a-31b; BK V [55-90] 61d-62b

14 PLUTARCH: *Nicias*, 435b-d

16 PTOLEMY: *Almagest*, BK I, 5a-6a

18 AUGUSTINE: *Confessions*, BK V, par 3-9 27c-29b / *City of God*, BK VIII, CH 1-12 264b,d-273a; BK XI, CH 2 323a-c; BK XVIII, CH 37 493c-494a; CH 41 495b-496c / *Christian Doctrine*, BK II, CH 40 655b-656a; CH 42 656c-d

19 AQUINAS: *Summa Theologica*, PART I, Q 1 3a-10c; Q 2, A 2, REP 1 11d-12c; Q 12, AA 12-13 60d-62b; Q 14, A 6, REP 2 80a-81c; Q 19, A 5, REP 2 112d-113c; Q 32, A 1 175d-178a; Q 39, AA 7-8 209a-213a; Q 46, A 2 253a-255a; Q 84, A 5 446c-447c

20 AQUINAS: *Summa Theologica*, PART I-II, Q 71, A 6, REP 5 110b-111b; PART II-II, Q 2, AA 3-4 392d-394b; Q 19, A 7, ANS 469d-470c; Q 45 598c-603c esp AA 3-4 600c-601c

23 HOBBES: *Leviathan*, PART I, 65b-66c; 70c; 83b; PART II, 137b-c; 160b; 163a-b; PART III, 165a-c; PART IV, 260b-c; 267a-c; 269b-271c; 274c-d

25 MONTAIGNE: *Essays*, 89c-d; 155a-c; 208d-209c; 212a-d; 238c-239c; 267c-268a; 271b-273b

30 BACON: *Advancement of Learning*, 4c; 19d-20a; 39d-40c; 41b-d; 55b-d; 95d-101c esp 96d-97b / *Novum Organum*, BK I, APH 65 114b-c; APH 79 119d-120a; APH 89 124a-d

31 DESCARTES: *Discourse*, PART I, 43c / *Meditations*, 69a-71a,c / *Objections and Replies*, 125b-126a; 127d; 162c-165d; 168b-169a; 283d-284d

33 PASCAL: *Pensées*, 77 186a; 185-195 205a-210b; 219 212a; 226 212b-213a; 245-253 218b-220a; 265-290 221b-225a; 543 266a; 557-567 272b-273b / *Vacuum*, 355b-356b

34 NEWTON: *Optics*, BK III, 543b-544a

35 HUME: *Human Understanding*, SECT XI, DIV 102 497b-d; SECT XII, DIV 132, 509c

39 SMITH: *Wealth of Nations*, BK V, 336b-337a

40 GIBBON: *Decline and Fall*, 12d-13b; 159a-d; 186a-d; 200d-201a; 204d-205b; 307b-309d esp 308b-309b; 599c; 658b-c; 670b-d

42 KANT: *Pure Reason*, 177b-192d esp 190a-192d; 236b-240b esp 239a-b, 239d-240a / *Judgement*, 560d-561b; 578a-b; 591b-592c; 600d-601c; 607d-609b

43 MILL: *Utilitarianism*, 455a-c

44 BOSWELL: *Johnson*, 102c-d

46 HEGEL: *Philosophy of Right*, PART III, par 270, 87c-d / *Philosophy of History*, INTRO, 158c-160b; 177c-d; PART III, 308c-309d; PART IV, 361b-c; 368d-369a,c

49 DARWIN: *Origin of Species*, 239c-d / *Descent of Man*, 593d

50 MARX: *Capital*, 305a-306b [fn 2]

51 TOLSTOY: *War and Peace*, BK V, 197b; BK VI, 248d-249a; EPILOGUE II, 675a-677b esp 676a-b; 680b-c; 684b-d; 695d-696d

52 DOSTOEVSKY: *Brothers Karamazov*, BK IV, 87c-d; BK VI, 158b-159a

53 JAMES: *Psychology*, 847b-848a

54 FREUD: *New Introductory Lectures*, 874a-881c esp 875b-d, 877d-880d, 881c

2b. The comparison of science with poetry and history

7 PLATO: *Lysis*, 19d-20a / *Protagoras*, 57a-c / *Phaedrus*, 138c-140d / *Ion* 142a-148a,c / *Republic*, BK X, 427c-434c

9 ARISTOTLE: *Poetics*, CH 9 [1451^{a}36-^{b}32] 686a-c

20 AQUINAS: *Summa Theologica*, PART I-II, Q 101, A 2, REP 2 267a-268a

23 HOBBES: *Leviathan*, PART I, 67b-c

25 MONTAIGNE: *Essays*, 41b-42a; 258c-259a

28 HARVEY: *Circulation of the Blood*, 316a-b

30 BACON: *Advancement of Learning*, 32d; 38c-39a; 44c

31 DESCARTES: *Discourse*, PART I, 43a-b

33 PASCAL: *Vacuum*, 355a-356b

35 HUME: *Human Understanding*, SECT I, DIV 5, 452d-453a; SECT VIII, DIV 65, 479b-c; SECT XII, DIV 132, 509c

38 ROUSSEAU: *Inequality*, 333d-334a; 348a,c

40 GIBBON: *Decline and Fall*, 345b-346b

42 KANT: *Judgement*, 526a-527b; 532b-c; 575b-c

46 HEGEL: *Philosophy of History*, INTRO, 157b-158a; 182d-183c

51 TOLSTOY: *War and Peace*, BK XI, 469a-470c; BK XIII, 563a-b; EPILOGUE II, 690a-b; 694d-696d

53 JAMES: *Psychology*, 687a; 863a
54 FREUD: *Interpretation of Dreams*, 239c-240a; 246b-248c / *Civilization and Its Discontents*, 796c

3. The relation of science to action and production

7 PLATO: *Republic*, BK V, 369c-d; BK VI, 375b-383b passim; BK VII, 401b
8 ARISTOTLE: *Topics*, BK VI, CH 6 [145^{a}12-18] 198d / *Metaphysics*, BK VII, CH 7 [1032^{a}26-^{b}29] 555b-d; CH 9 [1034^{a}22-29] 557c; BK IX, CH 2 571c-572a
20 AQUINAS: *Summa Theologica*, PART I-II, Q 57, A 5, REP 3 39a-40a
30 BACON: *Advancement of Learning*, 65d-66a / *Novum Organum*, BK II, APH 1-9 137a-140c
31 DESCARTES: *Discourse*, PART VI, 61b-d; 66d-67a,c
35 HUME: *Human Understanding*, SECT I, DIV 5 452d-453b
42 KANT: *Fund. Prin. Metaphysic of Morals*, 266c-267a / *Practical Reason*, 300d [fn 1] / *Intro. Metaphysic of Morals*, 388d; 390b,d-391a / *Judgement*, 463a-464c; 523d-524a
43 MILL: *Representative Government*, 346c-347a
50 MARX: *Capital*, 170b-c; 190d [fn 2]

3a. The distinction between theoretic and practical science: the character of ethics, politics, economics, and jurisprudence as sciences

7 PLATO: *Charmides*, 7d-8b / *Statesman*, 581a; 604c-608d
8 ARISTOTLE: *Topics*, BK I, CH 14 [105^{b}19-29] 149c; BK VI, CH 6 [145^{a}12-18] 198d / *Heavens*, BK III, CH 7 [306^{a}14-18] 397b-c / *Metaphysics*, BK I, CH 2 [982^{a}30-^{b}4] 500c-d; BK II, CH 1 [993^{b}20 23] 512a; BK III, CH 2 [996^{a}23-36] 514d-515a; BK IV, CH 4 [1008^{b}2-32] 527d-528b; BK VI, CH 1 [1025^{b}19-28] 547d; BK XI, CH 7 [1064^{a}10-19] 592b-c; BK XII, CH 9 [1074^{b}37-1075^{a}2] 605c
9 ARISTOTLE: *Parts of Animals*, BK I, CH 1 [639^{b}32-640^{a}10] 162a-b / *Ethics*, BK I, CH 1-3 339a-340b; CH 7 [1098^{a}20-^{b}8] 343c-344a; BK II, CH 2 [1103^{b}26-1104^{a}9] 349b-c; CH 4 350d-351b; BK III, CH 3 [1112^{a}30-^{b}12] 358b-c; BK VI, CH 2 387d-388b passim; BK X, CH 9 [1180^{b}20-1181^{b}24] 435c-436a,c / *Politics*, BK IV, CH 1 487a-488b
16 PTOLEMY: *Almagest*, BK I, 5a-6a
18 AUGUSTINE: *City of God*, BK VIII, CH 4 266d-267c; CH 8 270a-d; BK XI, CH 25 336b-d
19 AQUINAS: *Summa Theologica*, PART I, Q 1, A 4 5a-b; A 5, ANS 5c-6a; Q 14, A 16 90b-91b; Q 79, A 11 424d-425b; Q 84, A 8, ANS 450b-451b; PART I-II, Q 1, A 6, REP 1-2 614a-c; Q 3, A 5 626b-627a
20 AQUINAS: *Summa Theologica*, PART I-II, Q 56, A 3, ANS 31a-32b; Q 57, A 5, REP 3 39a-40a; Q 94, A 4, ANS 223d-224d; PART III, Q 11, A 1, REP 3 772b-773a; Q 13, A 1, REP 3 780a-781b
23 HOBBES: *Leviathan*, PART I, 60c-61a; 72a-d; 78b-c; 95d-96b; PART II, 158c-d; 164a,c
30 BACON: *Advancement of Learning*, 16d-17a; 40a-c; 42a-c; 46c-47c; 55b-d; 65d-66a; 81d-82a; 86b-c / *Novum Organum*, BK I, APH 3 107b; BK II, APH 9 140b-c
31 DESCARTES: *Rules*, I 1a-2a / *Discourse*, PART I, 44a-b; PART III, 48b-49b; PART VI, 61b-d / *Objections and Replies*, 126a-b; 162d; 206c-207a; 215a-b; 237b-c; 243c-d
35 LOCKE: *Human Understanding*, BK I, CH II, SECT 1 103d-104a; SECT 4 104d-105a; BK III, CH XI, SECT 15-18 303b-304b; BK IV, CH III, SECT 18-20 317d-319c; CH IV, SECT 7-10 325b-326b; CH XII, SECT 8 360c; CH XXI 394d-395a,c
35 HUME: *Human Understanding*, SECT I, DIV 1-5 451a-453b; SECT VIII, DIV 65, 479b-c esp 479c; SECT XI, DIV 104 498b-c; SECT XII, DIV 131-132 508d-509d passim, esp DIV 132, 509c-d
36 SWIFT: *Gulliver*, PART II, 78a-b
38 ROUSSEAU: *Inequality*, 329a-334a,c
41 GIBBON: *Decline and Fall*, 75d-80b passim
42 KANT: *Pure Reason*, 5a-13d; 148c; 190c-191a; 234c-235a / *Fund. Prin. Metaphysic of Morals*, 253a-254b; 260d-261b; 264b-d; 266a-b; 271a-c; 283d-284d / *Practical Reason*, 291a-297c; 314d-321b; 329a-330c; 360d-361d / *Pref. Metaphysical Elements of Ethics*, 366d; 367c / *Intro. Metaphysic of Morals*, 383a-d; 388a-d; 390b,d-391a / *Science of Right*, 397a-b; 398c-399c / *Judgement*, 461a-475d esp 463a-467a, 474b-475d; 578a-b; 596c-598b
43 FEDERALIST: NUMBER 9, 47c-d; NUMBER 31, 103c-104a; NUMBER 37, 119b-120b
43 MILL: *Liberty*, 283d-284b / *Utilitarianism*, 445a-447a passim; 453c
46 HEGEL: *Philosophy of Right*, PREF, 5c-6a; INTRO, par 2-3 9b-12c; PART I, par 101 38b-39a; ADDITIONS, 1 115a-d; 19 119c-d; 120 136b-c
50 MARX: *Capital*, 6a-11d passim, esp 6a-d, 8a-9b, 10b-11b
51 TOLSTOY: *War and Peace*, BK IX, 361d-365c; EPILOGUE II, 680d-681a; 689b
53 JAMES: *Psychology*, 865b-866a
54 FREUD: *Civilization and Its Discontents*, 800c-801b / *New Introductory Lectures*, 883c-d

3b. The distinction between pure and applied science: the relation of science to the useful arts

7 PLATO: *Lysis*, 16c-18b / *Protagoras*, 43b-d / *Ion* 142a-148a,c / *Gorgias*, 261a-262a / *Republic*, BK VII, 392a-398c / *Statesman*, 580d-581a; 581c-582a / *Laws*, BK IV, 684c-685a
8 ARISTOTLE: *Posterior Analytics*, BK II, CH 19 [100^{a}6-9] 136c / *Topics*, BK VI, CH 6 [145^{a}12-18] 198d / *Metaphysics*, BK I, CH 1 499a-500b; BK VII, CH 7 [1032^{a}26-1033^{a}4] 555b-556a; CH

(3. *The relation of science to action and production.* 3b. *The distinction between pure and applied science: the relation of science to the useful arts.*)

9 [1034a21–32] 557c; BK IX, CH 2 571c-572a; CH 5 573a-c; CH 7 [1049a5–12] 574c-d; BK XII, CH 9 [1074b35–1075a2] 605c / *Sense and the Sensible*, CH 1 [436a16–b2] 673b / *Youth, Life, and Breathing*, CH 27 [480b21–31] 726d

9 ARISTOTLE: *Ethics*, BK I, CH 1 339a-b; CH 7 [1098a28–32] 343d; BK VI, CH 3–4 388b-389a

10 HIPPOCRATES: *Ancient Medicine* 1a-9a,c esp par 1–4 1a-2c, par 14 5a-c; par 20–22 7b-8d / *Epidemics*, BK III, SECT III, par 16 59b-c / *Surgery*, par 1 70b / *Articulations*, par 58, 112d / *The Law*, par 4 144d

10 GALEN: *Natural Faculties*, BK II, CH 9, 195c-196a

11 NICOMACHUS: *Arithmetic*, BK I, 812d-813a

12 EPICTETUS: *Discourses*, BK II, CH 17, 158d-159b

13 VIRGIL: *Georgics* 37a-99a passim, esp II [475–515] 65a-66a

14 PLUTARCH: *Marcellus*, 252a-255a

16 COPERNICUS: *Revolutions of the Heavenly Spheres*, BK I, 510b

19 AQUINAS: *Summa Theologica*, PART I, Q 17, A 1, ANS 100d-101d

20 AQUINAS: *Summa Theologica*, PART I-II, Q 57, A 3, ANS and REP 1,3 37b-38a; A 4, ANS and REP 2 38a-39a; A 5, REP 3 39a-40a; Q 95, A 2, ANS 227c-228c

23 HOBBES: *Leviathan*, PART I, 73b

25 MONTAIGNE: *Essays*, 450d-451a; 523c-524b

28 GALILEO: *Two New Sciences*, SECOND DAY, 179c-d

28 HARVEY: *Motion of the Heart*, 289d / *Circulation of the Blood*, 305a-d

29 CERVANTES: *Don Quixote*, PART I, 145c-d

30 BACON: *Advancement of Learning*, 5b-6a; 46b-c; 48d-49b; 50c-51d / *Novum Organum*, BK I, APH 11 107d; APH 81 120b-c; APH 85 121d-122d; APH 129 134d-135d; BK II, APH 1–9 137a-140c esp APH 4 137d-138b; APH 44–52 175d-195d passim / *New Atlantis* 199a-214d esp 210d-214d

31 DESCARTES: *Rules*, 1 1a-2a / *Discourse*, PART VI, 66a-67a,c

34 NEWTON: *Principles*, 1a-b

34 HUYGENS: *Light*, PREF, 551b-552a

35 LOCKE: *Human Understanding*, BK IV, CH XII, SECT 11–12 361c-362c

35 HUME: *Human Understanding*, SECT I, DIV 5 452d-453b

36 SWIFT: *Gulliver*, PART II, 78a-b; PART III, 97b-98a; 106a-112a

39 SMITH: *Wealth of Nations*, BK I, 5b-6a

40 GIBBON: *Decline and Fall*, 633c; 661c-663c

42 KANT: *Pure Reason*, 60a-c / *Fund. Prin. Metaphysic of Morals*, 266c-267a / *Practical Reason*, 300d [fn 1] / *Intro. Metaphysic of Morals*, 388d / *Judgement*, 463a-464c; 523d-524b; 551a-556a

43 MILL: *Representative Government*, 369a

45 FOURIER: *Theory of Heat*, 172b; 181a-b; 184a; 213b

46 HEGEL: *Philosophy of History*, PART I, 218d-219a

50 MARX: *Capital*, 170b-c; 183b-184a; 190d [fn 2]; 239c-d; 299b-d

54 FREUD: *Psycho-Analytic Therapy*, 123a-125a / *Civilization and Its Discontents*, 777a; 778b-d

4. The nature of scientific knowledge

4a. The principles of science: facts, definitions, axioms, hypotheses

7 PLATO: *Meno*, 183b-c / *Republic*, BK VI, 383d-388a; BK VII, 391b-398c esp 397a-398c

8 ARISTOTLE: *Prior Analytics*, BK I, CH 30 63d-64b esp [46a18–27] 64a / *Posterior Analytics*, BK I 97a-122a,c esp CH 1–3 97a-100a, CH 10–11 104d-106b, CH 19–22 111c-115b, CH 32 120c-121b; BK II, CH 9 128a-b; CH 19 136a-137a,c / *Topics*, BK I, CH 1 [100a25–b21] 143a-b; CH 2 [101a34–b4] 144a; BK VI, CH 4 [141a26–142a9] 194c-195c / *Physics*, BK VIII, CH 1 [252a20–b7] 335d-336b / *Heavens*, BK I, CH 5 [271b1–18] 362c-d; BK III, CH 7 [306a1–18] 397b-c / *Generation and Corruption*, BK I, CH 2 [316a5–14] 411c-d / *Metaphysics*, BK I, CH 2 [982a5–b10] 500b-d; BK II, CH 2 [994b16–30] 513a-b; BK III, CH 1 [995a21]–CH 2 [997a14] 513b,d-515c; BK IV, CH 3–7 524b-532b; BK VI, CH 1 [1025b1–1026a6] 547b,d-548a; BK XI, CH 1 [1059a24–26] 587a; CH 4 [1061b17]–CH 7 [1064a28] 589d-592c; BK XIII, CH 4 [1078b18–30] 610b-c / *Soul*, BK I, CH 1 [402a10–403a2] 631b-632a / *Sense and the Sensible*, CH 1 [436a16–b2] 673b / *Youth, Life, and Breathing*, CH 27 [480b21–31] 726d

9 ARISTOTLE: *Ethics*, BK I, CH 7 [1098a35–b8] 343d-344a; BK VI, CH 3 [1139b25–34] 388c; CH 6 389d

11 EUCLID: *Elements*, BK I, DEFINITIONS–COMMON NOTIONS 1a-2a

18 AUGUSTINE: *City of God*, BK VIII, CH 2–10 265b-271d passim

19 AQUINAS: *Summa Theologica*, PART I, Q 1, A 2, ANS and REP 1 4a-c; Q 17, A 3, REP 1–2 102d-103c; Q 32, A 1, REP 2 175d-178a; Q 36, A 3, REP 4 194c-195d; Q 85, A 6, ANS 458d-459c

20 AQUINAS: *Summa Theologica*, PART I-II, Q 94, A 2, ANS 221d-223a; PART II-II, Q 1, A 5, REP 2 383b-384b

23 HOBBES: *Leviathan*, PART I, 56b-d; 58a-61a; PART IV, 268c-d

28 GILBERT: *Loadstone*, PREF, 1b-c

28 GALILEO: *Two New Sciences*, THIRD DAY, 197b-d; 200a-d; 207d-208a; 236d-237a

28 HARVEY: *On Animal Generation*, 334c-d

30 BACON: *Advancement of Learning*, 56c-59c / *Novum Organum*, BK I, APH 63 113d-114a;

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31 DESCARTES: *Rules*, III, 4a-5a; IV, 5c-d; 6d; VIII, 13c-d; IX, 15b-c / *Discourse*, PART II, 47a; PART IV–V, 51b-54c; PART VI, 61d-62c; 66a-b / *Meditations*, I 75a-77c; III, 82a-d; 83c-d; IV, 89b-c; V, 95b-96a / *Objections and Replies*, 123a-d; 125a-b; POSTULATE I–VII 130d-131c; 162a; 226d; 229c-d

31 SPINOZA: *Ethics*, PART II, PROP 40 387a-388b

33 PASCAL: *Pensées*, I 171a-172a / *Geometrical Demonstration*, 430b-434b passim

34 NEWTON: *Principles*, 1a-2a; DEFINITIONS–LAWS OF MOTION 5a-24a; BK III, 269a / *Optics*, BK I, 379a; BK III, 541b-542a

34 HUYGENS: *Light*, CH I, 553a; CH V, 600a-601b

35 LOCKE: *Human Understanding*, BK III, CH XI, SECT 15–18 303b-304b; BK IV, CH VII 337a-344d esp SECT I 337a, SECT 10–11 339b-342d; CH XII, SECT 1–6 358c-360a; SECT 12, 362b-c; SECT 15 363a-b

35 HUME: *Human Understanding*, SECT I, DIV 2 451b-c

42 KANT: *Pure Reason*, 68a-69c; 179d-182b; 211c-218d esp 215d-216d / *Practical Reason*, 293c-294b; 302d-303b; 330d-331a / *Science of Right*, 457a-b

43 FEDERALIST: NUMBER 31, 103c-104a

43 MILL: *Utilitarianism*, 445a-447a passim; 461c-464d passim

45 LAVOISIER: *Elements of Chemistry*, PREF, 1b-c

45 FOURIER: *Theory of Heat*, 169b-170a; 172a

46 HEGEL: *Philosophy of Right*, INTRO, par 2 9b-10a; PART III, par 279, 93b / *Philosophy of History*, INTRO, 157b-158a

53 JAMES: *Psychology*, xiiib; 862a-864a passim

54 FREUD: *Narcissism*, 400d-401a / *Instincts*, 412a-b

4b. The objects of science: the essential and necessary; the sensible and measurable

7 PLATO: *Republic*, BK V, 370d-373c; BK VI–VII, 383d-398c esp BK VII, 391b-398c / *Philebus*, 633a-635a esp 634b-635a

8 ARISTOTLE: *Prior Analytics*, BK I, CH 13 [32^{b}4–23] 48b-d / *Posterior Analytics*, BK I, CH 4–9 100a-104d; CH 30–31 119d-120c; CH 33 121b-122a,c; BK II, CH 1–2 122b,d-123c; CH 19 136a-137a,c / *Metaphysics*, BK I, CH 1–2 499a-501c; BK III, CH 2 [996^{a}18–997^{a}34] 514d-516a; BK VI, CH 1–2 547b,d-549c; BK XI, CH 8 593a-d / *Soul*, BK I, CH 1 [402^{a}10–403^{a}2] 631b-632a

9 ARISTOTLE: *Parts of Animals*, BK I 161a-169d esp CH 5 [644^{b}21–645^{a}37] 168c-169b / *Ethics*, BK VI, CH 3 [1139^{b}18–25] 388b-c; BK X, CH 9 [1180^{b}13–23] 435b-c

11 NICOMACHUS: *Arithmetic*, BK I, 811a-812a

19 AQUINAS: *Summa Theologica*, PART I, Q 57, A 3, ANS 297b-298a; Q 86, A 4, ANS 463d-464d

20 AQUINAS: *Summa Theologica*, PART I-II, Q 84, A 1, REP 3 174b-175a

23 HOBBES: *Leviathan*, PART I, 60a-b

28 GALILEO: *Two New Sciences*, THIRD DAY, 202d-203a

30 BACON: *Advancement of Learning*, 42a-c; 43a-c; 45a-46a / *Novum Organum*, BK I, APH 51 111c; BK II, APH 2–20 137b-153a

31 DESCARTES: *Rules*, II 2a-3b; VI, 8d-9a; XIV, 30d-32a / *Discourse*, PART II, 47b-d; PART V, 54c; 55a-b

31 SPINOZA: *Ethics*, PART II, PROP 37–47 386b-391a

34 NEWTON: *Principles*, 1a-2a; BK III, RULE III 270b-271a

35 LOCKE: *Human Understanding*, BK III, CH VI 268b-283a passim, esp SECT 9 270d-271a; BK IV, CH II, SECT 9–13 311b-312b; CH III, SECT 29 322c-323a; CH VI, SECT 13 335c-d

35 BERKELEY: *Human Knowledge*, SECT 106 433c-d

35 HUME: *Human Understanding*, SECT IV, DIV 20–21 458a-c; SECT XII, DIV 131–132 508d-509d

42 KANT: *Pure Reason*, 46d-47c / *Intro. Metaphysic of Morals*, 387a-d / *Judgement*, 550a-551a,c; 562d-563b; 564a-c; 581a-582c; 603d-604b

45 LAVOISIER: *Elements of Chemistry*, PREF, 1b

45 FOURIER: *Theory of Heat*, 169a; 177a; 183a-184a

45 FARADAY: *Researches in Electricity*, 851b-c

49 DARWIN: *Origin of Species*, 239c

53 JAMES: *Psychology*, 89b-90b; 647b-648b; 876a-b; 882a-884b

54 FREUD: *New Introductory Lectures*, 874a-b; 879c-d

4c. The role of cause in science: explanation and description as aims of scientific inquiry

7 PLATO: *Meno*, 188b-189a / *Phaedo*, 240d-246c / *Republic*, BK VI–VII, 383d-398c / *Timaeus*, 455a-b

8 ARISTOTLE: *Posterior Analytics* 97a-137a,c passim, esp BK II, CH 1–2 122b,d-123c, CH 9 128a-b; CH 11 128d-129d, CH 16–18 134b-136a / *Physics* BK II, CH 3 [194^{b}16–23] 271a-b; CH 7 [198^{a}22–24] 275b; BK IV, CH 4 [211^{a}6–11] 290a / *Metaphysics*, BK I, CH 1 [981^{a}24–982^{a}1] 499c-500b; CH 2 [982^{a}28–30] 500c; BK II, CH 2 [994^{b}16–31] 513a-b; BK III, CH 2 [996^{a}18–^{b}26] 514d-515b; BK VI, CH 1 [1025^{b}1–18] 547b,d; BK VII, CH 17 565a-566a,c; BK VIII, CH 4 568d-569b; BK XI, CH 7 [1063^{b}36–1064^{a}9] 592b

9 ARISTOTLE: *Parts of Animals*, BK I, CH 1 [639^{b}10–642^{b}4] 161d-165d esp [642^{a}1–30] 165a-c / *Gait of Animals*, CH 1 243a-b / *Generation of Animals*, BK I, CH 1 [715^{a}1–18] 255a-b; BK IV, CH 1 [765^{a}35–^{b}5] 306c; BK V, CH 1 [778^{b}5–10] 320d / *Ethics*, BK I, CH 7 [1098^{a}35–^{b}8] 343d-344a

10 GALEN: *Natural Faculties*, BK I, CH 4 169a

12 LUCRETIUS: *Nature of Things*, BK V [509–533] 67d-68a; BK VI [703–711] 89c-d

(4. The nature of scientific knowledge. 4c. The role of cause in science: explanation and description as aims of scientific inquiry.)

16 COPERNICUS: *Revolutions of the Heavenly Spheres*, 505a-506a
16 KEPLER: *Epitome*, BK IV, 958b-960a
19 AQUINAS: *Summa Theologica*, PART I, Q 19, A 5, ANS and REP 2 112d-113c; Q 32, A 1, REP 2 175d-178a; Q 57, A 3, ANS 297b-298a; Q 86, A 4, ANS 463d-464d
20 AQUINAS: *Summa Theologica*, PART II-II, Q 9, A 2, ANS 424b-425a
23 HOBBES: *Leviathan*, PART I, 60a-b; PART IV, 267a-c
28 GILBERT: *Loadstone*, BK I, 5a-7a passim; BK II, 27b-c
28 GALILEO: *Two New Sciences*, THIRD DAY, 202a-203a; FOURTH DAY, 252a-b
28 HARVEY: *Circulation of the Blood*, 319c / *On Animal Generation*, 335c-336c; 393b-c; 425a
30 BACON: *Advancement of Learning*, 42a-c; 43a-c; 45a-46a; 46c-47c / *Novum Organum*, BK I, APH 48 110d-111a; APH 99 127b-c; APH 121 132b-d; BK II, APH 2-3 137b-d / *New Atlantis*, 210d
31 DESCARTES: *Rules*, IX, 15b-d / *Discourse*, PART VI, 61d-62c; 66a-b / *Meditations*, III, 84a-87a; IV, 90a-b / *Objections and Replies*, AXIOM I 131d; 158b-162a; 215a-b
31 SPINOZA: *Ethics*, PART I, AXIOM 4 355d; PROP 8, SCHOL 2 356d-357d; APPENDIX 369b-372d; PART IV, PREF 422b,d-424a
34 NEWTON: *Principles*, 1b-2a; DEF VIII 7b-8a; BK III, RULE I-II 270a; GENERAL SCHOL, 371b-372a / *Optics*, BK III, 541b-542a; 543a-544a
34 HUYGENS: *Light*, CH I, 553a-b
35 LOCKE: *Human Understanding*, BK IV, CH III, SECT 9-17 315c-317c; SECT 28-29 322a-323a; CH VI, SECT 5-15 332b-336d passim
35 BERKELEY: *Human Knowledge*, SECT 29-33 418c-419a esp SECT 32 418d-419a; SECT 50-53 422c-423a passim; SECT 60-66 424b-426a esp SECT 65-66 425d-426a; SECT 102-109 432d-434b
35 HUME: *Human Understanding*, SECT I, DIV 9 454c-455a; SECT IV, DIV 21-22 458b-459a; DIV 26 460b-c; SECT VII, DIV 57, 475d-476b [fn 2]; DIV 60, 477a; SECT VIII, DIV 67 480c-481a; DIV 70, 481d-482a; SECT IX, DIV 82 487b-c; SECT XII, DIV 132 509a-d esp 509b-c
39 SMITH: *Wealth of Nations*, BK V, 335b-336d
42 KANT: *Pure Reason*, 46d-47c / *Fund. Prin. Metaphysic of Morals*, 285c-286a / *Practical Reason*, 311d-314d / *Judgement*, 557c-558b; 564a-c; 581a-582c
45 LAVOISIER: *Elements of Chemistry*, PART I, 9d-10b
45 FOURIER: *Theory of Heat*, 169a; 183a-184a
45 FARADAY: *Researches in Electricity*, 298d; 440b,d
46 HEGEL: *Philosophy of History*, INTRO, 157b-158a
49 DARWIN: *Origin of Species*, 239c-240d
51 TOLSTOY: *War and Peace*, BK IX, 344a-b; BK XI, 470a-c; BK XIII, 563a-b; EPILOGUE I, 650b-c; EPILOGUE II, 694d-696d
53 JAMES: *Psychology*, 69b-70a; 89b-90b; 324b; 742a-b; 745b; 824b-825a; 882a-884b passim; 885b-886a
54 FREUD: *Instincts*, 412a / *General Introduction*, 454b-c; 484a

4d. **The generality of scientific formulations: universal laws of nature**

7 PLATO: *Republic*, BK VI, 386d-388a; BK VII, 391b-398c
8 ARISTOTLE: *Posterior Analytics*, BK I, CH 4-5 100a-102b; CH 11 [77^{a}5-9] 105d-106a; CH 13-14 107c-109a; CH 24 116b-118a; CH 31 120a-c; BK II, CH 19 136a-137a,c / *Metaphysics*, BK I, CH 2 [982^{a}21-25] 500c; BK VI, CH 1 [1026^{a}23-33] 548b-c; BK VII, CH 15 563c-564c; BK XI, CH 7 [1064^{b}6-13] 592d-593a
9 ARISTOTLE: *Ethics*, BK X, CH 9 [1180^{b}13-23] 435b-c / *Rhetoric*, BK I, CH 2 [1356^{b}28-35] 596b-c
19 AQUINAS: *Summa Theologica*, PART I, Q 84, A 1, ANS 440d-442a
28 GALILEO: *Two New Sciences*, THIRD DAY, 197a-b; 200a-b; 202d-203a; FOURTH DAY, 238a
28 HARVEY: *On Animal Generation*, 332a-334d esp 334c-d
30 BACON: *Advancement of Learning*, 98c / *Novum Organum*, BK I, APH 17-25 108a-d; APH 103-106 127d-128c; APH 130 135d-136a,c; BK II, APH 5 138b-139a; APH 33 161b-d
31 DESCARTES: *Discourse*, PART II, 47c-d; PART V, 54c; 55b / *Objections and Replies*, 167c-d
31 SPINOZA: *Ethics*, PART III, 395a-d
33 PASCAL: *Vacuum*, 358a-b
34 NEWTON: *Principles*, 1a-2a; BK III, RULES 270a-271b; PROP 7 281b-282b; GENERAL SCHOL, 371b-372a / *Optics*, BK III, 541b-542a; 543a-b
34 HUYGENS: *Light*, PREF, 551b-552a
35 LOCKE: *Human Understanding*, BK IV, CH I, SECT 9, 308d-309b; CH III, SECT 14 316b-d; SECT 28-29 322a-323a; SECT 31 323c-d; CH VI, SECT 4-16 331d-336d passim; CH XII, SECT 7-13 360b-362d passim
35 BERKELEY: *Human Knowledge*, INTRO, SECT 12 408a-b; SECT 15-16 409a-d; SECT 62-66 425a-426a; SECT 103-109 433a-434b passim; SECT 126-128 438b-d
35 HUME: *Human Understanding*, SECT I, DIV 9 454c-455a; SECT IV, DIV 26 460b-c; SECT XII, DIV 132, 509c
42 KANT: *Pure Reason*, 195d-200a esp 197b-198a; 211c-218d / *Judgement*, 562d-563b; 564a-c; 581a-582c
45 FOURIER: *Theory of Heat*, 169a-b; 173b; 175b; 177a; 184a

45 FARADAY: *Researches in Electricity*, 391a-d; 398c; 406b; 440b,d; 595a; 603d; 655c; 670a-b; 673b,d-674a; 851b-c; 855a,c
46 HEGEL: *Philosophy of Right*, ADDITIONS, 120 136b-c / *Philosophy of History*, INTRO, 182d-183c; PART IV, 361a-b
49 DARWIN: *Origin of Species*, 98c
51 TOLSTOY: *War and Peace*, BK XI, 469a-470c; BK XIII, 563a-b; EPILOGUE II, 693d-696d
53 JAMES: *Psychology*, 524a; 861b-886a passim

4e. The certitude and probability or the finality and tentativeness of scientific conclusions: the adequacy of scientific theories

7 PLATO: *Republic*, BK VI, 386d-388a; BK VII, 397a-398c / *Timaeus*, 447b-d
8 ARISTOTLE: *Prior Analytics*, BK I, CH 13 [32^{b}4-23] 48b-d / *Posterior Analytics*, BK I, CH 2 97d-99a; CH 6 102b-103c; CH 31 120a-c; CH 33 121b-122a,c / *Heavens*, BK II, CH 5 [287^{b}28-288^{a}2] 379b-c; CH 13 [293^{a}15-31] 384d; BK III, CH 7 [306^{a}1-18] 397b-c
9 ARISTOTLE: *Ethics*, BK I, CH 3 [1094^{b}11-27] 339d-340a; CH 7 [1098^{a}20-^{b}2] 343c-d; BK II, CH 2 [1103^{b}26-1104^{a}9] 349b-c; BK VI, CH 3 388b-c
16 PTOLEMY: *Almagest*, BK III, 83a; BK XIII, 429a-b
16 COPERNICUS: *Revolutions of the Heavenly Spheres*, 505a-506a
16 KEPLER: *Epitome*, BK IV, 888b-890a; 929a
19 AQUINAS: *Summa Theologica*, PART I, Q 32, A 1, REP 2 175d-178a; Q 57, A 3, ANS 297b-298a; Q 85, A 6 458d-459c; Q 86, A 4, ANS 463d-464d
20 AQUINAS: *Summa Theologica*, PART II-II, Q 4, A 8 409a-d; Q 9, A 2, ANS 424b-425a
23 HOBBES: *Leviathan*, PART I, 65c-d; 71c; PART IV, 267a-b
28 GALILEO: *Two New Sciences*, THIRD DAY, 200a-b; 202d-203a
30 BACON: *Advancement of Learning*, 14b-15a; 47d-48d / *Novum Organum*, BK II, APH 19-20 150c-153a
31 DESCARTES: *Rules*, I-XII 1a-25a passim / *Discourse*, PART II, 47a-48b; PART IV 51b-54b; PART VI, 62b-c; 66a-b / *Meditations*, I, 76c; III, 82a-d; 83c-d; IV, 89b-c; V, 95b-96a / *Objections and Replies*, 123a-d; 125a-b; POSTULATE I-VII 130d-131c; 143c; 162a; 226d; 229c-d / *Geometry*, BK II, 304b
31 SPINOZA: *Ethics*, PART II, DEF 4 373b; PROP 37-47 386b-391a
32 MILTON: *Paradise Lost*, BK VIII [66-84] 233b-234a
33 PASCAL: *Vacuum*, 357a-358b; 365b-366a / *Geometrical Demonstration*, 430b-434b
34 NEWTON: *Optics*, BK III, 543a-b
34 HUYGENS: *Light*, PREF, 551b-552a
35 LOCKE: *Human Understanding*, BK IV, CH II, SECT 2-13 309d-312b passim; CH III, SECT 14 316b-d; SECT 26 321b-c; SECT 29 322c-323a; CH VI, SECT 5-16 332b-336d passim, esp SECT 13 335c-d; CH XII, SECT 7-14 360b-363a passim, esp SECT 8 360c, SECT 10 361b-c
35 BERKELEY: *Human Knowledge*, SECT 58-59 424a-b
35 HUME: *Human Understanding*, SECT I, DIV 8, 454b-c; SECT IV, DIV 20-21 458a-c; DIV 26 460b-c; SECT IX, DIV 82 487b-c; SECT XII, DIV 129-132 508a-509d
36 SWIFT: *Gulliver*, PART III, 118a-119a
38 ROUSSEAU: *Inequality*, 348a,c
42 KANT: *Pure Reason*, 129c-130a; 133c-134d; 194b-c; 218d-222b esp 221c-222b; 227a-230c; 248d-250a,c / *Practical Reason*, 311d-313d; 335b-c / *Intro. Metaphysic of Morals*, 387a-d / *Judgement*, 603a-b
43 FEDERALIST: NUMBER 31, 103c-104a
43 MILL: *Liberty*, 277a; 283d-284b / *Utilitarianism*, 445a-447a passim
45 LAVOISIER: *Elements of Chemistry*, PART I, 9d-10a; 32d-33a
45 FOURIER: *Theory of Heat*, 181b
45 FARADAY: *Researches in Electricity*, 273b [fn 2]; 298d; 391a-c; 774d-775a; 850b,d-851c
49 DARWIN: *Origin of Species*, 42a; 239c / *Descent of Man*, 590a
53 JAMES: *Psychology*, 89b-90b; 647b-648b esp 648a; 655a-659a passim, esp 655a, 658b-659a; 863a-866a esp 863a, 864a; 882a-884b passim
54 FREUD: *General Introduction*, 463c-d; 484c-485a; 546a-b / *Beyond the Pleasure Principle*, 661c-662b esp 661d / *New Introductory Lectures*, 818c-819b

5. Scientific method

5a. The role of experience: observation and experiment

7 PLATO: *Republic*, BK VI, 386d-388a; BK VII, 391b-398c / *Timaeus*, 455a-c
8 ARISTOTLE: *Prior Analytics*, BK I, CH 30 63d-64b / *Posterior Analytics*, BK I, CH I [71^{a}1-8] 97a; CH 3 [72^{b}25-33] 99c; CH 18 111b-c; CH 31 120a-c; BK II, CH 2 [90^{a}24-30] 123b-c; CH 7 [92^{a}34-^{b}1] 126b; CH 19 136a-137a,c / *Topics*, BK I, CH 12 148d; CH 18 [108^{b}7-12] 152d; BK VIII, CH I [155^{b}35-156^{a}7] 211d-212a; [156^{b}10-18] 212c-d / *Physics*, BK I, CH I 259a-b; BK VIII, CH I [252^{a}20-^{b}7] 336a-b / *Heavens*, BK I, CH 3 [270^{b}1-24] 361c-362a; BK II, CH 13 [293^{a}15-31] 384d; BK III, CH 7 [306^{a}1-18] 397b-c / *Generation and Corruption*, BK I, CH 2 [316^{a}5-14] 411c-d / *Metaphysics*, BK I, CH I 499a-500b; BK XI, CH 7 [1064^{a}4-9] 592b
9 ARISTOTLE: *History of Animals*, BK I, CH 6 [491^{a}5-15] 12c-d; BK III, CH 2 [511^{b}10-25] 35a-b / *Parts of Animals*, BK III, CH 4 [666^{a}7-10] 193d / *Generation of Animals*, BK III, CH 10 [760^{b}27-35] 301d-302a / *Ethics*, BK X, CH 9 [1180^{b}20-1181^{b}24] 435c-436a,c
10 GALEN: *Natural Faculties*, BK I, CH 13 173d-177a; BK III, CH 2 199d-200a

(5. *Scientific method.* 5a. *The role of experience: observation and experiment.*)

19 AQUINAS: *Summa Theologica*, PART I, Q 84, A 4, ANS 444d-446b
21 DANTE: *Divine Comedy*, PARADISE, II [46-105] 108b-d
23 HOBBES: *Leviathan*, PART I, 60a-d; PART II, 129a-b; PART IV, 267a-b
25 MONTAIGNE: *Essays*, 285c-286a; 377a-d; 516b-c
28 GILBERT: *Loadstone*, PREF, 1a-b; BK I, 6a-7a; BK II, 27b-c; BK IV, 85b-c
28 GALILEO: *Two New Sciences*, FIRST DAY, 131a-138b passim; THIRD DAY, 203d-205b; 207d-208c
28 HARVEY: *Motion of the Heart*, 267b,d-274b esp 268c-d, 273c; 285c-d; 286b-304a,c esp 286b-c, 295d-296a / *Circulation of the Blood*, 320b; 322d-323d; 324c-d / *On Animal Generation*, 331b-335c; 411c-d; 451b-d; 473a
30 BACON: *Advancement of Learning*, 16a; 42a-c; 43d-44c / *Novum Organum* 105a-195d esp BK I, APH 8 107c-d, APH 19 108b, APH 22 108c, APH 50 111b, APH 54 111c-d, APH 70 116b-117a, APH 82-83 120d-121b, APH 95-103 126b-128a, APH 121 132b-d, BK II, APH 10-15 140c-149a, APH 36 164a-168d, APH 38-43 169c-175c / *New Atlantis*, 210d-214d
31 DESCARTES: *Rules*, II, 2d-3a; VIII, 12b-13a; XII, 22c-23a; XIV, 28a-b / *Discourse*, PART I, 44a-c; PART III, 50b-51a; PART V, 56a-59d; PART VI 60d-67a,c / *Meditations*, I 75a-77c
33 PASCAL: *Vacuum*, 355a-358b / *Weight of Air*, 429a
34 NEWTON: *Principles*, BK III, RULE III-IV 270b-271b / *Optics*, BK I, 379a; BK III, 543a-b
34 HUYGENS: *Light*, CH I, 553a
35 LOCKE: *Human Understanding*, BK IV, CH III, SECT 14 316b-d; SECT 16 317a-c; SECT 25-29 321a-323a passim; CH XII, SECT 9-14 360d-363a
35 BERKELEY: *Human Knowledge*, SECT 30 418c; SECT 58-59 424a-b; SECT 104 433a-b; SECT 107, 434a
35 HUME: *Human Understanding*, SECT IV, DIV 23-27 459a-460d; SECT VII, DIV 48, 471b-c; SECT VIII, DIV 65, 479b-c; SECT XII, DIV 132 509a-d
38 ROUSSEAU: *Inequality*, 329d-330b
42 KANT: *Pure Reason*, 5c-6c; 185a-c; 227b-c / *Fund. Prin. Metaphysic of Morals*, 253a-c; 254b-c; 263b-c / *Practical Reason*, 329d-330c / *Judgement*, 562d-563b
43 MILL: *Utilitarianism*, 446a; 461c-464d passim, esp 463c-d
45 LAVOISIER: *Elements of Chemistry*, PREF, 1c-2b; 6d-7a,c; PART I, 23c; PART III, 87b-c
45 FOURIER: *Theory of Heat*, 175b; 181b; 184a
45 FARADAY: *Researches in Electricity*, 385b-c; 440b,d; 467a-b; 542b-c; 607a,c; 659a; 774d
46 HEGEL: *Philosophy of History*, PART IV, 361a-b
49 DARWIN: *Origin of Species*, 12b-c; 14c-18a passim; 136b-139a passim, esp 137b-c; 149d-150a
50 MARX: *Capital*, 6c-d
53 JAMES: *Psychology*, 56a-66a esp 56a-57b, 61b-64a; 122b-127b esp 125b-127b; 265a-268a; 341a-344b; 352b-355b passim; 538a; 677b; 862a-865a esp 864a, 865a
54 FREUD: *Interpretation of Dreams*, 291d-292a / *Narcissism*, 400d-401a / *General Introduction*, 488a-b; 545c-d / *New Introductory Lectures*, 815a-b; 879c

5b. Techniques of exploration and discovery: the ascertainment of fact

10 GALEN: *Natural Faculties*, BK I, CH 13 173d-177a
16 KEPLER: *Epitome*, BK IV, 907b-908b
28 GILBERT: *Loadstone*, BK II, 27c-d
28 GALILEO: *Two New Sciences*, FIRST DAY, 131a-138b; 148c-149c; 157b-177a,c passim; THIRD DAY, 203d-205b
28 HARVEY: *Motion of the Heart*, 273c-d; 280c-d; 285c-d / *On Animal Generation*, 331b-333d; 335c-336c
30 BACON: *Advancement of Learning*, 13d-14b; 15d-16a; 30d-31a; 34b; 56c-60a esp 57d-58b, 59c-60a / *Novum Organum*, BK I, APH 50 111b; APH 64 114b; APH 70 116b-117a; APH 82-83 120d-121b; APH 98-106 126d-128c; APH 109 128d-129c; APH 113 130a-b; APH 121 132b-d; BK II, APH 4 137d-138b; APH 10 140c-d; APH 21 153a-b; APH 39 169d-170c; APH 45 176a-177c
33 PASCAL: *Vacuum*, 356a-365b / *Great Experiment* 382a-389b / *Equilibrium of Liquids* 390a-403a passim, esp 390a-392a
34 NEWTON: *Principles*, BK III, RULE I-II 270a; RULE IV 271b / *Optics*, BK I, 379a; 386b-455a; BK II, 457a-470a; BK II-III, 496a-516a; BK III, 543a-b
35 LOCKE: *Human Understanding*, BK III, CH VI, SECT 46-47 281d-282b; BK IV, CH XII, SECT 9-13 360d-362d
42 KANT: *Intro. Metaphysic of Morals*, 387a-b
45 LAVOISIER: *Elements of Chemistry*, PART I, 10d-12d; 17a-20d; 22c-24a; 29d-33b
45 FOURIER: *Theory of Heat*, 169a; 175b; 184a
45 FARADAY: *Researches in Electricity*, 440b,d; 607a,c; 659a; 774d
49 DARWIN: *Origin of Species*, 136b-139a passim
53 JAMES: *Psychology*, 385a-b; 677b
54 FREUD: *General Introduction*, 545d-546b / *New Introductory Lectures*, 881b-c

5c. The use of mathematics in science: calculation and measurement

7 PLATO: *Republic*, BK VII, 391b-398c / *Timaeus*, 449b-450a; 453b-454a
8 ARISTOTLE: *Physics*, BK II, CH 2 [194^{a}7-11] 270b-c / *Meteorology*, BK III, CH 3 477a-478a; CH 5 480a-481c / *Metaphysics*, BK III, CH 2 [997^{b}27-33] 516c

18 AUGUSTINE: *Confessions*, BK V, par 3–6 27c-28c / *Christian Doctrine*, BK II, CH 29 650d-651c
20 AQUINAS: *Summa Theologica*, PART II–II, Q 9, A 2, REP 3 424b-425a
23 HOBBES: *Leviathan*, PART I, 58a-c; PART IV, 268c-d
28 GALILEO: *Two New Sciences*, FIRST DAY, 131d-132a; 133b; 136d-137c; 164a-166c; SECOND DAY-FOURTH DAY 178a-260a,c esp THIRD DAY, 207d-208c, FOURTH DAY, 252a-b
30 BACON: *Advancement of Learning*, 37b-c; 46b-c / *Novum Organum*, BK II, APH 44–48 175d-188b
31 DESCARTES: *Discourse*, PART I, 43b-c
34 NEWTON: *Principles* 1a-372a esp 1a-2a, DEF VIII 7b-8a, BK I, PROP 69, SCHOL 130b-131a, BK III, 269a
35 HUME: *Human Understanding*, SECT IV, DIV 27 460c-d
36 SWIFT: *Gulliver*, PART II, 78b
45 LAVOISIER: *Elements of Chemistry*, PART I, 14a-c; 33b-36a; 41a-44d; PART III, 96b-103b
45 FOURIER: *Theory of Heat*, 172a-173b; 175b; 177a; 182b-185b; 196a-251b passim
45 FARADAY: *Researches in Electricity*, 316b-318c; 366d-371d; 444a-451a; 465d-467a,c; 768d-773d; 778b,d-793c; 831b-c
51 TOLSTOY: *War and Peace*, BK XI, 469a-d; BK XIV, 589c-590c; EPILOGUE II, 695b-c
53 JAMES: *Psychology*, 348a-359a esp 351a-352a; 882a-884b esp 884a

5d. Induction and deduction in the philosophy of nature and natural science

8 ARISTOTLE: *Prior Analytics*, BK I, CH 30 [46^{a}18–28] 64a; BK II, CH 23 [68^{b}15–29] 90b-c / *Posterior Analytics*, BK I, CH 1 [71^{a}1–11] 97a; CH 3 [72^{b}25–33] 99c; CH 18 111b-c; BK II, CH 7 [92^{a}34–^{b}1] 126b / *Topics*, BK I, CH 12 148d; CH 18 [108^{b}7–12] 152d; BK VIII, CH 1 [155^{b}35–156^{a}7] 211d-212a; [156^{b}10–18] 212c-d; CH 14 [164^{a}11–16] 222d / *Physics*, BK I, CH 1 259a-b; BK VIII, CH 1 [252^{a}20–^{b}7] 335d-336b / *Heavens*, BK III, CH 7 [306^{a}6–18] 397b-c / *Generation and Corruption*, BK I, CH 2 [316^{a}5–14] 411c-d / *Metaphysics*, BK XI, CH 7 [1064^{a}4–9] 592b; BK XIII, CH 4 [1078^{b}18–30] 610b-c / *Soul*, BK I, CH 1 [402^{a}10–403^{a}2] 631b-632a
9 ARISTOTLE: *Generation of Animals*, BK III, CH 10 [760^{b}29–32] 301d-302a / *Ethics*, BK I, CH 4 [1095^{a}30–^{b}8] 340c; CH 7 [1098^{a}35–^{b}3] 343d / *Rhetoric*, BK I, CH 2 [1356^{a}36–1358^{a}35] 596a-598b; BK II, CH 20–22 640d-645a
10 HIPPOCRATES: *Ancient Medicine*, par 1–8 1a-3b
10 GALEN: *Natural Faculties*, BK III, CH 1–2, 199c-d
16 COPERNICUS: *Revolutions of the Heavenly Spheres*, 505a-506a
19 AQUINAS: *Summa Theologica*, PART I, Q 32, A 1, REP 2 175d-178a
28 GALILEO: *Two New Sciences*, THIRD DAY, 207d-208c; FOURTH DAY, 252a-b
28 HARVEY: *Motion of the Heart*, 267b,d-268a; 280c; 285c-d; 295d-296a / *On Animal Generation*, 332a-334d esp 334c-d; 336b-d; 383d
30 BACON: *Advancement of Learning*, 42a-c; 57b-58b; 61d; 96d-97a / *Novum Organum* 105a-195d esp PREF 105a-106d, BK I, APH 11–26 107d-108d, APH 69 116a-b, APH 103-106 127d-128c, BK II, APH 10–52 140c-195d
31 DESCARTES: *Rules*, II, 2d-3a; III, 4c-d; VII 10b-12a; XI 17b-18b; XII, 23b-c / *Discourse*, PART VI, 61d-62c / *Objections and Replies*, 167c-d
33 PASCAL: *Vacuum*, 365b-371a
34 NEWTON: *Principles*, BK III, RULE IV 271b; GENERAL SCHOL, 371b-372a / *Optics*, BK III, 543a-b
34 HUYGENS: *Light*, PREF, 551b-552a
35 LOCKE: *Human Understanding*, BK IV, CH XII, SECT 12–13 362a-d
35 BERKELEY: *Human Knowledge*, INTRO, SECT 15–16 409a-d; SECT 107–108, 434a
35 HUME: *Human Understanding*, SECT I, DIV 9 454c-455a; SECT III, DIV 19, 458a; SECT IV, DIV 26 460b-c; SECT VIII, DIV 65, 479b-c; SECT IX, DIV 82 487b-c; SECT XII, DIV 131–132 508d-509d passim
42 KANT: *Pure Reason*, 195d-197b
43 MILL: *Utilitarianism*, 445a-447b passim; 475b,d [fn 1]
45 FARADAY: *Researches in Electricity*, 659a; 774d-775a
51 TOLSTOY: *War and Peace*, EPILOGUE II, 690b
53 JAMES: *Psychology*, 674a-675b esp 675b

5e. The use of hypotheses: prediction and verification

7 PLATO: *Phaedo*, 242b-243c / *Republic*, BK VI, 383d-388a esp 386d-388a; BK VII, 391b-398c esp 397a-398c / *Timaeus*, 447a-d; 462b-c
8 ARISTOTLE: *Heavens*, BK II, CH 5 379b-c; BK III, CH 7 [306^{a}1–18] 397b-c / *Meteorology*, BK I, CH 7 [344^{a}5–9] 450b / *Metaphysics*, BK XII, CH 6 [1071^{b}12]–CH 7 [1072^{a}22] 601b-602b; CH 8 603b-605a
10 HIPPOCRATES: *Ancient Medicine*, par 1–2 1a-d
12 LUCRETIUS: *Nature of Things*, BK V [509–533] 67d-68a; BK VI [703–711] 89c-d
16 PTOLEMY: *Almagest*, BK III, 83a; BK IX, 273a; BK XIII, 429a-b
16 COPERNICUS: *Revolutions of the Heavenly Spheres*, 505a-506a; 507a-508a
16 KEPLER: *Epitome*, BK IV, 852a-853a; 888b-890a; 911a-b; 929a; BK V, 964b
19 AQUINAS: *Summa Theologica*, PART I, Q 32, A 1, REP 2 175d-178a; Q 86, A 4, ANS 463d-464d
28 GILBERT: *Loadstone*, BK VI, 119a-b
28 HARVEY: *Motion of the Heart*, 285c-d; 286b-304a,c esp 286b-c, 295d-296a / *Circulation of the Blood*, 316a-b
30 BACON: *Novum Organum*, BK II, APH 18, 149d; APH 36, 165d-166a

(*5. Scientific method. 5e. The use of hypotheses: prediction and verification.*)

31 DESCARTES: *Discourse*, PART VI, 61d-62c; 65d-66b
32 MILTON: *Paradise Lost*, BK VIII [66-84] 233b-234a
33 PASCAL: *Vacuum*, 368b-369a
34 NEWTON: *Principles*, BK III, RULE IV 271b; GENERAL SCHOL, 371b-372a / *Optics*, BK I, 379a; BK III, 543a-b
34 HUYGENS: *Light*, PREF-CH I, 551b-553b
35 LOCKE: *Human Understanding*, BK IV, CH III, SECT 16 317a-c; CH XII, SECT 12-13 362a-d
35 BERKELEY: *Human Knowledge*, SECT 105 433b-c
35 HUME: *Human Understanding*, SECT IX, DIV 82 487b-c; SECT XI, DIV 107, 499d-500a
38 ROUSSEAU: *Inequality*, 333d-334a; 348a,c
42 KANT: *Science of Right*, 457a-b
45 LAVOISIER: *Elements of Chemistry*, PART I, 9d-10b; PART II, 62a-63a
45 FOURIER: *Theory of Heat*, 184a
45 FARADAY: *Researches in Electricity*, 607a,c; 758a-759c; 777d-778c; 850b,d-855a,c esp 850b,d-851c
46 HEGEL: *Philosophy of History*, PART III, 285d-286a
49 DARWIN: *Origin of Species*, 239c
51 TOLSTOY: *War and Peace*, BK XIII, 563a-b; EPILOGUE II, 694d-696d
53 JAMES: *Psychology*, 95a; 357b; 647b-648b esp 648a; 863a-865a; 882a-884b passim
54 FREUD: *Interpretation of Dreams*, 351c / *Narcissism*, 400d-401d esp 401a / *General Introduction*, 483d-485a passim; 502d-503a / *Group Psychology*, 686c-d / *New Introductory Lectures*, 840a-b

6. The development of the sciences

8 ARISTOTLE: *Metaphysics*, BK II, CH I [993^{a}30-^{b}8] 511b,d
11 ARCHIMEDES: *Sphere and Cylinder*, BK I, 403a-b / *Sand-Reckoner*, 520a-b / *Quadrature of the Parabola*, 527a-b
16 PTOLEMY: *Almagest*, BK I, 6b; 10b-12b; BK III, 77a-83b; BK IV, 109a-112a; BK VII, 223a-232b; BK IX, 272a-273a; BK XIII, 465b
16 COPERNICUS: *Revolutions of the Heavenly Spheres*, 505a-509b; BK I, 511a; 515a-b; 517b-520b
16 KEPLER: *Epitome*, BK IV, 845a-850a; 851a; 852a-853a; 857b-863b; 907b-910a / *Harmonies of the World*, 1009b-1010a
25 MONTAIGNE: *Essays*, 276b-278a
28 GALILEO: *Two New Sciences*, THIRD DAY, 197a-b
30 BACON: *Advancement of Learning*, 14c-15c esp 15a-b; 16c-d; 29c-32c esp 30d-31a; 48d-49b; 51d-53d / *Novum Organum*, BK I, APH 30-31 109a; APH 50 111b; APH 70-115 116b-130d
31 DESCARTES: *Discourse* 41a-67a,c esp PART VI 60d-67a,c
34 NEWTON: *Principles*, 1a-2a; LAWS OF MOTION, SCHOL, 19b-20a; BK II, PROP 52, SCHOL, 265a-b; PROP 53, SCHOL 266a-267a / *Optics*, BK III, 526b
34 HUYGENS: *Light*, PREF-CH I, 552a-553b
35 LOCKE: *Human Understanding*, 89a-b
36 STERNE: *Tristram Shandy*, 224b-225a
39 SMITH: *Wealth of Nations*, BK V, 335b-337b
40 GIBBON: *Decline and Fall*, 23d; 148a-b
41 GIBBON: *Decline and Fall*, 298a-300a; 325d-328a,c esp 326b-327b; 526c; 664d [n 55-56]
42 KANT: *Pure Reason*, 1d-2b [fn 2]
43 FEDERALIST: NUMBER 37, 119b-d
45 LAVOISIER: *Elements of Chemistry*, PREF, 3c-4a
45 FOURIER: *Theory of Heat*, 169a-b
45 FARADAY: *Researches in Electricity*, 391a-c; 440b,d; 824a-b
46 HEGEL: *Philosophy of History*, PART I, 217c-219c
49 DARWIN: *Descent of Man*, 590a
53 JAMES: *Psychology*, 3b-4a; 37b; 125b-127b passim
54 FREUD: *Interpretation of Dreams*, 137b-139a esp 138d-139a / *General Introduction*, 545d-546b; 550d-551a / *New Introductory Lectures*, 880d-881c

***6a.* The technical conditions of scientific progress: the invention of scientific instruments or apparatus**

16 PTOLEMY: *Almagest*, BK I, 24b-26a; BK II, 38b-39b; BK V, 143a-144a; 166a-167b
16 COPERNICUS: *Revolutions of the Heavenly Spheres*, BK II, 558b-559b; 567b; 586b-589a; BK IV, 705b-706a
16 KEPLER: *Epitome*, BK IV, 908a-b
30 BACON: *Advancement of Learning*, 30d-31a / *Novum Organum*, BK I, APH 50 111b; BK II, APH 39 169d-170c; APH 45, 176a / *New Atlantis*, 210d-214d
33 PASCAL: *Vacuum*, 362a
34 NEWTON: *Optics*, BK I, 412a-423b
34 HUYGENS: *Light*, CH V, 599b-600a
35 LOCKE: *Human Understanding*, BK IV, CH XII, SECT 11, 361d-362a
41 GIBBON: *Decline and Fall*, 299b-d
45 LAVOISIER: *Elements of Chemistry*, PART III 87a-133d passim, esp 87a-d
45 FARADAY: *Researches in Electricity*, 277d-279a; 316b-318c; 366d-371d; 444a-451a; 465d-467a,c; 768d-773d; 778b,d-793c
50 MARX: *Capital*, 170a-c; 187d-188a
53 JAMES: *Psychology*, 126a

***6b.* The place of science in society: the social conditions favorable to the advancement of science**

7 PLATO: *Republic*, BK VII, 395a-b / *Statesman*, 601c-602c

8 ARISTOTLE: *Metaphysics*, BK I, CH I [981b13-24] 500a; BK II, CH I [993a30-b8] 511b,d
23 HOBBES: *Leviathan*, PART I, 73b; PART IV, 267c-d
28 HARVEY: *On Animal Generation*, 472d-473a
30 BACON: *Advancement of Learning*, 7a; 14c-15a; 29c-32c esp 30d-31a, 32a; 54a-b; 56b / *Novum Organum*, BK I, APH 72 117c-d / *New Atlantis*, 214a-b
31 DESCARTES: *Discourse*, PART III, 51b; PART VI, 66d-67a,c
35 LOCKE: *Human Understanding*, BK IV, CH XII, SECT 11, 361d-362a
35 HUME: *Human Understanding*, SECT XI, DIV 102 497b-d; DIV 114 503a-b
36 SWIFT: *Gulliver*, PART II, 78a-b
38 ROUSSEAU: *Inequality*, 365d
39 SMITH: *Wealth of Nations*, BK I, 5d-6a
40 GIBBON: *Decline and Fall*, 148a-b; 158d-159a; 658b-c; 669a-671b esp 669c, 670b-c
41 GIBBON: *Decline and Fall*, 327a-328a,c passim, esp 327b; 522d-523c
42 KANT: *Judgement*, 551a-552a
43 CONSTITUTION OF THE U.S.: ARTICLE I, SECT 8 [214-217] 13b
43 FEDERALIST: NUMBER 43, 139d-140a
43 MILL: *Liberty*, 274b-293b passim, esp 277a, 283d-284b
46 HEGEL: *Philosophy of Right*, PART III, par 270, 85d [fn 2]; 87c-d; 88c-89a; par 319, 106b / *Philosophy of History*, PART II, 277d-278a
53 JAMES: *Psychology*, 866a-b [fn 2]
54 FREUD: *General Introduction*, 581c / *War and Death*, 755a / *New Introductory Lectures*, 879d-880b

7. The evaluation of science

7a. The praise of science by comparison with opinion, superstition, magic

7 PLATO: *Republic*, BK V, 370d-373c
8 ARISTOTLE: *Posterior Analytics*, BK I, CH 33 121b-122a,c / *Generation and Corruption*, BK I, CH 2 [316a5-14] 411c-d / *Metaphysics*, BK IV, CH 2 [1004b18-27] 523d; BK VII, CH 15 [1039b31-1040a8] 563d-564a
12 LUCRETIUS: *Nature of Things*, BK I [62-158] 1d-3a; BK II [1-61] 15a-d; BK III [1-93] 30a-31b; BK IV [1-25] 44a-b; BK V [1-54] 61a-d; BK VI [1-95] 80a-81c
14 PLUTARCH: *Pericles*, 138d / *Nicias*, 435b-d
16 PTOLEMY: *Almagest*, BK I, 5a-6a
16 COPERNICUS: *Revolutions of the Heavenly Spheres*, BK I, 510a-b
16 KEPLER: *Epitome*, BK IV, 847b
19 AQUINAS: *Summa Theologica*, PART I, Q 12, A 13, REP 3 61c-62b; Q 79, A 9, REP 3-4 422b-423d
20 AQUINAS: *Summa Theologica*, PART II-II, Q 1, AA 4-5 382c-384b
23 HOBBES: *Leviathan*, PART I, 56b-d; 60a-c; 65c-d
28 GILBERT: *Loadstone*, PREF, 1c-2a
28 GALILEO: *Two New Sciences*, FIRST DAY, 168a-b
30 BACON: *Advancement of Learning*, 13a-c; 14b-15a; 54c-55a; 57d-58b / *Novum Organum* 105a-195d passim, esp BK I, APH 46-49 110b-111a, APH 61-67 113a-116a, APH 74 118b, APH 89 124a-d, APH 124 133c-d / *New Atlantis* 199a-214d esp 210d-214d
31 DESCARTES: *Discourse*, PART VI 60d-67a,c
33 PASCAL: *Vacuum*, 380b-381b
34 NEWTON: *Principles*, 1a-2a
35 LOCKE: *Human Understanding*, 89a-b
35 HUME: *Human Understanding*, SECT I, DIV 6-10 453b-455b passim, esp DIV 6-7 453b-454a
39 SMITH: *Wealth of Nations*, BK V, 335b-337a esp 336b-337a; 347c-d
40 GIBBON: *Decline and Fall*, 159a-c
42 KANT: *Pure Reason*, 1d-2b [fn 2]; 129c-130a; 133c-134d; 146a-149d; 175b [fn 1]; 218d-227a; 248d-250a,c / *Practical Reason*, 299d
45 FOURIER: *Theory of Heat*, 169a-b
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46 HEGEL: *Philosophy of Right*, PART III, par 319, 106b / *Philosophy of History*, PART IV, 361b-c
49 DARWIN: *Origin of Species*, 85d; 118d
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54 FREUD: *New Introductory Lectures*, 873d-884d passim

7b. The satirization of science and scientists: the foibles of science

5 ARISTOPHANES: *Clouds* [126-411] 489c-493c
22 CHAUCER: *Canon's Yeoman's Prologue* 471b-474a / *Canon's Yeoman's Tale* 474b-487a
25 MONTAIGNE: *Essays*, 257d-261c; 276b-278a; 377a-d
33 PASCAL: *Pensées*, 76-79 186a
35 BERKELEY: *Human Knowledge*, INTRO, SECT 17 409d-410a
36 SWIFT: *Gulliver*, PART II, 78a-b; PART III, 103b-115b esp 106a-115b; 118a-119a
36 STERNE: *Tristram Shandy*, 224b-225a
37 FIELDING: *Tom Jones*, 342d
47 GOETHE: *Faust*, PART I [656-675] 17b-18a
48 MELVILLE: *Moby Dick*, 95b-105b; 204a-b; 257a; 365b-367a
51 TOLSTOY: *War and Peace*, EPILOGUE II, 689c-690a
53 JAMES: *Psychology*, 358b-359a; 866a-b [fn 2]
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Matters relevant to the conception and spirit of science as experimental inquiry, *see* EXPERIENCE 3b; KNOWLEDGE 5c; OPINION 4a; PHYSICS 2; and for the discussion of particular experimental or empirical sciences, *see* ASTRONOMY 1; MAN 2b; MECHANICS 4–4a, 7–7e(5); MEDICINE 2a; PHYSICS 2; SOUL 5b.

Other considerations of the differences and relations between philosophy and science, *see* DEFINITION 6b; METAPHYSICS 3b; NATURE 4b; PHILOSOPHY 1c; PHYSICS 2, 2b; PROGRESS 6b; TRUTH 4c.

The relation of science to religion, *see* PHILOSOPHY 1a; RELIGION 6g; TRUTH 4a; and for the conception of sacred theology as a science, *see* THEOLOGY 4a–4d.

The comparison of science or philosophy with poetry and history, *see* HISTORY 1; PHILOSOPHY 1d; POETRY 5, 5b.

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Other discussions bearing on the nature and objects of scientific knowledge, *see* ASTRONOMY 1, 3a–3b; CAUSE 5a–5b; HYPOTHESIS 4a–4b; KNOWLEDGE 5c; MECHANICS 4; PHYSICS 2a–2b; PRINCIPLE 3c(1)–3c(3); TRUTH 4c; UNIVERSAL AND PARTICULAR 4f.

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The effects of science on human life, *see* STATE 7b; WEALTH 3a; and for the social conditions favorable to the advancement of science, *see* KNOWLEDGE 10; OPINION 5b; PROGRESS 6d–6e; TRUTH 8d.

ADDITIONAL READINGS

Listed below are works not included in *Great Books of the Western World*, but relevant to the idea and topics with which this chapter deals. These works are divided into two groups:

I. Works by authors represented in this collection.
II. Works by authors not represented in this collection.

For the date, place, and other facts concerning the publication of the works cited, consult the Bibliography of Additional Readings which follows the last chapter of *The Great Ideas*.

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II.

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——. *Against the Logicians*
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Chapter 84: SENSE

INTRODUCTION

THE nature of sensation seems at first to be as obvious as its existence. In the tradition of the great books there may be controversy concerning the existence of sense in plants as well as in animals, and there may be controversy over the existence in man of faculties higher than sense. But no one disputes that men and other animals are endowed with a power of sense.

The extent of this power may be questioned, but not the fact that animals and men, when awake, experience sensations or perceive through their senses. Sleep, according to Aristotle, can occur only in those living things which have the power of sense-perception. "If there be an animal not endowed with sense-perception, it is impossible that this should either sleep or wake, since both these are affections of the activity of the primary faculty of sense-perception."

The existence of the sensible—of an external something which causes sensation and can be sensed—also seems to escape denial or dispute. The existence of a purely intelligible reality—of a world of immaterial things incapable of being sensed—is subject to debate in all periods of western thought. The sensible world is sometimes regarded as the only reality; sometimes it is regarded as mere seeming, or appearance, in comparison with the reality of purely intelligible being. Men may also differ on the question whether things possess sensible qualities when they are not being sensed. But with few exceptions, notably Berkeley and Hume, the existence of a sensible world of material things is not denied or seriously doubted.

The controversies and issues indicated above are, for the most part, discussed elsewhere. The chapter on ANIMAL considers the sensitivity of plants. There also, as well as in the chapters on MAN, IDEA, and MIND, is considered the distinction between the senses and the higher faculties of reason or intellect. The chapter on MEMORY AND IMAGINATION deals with these two functions in their relation to sense and sense-perception; and the contrast between sensible and intelligible reality is discussed in the chapters on BEING, FORM, IDEA, and MATTER. Some of these topics necessarily recur here, especially as they bear on what for this chapter are the primary problems—the nature of sensation, the analysis of the power of sense, and the character of the knowledge which is afforded by the senses.

AS WE HAVE ALREADY observed, no difficulty seems to arise at first concerning the nature of sensation. It is supposed by many inquirers, early and late in the tradition, that matter is sensitive as well as sensible. Animals have sense-organs which react to physical stimulation. Bodies either act directly upon the sense-organs, as in the case of touch and taste; or, as in the case of vision, hearing, and smell, they exert their influence through an intervening medium, yet in a manner which seems to be no less the action and reaction of bodies.

Those who distinguish between living organisms and inanimate bodies tend to regard sensitivity as a property of living matter, but it does not follow for all who make this distinction that other than material factors are needed to explain sensation. On the contrary, some writers seem to think that the motions of matter account for sensation as readily as the laws of mechanics account for all the sensible changes we are able to perceive.

Lucretius, for example, holds that living things consist of body and soul, and that the soul (or mind) differs from the body only in the size, the fineness of texture, and the mobility of the material particles which compose it. It

is, he says, "by the common motions of the two"—body and soul—that "sensation is kindled and fanned throughout our flesh." Sensation occurs when the particles of body and soul together are set in motion by the impact of external bodies upon the organs of sense. "When the pupil of the eye receives in itself a certain kind of blow, it is said to perceive white color, and another again when it perceives black." Similarly, "every kind of sound and voice is heard when they have found their way into the ears and struck upon the sense with their body; for that voice, too, and sound are bodily you must grant, since they can strike on the senses."

Either the external body itself, as in touch, strikes the sense and sets up those bodily motions in the animal which are sensation; or, according to Lucretius, minute replicas or images —composed of atoms, as all things are—fly off from the surface of distant bodies and enter through the pores of our sense-organs to awaken in us vision, hearing, or smell. In either case, sensation is a bodily reaction; and, for Lucretius, imagination and memory, even thought, are consequent motions in the atoms of the mind —further bodily reverberations, as it were, of sensation.

"The cause of sense," writes Hobbes, "is the external body or object, which presses the organ proper to each sense, either immediately, as in taste and touch, or mediately, as in seeing, hearing, and smelling; which pressure, by the mediation of nerves, and other strings and membranes of the body, continues inwards to the brain and heart, causes there a resistance or counter-pressure, or endeavor of the heart, to deliver itself; which endeavor, because outward, seems to be some matter without. And this *seeming* or *fancy* is that which men call *sense.*"

The object seems to be colored or hot or sweet when it causes certain sensations in us which are projected outward upon it, in response or counter-action to the inward motions it sets up. But, says Hobbes, these sensible qualities are, in the object, nothing but "so many several motions of the matter by which it presses our organs diversely. Neither in us that are pressed, are they anything else but diverse motions (for motion produces nothing but motion)."

THE FOREGOING THEORY, reducing sensation to bodily motion, seems to draw its cogency from the fact that only bodies are sensible, that sense-organs are bodily parts, and that sense-organs must be activated by some sort of physical contact for sensations to occur. Some writers, like Descartes, accept the theory for animals, but reject it for men; or they distinguish, in the case of men, between thought and sensation. They regard sensation, with its subsidiary functions of memory and imagination, as reducible to corporeal motions, but refuse to grant that external sense-impressions or interior fancy can produce knowledge without the activity of an immaterial soul.

To animals, Descartes declares, "we can ascribe . . . no knowledge at all, but only fancy of a purely corporeal kind." In contrast, "that power by which we are said to know things is purely spiritual, and not less distinct from every part of the body than blood from bone, or hand from eye." In men as well as animals, the external senses, "in so far as they are part of the body . . . perceive in virtue of passivity alone, just in the way that wax receives an impression from a seal." Fancy or imagination is also "a genuine part of the body"; and "memory, at least that which is corporeal and similar to that of the brutes, is in no respect distinct from imagination."

These corporeal faculties are, according to Descartes, of use to the understanding or the mind only when it "proposes to examine something that can be referred to the body"; but if it "deal with matters in which there is nothing corporeal or similar to the corporeal, it cannot be helped by those faculties." Hence, for Descartes, the "mind can act independently of the brain; for certainly the brain can be of no use in pure thought; its only use is for imagining and perceiving."

For others, like William James, the distinction between sensation and thought, so far as their relation to matter is concerned, seems quite untenable. He objects to those who look upon sensational consciousness as "something *quasi*-material, hardly cognitive, which one need not much wonder about," while they regard rational consciousness as "quite the reverse, and the mystery of it [as] unspeakable." We can correlate consciousness with the brain's

workings only in an empirical fashion, James thinks, and we ought to confess that "no glimmer of explanation of it is yet in sight. That brains should give rise to a knowing consciousness at all, this is the one mystery which returns, no matter of what sort the consciousness or of what sort the knowledge may be. Sensations, aware of mere qualities, involve the mystery as much as thoughts, aware of complex systems, involve it."

Still others, like Plotinus and Aristotle, think that the mystery of conscious matter is not essentially different from the mystery of living matter, for if there is anything mysterious about nutrition and growth, or sensation and imagination, it consists in the same thing—the union of material and immaterial principles, of body and soul.

"If the soul were a corporeal entity," Plotinus writes, "there could be no sense-perception, no mental act, no knowledge. . . . If the sentient be a material entity (as we are invited to believe), sensation could only be of the order of seal-impressions struck by a ring on wax." Perception is not a passively received impression. It is, according to Plotinus, an act of awareness "determined by the nature and character of the living being in which it occurs. . . . In any perception we attain by sight, the object is grasped there where it lies in the direct line of vision. . . . The mind looks outward; this is ample proof that it has taken and takes no inner imprint, and does not see in virtue of some mark made upon it, like that of the ring on the wax; it need not look outward at all if, even as it looked, it already held the image of the object, seeing by virtue of an impression made upon itself."

According to Aristotle, "two characteristic marks have above all others been recognized as distinguishing that which has soul in it from that which has not—self-movement and sensation." By self-movement he appears to mean such things as the nutrition and growth which is found in plants, as well as the additional animal faculty of local motion. Both self-movement and sensation require soul as well as body. "Nothing grows or decays naturally," he writes, "except what feeds itself, and nothing feeds itself except what has a share of soul in it." So, too, "nothing except what has soul in it is capable of sensation." But "the exercise of sense-perception does not belong to soul or body exclusively." Sensation "is not an affection of the soul" by itself, nor has a soulless body "the potentiality of perception."

But, Aristotle asks, are all affections of the soul "affections of the complex of body and soul, or is there any one among them peculiar to the soul by itself? . . . If we consider the majority of them, there seems to be no case in which the soul can act or be acted upon without involving the body; *e.g.*, anger, courage, appetite, and sensation generally. Thinking seems to be the most probable exception; but if this too proves to be a form of imagination, or to be impossible without imagination, it too requires a body as a condition of its existence."

Aquinas tries to answer the question Aristotle asks, with a threefold distinction which places sensation and imagination midway between the vegetative functions and rational thought. The power of thought, or "the intellectual power," Aquinas says, "does not belong to a corporeal organ, as the power of seeing is the act of the eye; for understanding is an act which cannot be performed by a corporeal organ, like the act of seeing."

At the other extreme from this "operation of the soul which so far exceeds the corporeal nature that it is not even performed by any corporeal organ," are those "operations of the soul . . . performed by a corporeal organ and by virtue of a corporeal quality." Because it is a kind of self-movement, digestion requires soul as well as body, but it is a corporeal action in the way in which, according to Aquinas, it involves "the action of heat." Between these extremes, Aquinas places sensation and imagination, operations "performed through a corporeal organ, but not through a corporeal quality."

He explains this further by means of a distinction between natural and spiritual immutation—physical and psychic change. "Natural immutation takes place by the form of the thing which causes the immutation being received, according to its natural existence, into the thing in which the immutation is effected, as heat is received into the heated thing." Vegetative activities, while remaining psychic in the sense of occurring only in living or be-

souled matter, involve only natural immutations in the vital organs involved.

In contrast, "spiritual immutation takes place by the form of the thing causing the immutation being received, according to a spiritual mode of existence, into the thing in which the immutation is effected, as the form of color is received into the eye, which does not thereby become colored." Though some sensations may require a natural immutation of the sense-organ, as hot and cold do, all sensations necessarily involve a spiritual immutation, which enables the sense-organ to perform its proper act of knowing, as the eye knows color without becoming colored. "Otherwise," Aquinas says, "if a natural immutation alone sufficed for the sense's action, all natural bodies would feel when they undergo alteration."

THESE DIVERSE VIEWS of the nature of sensation seem to be paralleled by diverse views of the sensitive faculty. That the function of the senses is somehow to apprehend or know does not seem to be disputed. But whether the senses—including memory and imagination—are the only faculty of knowing is an issue to which the great books seem to give a variety of answers.

The opposite answers appear to be correlated, not only with conflicting positions in respect to body and soul, but also with opposing theories of the distinction between men and other animals. Those who hold that the motions of matter are adequate to explain the phenomena of knowing and thinking, tend to make sense-perception the primary function of the mind and to treat not only memory and imagination, but also reasoning or thought as subsequent activities of the same general faculty which receives impressions from external sources in the first instance. Since other animals possess senses and give evidence that perception in them has consequences for memory and imagination, those who hold this view also tend to attribute thought to animals and to regard man as differing from them only in degree.

Those who take the contrary view that knowing involves an immaterial principle or cause—a soul as well as a body—tend to distinguish the various functions of sense from the activities of thought—such as conception, judgment, and reasoning. They also take the position that man, while sharing sense-perception, memory, and imagination with other animals, alone possesses the higher faculty. The difference between men and brutes is thus conceived as one of kind, not of degree, when the difference between the senses and the reason in man is also conceived as a difference in kind. A functional relationship between sensation and thought is not thereby denied, but a distinct faculty is affirmed to be necessary for going beyond the apprehension of particulars to knowledge of the universal, or for rising above the imagination to abstract thought.

The distinction between sense and reason as faculties of knowing is sometimes stated in terms of a difference in their objects—the particular versus the universal, becoming versus being, the material versus the immaterial. Sometimes it is stated in terms of the difference between a corporeal power requiring a bodily organ and a spiritual power which belongs exclusively to the soul. Sometimes it is stated in terms of the contrast between sense as intuitive and reason as discursive, the one beholding its objects immediately, the other forming concepts, judgments, or conclusions about objects which are either beheld by the senses or cannot be intuitively apprehended at all.

The exceptions to the foregoing summary are almost as numerous as the exemplifications of the points mentioned. Nothing less than this intricate pattern of agreements and differences will serve, however, to represent the complexity of the discussion and the way in which diverse theories of sense imply different views of nature and man, of mind and knowledge. The situation can be illustrated by taking certain doctrines which seem to be opposite on most points, and then considering other theories which seem to agree, on this point or that, with both extremes.

WE HAVE ALREADY observed the opposition between Hobbes and Aquinas with regard to matter and spirit in relation to the activity of the senses. Hobbes, like Lucretius, not only treats all mental phenomena as manifestations of bodily motion, but also reduces thought to the train or sequence of images. Images are in turn reducible to the sensations from which they derive.

"As we have no imagination," Hobbes writes, "whereof we have not formerly had sense, in whole or in parts; so we have no transition from one imagination to another, whereof we never had the like before in our senses." Using the word "thoughts" to stand for the images derived from sense, Hobbes goes on to say that "besides sense, and thoughts, and the train of thoughts, the mind of man has no other motion; though by the help of speech and method, the same faculties may be improved to such a height as to distinguish men from all other living creatures."

Only man's use of words makes the difference in the exercise of the imagination "that we generally call understanding," and which, according to Hobbes, "is common to man and beast." Similarly, it is only the fact that common names have general significance which gives human discourse the appearance of abstract thought, for Hobbes denies abstract ideas. Thoughts or images are no less particular than sensations, "there being nothing in the world universal but names."

Berkeley and Hume seem to agree with Hobbes that man has no abstract ideas or universal concepts; that all the operations of thought are merely elaborations of the original impressions of sense; and that no special power, but only the use of language, distinguishes men from other animals.

Berkeley uses the word "idea" to stand for sense-impressions—"ideas actually imprinted on the senses"—and for whatever is "perceived by attending to the passions and operations of the mind." To these two he adds a third: "ideas formed by the help of memory and imagination, either compounding or dividing, or barely representing those originally perceived in the aforesaid ways." The only difference between the first and the third is that "the ideas of sense are more strong, lively, and distinct than those of the imagination." But our ideas of sense and imagination do not cover all the objects of which we can think. He admits, therefore, the possibility of our having *notions*, whereby we understand the meaning of a word like "spirit" or "soul" which refers to a substance of which we can form no idea.

Hume divides "all the perceptions of the mind into two classes or species, which are distinguished by their different degrees of force and vivacity. The less forcible and lively are commonly denominated *thoughts* or *ideas*." The other he calls "impressions," meaning thereby "all our more lively perceptions." Impressions are the source of all other ideas, the creative power of the mind consisting in "no more than the faculty of compounding, transposing, augmenting, or diminishing the materials afforded us by the senses" and every simple idea being "copied from a similar impression."

Yet, though Berkeley and Hume seem to agree with Hobbes in reducing all thought to primary sense-perceptions and derived memories or imaginations, Hume does not attempt to explain thought by the motions of matter. Berkeley differs even more radically. He denies that matter or bodies exist, and so he regards sense-perception, like all the rest of thought, as purely spiritual. The soul passively receives its original impressions directly from God and actively forms the ideas it is able to derive from these impressions.

NOR DO ALL THOSE who somehow conceive man as composed of both body and soul agree upon the function of sense in relation to the rest of thought. Locke, for example, uses "understanding" to cover all sorts of mental activity. Mental activity begins with the passive reception of the simple ideas of sense—the impressions produced in us when "the bodies that surround us do diversely affect our organs"—and the simple ideas of reflection which arise from an awareness of our own mental operations. But mental activity also includes the formation of complex ideas by the compounding of simple ones, and even the act whereby we form abstract ideas, in doing which man, in Locke's opinion, is distinguished from brutes.

All these activities require soul as well as body. All are somehow nothing more than a reworking of the original sensations passively received. In this last respect, Locke's view accords with that of Hobbes, Berkeley, and Hume, though he differs from them with respect to abstract ideas and in his theory of body and soul. On the very point which he holds in common with Hobbes, Berkeley, and Hume, Locke seems to disagree with Descartes.

Thinking, for Descartes, is the activity of a

purely spiritual substance—the rational soul—peculiar to the dual nature of man; whereas sensation and imagination, common to men and brutes, are purely corporeal functions. In man, the soul or thinking substance may form certain of its ideas, those relative to bodies, under the influence of sense or fancy; but with regard to other ideas, such as those we have of geometrical figures, Descartes says he cannot admit that they "have at any time entered our minds through the senses." He objects to the use of the word "idea" for images, or what he calls "pictures in the corporeal imagination, *i.e.*, in some part of the brain." He criticizes those who "never raise their minds above the things of sense," so accustomed are they "to consider nothing except by imagining it," with the result that whatever "is not capable of being imagined appears to them not to be intelligible at all."

Against the maxim which Locke, no less than Hobbes or Berkeley, would approve—that "there is nothing in the understanding which has not first of all been in the senses"—Descartes offers the ideas of God and of the soul as plainly contrary examples, ideas clearly in the mind which have no origin in sensation or fancy. "Those who desire to make use of their imagination to understand these ideas," he adds, "act in the same way as if, to hear sounds or smell odours, they should wish to make use of their eyes."

In making a sharp distinction between the faculties of sense and understanding or reason, Descartes seems to share the position of Plato, Aristotle, Aquinas, Spinoza, and Kant. Yet for Descartes as for Plato, the intellect in its own sphere of objects is like the senses in theirs, since each is able to behold its proper objects intuitively; whereas for Kant as for Aristotle, sense alone is a faculty of intuition. The ideas by which we apprehend intelligible objects, according to Plato, Descartes, and Spinoza, are not derived from sensations or images. According to Aristotle and Aquinas, on the other hand, the intellect abstracts all its ideas, or universal concepts, from the particulars of sense.

In this respect Aristotle and Aquinas seem to be in agreement with Locke, even though that agreement must be qualified by the observation that Locke sees no need for a special faculty to obtain abstract ideas. On the other hand, Plato, Aristotle, Aquinas, and Descartes all seem to agree in holding that understanding is as immaterial as its objects. Unlike sense, which requires bodily organs, rational thought is, according to them, an activity peculiar either to the soul itself or to a power of the soul which is not embodied in an organ, as the power of vision is embodied in the eye or the powers of memory and imagination are embodied in the brain.

William James denies this. He holds the view that all forms of consciousness are somehow functions of the brain. Yet he also insists that percept and concept are radically distinct forms of consciousness. To this extent, James makes as sharp a separation as the authors above mentioned between the sensory and the rational phases of thought. He places sensation, perception, memory and imagination on one side, and conception, judgment, and reasoning on the other. But this is for him not a distinction of faculties or powers, but only of different functions which one and the same mind is able to perform.

CERTAIN POINTS OR problems in the traditional discussion of sense are unaffected by the basic issues just considered. For example, most writers tend to make some distinction between the special exterior senses, such as vision and hearing, touch and taste, and the several interior senses, which Aquinas enumerates as the common sense, memory, imagination, and the estimative or cogitative powers. Yet not all who consider memory and imagination as activities consequent upon sense-perception call them "interior senses." Not all recognize a distinct estimative or cogitative power even when they recognize a kind of thinking about particulars done by animals and men with sensory materials. Nor do all who discuss discrimination or comparison, and the collation or combining of the impressions received from the special senses, attribute these functions to the special faculty which Aristotle first calls "the common sense."

Frequently the same analytical point is made in different ways. As indicated in the chapter on QUALITY, the distinction which Aristotle

and Aquinas make between proper and common sensibles, according as the quality, such as color and odor, belongs to a single sense, or, like shape and motion, can be perceived by two or more senses, seems to parallel the distinction between what Locke calls "secondary" and "primary" qualities. But where Locke and others treat the so-called "secondary qualities" as entirely subjective, occurring only in the experience of the sentient organism and having no reality in the sensible thing, Aristotle takes a contrary view.

When it is not actually seen or smelled, the sensible thing, according to Aristotle, is potentially colorful or odoriferous; just as when it is not actually seeing or smelling, the sense of vision or smell is also in a state of potentiality with respect to these qualities. But when the sensible thing is actually sensed, then, Aristotle says, "the actuality of the sensible object and of the sensitive faculty is *one* actuality." The thing is actually colored when it is actually seen, though it is only potentially colored when it is merely able to be so seen. "Earlier students of nature," he writes, "were mistaken in their view that without sight there was no white or black, without taste no savor. This statement of theirs is partly true, partly false: 'sense' and 'the sensible object' are ambiguous terms, *i.e.*, they may denote either potentialities or actualities. The statement is true of the latter, false of the former."

Another example of the same analytical point (which is made differently by different writers) concerns the distinction between sensation and perception. According to William James, "perception involves sensation as a portion of itself, and sensation in turn never takes place in adult life without perception also being there." The difference between them is that the function of sensation is "that of mere acquaintance with a fact," whereas "perception's function . . . is knowledge *about* a fact, and this knowledge admits of numberless degrees of complication." Hearing a sound is having a sensation, but perception occurs when, as James points out, we "hear a sound, and say 'a horse-car.'"

But James does not agree that, when perception is so described, it is, as other psychologists have suggested, a species of reasoning. "If, every time a present sign suggests an absent reality to our mind, we make an inference, and if every time we make an inference we reason; then," James admits, "perception is indubitably reasoning. Only one sees no room in it for any unconscious part." No inference is consciously made in perception; and James thinks that "to call perception unconscious reasoning is either a useless metaphor, or a positively misleading confusion between two different things." In his opinion, "perception differs from sensation [simply] by the consciousness of further facts associated with the object of sensation." For him, "perception and reasoning are coordinate varieties of that deeper sort of process known psychologically as the association of ideas."

What James treats as the object of sensation, Aristotle refers to as a quality sensed by one or more of the special senses, either a proper or a common sensible. What James treats as the object of perception, Aristotle calls an "accidental object of sense," because it is strictly not sensible at all by any of the exterior senses, singly or in combination. When we call "the white object we see" the son of Diares or a man, we have an example of an accidental sensible or an object incidentally perceived, because "'being the son of Diares' is incidental to the directly visible white patch" we see with our eyes.

This distinction between sensation and perception seems to have a bearing on the problem of the fallibility of the senses. Again the same point seems to be differently made. Aristotle, for example, holds that whereas each of the senses is normally infallible in the apprehension of its proper object or appropriate quality, error is possible in the perception of the complex thing which is not strictly an object of the special senses. "While the perception that there is white before us cannot be false," he writes, "the perception that what is white is this or that may be false."

Lucretius likewise insists that the senses themselves are never deceived, but that all the errors attributed to the senses are the result of a false inference or judgment which reason makes on the basis of the evidence presented by the senses. That also seems to be the opinion of Descartes, who thinks that "no direct experience can ever deceive the understanding if

it restricts its attention accurately to the object presented to it. . . . Thus if a man suffering from jaundice persuades himself that the things he sees are yellow, this thought of his will be composite, consisting partly of what his imagination presents to him, and partly of what he assumes on his own account, namely, that the color looks yellow, not owing to the defect in his eye, but because the things he sees really are yellow. . . . We can go wrong only when the things we believe are in some way compounded by ourselves." Descartes holds that "no falsity can reside" in sensations themselves, but only in those judgments which, on the basis of sensations, we are "accustomed to pass about things external to us."

THE MOST FUNDAMENTAL judgment which men make on the basis of sensation is that an external world exists—a reality not of our own making. Descartes argues from the evidence of the senses to the independent existence of a world of bodies. Though Berkeley argues, on the contrary, that bodies do not exist except as objects of perception, he attributes the sense-impressions, over which we seem to have no control, to the action of an external cause—to God, who uses them as signs for instructing us.

Locke defines sensitive knowledge as that which informs us of "the existence of things actually present to our senses." We may know our own existence intuitively, and God's existence demonstratively, but "the knowledge of the existence of any other thing we can have only by sensation." And though, he adds, "the notice we have by our senses of the existing of things without us . . . be not altogether so certain as our intuitive knowledge or the deductions of our reason . . . yet it is an assurance that deserves the name of knowledge."

Against such views, the most fundamental skepticism goes further than doubting the veracity of the senses because of the illusions and hallucinations they cause us to suffer. "By what arguments," Hume asks, "can it be proved that the perceptions of the mind must be caused by external objects . . . and could not arise either from the energy of the mind itself or from the suggestion of some visible or unknown spirit?"

"It is a question of fact," he adds, "whether the perception of the senses be produced by external objects, resembling them. How shall this question be determined? By experience surely; as all other questions of a like nature. But here experience is, and must be, entirely silent. The mind has never anything present to it but the perceptions, and cannot possibly reach any experience of their connexion with objects. The supposition of such a connexion is, therefore, without any foundation in reasoning."

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PAGE SECTIONS: When the text is printed in one column, the letters **a** and **b** refer to the upper and lower halves of the page. For example, in **53** JAMES: *Psychology*, **116a-119b**, the passage begins in the upper half of page 116 and ends in the lower half of page 119. When the text is printed in two columns, the letters **a** and **b** refer to the upper and lower halves of the left-hand side of the page, the letters **c** and **d** to the upper and lower halves of the right-hand side of the page. For example, in **7** PLATO: *Symposium*, **163b-164c**, the passage begins in the lower half of the left-hand side of page 163 and ends in the upper half of the right-hand side of page 164.

AUTHOR'S DIVISIONS: One or more of the main divisions of a work (such as PART, BK, CH, SECT) are sometimes included in the reference; line numbers, in brackets, are given in certain cases; *e.g.*, *Iliad*, BK II [265–283] **12d**.

BIBLE REFERENCES: The references are to book, chapter, and verse. When the King James and Douay versions differ in title of books or in the numbering of chapters or verses, the King James version is cited first and the Douay, indicated by a *(D)*, follows; *e.g.*, OLD TESTAMENT: *Nehemiah*, 7:45—*(D) II Esdras*, 7:46.

SYMBOLS: The abbreviation "esp" calls the reader's attention to one or more especially relevant parts of a whole reference; "passim" signifies that the topic is discussed intermittently rather than continuously in the work or passage cited.

For additional information concerning the style of the references, see the Explanation of Reference Style; for general guidance in the use of *The Great Ideas*, consult the Preface.

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7 PLATO: *Timaeus*, 454b-455a

8 ARISTOTLE: *Soul*, BK II, CH 1 [412b18–24] 642d; CH 8 [420a2–19] 651b-c; CH 9 [421a19–26] 652d; [421b8–422a6] 653a-c; CH 10 [422b1–9] 654a; CH 11 [422b17–424a9] 654b-655d; BK II, CH 12 [424a24]–BK III, CH 1 [425a13] 656a-657a; BK III, CH 2 [426b8–17] 658d; CH 13 [435a11–b3] 668a-b / *Sense and the Sensible*, CH 2–5 674a-683b passim / *Youth, Life, and Breathing*, CH 3 [468b28]–CH 4 [469b6] 715b-716a

9 ARISTOTLE: *History of Animals*, BK I, CH 4 [489a24–27] 10c; CH 15 [494b11–16] 16d; BK II, CH 10 25b-c; CH 12 [504a19–23] 26c; CH 13 [505a32–34] 27d-28a; BK IV, CH 1 [524a33–b5] 50a; CH 7 [532a5–10] 58d-59a; CH 8 59d-62a / *Parts of Animals*, BK II, CH 1 [647a1–34] 171a-c; CH 8 [653b19–29] 179b; CH 10–17 181d-188a,c esp CH 10 [656a14]–CH 12 [657a24] 182b-183d, CH 16–17 185d-188a,c; BK III, CH 4 [666a10–b1] 193d-194b; CH 5 [667b22–32] 196a; BK IV, CH 5 [678b2–18] 208b-c; [681b15–682a9] 212b-d; CH 11 [690b18–691a28] 222d-223c / *Motion of Animals*, CH 9 [702b22–25] 238b / *Generation of Animals*, BK II, CH 6 [743b25–744a18] 285a-b; BK V, CH 1 [779a27]–CH 2 [781b29] 321c-324a

10 HIPPOCRATES: *Sacred Disease*, 159c-160a

12 LUCRETIUS: *Nature of Things*, BK III [136–160] 31d-32a; [231–251] 33a-b; [359–369] 34d; [406–416] 35b-c; BK IV [237–253] 47b-c; [324–352] 48c-d; [615–629] 52b-c

16 KEPLER: *Epitome*, BK IV, 855a

17 PLOTINUS: *Fourth Ennead*, TR III, CH 23 153d-154b

19 AQUINAS: *Summa Theologica*, PART I, Q 76, A 5, ANS and REP 2 394c-396a; Q 77, A 5, REP 3 403d-404c

23 HOBBES: *Leviathan*, PART I, 49a-d; 50b-51b; PART III, 172c; PART IV, 258b-c

28 HARVEY: *Circulation of the Blood*, 326b / *On Animal Generation*, 455c; 456b-458a esp 457a-d; 494b

30 BACON: *Novum Organum*, BK II, APH 27, 157b-d

31 DESCARTES: *Rules*, XII, 19a-20d / *Objections and Replies*, 209c

(3. *The analysis of the power of sense: its organs and activities.* 3a. *The anatomy and physiology of the senses: the special sense-organs, nerves, brain.*)

34 NEWTON: *Optics*, BK I, 384b-385b
35 LOCKE: *Human Understanding*, BK II, CH III, SECT 1 128d-129a; CH VIII, SECT 12 135a; CH XXIX, SECT 3 234b-c
36 STERNE: *Tristram Shandy*, 270a-271b
38 MONTESQUIEU: *Spirit of Laws*, BK XIV, 102b,d-103b
48 MELVILLE: *Moby Dick*, 244a-245b
49 DARWIN: *Origin of Species*, 85d-87c; 90b-c / *Descent of Man*, 259c 261c; 397d-398a; 595d-596a
53 JAMES: *Psychology*, 8a-52b esp 27a-42b; 151a-b; 453a; 456b-457a; 497a-501b esp 500a-501b; 533a-538b passim, esp 533a-534a, 536a, 538a-b; 546b-547b [fn 1]; 562b-563a esp 562b-563b [fn 1]; 575b-584a; 768b; 787a
54 FREUD: *Interpretation of Dreams*, 351b-352b; 367b-c / *Beyond the Pleasure Principle*, 647a-648a

3b. The distinction between the exterior and interior senses

8 ARISTOTLE: *Posterior Analytics*, BK II, CH 19 [99^b36 100^a3] 136b-c / *Soul*, BK III, CH 2 657d-659c; CH 3 [428^a5-16] 660b; CH 7 [431^a14 $^b2$] 663d-664a / *Sleep*, CH 2 [455^a3-$^b13$] 697c-698b
17 PLOTINUS: *Fourth Ennead*, TR III, CH 29 157b-d
19 AQUINAS: *Summa Theologica*, PART I, Q 78, A 4, ANS and REP 1-2 411d-413d; Q 81, A 3, REP 3 430c-431d; PART I-II, Q 35, A 2, REP 2 773b-d
23 HOBBES: *Leviathan*, PART I, 50a-c; 52b-c; PART IV, 258b-c
28 HARVEY: *On Animal Generation*, 457b
31 DESCARTES: *Rules*, XII, 19a-20a
42 KANT: *Pure Reason*, 24a-b; 26b-29d / *Intro. Metaphysic of Morals*, 386d-387a,c
54 FREUD: *Interpretation of Dreams*, 367b-c; 384c-385b

3b(1) Enumeration of the exterior senses: their relation and order

8 ARISTOTLE: *Generation and Corruption*, BK II, CH 2 [329^b6 17] 429c / *Soul*, BK II, CH 7-11 649b 656a; BK III, CH 1-2 656b,d-659c / *Sense and the Sensible* 673a-689a,c
9 ARISTOTLE: *History of Animals*, BK IV, CH 8 59d 62a / *Parts of Animals*, BK II, CH 10 [656^a24] CH 11 [657^a18] 182c-183c
10 HIPPOCRATES: *Sacred Disease*, 159d
12 LUCRETIUS: *Nature of Things*, BK II [434-443] 20c; [680-687] 23c-d; BK IV [478-499] 50b-d
19 AQUINAS: *Summa Theologica*, PART I, Q 18, A 3, ANS 106b-107c; Q 76, A 5, ANS 394c-396a; Q 78, A 3 410a-411d; Q 91, A 3, REP 1 486b-487d; PART I-II, Q 31, A 6 756d-757c
20 AQUINAS: *Summa Theologica*, PART III SUPPL, Q 82, A 4 972d-974c; Q 91, A 4, REP 1 1022d-1023d
28 HARVEY: *On Animal Generation*, 457b-c
31 DESCARTES: *Rules*, XII, 19a
35 LOCKE: *Human Understanding*, BK II, CH II, SECT 3-CH III, SECT 1 128b-129a; CH IX, SECT 8-9, 139c-140a
35 BERKELEY: *Human Knowledge*, SECT 1 413a-b; SECT 42-44 420c-421a
53 JAMES: *Psychology*, 62a-63a; 569b-570a; 650b-651a

3b(2) Enumeration of the interior senses: their dependence on the exterior senses

8 ARISTOTLE: *Posterior Analytics*, BK II, CH 19 [99^b36-100^a6] 136b-c / *Metaphysics*, BK I, CH 1 [980^a22-$^b24$] 499a / *Soul*, BK III, CH 3 [428^b 10-429^a9] 660d-661b; CH II [433^b31-434^a9] 666d / *Memory and Reminiscence*, CH 1 690a-692b
9 ARISTOTLE: *Motion of Animals*, CH 8 [702^a 19-20] 237c / *Rhetoric*, BK I, CH II [1370^a28-31] 613c
17 PLOTINUS: *Fourth Ennead*, TR III, CH 29 157b-d; TR IV, CH 8, 161d-162b; TR VI 189b-191c
18 AUGUSTINE: *Confessions*, BK X, par 12-15 74b-75b
19 AQUINAS: *Summa Theologica*, PART I, Q 78, A 4 411d-413d; Q 84, A 7, REP 2 449b-450b; Q III, A 3, REP 1 570b-571b
21 DANTE: *Divine Comedy*, PURGATORY, XVII [13 18] 78c
23 HOBBES: *Leviathan*, PART I, 50a-c; 52b-c; 54b-c; PART IV, 262a-c
28 HARVEY: *On Animal Generation*, 334c-d
31 DESCARTES: *Rules*, XII, 19a-20d
31 SPINOZA: *Ethics*, PART II, PROP 17-18 380d-382b
35 LOCKE: *Human Understanding*, BK I, CH III, SECT 21 118b-119a; BK II, CH II, SECT 2-3 128a-c; CH X 141b-143d esp SECT 7 142c-d; CH XI, SECT 1-7 143d-145b; CH XII, SECT 1, 147b-c
35 HUME: *Human Understanding*, SECT II, DIV 13 455d-456b
42 KANT: *Pure Reason*, 41c-42b; 54b-55a
53 JAMES: *Psychology*, 13a; 391a; 480a
54 FREUD: *Interpretation of Dreams*, 352a-c

3c. The activity of the exterior senses

3c(1) The functions of the exterior senses: the nature and origin of sensations

7 PLATO: *Meno*, 177b-d / *Republic*, BK VI, 385c-386c / *Timaeus*, 453b-454a; 454c-455a; 463d-465d / *Theaetetus*, 518b-522b; 533b-534b / *Philebus*, 621a-c
8 ARISTOTLE: *Categories*, CH 8 [9^a28-$^b8$] 14b-c / *Topics*, BK I, CH 14 [105^b4-9] 149b; BK IV, CH 5 [125^b15-18] 174d / *Generation and Corrup-*

tion, BK I, CH 8 [324b26–32] 423b; [326b11–21] 425c-d / *Metaphysics*, BK IX, CH 6 [1048b18–34] 574a-c / *Soul*, BK II, CH 5 647b-648d; BK III, CH 7 [431a1–8] 663c / *Sense and the Sensible* 673a-689a,c passim

9 ARISTOTLE: *Parts of Animals*, BK II, CH 1 [647a7–19] 171a-b; CH 10 [656b26–657a13] 183a-c; BK IV, CH 11 [690b26–691a13] 222d-223b / *Generation of Animals*, BK V, CH 1 [780b13]–CH 2 [781b29] 322d-324a / *Ethics*, BK II, CH 1 [1103a26–31] 348d; BK X, CH 4 [1174b15–1175a3] 429a-b

10 HIPPOCRATES: *Sacred Disease*, 159d

12 LUCRETIUS: *Nature of Things*, BK II [398–477] 20a-21a; [865–990] 26a-27c; BK III [231–257] 33a-b; [323–416] 34b-35c; BK IV [26–268] 44b-47d; [522–776] 51a-54b

17 PLOTINUS: *First Ennead*, TR I, CH 6–7 3c-4a / *Second Ennead*, TR VIII 64c-65c / *Fourth Ennead*, TR III, CH 23 153d-154b; CH 25–26, 155c; TR IV, CH 23–25 169c-171b; TR V, CH 1–TR VI, CH 2 183a-190b

19 AQUINAS: *Summa Theologica*, PART I, Q 14, A 1, ANS 75d-76c; A 2, REP 1 76d-77d; Q 75, A 3, ANS and REP 2 380c-381b; Q 77, A 5, REP 3 403d-404c; Q 78, A 3 410a-411d

20 AQUINAS: *Summa Theologica*, PART III SUPPL., Q 70, AA 1–2 893d-897d; Q 82, AA 3–4 971a-974c

23 HOBBES: *Leviathan*, PART I, 49a-d; 62b; PART III, 172b; PART IV, 258b-c

28 HARVEY: *On Animal Generation*, 456c-457d passim, esp 457c-d

30 BACON: *Novum Organum*, BK II, APH 45, 176a-b

31 DESCARTES: *Rules*, XII, 19a / *Objections and Replies*, 163b; 228c-229c; 229d-230c

31 SPINOZA: *Ethics*, PART II, AXIOM 4 373d; PROP 11–16 377b-380d esp POSTULATE 3 380b

34 NEWTON: *Optics*, BK I, 428a-b; 434a-435a; 442a-443a; BK III, 518b-519b; 522a

35 LOCKE: *Human Understanding*, BK II, CH 1, SECT 3 121c-d; SECT 23 127b; CH III, SECT 1 128d-129a; CH VIII, SECT 4 133d; SECT 7–26 134b-138b passim, esp SECT 11–13 134d-135b, SECT 21 136c-d; CH IX, SECT 1–4 138b-d; CH XIX, SECT 1, 175b; CH XXIII, SECT 11–13 206d-208b; CH XXIX, SECT 3 234b-c; CH XXXI, SECT 2 239b-d; BK III, CH IV, SECT 10 261b-d; CH V, SECT 2 263d-264a; BK IV, CH II, SECT 11–13 311c-312b; CH III, SECT 28 322a-c; CH IV, SECT 4 324c

35 BERKELEY: *Human Knowledge*, SECT 18–20 416b-417a; SECT 25–33 417d-419a passim; SECT 36 419c-d; SECT 44, 421a; SECT 56–57 423c-424a; SECT 90 430c-d; SECT 146–149 442a-d

38 MONTESQUIEU: *Spirit of Laws*, BK XIV, 102b,d-103b

42 KANT: *Pure Reason*, 23a-24a; 115b-c / *Judgement*, 477b-d; 518a

44 BOSWELL: *Johnson*, 202a

45 LAVOISIER: *Elements of Chemistry*, PART I, 14a

46 HEGEL: *Philosophy of Right*, ADDITIONS, 25 121a

50 MARX: *Capital*, 31c-d

53 JAMES: *Psychology*, 98b-103b; 108a-b; 149b-151b esp 151a-b; 184b-185a; 193b-194a; 422a; 452a-457a esp 456b-457a; 470b-471a; 472b-479a; 520a-521a; 547a-627a esp 549a, 550a-b, 553b-554b, 562a-563a, 584b-589b, 593a, 595b-597b [fn 2], 596a-608b, 611b, 613b-616b; 856b-858a passim

54 FREUD: *Instincts*, 412c-413a / *Beyond the Pleasure Principle*, 647c-648a / *Ego and Id*, 701b-d

3c(2) The attributes of sensation: intensity, extensity, affective tone; the psychophysical law

8 ARISTOTLE: *Topics*, BK I, CH 15 [106a22–36] 150a-b; [107b27–37] 152a / *Physics*, BK VII, CH 3 [246b20–247a19] 330a-b / *Soul*, BK II, CH 8 [420a27–b4] 651c-d; CH 9 [421a6–16] 652c; BK III, CH 2 [426a27–b8] 658c-d; CH 13 [435b4–19] 668c

9 ARISTOTLE: *Ethics*, BK X, CH 4 [1174b15–1175a3] 429a-b

12 LUCRETIUS: *Nature of Things*, BK II [398–477] 20a-21a; [963–972] 27b; BK IV [324–331] 48c; [524–548] 51a-b; [615–721] 52b-53d

17 PLOTINUS: *Second Ennead*, TR VIII, CH 1, 65a / *Fifth Ennead*, TR VIII, CH 11, 245c

19 AQUINAS: *Summa Theologica*, PART I–II, Q 31, AA 5–6 755c-757c

23 HOBBES: *Leviathan*, PART I, 62b-c

35 LOCKE: *Human Understanding*, BK IV, CH II, SECT 11–13 311c-312b

35 BERKELEY: *Human Knowledge*, SECT 33 419a; SECT 36 419c-d

35 HUME: *Human Understanding*, SECT II, DIV 11–12 455b-d

38 MONTESQUIEU: *Spirit of Laws*, BK XIV, 103a-c

42 KANT: *Pure Reason*, 69c-72c / *Intro. Metaphysic of Morals*, 385a-c / *Judgement*, 477b-478a

43 MILL: *Utilitarianism*, 450a

49 DARWIN: *Descent of Man*, 569a-b

53 JAMES: *Psychology*, 275b-276b; 319b-321a; 348a-359a; 498a-501b passim; 526b-527a; 533a-b; 540a-547a; 552a-554b; 563a-566a; 651a-b; 829b-830a

54 FREUD: *Interpretation of Dreams*, 367b-c; 384c-d / *Narcissism*, 403d-404a / *Beyond the Pleasure Principle*, 639b-d; 648b-649c passim / *Ego and Id*, 701a-b / *Civilization and Its Discontents*, 773a

3c(3) The classification of sensations or sense-qualities: proper and common sensibles; primary and secondary qualities

7 PLATO: *Timaeus*, 462c-463d; 464b-465d

8 ARISTOTLE: *Categories*, CH 8 [9a28–b8] 14b-c / *Generation and Corruption*, BK II, CH 1–3

(*3c. The activity of the exterior senses.* 3c(3) *The classification of sensations or sense-qualities: proper and common sensibles; primary and secondary qualities.*)

428b,d-431a / *Soul*, BK II, CH 6 [418a6-19] 648d-649a; CH 9 [421a27-b2] 652d; CH 10 [422b10]-CH 11 [422b33] 654b-c; BK III, CH 1 [425a14-29] 657b-c; [425b4-10] 657c-d / *Sense and the Sensible*, CH 1 [437a3-10] 673d-674a; CH 3-5 676a-683b; CH 6 [445b4-446a20] 683b-684c

10 GALEN: *Natural Faculties*, BK I, CH 6, 169c-d
12 LUCRETIUS: *Nature of Things*, BK II [398-521] 20a-21c; [730-864] 24b-26a
19 AQUINAS: *Summa Theologica*, PART I, Q 78, A 3 esp REP 2 410a-411d; A 4, REP 1-2 411d-413d
20 AQUINAS: *Summa Theologica*, PART III SUPPL, Q 92, A 2, ANS 1032b-1034b
23 HOBBES: *Leviathan*, PART I, 49b-d; PART III, 172b
31 DESCARTES: *Rules*, XII, 19a-c / *Objections and Replies*, 163b; 228c-229c; 231a-b
34 NEWTON: *Principles*, BK III, RULE III 270b-271a / *Optics*, BK I, 428a-b
35 LOCKE: *Human Understanding*, BK II, CH III, SECT 1 128d-129a; CH V 131b; CH VII, SECT 1 131c; CH VIII, SECT 7-26 134b-138b; CH IX, SECT 8-9, 139c-140a; CH XXI, SECT 3 178d; SECT 75 200b-d; CH XXIII, SECT 7-13 205d-208b; SECT 37, 214a-b; CH XXX, SECT 2 238b-c; CH XXXI, SECT 2 239b-d; BK III, CH IV, SECT 16 263b-c; BK IV, CH III, SECT 11-14 315d-316d; SECT 28 322a-c
35 BERKELEY: *Human Knowledge*, SECT 9-15 414d-416a; SECT 25 417d-418a; SECT 73 427b-c; SECT 102 432d-433a
35 HUME: *Human Understanding*, SECT XII, DIV 122 505c-d
42 KANT: *Pure Reason*, 15b-c; 29d-33d esp 30d-31a, 31d-32a, 32d-33b [fn 1]
53 JAMES: *Psychology*, 185a-b; 502b-503b; 569b-570a; 572a-b; 627a-b; 650b-651a

3c(4) The distinction between sensation and perception: the accidental sensible; complex ideas of substance

8 ARISTOTLE: *Metaphysics*, BK XIII, CH 10 [1087a 18-21] 619c / *Soul*, BK II, CH 6 [418a20-26] 649a / *Sense and the Sensible*, CH 1 [437a3-17] 673d-674a; CH 6 [446b18-27] 685a-b
20 AQUINAS: *Summa Theologica*, PART III SUPPL, Q 92, A 2, ANS 1032b-1034b
35 LOCKE: *Human Understanding*, BK II, CH IX, SECT 8-10 139b-140b; CH XXIII, SECT 1 204a-b
35 BERKELEY: *Human Knowledge*, SECT 1 413a-b; SECT 42-44 420c-421a; SECT 148 442b-d
42 KANT: *Pure Reason*, 115b-c
53 JAMES: *Psychology*, 452a-453a; 502a-505b; 526b-527a

3c(5) Sensation and attention: pre-perception and apperception; the transcendental unity of apperception

8 ARISTOTLE: *Sense and the Sensible*, CH 7 685c-689a,c
21 DANTE: *Divine Comedy*, PURGATORY, IV [1-18] 57c
42 KANT: *Pure Reason*, 14a-108a,c esp 14a-15c, 23a-33d, 41c-42b, 48d-59b, 66d-93c
48 MELVILLE: *Moby Dick*, 244a-245a
51 TOLSTOY: *War and Peace*, BK XIV, 605c-d
53 JAMES: *Psychology*, 184b-185a; 232b-235a; 262a-291a esp 262b-268a, 275b-276b, 282a-288a; 295b-297a; 328a-329a; 469a-b; 522b-525a; 562a-b; 620b-621a

3d. The activity of the interior senses

3d(1) The functions of the common sense: discrimination, comparison, association, collation or perception

8 ARISTOTLE: *Soul*, BK III, CH 1 [425a14-b10] 657b-d; CH 2 [426b8-427a14] 658d-659c / *Sleep*, CH 2 [455a3-b13] 697c-698b
10 HIPPOCRATES: *Sacred Disease*, 159c-d
16 KEPLER: *Epitome*, BK IV, 855a
17 PLOTINUS: *Fourth Ennead*, TR III, CH 3 143b-c; TR VII, CH 6-7 194b-195b
19 AQUINAS: *Summa Theologica*, PART I, Q 78, A 4, ANS and REP 1-2 411d-413d; Q 87, A 3, REP 3 467b-468a
23 HOBBES: *Leviathan*, PART I, 52a-b
28 HARVEY: *On Animal Generation*, 457b-458a esp 457b-c
31 DESCARTES: *Rules*, XII, 19c-d
35 LOCKE: *Human Understanding*, BK II, CH XI, SECT 1-7 143d-145b
42 KANT: *Pure Reason*, 14a; 51c-d; 54b-64a / *Judgement*, 493c-d; 528c-529b
53 JAMES: *Psychology*, 185a-b; 313b-341a esp 313b-319a, 322b-326a, 336a-340a; 344b-346a; 360a-399b esp 378a-380a, 396a-397a, 399a-b; 411a-420b esp 414a-416b [fn 1], 415a-418a; 502b-504b; 506a-507a; 525a-526b; 547a-552a esp 547a-b, 551b-552a; 561a-575a esp 561a, 570a-573a; 584a-589b esp 584a-b; 867a-868b
54 FREUD: *Interpretation of Dreams*, 367b-c; 384c-385c

3d(2) Memory and imagination as interior powers of sense

7 PLATO: *Theaetetus*, 523d-524a / *Philebus*, 621a-b
8 ARISTOTLE: *Posterior Analytics*, BK II, CH 19 [99b20-100a9] 136a-c / *Metaphysics*, BK I, CH 1 [980a28-b24] 499a / *Memory and Reminiscence* 690a-695d
9 ARISTOTLE: *Motion of Animals*, CH 7 [701b13]-CH 8 [702a21] 237a-c / *Rhetoric*, BK I, CH 11 [1370a28-31] 613c

17 PLOTINUS: *Fourth Ennead*, TR III, CH 28-32 156d-159a; TR VI 189b-191c
18 AUGUSTINE: *Confessions*, BK X, par 12-17 74b-75d
19 AQUINAS: *Summa Theologica*, PART I, Q 55, A 2, REP 2 289d-290d; Q 78, A 4, ANS and REP 3 411d-413d
20 AQUINAS: *Summa Theologica*, PART I-II, Q 50, A 3, REP 3 8b-9a
23 HOBBES: *Leviathan*, PART I, 50a-52b esp 50a-d; PART IV, 258b-c; 262a-c
30 BACON: *Advancement of Learning*, 55b-c
31 DESCARTES: *Rules*, XII, 19d; 20b-d / *Objections and Replies*, 208d-209a; 218c; 219b-c
31 SPINOZA: *Ethics*, PART II, PROP 17-18 380d-382b; PART III, POSTULATE 2 396a
35 LOCKE: *Human Understanding*, BK II, CH X, SECT 1-2 141b-c; SECT 7 142c-d
38 ROUSSEAU: *Inequality*, 341d-342a
42 KANT: *Pure Reason*, 41c-42b; 54b-64a / *Judgement*, 493c-d
46 HEGEL: *Philosophy of History*, PART I, 219d-220a
53 JAMES: *Psychology*, 13a-15a esp 13a; 145a; 421b-431b passim, esp 424b-425a; 480a-501b esp 480a-b, 497a-501b
54 FREUD: *Interpretation of Dreams*, 352a-d

3d(3) The estimative or cogitative power: instinctive recognition of the harmful and beneficial

6 HERODOTUS: *History*, BK II, 63b-c
9 ARISTOTLE: *History of Animals*, BK VIII, CH 12 [596^{b}20-28] 122d; BK IX, CH 5-6 136d-138b passim
17 PLOTINUS: *Fourth Ennead*, TR IV, CH 20 167d-168b
19 AQUINAS: *Summa Theologica*, PART I, Q 59, A 3, ANS 308b-309a; Q 76, A 5, REP 4 394c-396a; Q 78, A 4, ANS and REP 4-5 411d-413d; Q 81, A 2, REP 2 429c-430c; A 3, ANS and REP 2 430c-431d; Q 83, A 1, ANS 436d-438a; Q 96, A 1, ANS and REP 4 510b-511b; PART I-II, Q 29, A 6, ANS 748b-749a
22 CHAUCER: *Nun's Priest's Tale* [15,279-287] 457b
25 MONTAIGNE: *Essays*, 286d-287b
28 HARVEY: *On Animal Generation*, 456d-457a
31 DESCARTES: *Meditations*, VI, 100a-d
35 LOCKE: *Human Understanding*, BK I, CH II, SECT 3 104b-d; BK II, CH X, SECT 3 141c-d; CH XI, SECT 5 144d-145a; SECT 11 145d-146a
38 ROUSSEAU: *Inequality*, 337d-338a
48 MELVILLE: *Moby Dick*, 144a
49 DARWIN: *Origin of Species*, 121a; 122c / *Descent of Man*, 287d-288a; 290c-291a; 292b-c
53 JAMES: *Psychology*, 13a; 708a-709a; 720b-725a passim; 729b
54 FREUD: *General Introduction*, 607d-609c esp 607d-608c; 612c-614a esp 613d-614a; 623b-c / *Beyond the Pleasure Principle*, 640d-641a / / *Inhibitions, Symptoms, and Anxiety*, 720a-721c esp 720c-d; 737b-d; 751a-752b / *New Introductory Lectures*, 845a-846a

3e. The relation of sense to emotion, will, and movement: the conception of a sensitive appetite

7 PLATO: *Phaedrus*, 128a-129c / *Republic*, BK IV, 350b-353d esp 352c-d; BK IX, 421a-b / *Timaeus*, 466a-467b / *Laws*, BK VI, 712b
8 ARISTOTLE: *Physics*, BK VII, CH 3 [246^{b}20-247^{a}19] 330a-b / *Soul*, BK II, CH 2 [413^{b}17-24] 643d; CH 3 [414^{a}28-^{b}16] 644c-d / *Dreams*, CH 2 [460^{a}34-^{b}27] 704b-d
9 ARISTOTLE: *Motion of Animals*, CH 6 [700^{b}4]-CH 8 [702^{a}22] 235d-237c / *Ethics*, BK III, CH 10 [1118^{a}1-^{b}7] 364c-365a; BK VI, CH 2 [1139^{a}16-21] 387d; BK VII, CH 3 [1147^{a}25-^{b}6] 397c-d; CH 4 [1148^{a}4-22] 398b-c; CH 6 [1149^{a}23-^{b}3] 399d-400a
12 LUCRETIUS: *Nature of Things*, BK IV [877-891] 55d
12 EPICTETUS: *Discourses*, BK II, CH 23, 170a-171a
17 PLOTINUS: *Fourth Ennead*, TR III, CH 28 156d-157b; TR IV, CH 20 167d-168b
18 AUGUSTINE: *Confessions*, BK II, par 1-2 9a-b; par 10 11a-b; BK III, par 1 13b-c
19 AQUINAS: *Summa Theologica*, PART I, Q 6, A 1, REP 2 28b-d; Q 18, A 3, ANS 106b-107c; Q 78, A 1 407b-409a; Q 81 428d-431d; Q 82, A 2, REP 3 432d-433c; PART I-II, Q 1, A 2, REP 3 610b-611b; Q 2, A 6, REP 2 619d-620d; Q 17, A 7 690d-692a; QQ 22-48 720b,d-826a,c passim, esp Q 22, A 3 722d-723b
20 AQUINAS: *Summa Theologica*, PART I-II, Q 56, AA 4-5 32b-34b
21 DANTE: *Divine Comedy*, PURGATORY, XVI [85-102] 77d
23 HOBBES: *Leviathan*, PART I, 61a-d; 62b-c; 64a-c
25 MONTAIGNE: *Essays*, 288a-290b
27 SHAKESPEARE: *Hamlet*, ACT III, SC IV [65-81] 55b-c
30 BACON: *Advancement of Learning*, 55b-c
31 SPINOZA: *Ethics*, PART III, PROP 9 399b-c
42 KANT: *Pure Reason*, 164b-c; 235c-d / *Fund. Prin. Metaphysic of Morals*, 259a-c; 265b,d [fn 1]; 270c-d; 284d-285a / *Practical Reason*, 298d-300a; 341c-342a / *Intro. Metaphysic of Morals*, 385c-386d / *Judgement*, 477b-c; 586a-b
53 JAMES: *Psychology*, 13a-15a; 51a-b; 521a-522a; 694a-699a; 738a-759a esp 743a-745b, 754b-755b, 757b-759a; 767b-794a esp 768a-771a, 790a-794a; 808b-810b; 812a-813a; 827b-835a esp 827b-828a, 830b-831b
54 FREUD: *Interpretation of Dreams*, 351c-353b esp 351d-352a; 363c-364b / *Instincts*, 412c-413d; 419a-420c esp 420a / *Beyond the Pleasure Principle*, 648b-c / *Ego and Id*, 701b

4. The character of sensitive knowledge

7 PLATO: *Phaedo*, 224a-225a; 231c-232a / *Republic*, BK VI-VII, 383d-398c / *Theaetetus*, 517b-536a

8 ARISTOTLE: *Posterior Analytics*, BK I, CH 31 120a-c / *Metaphysics*, BK I, CH I [980^{a}20-^{b}24] 499a; [981^{b}10-13] 499d-500a; BK IV, CH 5 [1009^{b}1-17] 528d-529a; [1010^{b}1-1011^{a}2] 530a-c; BK XI, CH 6 [1062^{b}34-1063^{a}9] 591a-b

17 PLOTINUS: *First Ennead*, TR I, CH 3-7 1d-4a / *Fourth Ennead*, TR III, CH 26, 155c; TR IV, CH 20 167d-168b; CH 23-25 169c-171b; TR V 183a-189b

18 AUGUSTINE: *Confessions*, BK X, par 10-11 73d-74b; BK XII, par 5 100a-b / *Christian Doctrine*, BK II, CH 27 650a

19 AQUINAS: *Summa Theologica*, PART I, Q 12, A 4, ANS and REP 3 53b-54c; Q 14, A 6, REP 1 80a-81c; Q 78, A 3, ANS 410a-411d; A 4, ANS and REP 4-6 411d-413d

28 HARVEY: *On Animal Generation*, 332a-333c

31 DESCARTES: *Rules*, XII, 19a-20a / *Meditations*, VI 96b-103d / *Objections and Replies*, 136d-137a; 163b; 229d-230d

31 SPINOZA: *Ethics*, PART II, PROP 11-16 377b-380d

35 LOCKE: *Human Understanding*, BK II, CH XXIII, SECT 29 211d-212a; BK IV, CH II, SECT 14 312b-d; CH III, SECT 2-5 313a-c; SECT 21 319c; CH XI 354c-358c

35 BERKELEY: *Human Knowledge*, SECT 18, 416b; SECT 135-145 440a-442a passim

42 KANT: *Pure Reason*, 23a-24a; 30b-31a esp 30b-c; 34a-b; 54b-55a; 58a-59b

53 JAMES: *Psychology*, 157b-168a esp 158b-161a, 167b; 453a-479a esp 453a-454a, 456b-459b, 469a-b

4a. Comparison of sensitive with other forms of knowledge

7 PLATO: *Symposium*, 167a-d / *Phaedo*, 224a-225a; 231c-232a / *Republic*, BK VI-VII, 383d-398c / *Timaeus*, 447b-d / *Theaetetus*, 534d-536a

8 ARISTOTLE: *Posterior Analytics*, BK I, CH 31 120a-c / *Topics*, BK II, CH 8 [114^{a}17-26] 159d-160a / *Metaphysics*, BK I, CH I [980^{a}20-^{b}24] 499a / *Soul*, BK II, CH 5 647b-648d

9 ARISTOTLE: *Generation of Animals*, BK I, CH 23 [731^{a}30-^{b}5] 271c-d / *Ethics*, BK I, CH 4 [1095^{a}30-^{b}12] 340c-d; BK VI, CH 8 [1142^{a}12-31] 391b-c

17 PLOTINUS: *Fifth Ennead*, TR V, CH 1-3 228b-230a / *Sixth Ennead*, TR III, CH 18, 291a-b

18 AUGUSTINE: *Confessions*, BK III, par 10 15b-d; BK XII, par 5 100a-b

19 AQUINAS: *Summa Theologica*, PART I, Q 12, A 4, ANS and REP 3 53b-54c; Q 13, A 7, ANS 68d-70d; Q 14, A 6, REP 1 80a-81c; Q 54, A 2, ANS 285d-286c; Q 57, A 1, REP 2 295a-d; A 2, ANS 295d-297a; Q 78, A 4, ANS and REP 4-6 411d-413d; Q 85, A 2, REP 3 453d-455b

23 HOBBES: *Leviathan*, PART I, 49d

28 HARVEY: *On Animal Generation*, 332a-333c

31 DESCARTES: *Discourse*, PART IV, 53b / *Meditations*, III, 83d-84a; VI 96b-103d / *Objections and Replies*, 136d-137a; 218c-d; 229d-230d

35 LOCKE: *Human Understanding*, BK III, CH I, SECT 5 252b-c; BK IV, CH II, SECT 14 312b-d; CH III, SECT 2-5 313a-c; SECT 21 319c; CH XI, SECT 13 357d-358a

35 BERKELEY: *Human Knowledge*, INTRO, SECT 1 405a-b; SECT 18 416b-c; SECT 27 418a-b; SECT 135-142 440a-441c

35 HUME: *Human Understanding*, SECT V, DIV 41, 468a-b

42 KANT: *Pure Reason*, 14a-c; 22a,c; 23a-24a; 34a-c; 45d-46a; 199a-c / *Judgement*, 528c-d; 542b-543c; 570b-572b esp 571c-572a

53 JAMES: *Psychology*, 144a-145a; 167b; 311b-312b [fn 1]; 450a-451b; 453a-459b esp 453a-b, 456a

4b. The object of sense-perception: the evident particular fact; judgments of perception and judgments of experience

7 PLATO: *Phaedo*, 224a-225a; 231c-232a / *Republic*, BK VI, 383d-388a / *Timaeus*, 447b-c; 457d / *Theaetetus*, 517b-536a / *Sophist*, 568b

8 ARISTOTLE: *Posterior Analytics*, BK II, CH 19 [99^{b}20-100^{b}5] 136a-d / *Topics*, BK II, CH 8 [114^{a}18-26] 159d-160a / *Physics*, BK I, CH 5 [188^{b}26-189^{a}9] 264b-c / *Heavens*, BK III, CH 7 [306^{a}1-18] 397b-c / *Metaphysics*, BK I, CH I [981^{b}10-13] 499d-500a; BK IV, CH 5 [1009^{b}1-17] 528d-529a; [1010^{b}1-1011^{a}2] 530a-c; BK XI, CH 7 [1064^{a}4-9] 592b / *Soul*, BK II, CH 5 [417^{b}18-28] 648b-c; BK III, CH II [434^{a}16-22] 667a

9 ARISTOTLE: *Ethics*, BK I, CH 7 [1098^{a}34-^{b}8] 343d-344a; BK VI, CH 8 [1142^{a}23-31] 391b-c

17 PLOTINUS: *First Ennead*, TR I, CH 7 3d-4a / *Fourth Ennead*, TR VI, CH 1-2 189b-190b

18 AUGUSTINE: *Confessions*, BK III, par 10 15b-d; BK IV, par 15-17 23a-d

19 AQUINAS: *Summa Theologica*, PART I, Q 12, A 4, ANS and REP 3 53b-54c; Q 14, A 11, ANS and REP 1-2 84c-85c; A 12, ANS 85d-86d; Q 17, A 2 102a-d; Q 18, A 2, ANS 105c-106b; Q 57, A 1, REP 2 295a-d; A 2, ANS 295d-297a; Q 59, A 1, REP 1 306c-307b; Q 75, A 5, ANS 382a-383b; Q 76, A 2, REP 4 388c-391a; Q 77, A 5, REP 3 403d-404c; Q 79, A 6, ANS 419b-420d; Q 85, A 1, ANS 451c-453c; A 6, ANS 458d-459c

20 AQUINAS: *Summa Theologica*, PART I-II, Q 50, A 3, REP 3 8b-9a

23 HOBBES: *Leviathan*, PART I, 49a-d; PART III, 172b

28 HARVEY: *On Animal Generation*, 332a-333c

31 DESCARTES: *Discourse*, PART IV, 53b / *Meditations*, II, 80c-81d; VI 96b-103d passim / *Objections and Replies*, 229d-230d

31 SPINOZA: *Ethics*, PART II, PROP 11–16 377b-380d
35 LOCKE: *Human Understanding*, BK II, CH IX, SECT 8–10 139b-140b; BK IV, CH II, SECT 14 312b-d; CH III, SECT 2 313a; SECT 5 313c; SECT 14 316b-d; SECT 21 319c; CH XI 354c-358c esp SECT 13 357d-358a
35 BERKELEY: *Human Knowledge*, SECT 18 416b-c
42 KANT: *Pure Reason*, 16d-17d; 108a-d; 115b-c
43 MILL: *Utilitarianism*, 445d-446a
53 JAMES: *Psychology*, 150b-151b; 184b-185b; 363b-364a; 453a-457a; 472b-479a; 502a-504a; 506a-507a; 564a-b; 569b-570a; 606b-610b esp 608b-609a; 867a-868b esp 868a-b
54 FREUD: *Unconscious*, 430c / *Ego and Id*, 702d-703a

4c. The relation of sense and the sensible: the subjectivity or objectivity of sense-qualities

7 PLATO: *Theaetetus*, 517b-520b
8 ARISTOTLE: *Categories*, CH 7 [7^{b}35–8^{a}12] 12d-13a / *Physics*, BK VII, CH 2 [244^{b}1–245^{a}12] 328b-d; CH 3 329a-330d / *Metaphysics*, BK IV, CH 5 [1010^{b}30–1011^{a}2] 530c / *Soul*, BK II, CH 5 647b-648d; CH 11 [423^{b}27]–CH 12 [424^{a}24] 655c-656a; BK III, CH 2 657d-659c; CH 4 [429^{a}10–29] 661b-c; CH 8 664b-d / *Sense and the Sensible* 673a-689a,c / *Dreams*, CH 2 [459^{a} 23–460^{a}32] 703a-704b
9 ARISTOTLE: *Parts of Animals*, BK II, CH 2 [648^{b}15–18] 173a / *Ethics*, BK X, CH 4 [1174^{b}15–1175^{a}3] 429a-b
10 GALEN: *Natural Faculties*, BK I, CH 2, 167d
12 LUCRETIUS: *Nature of Things*, BK II [730–864] 24b-26a; [1002–1022] 27d-28a
19 AQUINAS: *Summa Theologica*, PART I, Q 14, A 2, ANS 76d-77d
20 AQUINAS: *Summa Theologica*, PART III SUPPL, Q 82, A 3, ANS 971a-972d
23 HOBBES: *Leviathan*, PART I, 49a-d; 57b; 59d; PART III, 172b
25 MONTAIGNE: *Essays*, 285b-292d passim
31 DESCARTES: *Rules*, XII, 19a-c / *Meditations*, VI, 100a / *Objections and Replies*, 162d-165a; 228c-229c; 231a-b
34 NEWTON: *Optics*, BK I, 428a-b
35 LOCKE: *Human Understanding*, BK II, CH VIII 133b-138b passim; CH XXI, SECT 3 178d; SECT 75 200b-d; CH XXIII, SECT 7–13 205d-208b; SECT 37, 214a-b; CH XXX, SECT 2 238b-c; CH XXXI, SECT 2 239b-d; CH XXXII, SECT 14–16 245c-246b; BK IV, CH II, SECT 11–14 311c-312d; CH III, SECT 6, 314b; SECT 11–14 315d-316d; SECT 28 322a-c; CH IV, SECT 4 324c; CH XI, SECT 4–9 355b-357a
35 BERKELEY: *Human Knowledge*, SECT 1–91 413a-431a esp SECT 3 413c-d, SECT 8–15 414c-416a, SECT 48–49 422a-b, SECT 56–57 423c-424a, SECT 73 427b-c, SECT 76–78 427d-428b, SECT 86–91 429c-431a; SECT 102 432d-433a
35 HUME: *Human Understanding*, SECT XII, DIV 117–123 504a-506a
42 KANT: *Pure Reason*, 23a-24a; 29d-33d esp 30d-31a, 31d-32a, 32d-33b [fn 1]; 88b-89c; 101b-102a; 115b-c / *Intro. Metaphysic of Morals*, 385a-c
50 MARX: *Capital*, 31c-d
53 JAMES: *Psychology*, 98b-105a; 127b-128a; 150a-151a; 176b-177a; 459a-479a esp 459a-b, 471b-473a, 479a; 851b-852a; 860a-b

4d. The limit, accuracy, and reliability of sensitive knowledge: the fallibility of the senses

7 PLATO: *Phaedo*, 224a-225a; 231c-232a / *Republic*, BK VI–VII, 386d-398c / *Theaetetus*, 534d-535c / *Statesman*, 594d-595c
8 ARISTOTLE: *Posterior Analytics*, BK I, CH 31 120a-c / *Topics*, BK V, CH 3 [131^{b}19–36] 182b-c / *Generation and Corruption*, BK I, CH 3 [318^{b} 19–24] 415c / *Metaphysics*, BK IV, CH 5 [1010^{b} 15–29] 530b-c / *Soul*, BK II, CH 6 [418^{a}6–18] 648d-649a; BK III, CH 3 [427^{b}6–14] 659d-660a / *Sense and the Sensible*, CH 4 [442^{b}4–9] 680a-b
9 ARISTOTLE: *Generation of Animals*, BK I, CH 23 [731^{a}30–^{b}5] 271c-d
12 LUCRETIUS: *Nature of Things*, BK I [693–700] 9c; BK IV [324–521] 48c-51a esp [469–521] 50b-51a
17 PLOTINUS: *Second Ennead*, TR VIII 64c-65c / *Fifth Ennead*, TR V, CH I 228b-229c
18 AUGUSTINE: *City of God*, BK XIX, CH 18 523a-b
19 AQUINAS: *Summa Theologica*, PART I, Q 17, A 2 102a-d; Q 85, A 6, ANS 458d-459c
21 DANTE: *Divine Comedy*, PARADISE, II [46–57] 108b
25 MONTAIGNE: *Essays*, 285c-292d
28 HARVEY: *Circulation of the Blood*, 320b; 322d-323d; 324c-d / *On Animal Generation*, 332a-333c
30 BACON: *Advancement of Learning*, 51c-d; 57d-58b / *Novum Organum*, BK I, APH 10 107d; APH 14–17 107d-108a; APH 41 109c-d; APH 50 111b; BK II, APH 6 139b-c; APH 39–40 169d-173d; APH 44, 175d
31 DESCARTES: *Rules*, VIII, 13a-b; XII, 18c; 22c-23a / *Discourse*, PART IV, 53b / *Meditations*, I 75a-77c; III, 83d-84a; VI 96b-103d esp 103a-d / *Objections and Replies*, POSTULATE I 130d; 206c-207a; 229d-230d
31 SPINOZA: *Ethics*, PART II, PROP 16, COROL 2 380d; PROP 24–28 383c-384c; PROP 29, COROL 384d-385a; PROP 40, SCHOL 2–PROP 41 388a-c
32 MILTON: *Paradise Lost*, BK V [544–576] 187a-b; BK VIII [114–130] 234b-235a
33 PASCAL: *Pensées*, 9 173b; 83 188b-189a
35 LOCKE: *Human Understanding*, BK II, CH XXIII, SECT 11–13 206d-208b; CH XXX, SECT 2 238b-c; CH XXXI, SECT 2 239b-d; CH XXXII, SECT 14–16 245c-246b; BK IV, CH II, SECT 14 312b-d; CH IV, SECT 4 324c; CH XI, SECT 3–9 355a-357a

(4. The character of sensitive knowledge. 4d. The limit, accuracy, and reliability of sensitive knowledge: the fallibility of the senses.)

35 BERKELEY: *Human Knowledge*, INTRO, SECT I 405a-b; SECT 14–15 415c-416a; SECT 27 418a-b; SECT 40 420b; SECT 86–88 429c-430b; SECT 101 432c-d; SECT 135–142 440a-441c passim
35 HUME: *Human Understanding*, SECT IV, DIV 29 461a-d; SECT XII, DIV 117–123 504a-506a
42 KANT: *Pure Reason*, 27b-33d esp 29d-30c; 108a-d esp 108d [fn 1] / *Practical Reason*, 337a-c / *Judgement*, 603b-d
49 DARWIN: *Origin of Species*, 96c
53 JAMES: *Psychology*, 125a-126a; 400a-405a; 460a-471a esp 469a-b; 508a; 544a-545b; 589b-625a esp 589b-590a, 593a-595a, 606b-610b, 625a
54 FREUD: *Interpretation of Dreams*, 383b-c

4d(1) The erroneous interpretation of sense-data: the problem of judgments based on sensation

7 PLATO: *Republic*, BK X, 431c-d / *Theaetetus*, 538d-541a
8 ARISTOTLE: *Generation and Corruption*, BK I, CH 3 [318^{b}19–31] 415c-d / *Metaphysics*, BK IV, CH 5 [1009^{b}1–17] 528d-529a; BK XI, CH 6 [1062^{b}34–1063^{a}9] 591a-b / *Soul*, BK II, CH 6 [418^{a}14–18] 648d-649a; BK III, CH 1 [425^{a}30–^{b}3] 657c; CH 3 [428^{b}18–24] 661a / *Sense and the Sensible*, CH 4 [442^{b}4–9] 680a-b
12 LUCRETIUS: *Nature of Things*, BK IV [324–468] 48c-50b; [1149–1170] 59a-b
19 AQUINAS: *Summa Theologica*, PART I, Q 17, A 2 102a-d; Q 85, A 6, ANS 458d-459c
29 CERVANTES: *Don Quixote*, PART I, 50b-52d
30 BACON: *Advancement of Learning*, 58b
31 DESCARTES: *Rules*, XII, 22c-23a / *Meditations*, III, 83d-84a / *Objections and Replies*, 229d-230d
35 LOCKE: *Human Understanding*, BK II, CH XXXII, SECT 19–26 247a-248b
35 HUME: *Human Understanding*, SECT XII, DIV 117, 504b-c
42 KANT: *Pure Reason*, 108a-d
44 BOSWELL: *Johnson*, 13c-d
53 JAMES: *Psychology*, 111a; 460a-469a esp 462b-463b, 468b-469a; 508a; 568b-570a; 589b-595a esp 589b-590a, 593a-595a; 617a-625a esp 618b-620a

4d(2) Error in sense-perception: illusions and hallucinations

7 PLATO: *Theaetetus*, 520c-522b
8 ARISTOTLE: *Dreams* 702a-706d
9 ARISTOTLE: *Parts of Animals*, BK II, CH 2 [648^{b}15–18] 173a
12 LUCRETIUS: *Nature of Things*, BK IV [324–336] 48c; [722–748] 53d-54a
14 PLUTARCH: *Marcus Brutus*, 816d-817c
17 PLOTINUS: *Second Ennead*, TR VIII 64c-65c
19 AQUINAS: *Summa Theologica*, PART I, Q 17, A 2, ANS 102a-d; Q 85, A 6, ANS 458d-459c; Q III, A 4, ANS 571b-d
20 AQUINAS: *Summa Theologica*, PART III SUPPL, Q 82, A 3, ANS 971a-972d
23 HOBBES: *Leviathan*, PART I, 50d-52b; PART III, 172b-d; 174b; 189d-190a; PART IV, 249d; 258b-d; 261a
29 CERVANTES: *Don Quixote*, PART I, 50b-52d
30 BACON: *Novum Organum*, BK I, APH 50 111b / *New Atlantis*, 213d
31 DESCARTES: *Rules*, XII, 22c-23a / *Meditations*, I, 75c-d; VI, 101d-102d
34 NEWTON: *Optics*, BK I, 384b-385b; 434a-435a; 443a
35 LOCKE: *Human Understanding*, BK II, CH XXIX, SECT 3 234b-c
35 BERKELEY: *Human Knowledge*, SECT 14, 415d
36 STERNE: *Tristram Shandy*, 234b-236b
44 BOSWELL: *Johnson*, 13c-d
53 JAMES: *Psychology*, 132a-139a; 248b-249b; 264b-269a; 462b-469a esp 462b-465a, 468a-469a; 475a-477b; 508a-520a esp 508a; 521a-522a; 527a-538b; 545a-b; 565a-b; 601a-606a; 610b-625a; 662a-663a [fn 1]; 747b [fn 3]; 780a-785a; 786a-787b [fn 1]; 842b-847b
54 FREUD: *Origin and Development of Psycho-Analysis*, 3a-d / *Hysteria*, 31b-38d passim, esp 31b-d, 36b-d; 102a-106c esp 104d-105d / *Interpretation of Dreams*, 148d-149a; 149d-150d; 337a-d; 353d-356b esp 354c-355b, 356a-b / *General Introduction*, 472a-c / *Ego and Id*, 700c

5. The contribution of the senses to scientific or philosophical knowledge

7 PLATO: *Phaedo*, 224a-225a; 228a-230c / *Republic*, BK VI–VII, 383d-398c / *Timaeus*, 455b-c / *Theaetetus*, 534d-536b / *Seventh Letter*, 809c-810d
8 ARISTOTLE: *Prior Analytics*, BK I, CH 30 [46^{a}18–28] 64a / *Posterior Analytics*, BK I, CH 13 [78^{b}31–79^{a}16] 108b-c; CH 18 111b-c; CH 31 120a-c; BK II, CH 19 136a-137a,c / *Physics*, BK I, CH 1 259a-b; CH 8 [191^{a}24–34] 267a-b / *Heavens*, BK III, CH 7 [306^{a}6–18] 397b-c / *Generation and Corruption*, BK I, CH 2 [316^{a}5–14] 411c-d / *Metaphysics*, BK I, CH 1 [980^{a}20–982^{a}1] 499a-500b; BK XI, CH 7 [1064^{a}4–9] 592b / *Soul*, BK I, CH 1 [402^{b}11–403^{a}2] 631d-632a / *Sense and the Sensible*, CH 1 [436^{b}13–437^{a}17] 673c-674a
9 ARISTOTLE: *Parts of Animals*, BK III, CH 4 [666^{a}7–10] 193d / *Generation of Animals*, BK III, CH 10 [760^{b}28–32] 301d-302a / *Ethics*, BK II, CH 2 [1104^{a}14–15] 349c
10 HIPPOCRATES: *Ancient Medicine*, par 1–8 1a-3b / *Aphorisms*, SECT I, par 1 131a
19 AQUINAS: *Summa Theologica*, PART I, Q 1, A 9, ANS 8d-9c; Q 84, AA 6–8 447c-451b; Q 87, A 1, ANS 465a-466c; Q 89, A 5, ANS 477a-478b; Q 91, A 3, REP 1–3 486b-487d; Q 96, A 1,

REP 3 510b-511b; PART I-II, Q 3, A 3, ANS 624b-625a

20 AQUINAS: *Summa Theologica*, PART I-II, Q 50, A 3, REP 3 8b-9a; PART III, Q 9, A 4 766b-767b; Q 12, A 3, REP 2 778b-779a

23 HOBBES: *Leviathan*, PART I, 54b-c; 60a-b; PART II, 129a; PART IV, 267a-b

25 MONTAIGNE: *Essays*, 260c-261c; 285c-288a; 291b-292d

28 GILBERT: *Loadstone*, PREF, 1a-b; BK I, 6a-7a; BK II, 27b-c

28 GALILEO: *Two New Sciences*, FIRST DAY, 131a-138b passim

28 HARVEY: *Motion of the Heart*, 267b,d-268d; 280c / *Circulation of the Blood*, 322d-323d; 324c-d / *On Animal Generation*, 331b-335c; 411c-d

30 BACON: *Advancement of Learning*, 5b-c; 16a; 34b; 44c; 50c-51d; 57b-d / *Novum Organum* 105a-195d esp BK I, APH 64 114b, APH 95-103 126b-128a, BK II, APH 38-43 169c-175c

31 DESCARTES: *Rules*, II, 2d-3a; VII, 10c-12a; XII, 22c-23a; 24a-b; XIV, 28d-33b / *Discourse*, PART IV, 53b; PART VI, 61d-62c / *Meditations*, I, 75b-76c; VI, 97a-103d / *Objections and Replies*, 128d-129a; 215b-c; 217c-d; 229d-230d

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34 NEWTON: *Principles*, BK III, RULE III-IV 270b-271b / *Optics*, BK III, 543a-b

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35 BERKELEY: *Human Knowledge*, SECT 30 418c; SECT 58-59 424a-b; SECT 104 433a-b; SECT 107 433d-434a

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42 KANT: *Pure Reason*, 5a-13d; 14a-c; 15c-16c; 31b-d; 46a-b; 58a-b; 66d-67b; 68a-69c; 85a-b; 86d-87b; 94b-95a; 211c-218d / *Fund. Prin. Metaphysic of Morals*, 253a-254d esp 253a-c, 254b-c; 263b-c; 273a-b / *Practical Reason*, 295b-d; 312c-d; 329d-330c; 331a-332d / *Intro. Metaphysic of Morals*, 387a-b

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53 JAMES: *Psychology*, 385a-b; 647b-648b; 677b; 851a-884b esp 860b-861a, 862a-865a, 867a, 884b

54 FREUD: *Narcissism*, 400d-401a / *Instincts*, 412a-b / *General Introduction*, 545b-d / *Ego and Id*, 701d / *New Introductory Lectures*, 815a; 879c

5a. Sensation as the source or occasion of ideas: the role of memory or reminiscence; the construction of complex ideas; the abstraction of universal concepts

7 PLATO: *Phaedo*, 228a-230d / *Republic*, BK VII, 392b-393b / *Timaeus*, 455a-c / *Theaetetus*, 538d-541a

8 ARISTOTLE: *Posterior Analytics*, BK I, CH 31 120a-c; BK II, CH 19 136a-137a,c / *Metaphysics*, BK I, CH I [980^a20-981^a13] 499a-c / *Soul*, BK I, CH I [403^a2-15] 632a-b; BK III, CH 7 [431^a14]-CH 8 [432^a14] 663d-664d / *Memory and Reminiscence*, CH I [449^b30-450^a25] 690c-691a

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23 HOBBES: *Leviathan*, PART I, 49a; 52b-c; 54a-c; PART IV, 262a-b

28 GILBERT: *Loadstone*, BK V, 105c

28 HARVEY: *Circulation of the Blood*, 305a / *On Animal Generation*, 332a-335c

31 DESCARTES: *Rules*, VIII, 13a; 14b; XII, 18b-c / *Discourse*, PART II, 47c-d; PART IV, 53b

35 LOCKE: *Human Understanding*, BK I, CH I, SECT 15 98d-99a; BK II, CH I-III 121a-129b esp CH I, SECT 1-8 121a-123a, SECT 20-25 126d-127d, CH II, SECT 2 128a-b; CH VII, SECT 10 133a-b; CH IX, SECT 15 141a; CH XI, SECT 4-9 144d-145c; CH XI, SECT 15-CH XII, SECT 2 146d-147d; CH XII, SECT 8 148c-d; CH XIII, SECT 2 149a; SECT 4-6 149b-d; SECT 27 154c-d; CH XIV, SECT 27 160d-161a; SECT 30-31 161c-162a; CH XVI, SECT 1-2 165c-d; SECT 5 166b-c; CH XVII, SECT 3 168b; SECT 5 168d-169a; CH XVII, SECT 22-CH XVIII, SECT 1 173d-174a; CH XVIII, SECT 6 174c-d; CH XXII, SECT 2 201a-b; SECT 9 202c-203a; CH XXIII, SECT 1 204a-b; SECT 3 204c-d; SECT 9 206b-c; SECT 15 208c-d; SECT 29 211d-212a; SECT 32-37 212c-214b; CH XXV, SECT 9 216d; SECT 11 217a; CH XXX, SECT 3 238c-d; CH XXXII, SECT 6-8 244b-d; SECT 12 245b-c; BK III, CH I, SECT 5 252b-c; CH II, SECT 3 253c; CH III, SECT 6-9 255c-256c; CH IV, SECT 12-14 262b-263a; CH VI, SECT 9 270d-271a; SECT 28-47 276a-

(5. *The contribution of the senses to scientific or philosophical knowledge. 5a. Sensation as the source or occasion of ideas: the role of memory or reminiscence; the construction of complex ideas; the abstraction of universal concepts.*)

282b esp SECT 46-47 281d-282b; CH XI, SECT 21-23 304d-305b; BK IV, CH IV, SECT 11-12 326b-d

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53 JAMES: *Psychology*, 171b-175a; 302b; 327a-331b; 405b 407a; 455a-b; 480a-484a; 540a-635a esp 547a-550b, 551b-552a, 561a-b, 584a-b, 593a-595a, 626a-628a, 630b-631a, 632b-635a; 787a

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5*b*. Sense-experience as the origin of inductions

8 ARISTOTLE: *Prior Analytics*, BK I, CH 30 [46^{a}18-28] 64a / *Posterior Analytics*, BK I, CH 18 111b-c; BK II, CH 2 [90^{a}24-30] 123b-c; CH 19 136a-137a,c / *Physics*, BK I, CH 8 [191^{a}24-34] 267a-b / *Generation and Corruption*, BK I, CH 2 [316^{a}5-14] 411c-d / *Metaphysics*, BK I, CH 1 499a-500b / *Soul*, BK I, CH 1 [402^{b}11-403^{a}2] 631d-632a

9 ARISTOTLE: *Ethics*, BK I, CH 7 [1098^{a}34-^{b}8] 343d-344a; BK VI, CH 8 [1142^{a}12-31] 391b-c; CH 11 [1143^{a}25-^{b}5] 392d-393a

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28 HARVEY: *Motion of the Heart*, 273c-d / *Circulation of the Blood*, 322d-323d; 324c-d / *On Animal Generation*, 332a-335c esp 334c-d; 473a

30 BACON: *Advancement of Learning*, 16a; 34b; 43d-44c / *Novum Organum*, BK I, APH 11-17 107d-108a; APH 19 108b; APH 22 108c; BK II, APH 38-43 169c-175c

31 DESCARTES: *Rules*, VII, 10c-12a; XIV, 28a-b / *Discourse*, PART VI, 61d-62c / *Objections and Replies*, 167c-d

31 SPINOZA: *Ethics*, PART II, PROP 40, SCHOL 1-2 387b-388b

34 NEWTON: *Principles*, BK III, RULE III-IV 270b-271b

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45 FARADAY: *Researches in Electricity*, 659a

46 HEGEL: *Philosophy of History*, PART IV, 361a-b

53 JAMES: *Psychology*, 862a-865a

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5*c*. The dependence of understanding or reason upon sense for knowledge of particulars: verification by appeal to the senses

7 PLATO: *Republic*, BK IX, 421a-422b

8 ARISTOTLE: *Physics*, BK I, CH 8 [191^{a}24-34] 267a-b; BK VII, CH 3 [247^{b}1-7] 330b / *Heavens*, BK I, CH 3 [270^{b}1-13] 361c-d; BK III, CH 7 [306^{a}1-18] 397b-c / *Generation and Corruption*, BK I, CH 2 [316^{a}5-14] 411c-d / *Soul*, BK I, CH 1 [402^{b}11-403^{a}2] 631d-632a; BK III, CH 8 [432^{a}2-9] 664c

9 ARISTOTLE: *Motion of Animals*, CH 1 [698^{a}10-15] 233a / *Generation of Animals*, BK III, CH 10 [760^{b}28-32] 301d-302a / *Ethics*, BK II, CH 7 [1107^{a}27-32] 352d-353a; CH 9 [1109^{b}20-23] 355c; BK X, CH 1 [1172^{a}34-^{b}7] 426b; CH 8 [1179^{a}17-22] 433d-434a / *Politics*, BK VII, CH 1 [1323^{a}33-^{b}7] 527b

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12 LUCRETIUS: *Nature of Things*, BK I [418-448] 6b-c; [690-704] 9c; BK IV [469-521] 50b-51a

18 AUGUSTINE: *City of God*, BK VIII, CH 7 269c-d

19 AQUINAS: *Summa Theologica*, PART I, Q 14, A 11 84c-85c; Q 32, A 1, REP 2 175d-178a; Q 57, A 2 295d-297a; Q 84, AA 7-8 449b-451b; Q 86, A 1 461c-462a

23 HOBBES: *Leviathan*, PART I, 85d; PART III, 165a; PART IV, 249b-250a

25 MONTAIGNE: *Essays*, 260c-261c; 285c-286a; 287b; 291b-292d

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31 DESCARTES: *Discourse*, PART VI, 61d-62c; 66a-b / *Meditations*, I 75a-77c / *Objections and Replies*, 229d-230d

34 NEWTON: *Principles*, BK III, RULE III-IV 270b-271b

35 LOCKE: *Human Understanding*, BK II, CH IV, SECT 6 131a; BK IV, CH XII, SECT 13 362c-d

35 HUME: *Human Understanding*, SECT X, DIV 86 488d-489b; SECT XI, DIV 110 501a-b; SECT XII, DIV 132 509a-d

42 KANT: *Pure Reason*, 85d-93c; 114d-115a; 146a-149d; 153a-c; 231b-c / *Practical Reason*, 337a-c

43 MILL: *Utilitarianism*, 461c-d; 463c-d

44 BOSWELL: *Johnson*, 129a

45 FARADAY: *Researches in Electricity*, 774d-775a

51 TOLSTOY: *War and Peace*, EPILOGUE II, 684a

53 JAMES: *Psychology*, 307a; 456a; 647b-648b esp 648b [fn 1]; 655a; 863a-865a; 881a-b

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6. The role of sense in the perception of beauty: the beautiful and the pleasing to sense; sensible and intelligible beauty

7 PLATO: *Symposium*, 167a-d / *Republic*, BK V, 370d-373c; BK VI, 385c-386c / *Theaetetus*, 513a-b; 535c

9 ARISTOTLE: *Parts of Animals*, BK I, CH 5 [645^{a}4–26] 168d-169a / *Ethics*, BK III, CH 10 [1118^{a}1–^{b}7] 364c-365a; BK X, CH 4 [1174^{b}15-1175^{a}3] 429a-b; CH 5 429d-430d / *Rhetoric*, BK III, CH 2 [1405^{b}17–20] 656a / *Poetics*, CH 7 [1450^{b}34–1451^{a}6] 685b-c

12 EPICTETUS: *Discourses*, BK IV, CH 11 240d-242d

17 PLOTINUS: *First Ennead*, TR VI 21a-26a / *Fifth Ennead*, TR VIII 239b-246c / *Sixth Ennead*, TR VII, CH 30–34 336b-338d

18 AUGUSTINE: *Confessions*, BK X, par 38 81a / *City of God*, BK VIII, CH 7 269c-d; BK XXII, CH 19, 605b / *Christian Doctrine*, BK I, CH 4 625b-c

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28 GALILEO: *Two New Sciences*, FIRST DAY, 175a-176c

29 CERVANTES: *Don Quixote*, PART II, 381d-382a

42 KANT: *Pure Reason*, 23d [fn 1] / *Judgement*, 476a-479d; 482b-483d; 492b-495a,c; 501b-502d; 506a-511a esp 508b-c; 537a-539d

46 HEGEL: *Philosophy of History*, PART I, 220b-c; PART II, 266a-267a; PART III, 304a; PART IV, 346d-347a

47 GOETHE: *Faust*, PART II [11,288–303] 274b-275a

48 MELVILLE: *Moby Dick*, 307b-308b

49 DARWIN: *Origin of Species*, 95a-d esp 95d / *Descent of Man*, 301c-302a; 451b; 568d-569b; 577b; 595d-596a

52 DOSTOEVSKY: *Brothers Karamazov*, BK III, 53c-54b

53 JAMES: *Psychology*, 157a; 755a-758a esp 755b

54 FREUD: *Civilization and Its Discontents*, 775b-c

CROSS-REFERENCES

For: Discussions relevant to the controversy over the distinction between sense and reason or intellect, and the distinction between the sensible and the intelligible, *see* BEING 7c, 8a–8b; EXPERIENCE 4a; IDEA 1b–1c, 2c–2g; KNOWLEDGE 6a(1), 6a(4); MEMORY AND IMAGINATION 1a, 5b, 6c(1), 6d; MIND 1a, 1d, 1g; UNIVERSAL AND PARTICULAR 4d; and for the related issue concerning the difference between animal and human faculties, *see* ANIMAL 1c(2); EVOLUTION 7b(3); MAN 1a–1c; SOUL 2c(2)–2c(3).

The intuitive character of sense-perception as contrasted with the discursive nature of judgment and reasoning, *see* INDUCTION 1a; KNOWLEDGE 6b(4), 6c(1); PRINCIPLE 2b(1); REASONING 1b; and for the theory of space and time as transcendental forms of intuition, *see* FORM 1c; MATHEMATICS 1c; MEMORY AND IMAGINATION 6c(2); MIND 1e(1), 4d(3); SPACE 4a; TIME 6c.

The differentiation of plant, animal, and human life with respect to sensitivity, *see* ANIMAL 1a(1), 1b, 1c(1); LIFE AND DEATH 3a–3b; MAN 4b; SOUL 2c(1)–2c(2).

The discussion of the nervous system, *see* ANIMAL 5g.

The theory of memory and imagination as interior powers of sense and as dependent on the exterior senses, *see* MEMORY AND IMAGINATION 1a, 1c; and for another consideration of the estimative power, *see* HABIT 3b.

The pleasantness and unpleasantness of sensations, *see* PLEASURE AND PAIN 4b, 4e; and for the variation of sense-qualities in degree or intensity, *see* QUALITY 3c; SAME AND OTHER 3c.

The distinction between proper and common sensibles, or between primary and secondary qualities, *see* QUALITY 2b; and for the issue concerning the objectivity or subjectivity of these qualities, *see* QUALITY 6c.

The distinction between sensation and perception, and the problem of our sensitive knowledge of substances as opposed to qualities, *see* BEING 8c; IDEA 2f; KNOWLEDGE 6b(1); MEMORY AND IMAGINATION 1a; PRINCIPLE 2a(1); and for the doctrine of the transcendental unity of apperception, *see* MEMORY AND IMAGINATION 6c(2); ONE AND MANY 4b.

For: The relation of sense to emotion and will, and for the distinction between the sensitive and the rational appetite, *see* DESIRE 3b(1); EMOTION 1; GOOD AND EVIL 4a; MEMORY AND IMAGINATION 1d; WILL 2b(2).

The comparison of sensitive with other forms of knowledge, *see* KNOWLEDGE 6b(1)–6b(3); and for the problem of truth and falsity in sensation and sense-perception, *see* MEMORY AND IMAGINATION 2e(4), 5c; PRINCIPLE 2b(1); TRUTH 3a(1)–3a(2).

The contribution of sense to thought, and for the role of sense in theories of reminiscence, induction, and abstraction, *see* EXPERIENCE 3b, 4b; IDEA 2b, 2f–2g; INDUCTION 2; MEMORY AND IMAGINATION 3a, 3c, 6c–6d; MIND 1a(2); REASONING 1c; UNIVERSAL AND PARTICULAR 4c.

The role of sense in the perception of beauty, *see* BEAUTY 4–5; PLEASURE AND PAIN 4c(1).

ADDITIONAL READINGS

Listed below are works not included in *Great Books of the Western World*, but relevant to the idea and topics with which this chapter deals. These works are divided into two groups:

I. Works by authors represented in this collection.
II. Works by authors not represented in this collection.

For the date, place, and other facts concerning the publication of the works cited, consult the Bibliography of Additional Readings which follows the last chapter of *The Great Ideas.*

I.

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II.

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Chapter 85: SIGN AND SYMBOL

INTRODUCTION

A SIGN points to something. A symbol stands for or takes the place of another thing. Sign and symbol are sometimes differentiated according to whether emphasis is placed on that which is signified or pointed out, or on that which functions as a surrogate or substitute.

Yet "sign" and "symbol" are often used interchangeably. We call the notations of music or mathematics either "signs" or "symbols." Words, too, are traditionally spoken of as signs or symbols. Words and other conventional notations for expressing meaning both point to and stand for something else. It is only in certain cases that one of these two functions seems to predominate, as the road marker points out the direction to take, and paper money takes the place of the precious metal whose value it represents.

On what is common to signs and symbols of all sorts there seems to be no disagreement throughout the tradition of western thought. From Augustine's statement that "a sign is a thing which, over and above the impression it makes on the senses, causes something else to come into mind as a consequence of itself," to Freud's analysis of the symbolism of dreams, of symptoms, and symptomatic acts, the great books consider sign or symbol as one term in a relation, the relation being one of meaning or, as Freud says, of "significance, intention, tendency." The fundamental problems traditionally discussed concern the nature of meaning itself, and the modes of signification which vary with the kinds of things that function as signs and the kinds of things they signify.

WITH RESPECT TO THINGS which function symbolically, the primary distinction seems to be that between natural and conventional signs. Augustine at first suggests a threefold division. Some things are simply things, and not signs at all. Some (for example, "the ram which Abraham offered up instead of his son") are not only things, but "also signs of other things." And some things, such as words, "are never employed except as signs." Augustine adds that words are not merely signs. "Every sign," he writes, "is also a thing, for what is not a thing is nothing at all."

The distinction between natural and conventional signs falls within this threefold division. "Natural signs," Augustine says, "are those which, apart from any intention or desire of using them as signs, do yet lead to the knowledge of something else, as, for example, smoke when it indicates fire. For it is not from any intention of making it a sign that it is so, but through attention to experience we come to know that fire is beneath, even when nothing but smoke can be seen. And the footprint of an animal passing by belongs to this class of signs."

Augustine seems to find natural signs in things that are related as cause and effect. Berkeley, on the other hand, tends to substitute the relation of sign and thing signified for the relation of cause and effect. "The fire which I see," he writes, "is not the cause of the pain I suffer upon my approaching, but the mark that forewarns me. In like manner the noise that I hear is not the effect of this or that motion or collision of the ambient bodies, but the sign thereof."

Every natural thing or event thus tends to become the sign of something else, so that the whole of nature constitutes a vast symbolism or language by which God informs us of his plan. Aristotle tends, in the opposite direction, to limit natural signs to those things which, according to our knowledge and experience, permit a necessary or probable inference to something else. The fact that a woman is giving milk

he regards as an infallible sign that she has lately borne a child; the fact that a man is breathing fast is merely a probable and refutable sign that he has a fever.

In any case, signs are generally acknowledged to be natural if they satisfy Augustine's criterion that they were not intentionally devised by men for the purpose of signifying. "Conventional signs, on the other hand," he writes, "are those which living beings mutually exchange for the purpose of showing, as well as they can, the feelings of their minds, or their perceptions, or their thoughts." Of conventional signs, Augustine goes on to say, words hold the chief place, because everything which can be expressed by gestures, or by such non-verbal symbols as flags or bugle calls, can also be expressed in words, whereas many thoughts which words readily express do not lend themselves easily to other modes of expression.

Except for the hypothesis (discussed in the chapter on LANGUAGE) of a natural form of speech common to all men and consisting of words perfectly adapted to the objects they name, it is never proposed that words are anything but conventional signs. As Aristotle says, "nothing is by nature a noun or a name—it is only so when it becomes a symbol." The audible sound or the visible mark becomes a symbol only by human institution or convention.

Yet not all the audible sounds which men and other animals make to express their feelings or desires are, in Aristotle's opinion, to be regarded as words. "Inarticulate sounds, such as those which brutes produce, are significant, yet none of these constitutes a noun." Nor are such cries, whereby one animal calls another or communicates fear or anger, strictly conventional signs; for, as Augustine points out, they are instinctive modes of expression, and so are natural rather than conventional. They are not voluntarily instituted.

IN TERMS OF THE ancient distinction between the conventional and the natural—that which changes from time to time and place to place and that which is everywhere and always the same—no one would question the conventionality of words and of all other non-verbal symbols which are peculiar to one people, one culture, or one epoch. That words are conventional signs raises the central problem concerning their meaning or significance. Utterly dissimilar words in different languages can have the same meaning, and identical sounds or marks in different languages can mean quite different things. Since the sounds or marks which constitute spoken and written words do not possess meaning naturally, from what source do such conventional signs get the meanings they have?

The usual answer, given by Aristotle, Locke, and others, is that words get their meanings from the ideas, thoughts, or feelings which men use them to express. "Spoken words," writes Aristotle, "are the symbols of mental experience and written words are the symbols of spoken words. Just as all men do not have the same writing, so all men do not have the same speech sounds, but the mental experiences, which these directly symbolize, are the same for all, as also are those things of which our experiences are the images."

In addition to being able to make articulate sounds, it was necessary for man, Locke says, to "be able to use these sounds as signs of internal conceptions, and to make them stand as marks for the ideas within his own mind, whereby they might be made known to others." Thus words came to be used by men "as the signs of their ideas; not by any natural connexion that there is between particular articulate sounds and certain ideas, for then there would be but one language amongst all men; but by a voluntary imposition, whereby such a word is made arbitrarily the mark of such an idea. The use then of words is to be sensible marks of ideas, and the ideas they stand for are their proper and immediate signification."

Locke goes further. Not only does the immediate signification of words lie in the ideas they stand for, but in his view words "can be signs of nothing else." Yet he also considers the fact that men, because they "would not be thought to talk barely of their own imaginations, but of things as they really are . . . often suppose their words to stand also for the reality of things." Locke thinks, nevertheless, that "obscurity and confusion" enter into the signification of words "whenever we make them stand for anything but those ideas we have in our own minds."

But though the meaning of a word may come from the idea it signifies, the word which is thus made meaningful seems, in the common usage of mankind, to serve as the name or designation of some real thing. It refers to something other than ideas or concepts in the human mind. Locke himself talks of "the application of names to things," and in his consideration of the distinction between proper and common names is concerned to point out that, though they differ in meaning (*i.e.*, differ in the type of idea they signify), both refer to the same sort of reality—individual existences. Aristotle and other writers who distinguish between things in the order of nature and the concepts we form of them, tend to take both views of the significance of words. Words signify the real things which they name as well as the ideas whose meanings they express. If we waive for the moment the possibility that some words may signify *only* ideas, whereas others signify both ideas and things, two questions may be asked. Are there any words which signify things alone? What is the relation between the idea and the thing a word signifies, when a word signifies them both; that is, when a word has both sorts of significance, how are they related to one another?

Aquinas answers the second question by saying that since "words are the signs of ideas, and ideas the similitudes of things, it is evident that words function in the signification of things through the conceptions of the intellect." Ideas may be the immediate or proximate object which words signify, but through them words ultimately signify the real things which are themselves the objects of ideas. According to this theory, an idea may be both the *object signified* by a word and the *medium through which* that word also signifies the thing of which we have the idea. Aquinas seems to think that ideas are always required as the medium whereby words signify things. "We can give a name to anything," he says, "only insofar as we can understand it." Accordingly, it is impossible for words to signify things directly, *i.e.*, without the mediation of ideas.

This position has a number of consequences for the theory of signs and raises a number of issues. Augustine's statement that "every sign is also a thing" has a different meaning when it is said of the sensible things which also happen to be signs and of the things of the mind —concepts or ideas—which cannot *be* without *being signs*. The understanding of this difference helps to explain the relation between verbal signs and the mental signs through which they signify or from which they get their meanings.

Whereas words are in the first instance meaningless marks and sounds which get meaning when men use them to express their thoughts or feelings, ideas and images are at once meaningful, however they arise in the mind. They are natural signs in the sense that it seems to be their very nature to signify. They do not get meaning. They do not even have meaning, in the way in which smoke as a natural sign of fire has a meaning which is distinct from, though a consequence of, its nature as smoke. An idea *is* a meaning, an intention of the mind, as it is sometimes called, a reference to an object thought about. The idea of fire is the meaning the word "fire" has when it designates the natural phenomenon which that word is conventionally used to name; and as Aristotle suggests, the conventional signs of different languages [*e.g.*, "fire" and "*feuer*"]—have the same meaning because the idea of fire is the same, and the natural phenomenon experienced and thought about is the same, for men of diverse tongues.

That ideas or mental images are themselves meanings or intentions—the symbols of things thought about—seems to be recognized in different ways by many writers in the tradition of the great books. In the *Cratylus*, Socrates suggests that signs should be like the things they signify. Some conventional signs, he thinks, are better than others in this respect. He implies that all words are inferior to mental images, which, by their very nature, imitate or resemble their objects.

The act of memory, according to Aristotle, requires a memory image which is "something like an impression or picture" of the thing remembered. If the memory image, through its resemblance to something once experienced, did not function as the sign of that absent thing, memory would not be memory, for, Aristotle argues, it would consist in beholding

the memory image itself, which is present, rather than the absent thing it stands for.

Aquinas, perhaps, is the writer most explicit in his treatment of images and ideas as in their very nature meanings or intentions of the mind. His calling them "mental words" seems to indicate that in his view they, like physical and sensible words, are signs; but the added qualification of "mental" also implies their difference. "The vocal sound which has no signification," he writes, "cannot be called a word; wherefore the exterior vocal sound is called a word from the fact that it signifies the interior concept of the mind. It follows that, first and chiefly, the interior concept of the mind is called a word." The mental word or concept suffices "when the mind turns to the actual consideration of what it knows habitually," for then, he adds, "a person speaks to himself." But unlike angels, who can make their concepts known to one another immediately, men require the medium of external speech. They must use sensible physical signs to communicate their thoughts.

Without referring to ideas as mental words, Locke does appear to identify ideas with meanings and to regard them as signs. The definition of a word, he says, is an attempt to make known "the meaning or idea it stands for." Denying that the general and the universal belong to the real existence of things, he holds that they "concern only signs, whether words or ideas. Words are general . . . when used for signs of general ideas . . . and ideas are general when they set up as the representatives of many particular things; but universality belongs not to things themselves, which are all of them particular in their existence, even those words and ideas which, in their signification, are general."

The basic issue to which Locke is addressing himself is discussed in the chapter on UNIVERSAL AND PARTICULAR. Locke's solution seems to involve the affirmation of abstract ideas, which are general or universal in their significance and through which common names come to have a different sort of meaning from the meaning of proper names. "Ideas become general by separating them from the circumstances of time and place, and any other ideas that may determine them to this or that particular existence." Common nouns like "man" or "cat" become general in their significance, according to Locke, "by being made the signs of general ideas."

To the question of what kind of signification it is that general words have, Locke replies: "As it is evident, that they do not signify barely one particular thing; for then they would not be general terms, but proper names; so, on the other side, it is as evident, they do not signify a plurality; for man and men would then signify the same. . . . That, then, which general words signify," Locke declares, "is a sort of things, and each of them does that by being a sign of an abstract idea in the mind."

It seems to follow, therefore, that those who, like Hobbes and Berkeley, deny the existence of abstract ideas or universal concepts, must offer a different explanation of the meaning of common nouns or general names. "There being nothing in the world universal but names," Hobbes writes, a name is universal when it "is imposed on many things for their similitude in some quality or other accident; and whereas a proper name bringeth to mind one thing only, a universal recalls any one of those many."

On similar grounds, Berkeley criticizes Locke's theory of how words acquire general significance. His own theory is that words become general "by being made the sign, not of an abstract general idea, but of several particular ideas, any one of which it indifferently suggests to the mind." And, in another place, he says that "an idea which, considered in itself, is particular becomes general by being made to represent or stand for all other particular ideas of the same sort." He does not himself explain how we come by the notion of "the same sort," or how one particular idea can represent the sort to which other particular ideas belong. But he rejects Locke's explanation because it involves ideas which are not only general, but also abstract.

The attempt to account for the meaning of general names is, in Berkeley's view, the cause of Locke's acceptance of abstract ideas. "If there had been no such thing as speech or universal signs," he writes, "there never [would have] been any thought of abstraction." Not only do men mistakenly suppose that "every name has, or ought to have, one only precise and settled signification, which inclines [them]

to think there are certain abstract, determinate ideas that constitute the true and only immediate signification of each general name"; but they also suppose that "it is by the mediation of these abstract ideas that a general name comes to signify any particular thing. Whereas, in truth," Berkeley concludes, "there is no such thing as one precise and definite signification annexed to any general name." Where Locke would say that a common name gets its general meaning by signifying one idea which itself has general significance, Berkeley reiterates that a general name gets its meaning from "a great number of particular ideas," all of which it signifies indifferently.

THE RELATION OF WORDS to ideas raises still other problems in the theory of signs, problems which have peculiar interest in the tradition of the liberal arts. One of these problems has already been mentioned. It is the question whether some words signify ideas alone, in contrast to words which signify ideas and, through them, things. This suggests the parallel problem of words which signify words, in contrast to words which are the names of things.

In his little tract *Concerning the Teacher*, Augustine points out that some words, such as "noun" and "adjective," signify kinds of words, just as other words, such as "man" and "stone," signify kinds of things. Furthermore, in the sentence "man is a noun," the word "man" signifies itself as the object referred to; whereas in the sentence "man is an animal," the word "man" signifies a living organism of a certain sort. The same word, therefore, may signify both itself and some thing other than itself.

These differences which Augustine observes in the signification of words come to be formulated in the traditional distinction between the first and second imposition of words. A word is used in the first imposition when it is used to signify things which are not words, as, for example, the word "man" when it refers to a human being. A word is used in the second imposition when it is applied to words rather than things, as, for example, the word "noun" said of "man," or the word "man" when it is used to refer to itself in the sentence "man is a noun."

A parallel distinction is that between words used in the first and the second intention. When the word "man" is used to signify a living organism of a certain sort, it is used in the first intention because it signifies a reality, not an idea. A word is said to be used in the second intention when it signifies an idea rather than a thing. For example, in the sentence, "man is a species," the word "species" signifies a logical classification and so is in the second intention; and the word "man" is also in the second intention because it refers to the idea which is denominated a species.

In some cases, an idea may not signify things at all, but only other ideas, such as the logical notions of *genus* and *species*. Words like "genus" and "species," unlike the words "man" and "stone," can therefore be used only in the second intention. The idea *man* is called a "first intention of the mind" because its primary function is to signify the living thing. Only secondarily does it signify itself as an object able to be considered. The idea *species*, on the other hand, is called a "second intention" because its sole function is to signify ideas which stand to other ideas in a certain relation.

Hobbes concisely summarizes most of these points when he points out that some words "are the names of the things conceived," whereas "others are the names of the imaginations themselves, that is to say, of those ideas or mental images we have of all the things we see and remember. And others again are names of names . . . as 'universal,' 'plural,' 'singular,' are the names of names." The names which we apply to particular species and genera, such as "man" and "animal," Aquinas says, "signify the common natures themselves, but not the intentions of these common natures, which are signified by the terms *genus* or *species*."

ANOTHER TRADITIONAL distinction in the modes of signification is that between intrinsic and extrinsic denomination. A name is said to be an intrinsic denomination when it is applied to a thing in order to signify its nature or its inherent properties and attributes, as, for example, when we call a thing "animal" or "rational," "white" or "square." A name is said to be an extrinsic denomination when it is applied to a thing only in order to signify some relation in which that thing stands to some-

thing else, as, for example, when we call sunshine "healthy" because it helps to produce healthy organisms or when we apply the names of animals, such as "pig" or "fox," to men because we think the men bear certain resemblances to these animals. The same word can be used in different connections both as an intrinsic and as an extrinsic denomination. "Healthy" means an inherent quality when it is applied to living organisms, and a causal relation to organic health when it is applied to sunshine; "pig" means a certain kind of animal when it is applied to the four-footed mammal, and only a resemblance to this animal in certain characteristics when it is applied to men.

This double use of the same word exemplifies what is traditionally called "equivocal speech" or the equivocal use of a name. Some writers tend to identify equivocation with ambiguity, on the ground that both involve a multiplicity of meanings for the same word. Others seem to think that a word is used ambiguously only if its user is indefinite as to which of its several meanings he intends to express; but they hold that a word can be used equivocally without ambiguity if its user makes plain that he is employing it now in this sense, now in that.

Aristotle says that two things are named equivocally "when though they have the same name, the definition corresponding with the name differs for each"; and "on the other hand, things are said to be named univocally which have both the name and the definition answering to the name in common." When we call a man and a pig an "animal," we are using that word univocally because we are using it with the same definition or meaning in both cases; but when we call a pig and a man a "pig," we are using that word equivocally because we are using it with different meanings, signifying *having the nature of a pig* in one instance and *being like a pig in certain respects* in the other.

Aristotle distinguishes several types of equivocation, of which we have already noted two. The use of the word "healthy" to describe an animal and sunshine is that type of equivocation in which the same word is used to name an inherent attribute and also a cause of that attribute; in other instances of the same type, it might be used to name the nature or attribute and the effect rather than the cause. Speaking of a man and a pig as a "pig" represents the metaphorical type of equivocation, in which the same word is used to name the nature of a thing and something else of a different nature which has only a likeness to that nature.

Metaphors, in turn, can be divided into types. Some are based on a direct similitude between two things in some accidental respect, *e.g.*, the man who is like a pig in manner of eating. Some, Aristotle says, are based on analogies or proportions, as, for example, when we call a king the "father of his people." Here the metaphor is based on the similarity of the relationship of a king to his subjects and of a father to his children. The name "father" is used metaphorically when it is transferred from one term in this proportion to the term which stands in an analogous position.

A third kind of metaphor, according to Aristotle, consists in the use of the same word now in a more generic, now in a more specific sense, or with broader and narrower meanings. Of this he gives an example in the *Ethics* when he discusses general and special justice, using the word "justice" narrowly to signify one of the special virtues and broadly to mean all the virtues considered in their social aspect. There is a sense of the word "justice," he writes, in which it signifies "not part of virtue but virtue entire"; "this form of justice is complete virtue, though not absolutely, but only in relation to our neighbor." The word "injustice" is also used in a correspondingly wide sense. But there is "another kind of injustice which is a part of injustice in the wide sense." This "particular injustice," Aristotle says, "shares the name and nature of the first, because its definition falls within the same genus." As Aristotle treats this type of equivocation in the *Rhetoric* and the *Poetics*, it includes three possibilities: the transfer of the name of a genus to one of its species, the transfer of the name of a species to its genus, and the transfer of the name of one species to another in the same genus.

It may be questioned whether this type of equivocation is properly classified as metaphorical, on Aristotle's own definition of metaphor as "giving a thing a name that belongs to something else." In the type of equivocation exemplified by the use of the word "justice," now

with a generic and now a specific meaning, the name does not seem to belong to the genus any more than it does to the species, or conversely. In contrast, when the name "father" is given to a king in relation to his people, the usage is metaphorical, because the name "father" belongs to something else, *i.e.*, the man who is a progenitor.

The same point can be made in terms of intrinsic and extrinsic denomination. When "justice" is used as the name for the whole of virtue (regarded socially) and also for one particular virtue, the word is an intrinsic denomination in both instances. In all other types of equivocation, the equivocal word is used once as an intrinsic and once as an extrinsic denomination; for example, as applied to the animal, the word "pig" is an intrinsic denomination, but it is an extrinsic denomination when it is applied to a man in order to signify a certain resemblance to the animal to which the name belongs. The same is true in the case of the word "healthy" as said of an animal and of sunshine.

In all these cases of equivocation, the two meanings of the same word are not totally distinct. On the contrary, the two senses have something in common. One of the meanings seems to be derived from the other; one appears to be secondary (usually the one involved in the extrinsic denomination) and the other primary. What is traditionally called "equivocation by chance," in contrast to equivocation by intention, is the extreme case in which the same word is used in two utterly distinct senses, having no common element of meaning at all; *e.g.*, the word "pen" used for a writing instrument and an enclosure for animals. Equivocation by intention, in which the different meanings of a word have something in common, thus appears to be intermediate between equivocation by chance (in which the meanings share no common element) and univocal usage (in which the meaning is exactly the same each time the word is used).

In the *Physics*, Aristotle seems to discover still another type of equivocation. "A pen, a wine, and the highest note in a scale are not commensurable," he writes. "We cannot say whether any one of them is sharper than any other . . . because it is only equivocally that the same term 'sharp' is applied to them." This does not seem to be equivocation by chance, for the word "sharp" seems to have some common meaning as applied to the three objects which affect the diverse senses of touch, taste, and hearing; nor is it like all other cases of equivocation by intention, in that no one of these three meanings of "sharp" seems to be primary and the others derived from it. Furthermore, in all three meanings, the word "sharp" is used as an intrinsic denomination.

In the *Metaphysics*, Aristotle also considers the special pattern of meaning which words like "being" or "one" have when they are applied to such heterogeneous things as substances, quantities, qualities, etc. He refers to these words as ambiguous or equivocal, comparing them with the word "healthy" as said of an animal, and of other things which either cause health or are effects of health. It may be questioned, however, whether "being" is equivocal in the same way that "healthy" is, since it always carries the significance of an intrinsic, never of an extrinsic denomination. "Being" as said of heterogeneous things seems to be more like "sharp" said of diverse sensible qualities—having a meaning which remains somehow the same while it is diversified in each case according to the diversity of the objects to which it applies.

THESE CONSIDERATIONS of the univocal and the equivocal sign, along with the treatment of ambiguity and intrinsic and extrinsic denomination, indicate the extent and manner in which the great books anticipate the kind of analysis which in our time has come to be called "semantics." The chapter on LANGUAGE gives further evidence of the fact that many of the points and distinctions made in contemporary semantics have a long history in the tradition of the liberal arts. Furthermore, as the chapter on LANGUAGE indicates, contemporary semantics cannot even claim novelty for its great interest in freeing men from the tyranny of words or in serving as a critical instrument to cut through the "vicious abstractions" of metaphysics. Hobbes and Locke frequently dismiss theories not on the ground that they are false, but rather because they think that the statement of them consists in so many meaningless words.

In the tradition of the great books, the analysis of words and their modes of signification seems to be motivated by other interests as well as these. The distinction between the univocal and the equivocal sign, for example, is considered in its bearing on the logical problems of definition and demonstration as well as for the sake of proposing remedies to safeguard discourse against ambiguity. It is also brought to bear upon the theological problem of the meaning of the names men apply to God and on the way in which they interpret the words of Sacred Scripture.

The problem of the names of God is discussed in the chapter on SAME AND OTHER in terms of the kind of likeness which can obtain between an infinite being and finite creatures. As there appears, Aquinas takes the position that God and creatures are neither the same in any respect, nor are they in all respects so diverse as to be utterly incomparable. Though an infinite and a finite being are in his view incommensurable, yet they can also have some sort of similitude—not an unqualified sameness, but the kind of similarity which can be described as an intrinsically diversified sameness.

Aquinas holds, therefore, that no names can be applied to God and creatures univocally, for "no name belongs to God in the same sense that it belongs to creatures." Nor, he goes on, "are names applied to God and creatures in a purely equivocal sense," for it would follow then that "from creatures nothing at all could be known or demonstrated about God," which supposition Aquinas denies. Between these two extremes of the simply univocal and the purely equivocal, he finds a middle ground in a type of signification which he calls "analogical." The meaning of an analogical name, he says, "is not, as it is in univocals, one and the same; yet it is not totally diverse as in equivocals."

What he means by "pure equivocation" seems to be what earlier writers call "equivocation by chance," and what he means by the "analogical" seems to correspond to what they call "equivocation by intention." "Univocal names have absolutely the same meaning," he writes, "while equivocal names have absolutely diverse meanings; whereas in analogicals, a name taken in one signification must be placed in the definition of the same name taken in other significations; as, for instance, "being" which is applied to *substance* is placed in the definition of "being" as applied to *accident*; and "healthy" applied to *animal* is placed in the definition of "healthy" as applied to *urine* and *medicine*."

But, as we have seen, there are many types of equivocation by intention—the attributive, based on cause and effect, as exemplified by the word "healthy"; that involving broader and narrower meanings, exemplified by the word "justice"; metaphors, of the sort exemplified by calling a man "pig," and of the sort based on analogies, when we speak of a king as the "father" of his people; and, finally, the very special type of equivocation found in "sharp" applied to a tone, a taste, and a touch.

If Aquinas places the kind of signification he calls "analogical" in the general area of equivocation by intention, it may be asked whether the various names of God are all analogical *in the same way*. The answer seems to be negative, for he distinguishes those names which have only a metaphorical sense when said of God, such as "angry" or "jealous"; and he denies the opinion of those who say that God is called "good" only in an attributive sense, *i.e.*, signifying him to be the cause of the goodness found in creatures. On the contrary, he thinks that words like "good" and "wise," and especially the name "being," are to be interpreted as intrinsic denominations when applied to both God and creatures.

For Aquinas, as for Aristotle, that would appear to make the pattern of meaning exhibited by the word "sharp" the model for the significance of "being" rather than that found in the merely attributive equivocation of the word "healthy"—whether "being" is said of substance and accidents, or of God and creatures. The point seems to be unaffected by the fact that Aquinas calls this type of signification "analogical," whereas Aristotle always refers to "being" as equivocal. Aristotle never treats any type of equivocation as analogical except the metaphor which results from transferring the name of one term in a proportion to another term standing in the same or a similar relationship.

THE DISTINCTION BETWEEN literal and figurative or metaphorical speech seems to be of prime importance in the theologian's rules for interpreting the word of God. As indicated in the chapter on RELIGION, Augustine insists that the language of Holy Writ must be read in many senses. Aquinas distinguishes a basic literal sense from three modes of spiritual meaning. That signification "whereby words signify things belongs to the first sense, the historical or literal. That signification whereby things signified by words have themselves also a signification is called the spiritual sense, which is based on the literal and presupposes it." The spiritual sense Aquinas divides into the allegorical, the moral, and the analogical.

To grasp the various spiritual meanings, the reader must understand that in Holy Scripture "divine things are metaphorically described by means of sensible things." As in the symbolism of the sacraments, physical things serve as the outward and visible signs of an inward and spiritual grace, so also "in Holy Scripture spiritual truths are fittingly taught under the likeness of material things."

A theologian like Aquinas thus justifies metaphors not only in Scripture, but also in sacred doctrine or theology, as "both necessary and useful," whereas in his view the poet's employment of them is solely for the sake of pleasure. Philosophers and scientists, on the other hand, often take the opposite view—that metaphors have a place only in poetry and should be avoided in the exposition of knowledge.

In the writing of poetry, "the command of metaphor," says Aristotle, "is the mark of genius," but all his rules for the construction of scientific definitions and demonstrations require the avoidance of metaphors, as of all other forms of equivocation. So, too, Hobbes inveighs against metaphors and figures of speech, giving as one of the main causes of absurdity in science "the use of metaphors, tropes, and other rhetorical figures, instead of words proper; for though it be lawful to say (for example) in common speech, *the way goeth, or leadeth hither or thither, the Proverb says this or that* (whereas ways cannot go, nor Proverbs speak); yet in reckoning, and seeking of truth, such speeches are not to be admitted."

Darwin looks forward to the day when "the terms used by naturalists, of affinity, relationship, community of type, paternity, morphology, adaptive characters, rudimentary and aborted organs, and so forth, will cease to be metaphorical and will have a plain significance." Freud, on the other hand, aware of how pervasive symbolism is in all the works of man, normal and neurotic, dreaming and awake, seems to be reconciled to the inevitability of metaphors in scientific discourse. The difficulty we meet with in picturing certain psychological processes, he writes, "comes from our being obliged to operate with scientific terms, *i.e.*, with the metaphorical expressions peculiar to psychology. . . . Otherwise we should not be able to describe the corresponding processes at all, nor in fact even to have remarked them. The shortcomings of our description would disappear if for the psychological terms we could substitute physiological or chemical ones. These, too, only constitute a metaphorical language, but one familiar to us for a much longer time and perhaps also simpler."

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PAGE SECTIONS: When the text is printed in one column, the letters **a** and **b** refer to the upper and lower halves of the page. For example, in **53** JAMES: *Psychology*, **116a-119b**, the passage begins in the upper half of page 116 and ends in the lower half of page 119. When the text is printed in two columns, the letters **a** and **b** refer to the upper and lower halves of the left-hand side of the page, the letters **c** and **d** to the upper and lower halves of the right-hand side of the page. For example, in **7** PLATO: *Symposium*, **163b-164c**, the passage begins in the lower half of the left-hand side of page 163 and ends in the upper half of the right-hand side of page 164.

AUTHOR'S DIVISIONS: One or more of the main divisions of a work (such as PART, BK, CH, SECT) are sometimes included in the reference; line numbers, in brackets, are given in certain cases; *e.g.*, *Iliad*, BK II [265-283] **12d**.

BIBLE REFERENCES: The references are to book, chapter, and verse. When the King James and Douay versions differ in title of books or in the numbering of chapters or verses, the King James version is cited first and the Douay, indicated by a *(D)*, follows; *e.g.*, OLD TESTAMENT: *Nehemiah*, 7:45—*(D) II Esdras*, 7:46.

SYMBOLS: The abbreviation "esp" calls the reader's attention to one or more especially relevant parts of a whole reference; "passim" signifies that the topic is discussed intermittently rather than continuously in the work or passage cited.

For additional information concerning the style of the references, see the Explanation of Reference Style; for general guidance in the use of *The Great Ideas*, consult the Preface.

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23 HOBBES: *Leviathan*, PART I, 73c-75d

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53 JAMES: *Psychology*, 310a-311a; 447b-448a

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36 SWIFT: *Gulliver*, PART IV, 154a

(3. *The patterns of meaning in human discourse.* 3*a. Verbal ambiguity: indefiniteness or multiplicity of meaning.*)

36 STERNE: *Tristram Shandy*, 234b-236b; 307b-308b
37 FIELDING: *Tom Jones*, 38d-39a; 264b
38 MONTESQUIEU: *Spirit of Laws*, BK XII, 89c-d
42 KANT: *Pure Reason*, 113b-c / *Practical Reason*, 294b-c; 315d-316a / *Science of Right*, 400d
43 FEDERALIST: NUMBER 37, 120a-b
43 MILL: *Utilitarianism*, 447b-d
46 HEGEL: *Philosophy of History*, PART I, 218a-c
50 MARX: *Capital*, 104d [fn 4]
53 JAMES: *Psychology*, 549b-550a
54 FREUD: *Interpretation of Dreams*, 277d-278a / *General Introduction*, 517c-518b; 540c-541b

3*b*. The distinction between univocal and equivocal speech

8 ARISTOTLE: *Categories*, CH 1 [1^a1-12] 5a / *Interpretation*, CH 1 [16^a4-8] 25a / *Topics*, BK VI, CH 10 [148^a23-$^b4$] 202b-c / *Metaphysics*, BK I, CH 9 [990^b33-991^a8] 509a-b; BK XI, CH 3 [1060^b31-36] 589a
19 AQUINAS: *Summa Theologica*, PART I, Q 1, A 10, REP 1 9c-10c; Q 13, A 5 66b-67d; A 10 72c-73c; Q 29, A 4, ANS and REP 4 165c-167a
30 BACON: *Advancement of Learning*, 60b-c
31 SPINOZA: *Ethics*, PART I, PROP 17, SCHOL 362c-363c
35 LOCKE: *Human Understanding*, BK II, CH IV, SECT 5, 131a; CH XXIX, SECT 9 235c-d; BK III, CH IX, SECT 15-16 288d-289c; CH X, SECT 5 292d-293a; CH XI, SECT 3-7 300b-301c; BK IV, CH VII, SECT 15 343d-344a; CH VIII, SECT 11 348b-c
35 HUME: *Human Understanding*, SECT VIII, DIV 62-63 478b-d
36 STERNE: *Tristram Shandy*, 307b-308b
42 KANT: *Science of Right*, 400d
53 JAMES: *Psychology*, 875b-876a

3*c*. The types of equivocation

3*c*(1) The same word used literally and figuratively: metaphors derived from analogies or proportions and from other kinds of similitude

8 ARISTOTLE: *Categories*, CH 1 [1^a1-6] 5a / *Topics*, BK VI, CH 2 [139^b33-140^a6] 192d-193a
9 ARISTOTLE: *Ethics*, BK V, CH 11 [1138^b5-14] 387a,c / *Rhetoric*, BK III, CH 2 [1404^b27-1405^b3] 655a-d; CH 3 [1406^b5]-CH 4 [1407^a16] 657a-d; CH 6 [1408^a2-9] 659a; CH 10-11 662c-666b / *Poetics*, CH 21 [1457^b1-33] 693a-c; CH 25 [1461^a8-20] 697c-d
18 AUGUSTINE: *Confessions*, BK V, par 24 34a-b; BK VI, par 6 36c-d / *City of God*, BK XVII, CH 3 450c-451c; BK XX, CH 21, 549d / *Christian Doctrine*, BK II, CH 10 640d-641a; BK III, CH 1 657b; CH 5-37 659d-674d
19 AQUINAS: *Summa Theologica*, PART I, Q 1, AA 9-10 8d-10c; Q 3, A 1, REP 1-5 14b-15b; A 2, REP 1-2 15c-16a; A 3, REP 1 16a-d; Q 13, A 2, ANS and REP 1 63c-64d; A 3 64d-65c; A 6, ANS and REP 2 67d-68c; A 10, CONTRARY 72c-73c; Q 34, A 1, ANS and REP 1,4 185b-187b; Q 67, A 1 349d-350b; A 2, REP 3 350b-351a; Q 68, A 4, ANS 358b-359b
20 AQUINAS: *Summa Theologica*, PART I-II, Q 100, A 2, REP 2 252b-253a; PART III, Q 8, A 1, REP 2 756d-757c
23 HOBBES: *Leviathan*, PART I, 55b; 59d; 61c; PART III, 176d-177d; 181d; 193d-195d
25 MONTAIGNE: *Essays*, 422c-423c
28 HARVEY: *Motion of the Heart*, 267a-b
30 BACON: *Advancement of Learning*, 65b-c
35 LOCKE: *Human Understanding*, BK III, CH 1, SECT 5 252b-c
35 BERKELEY: *Human Knowledge*, SECT 144 441d
36 SWIFT: *Gulliver*, PART III, 114b-115b
40 GIBBON: *Decline and Fall*, 775c-d [n 173]
42 KANT: *Judgement*, 547b-548c
53 JAMES: *Psychology*, 380a-381a; 689a-b
54 FREUD: *General Introduction*, 510b-c; 512d-513a

3*c*(2) The same word used with varying degrees of generality and specificity: the broad and narrow meaning of a word

9 ARISTOTLE: *Ethics*, BK V, CH 1-2 376a-378c / *Poetics*, CH 21 [1457^b7-16] 693b
18 AUGUSTINE: *Christian Doctrine*, BK III, CH 34-35 670c-672d
19 AQUINAS: *Summa Theologica*, PART I, Q 27, A 2, ANS 154c-155b; Q 67, A 1 349d-350b; A 2, REP 3 350b-351a; Q 68, A 4 358b-359b; Q 115, A 2, ANS 587c-588c
20 AQUINAS: *Summa Theologica*, PART I-II, Q 49, A 1 1b-2b; PART II-II, Q 9, A 2, ANS and REP 2 424b-425a; Q 186, A 1, ANS 650c-651d
39 SMITH: *Wealth of Nations*, BK II, 123b-d
43 MILL: *Utilitarianism*, 447b-d
54 FREUD: *General Introduction*, 509d

3*c*(3) The same word used to signify an attribute and its cause or effect

8 ARISTOTLE: *Topics*, BK I, CH 15 [106^a1-9] 149d; [106^b33-107^a8] 150d-151a; BK V, CH 2 [129^b30-130^a1] 180a / *Metaphysics*, BK IV, CH 2 [1003^a33-$^b11$] 522b; BK VII, CH 4 [1030^a31-$^b3$] 553a-b; BK XI, CH 3 [1060^b36-1061^a7] 589a-b
19 AQUINAS: *Summa Theologica*, PART I, Q 13, A 5, ANS 66b-67d; A 6, ANS and REP 3 67d-68c;

A 10, ANS 72c-73c; Q 16, A 6, ANS 98b-d; PART I–II, Q 20, A 3, REP 3 713c-714c

20 AQUINAS: *Summa Theologica*, PART III, Q 60, A 1, ANS 847b-848a

3d. The significance of names predicated of heterogeneous things: the analogical as intermediate between the univocal and the equivocal

8 ARISTOTLE: *Interpretation*, CH 3 [16b19–26] 25d-26a / *Topics*, BK I, CH 15 149d-152a passim / *Sophistical Refutations*, CH 7 [169a22–25] 232d / *Physics*, BK I, CH 2 [185a20]–CH 3 [187a10] 260a-262a; BK VII, CH 4 [248b7–249a24] 331b-332b / *Metaphysics*, BK I, CH 9 [992b18–24] 511a; BK III, CH 3 [998b22–27] 517c; BK IV, CH 2 [1003b23–34] 522d; BK V, CH 6–7 536a-538b; CH 9 538c-539a; BK VII, CH 1 550b,d-551a; BK X, CH 1 [1052b1–15] 578d-579a; CH 2 580b-d; BK XI, CH 2 [1060a36–b10] 588c; BK XII, CH 4–5 599d-601a

9 ARISTOTLE: *Ethics*, BK I, CH 6 [1096a17–29] 341b-c

19 AQUINAS: *Summa Theologica*, PART I, Q 3, A 4, REP 1 16d-17c; A 6, REP 1 18c-19a; Q 4, A 3, ANS 22b-23b; Q 13, AA 5–6 66b-68c; A 10 72c-73c; Q 29, A 4, REP 4 165c-167a

20 AQUINAS: *Summa Theologica*, PART I–II, Q 61, A 1, REP 1 54d-55c

35 LOCKE: *Human Understanding*, BK II, CH XIII, SECT 18 152a-c

42 KANT: *Pure Reason*, 181b-182b

4. The determination of meaning in science and philosophy

4a. The relation between univocal meaning and definition

7 PLATO: *Sophist*, 552b-c

8 ARISTOTLE: *Categories*, CH 5 [3a32–b9] 7c-d / *Posterior Analytics*, BK II, CH 13 [97b37–39] 133c / *Topics*, BK IV, CH 3 [123a27–29] 171d; CH 6 [127b5–6] 177a; BK VI, CH 2 192c-193b; CH 10 [148a22–b22] 202b-203a; BK VII, CH 4 [154a14–18] 209c; BK VIII, CH 3 [158b8–159a2] 215b-c / *Soul*, BK I, CH 1 [402b1–8] 631c-d

9 ARISTOTLE: *Parts of Animals*, BK I, CH 2–3 165d-167d

19 AQUINAS: *Summa Theologica*, PART I, Q 13, A 1, ANS 62c-63c

23 HOBBES: *Leviathan*, PART I, 56b; PART IV, 269b-c

33 PASCAL: *Geometrical Demonstration*, 430b-434a

35 LOCKE: *Human Understanding*, BK III, CH XI, SECT 12 302d

35 BERKELEY: *Human Knowledge*, INTRO, SECT 18 410a-c

43 FEDERALIST: NUMBER 37, 120a-b

49 DARWIN: *Descent of Man*, 347a-c

53 JAMES: *Psychology*, 121b-122a

4b. The dependence of demonstration on univocal terms: formal fallacies due to equivocation

8 ARISTOTLE: *Prior Analytics*, BK I, CH 34 66b-c / *Posterior Analytics*, BK I, CH II [77a5–9] 105d-106a / *Topics*, BK VIII, CH 3 [158b8–17] 215b / *Sophistical Refutations*, CH 4 [165b24–166b21] 228b-229c; CH 24 [179b38–180a7] 247d-248a / *Heavens*, BK I, CH II [280b1–7] 371d-372a / *Metaphysics*, BK IV, CH 4 [1006a33–b12] 525c-d

9 ARISTOTLE: *Rhetoric*, BK II, CH 24 [1401a13–23] 650b

12 EPICTETUS: *Discourses*, BK I, CH 7 112b-113d

19 AQUINAS: *Summa Theologica*, PART I, Q 1, A 10, REP 1 9c-10c; Q 13, A 5, ANS 66b-67d

23 HOBBES: *Leviathan*, PART I, 57d-58a; PART III, 172a

35 LOCKE: *Human Understanding*, BK III, CH IX, SECT 15–16 288d-289c; CH X, SECT 22 297c-298a; CH XI, SECT 7–26 301a-306d passim

35 HUME: *Human Understanding*, SECT VIII, DIV 62–63 478b-d

36 STERNE: *Tristram Shandy*, 307b-308b

4c. The nature and utility of semantic analysis: the rectification of ambiguity; the clarification and precision of meanings

7 PLATO: *Protagoras*, 52d-57a / *Euthydemus*, 68c-d / *Cratylus*, 107c-114a,c / *Phaedrus*, 120a-b

8 ARISTOTLE: *Categories*, CH 1 [1a13–16] 5b; CH 7 [6b26–7b14] 11b-12b; CH 8 [10a26–b11] 15b-c / *Topics*, BK I, CH 15 149d-152a; CH 18 [108a18–36] 152b-d; BK II, CH 3 154d-155d; BK V, CH 4 [133b15–134a4] 184d-185b; BK VI, CH 10 [148a23–b22] 202b-203a / *Sophistical Refutations*, CH 19–23 243d-247a / *Physics*, BK VII, CH 3 [245b9–246a4] 329a-b / *Heavens*, BK I, CH II 371d-372d; CH 12 [281b2–15] 373a-b / *Metaphysics*, BK I, CH 9 [992b18–24] 511a; BK IV, CH 4 [1006a33–b4] 525c-d; BK V 533a-547d; BK IX, CH 7 [1049a19–b1] 574d-575a / *Soul*, BK II, CH 4 [416b20–25] 647a

9 ARISTOTLE: *Ethics*, BK V, CH 1 [1129a18–31] 376b-d

10 GALEN: *Natural Faculties*, BK I, CH 1 167a-b

12 EPICTETUS: *Discourses*, BK I, CH 17, 122d-123c

18 AUGUSTINE: *Christian Doctrine*, BK III 657a-674d

19 AQUINAS: *Summa Theologica*, PART I, QQ 27–43 153a-237a,c passim; PART I–II, Q 22, A 1, ANS 720d-721c

20 AQUINAS: *Summa Theologica*, PART I–II, Q 49, A 1 1b-2b

23 HOBBES: *Leviathan*, PART I, 54c-58a; 58d-60a; 60c; PART II, 157c-d; PART IV, 269b-272b; 273a-b; 274a-b

30 BACON: *Advancement of Learning*, 60b-c; 63a-b

(*4. The determination of meaning in science and philosophy. 4c. The nature and utility of semantic analysis: the rectification of ambiguity; the clarification and precision of meanings.*)

33 PASCAL: *Provincial Letters*, 1a-14a / *Geometrical Demonstration*, 430b-434a
35 LOCKE: *Human Understanding*, BK III, CH I, SECT 6 252c-d; CH V, SECT 16 267d-268a; CH VI, SECT 28 276a-b; CH IX, SECT 3 285b-c; SECT 15-16 288d-289c; CH XI 300a-306d passim, esp SECT 7 301a-c
35 BERKELEY: *Human Knowledge*, SECT 122 437b-c
35 HUME: *Human Understanding*, SECT VIII, DIV 62-63 478b-d; DIV 74 484a-c
36 STERNE: *Tristram Shandy*, 418a-419b
38 ROUSSEAU: *Social Contract*, BK III, 419b-c
42 KANT: *Pure Reason*, 115b-c / *Practical Reason*, 294b-c; 339b-d / *Judgement*, 546d-547d
43 MILL: *Utilitarianism*, 465c-469b passim
44 BOSWELL: *Johnson*, 81b-82c
45 LAVOISIER: *Elements of Chemistry*, PREF, 1a-c; 4a-5d; 7c
53 JAMES: *Psychology*, 121b-122b

4d. The use of metaphors and myths in science and philosophy

7 PLATO: *Protagoras*, 44a-45a / *Phaedrus*, 124a-129d; 138c-139a / *Symposium*, 157b-159b / *Phaedo*, 246d-250a / *Gorgias*, 260a-262a; 292b-294d / *Republic*, BK VI-VII, 383d-391b; BK X, 437c-441a,c / *Timaeus*, 444c-446b; 477a,c / *Critias*, 478b-d / *Theaetetus*, 542a-544a / *Sophist*, 565a-b / *Statesman*, 586d-589c
8 ARISTOTLE: *Posterior Analytics*, BK II, CH 13 [97^{b}38-39] 133c / *Topics*, BK VIII, CH 3 [158^{b}8-17] 215b
9 ARISTOTLE: *Rhetoric*, BK III, CH 2 [1404^{b}27-1405^{b}20] 655a-656a; CH 3 [1406^{b}5]-CH 4 [1407^{a}16] 657a-d; CH 10-11 662c-666b
19 AQUINAS: *Summa Theologica*, PART I, Q 1, A 9 8d-9c; Q 13, A 3 64d-65c; A 6, ANS and REP 2 67d-68c; A 9, ANS and REP 1 71b-72c; A 10 72c-73c; Q 34, A 1, ANS and REP 1,4 185b-187b; Q 67, A 1 349d-350b; A 2, REP 3 350b-351a; Q 68, A 4, ANS 358b-359b
20 AQUINAS: *Summa Theologica*, PART III, Q 60, A 5, REP 1 850b-851b
23 HOBBES: *Leviathan*, PART I, 57d-58a; 61c; 67c
25 MONTAIGNE: *Essays*, 422c-423c
28 HARVEY: *On Animal Generation*, 336d-337a
35 LOCKE: *Human Understanding*, BK III, CH I, SECT 5 252b-c
42 KANT: *Judgement*, 575b-c
45 FARADAY: *Researches in Electricity*, 758a-759c; 777d-778c
49 DARWIN: *Origin of Species*, 40c-d; 242b
53 JAMES: *Psychology*, 153b; 686b-687b
54 FREUD: *General Introduction*, 510b-d passim; 566d-567b / *Beyond the Pleasure Principle*, 662a-b

4e. The use of signs in reasoning: necessary and probable signs; the interpretation of symptoms in medicine

7 PLATO: *Protagoras*, 59b-c
8 ARISTOTLE: *Prior Analytics*, BK II, CH 27 92a-93a,c / *Posterior Analytics*, BK I, CH 6 [75^{a}28-35] 103b-c
9 ARISTOTLE: *History of Animals*, BK IV, CH 10 [537^{b}14-20] 64b; BK VII, CH 12 [588^{a}9-12] 114c; BK VIII, CH 18 [601^{b}6-8] 127c; CH 21 [603^{b}20-24] 129c; CH 23 [604^{a}18]-CH 24 [604^{b}20] 130a-c / *Rhetoric*, BK I, CH 2 [1357^{a}23-^{b}24] 596d-597c; BK II, CH 24 [1401^{b}8-14] 650d; CH 25 [1402^{b}13-1403^{a}17] 652b-653a
10 HIPPOCRATES: *Prognostics* 19a-26a,c esp par 1 19a-b, par 25 26a,c / *Regimen in Acute Diseases*, APPENDIX, par 9-14 38b-40d / *Epidemics*, BK I, SECT II, par 5 46c-d; SECT III, par 1 49c-d; BK III, SECT III, par 16 59b-c / *Injuries of the Head*, par 5 65a / *Articulations*, par 10 94d-95a; par 26 99a-b; par 30, 100a; par 51 109a-b; par 54 111a; par 57 111d-112b; par 59 113b / *Instruments of Reduction*, par 4-24 122d-126c passim / *Aphorisms*, SECT I, par 12 131d; SECT II 132b-134a passim; SECT IV, par 17-SECT V, par 15 135d-138b; SECT V, par 30-SECT VII, par 86 138d-144a,c passim
19 AQUINAS: *Summa Theologica*, PART I, Q 57, A 4, ANS 298a-299a
23 HOBBES: *Leviathan*, PART I, 53d
24 RABELAIS: *Gargantua and Pantagruel*, BK III, 197a
25 MONTAIGNE: *Essays*, 372b-373b; 531d-532b
30 BACON: *Advancement of Learning*, 49b-50b; 77d-78d
36 SWIFT: *Gulliver*, PART III, 112b-113a; 114b
37 FIELDING: *Tom Jones*, 145b-146a
53 JAMES: *Psychology*, 324b
54 FREUD: *Origin and Development of Psycho-Analysis*, 1b-2b / *Hysteria*, 31b-d; 38d-40a; 50b-c; 54b-55d; 56b-c; 60c-62c passim; 87a-90d esp 87b-d / *Psycho-Analytic Therapy*, 124b / *General Introduction*, 550d-557a esp 556a-b; 593b-c; 605b-607b passim

5. Symbolism in theology and religion

5a. Natural things as signs of divinity

OLD TESTAMENT: *Genesis*, 9:8-17 / *Job*, 12:7-9; 37-41 / *Psalms*, 8; 19:1-4; 75:1; 104; 135:6-7; 147:7-9—(*D*) *Psalms*, 8; 18:1-5; 74:2; 103; 134:6-7; 146:7-9
APOCRYPHA: *Wisdom of Solomon*, 13:1-5—(*D*) OT, *Book of Wisdom*, 13:1-5 / *Ecclesiasticus*, 42:15-43:33—(*D*) OT, *Ecclesiasticus*, 42:15-43:37 / *II Maccabees*, 7:28—(*D*) OT, *II Machabees*, 7:28

NEW TESTAMENT: *Matthew*, 6:26-30 / *Luke*, 12:24-28 / *Romans*, 1:18-20
6 THUCYDIDES: *Peloponnesian War*, BK III, 438d-439a
12 LUCRETIUS: *Nature of Things*, BK II [589-660] 22c-23b; BK V [110-145] 62c-63a
12 EPICTETUS: *Discourses*, BK I, CH 16-17 121d-124a; BK III, CH 1 177a-c
12 AURELIUS: *Meditations*, BK XII, SECT 28 310a
16 KEPLER: *Epitome*, BK IV, 853b-854a; 860a / *Harmonies of the World*, 1009b-1010a; 1049b-1050a; 1061a; 1080b-1085b passim
18 AUGUSTINE: *City of God*, BK XI, CH 24-28 335c-338d; BK XVI, CH 26 438c 439a
19 AQUINAS: *Summa Theologica*, PART I, Q 1, A 10, ANS and REP 1 9c-10c; Q 3, A 1, REP 1-5 14b-15b; Q 12, A 3, REP 2-3 52c-53b; Q 13, A 2 63c-64d; A 4, ANS 65c-66b; Q 27, A 1, ANS 153b-154b; Q 34 185a-189a; Q 47, A 1, ANS and REP 2 256a-257b; Q 65, A 1, REP 3 339b-340b; Q 103, A 1, ANS 528b-529a
20 AQUINAS: *Summa Theologica*, PART III, Q 12, A 3, REP 2 778b-779a; Q 60, A 2, ANS and REP 1 848a-d; A 5, REP 1 850b-851b; PART III SUPPL, Q 92, A 2 1032b-1034b
21 DANTE: *Divine Comedy*, PARADISE, XXVIII [1-78] 148d-149c
23 HOBBES: *Leviathan*, PART I, 78d-79a; 81a-c
25 MONTAIGNE: *Essays*, 212a-c
28 HARVEY: *On Animal Generation*, 421d; 490d-494a esp 491a-b, 492c-493a
30 BACON: *Advancement of Learning*, 2c-4c; 38a; 41b-d / *New Atlantis*, 203a-b
32 MILTON: *Paradise Lost*, BK VIII [114-130] 234b-235a; BK IX [780-794] 264b; [990-1004] 269a; BK XI [181-207] 303a-b
33 PASCAL: *Pensées*, 643-646 290b-291b; 652-657 292a-293a; 670 295a-b; 675 296b-297a; 693-736 301b-317b
35 BERKELEY: *Human Knowledge*, SECT 32 418d-419a; SECT 146-154 442a-444b passim, esp SECT 148 442b-d
37 FIELDING: *Tom Jones*, 186c-d
40 GIBBON: *Decline and Fall*, 81d; 346d-347a
42 KANT: *Pure Reason*, 187a-190a
46 HEGEL: *Philosophy of History*, PART I, 228a-c; 235d-236c; 252a-255b; PART II, 263d-265c; 266a-267a; 268b-271c
47 GOETHE: *Faust*, PART I [3432-3468] 84a-b
51 TOLSTOY: *War and Peace*, BK VI, 248d-249a

5b. Supernatural signs: omens, portents, visitations, dreams, miracles

OLD TESTAMENT: *Genesis*, 4:1-16 esp 4:14-15; 9:8-17; 28:10-22; 37:1-11; 40-41 / *Exodus*, 3:1-4:9; 7-17 passim; 31:18; 32:15-16; 40:34-38—(*D*) *Exodus*, 3:1-4:9; 7-17 passim; 31:18; 32:15-16; 40:32-36 / *Numbers*, 9:15-23; 11-12; 16-17; 20:1-13; 22; 26:9-11 / *Deuteronomy*, 4:9-14,32-39; 5:22-27; 6:20-25; 7:17-23; 10:20-11:9; 13:1-5; 28:1-29:9 / *Joshua*, 3-4; 5:13-6:20; 10:12-14—(*D*) *Josue*, 3-4; 5:13-6:20; 10:12-14 / *Judges*, 6:11-24,36-40; 7:13-15; 13 / *I Samuel*, 10:1-16; 12:12-20; 28—(*D*) *I Kings*, 10:1-16; 12:12-20; 28 / *I Kings*, 13:4-6; 17; 18:16-39 esp 18:30-39; 19—(*D*) *III Kings*, 13:4-6; 17; 18:16-39 esp 18:30-39; 19 / *II Kings*, 1-6 passim; 13:20-21; 20:1-11—(*D*) *IV Kings*, 1-6 passim; 13:20-21; 20:1-11/ *II Chronicles*, 32:9-22 esp 32:21-22—(*D*) *II Paralipomenon*, 32:9-22 esp 32:21-22 / *Job*, 4:13-21; 38:1-42:8 / *Psalms*, 105 esp 105:16-41; 135:8-12—(*D*) *Psalms*, 104 esp 104:16-41; 134:8-12 / *Isaiah*, 6; 7:10-16; 38:1-8—(*D*) *Isaias*, 6; 7:10-16; 38:1-8 / *Jeremiah*, 32:16-24—(*D*) *Jeremias*, 32:16-24 / *Ezekiel* passim, esp 1-3, 11:22-24, 40:1-48:35—(*D*) *Ezechiel* passim, esp 1-3, 11:22-24, 40:1-48:35 / *Daniel*, 2-12 passim—(*D*) *Daniel*, 2:1-3:23 passim; 3:91-12:13 passim / *Hosea*, 1-3—(*D*) *Osee*, 1-3 / *Amos*, 7-8 / *Jonah*—(*D*) *Jonas* / *Zechariah*, 1-6—(*D*) *Zacharias*, 1-6
APOCRYPHA: *Rest of Esther*, 10-11—(*D*) OT, *Esther*, 10:4-11:12 / *Bel and Dragon*, 30-42—(*D*) OT, *Daniel*, 14:30-42 / *II Maccabees*, 1:18-22; 15:11-17—(*D*) OT, *II Machabees*, 1:18-22; 15:11-17
NEW TESTAMENT: *Matthew* passim, esp 1:20-21, 2:12-13, 2:19-23, 8:1-17, 8:23-9:8, 9:18-34, 10:1, 12:22-29, 12:38-40, 14:13-33, 15:22-16:4, 17:1-8, 17:14-20, 20:29-34 / *Mark* passim, esp 1:23-2:12, 5:1-43, 7:24-8:26, 9:1-9, 9:16-29, 10:46-52, 16:16-18 / *Luke* passim, esp 1:5-66, 4:33-5:26, 7:1-23, 8:22-56, 9:28-43, 11:16, 11:29, 14:1-6, 17:11-19, 18:35-43 / *John* passim, esp 1:43-2:11, 2:18, 2:22, 3:14-18, 4:46-54, 5:36, 6:30, 9:1-41, 11:1-48, 12:27-30, 12:37-40, 20:1-9 / *Acts* passim, esp 2:1-24, 3:2-11, 5:15-24, 7:55-56, 8:6-8, 8:13, 9:3-8, 9:33-42, 10:1-48, 13:9-12, 14:7-10, 18:9-11, 19:11-20, 20:9-12, 28:3-10 / *I Corinthians*, 1:22-24 / *Hebrews*, 2:3-4 / *Revelation*—(*D*) *Apocalypse*
4 HOMER: *Iliad*, BK I [33-100] 3b-4b; BK II [1-83] 10a-d; [301-332] 13a-b; BK VIII [167-183] 52d-53a; [245-252] 53c-d; BK XII [195-250] 84a-d / *Odyssey*, BK II [146-207] 189c-190b; BK IV [787-841] 207a-d; BK XVII [541-550] 282d; BK XIX [509-581] 294c-295a,c; BK XX [91-121] 297a-b; [240-246] 298c; [345-357] 299d; BK XXIV [520-548] 322c-d
5 AESCHYLUS: *Persians* [176-230] 17a-c / *Seven Against Thebes* [24-29] 27b / *Prometheus Bound* [484-499] 45a; [645-668] 46d-47a / *Agamemnon* [104-159] 53a-d / *Choephoroe* [514-552] 75a-c
5 SOPHOCLES: *Oedipus the King* [976-986] 108b / *Oedipus at Colonus* [1447-1666] 127b-129b / *Antigone* [988-1097] 139c-140c / *Electra* [404-515] 159b-160a
5 EURIPIDES: *Iphigenia Among the Tauri* [42-60] 411c-d; [1234-1283] 422b-c
5 ARISTOPHANES: *Birds* [708-722] 551d-552a

(*5. Symbolism in theology and religion.* ***5b. Supernatural signs: omens, portents, visitations, dreams, miracles.***)

6 HERODOTUS: *History*, BK I, 4d; 8a-b; 12b-d; 17a-b; 18b; 20d-21a; 38a-b; 39c-40a; BK II, 60d-61b; 79a-c; 83b-c; 86c-87a; BK III, 90d-91a; 95d; 116a-b; BK IV, 124d-125a; 126d-127a; 135b-c; 138a-b; 150b-d; 154c-d; 155b-c; BK V, 170c-d; 176c-d; 183d-184a; BK VI, 190c-d; 200d-201a; 204b-c; 208b; BK VII, 219a-c; 238d-239a; BK VIII, 266b-d; 267a; 270c-271a; 283d; BK IX, 289d-290a; 302c; 309d-310a; 313d-314a

7 PLATO: *Euthydemus*, 66a / *Apology*, 207b-c; 211a-b / *Timaeus*, 467a-c

8 ARISTOTLE: *Prophesying* 707a-709a,c

9 ARISTOTLE: *History of Animals*, BK III, CH II [518a32-36] 43a; CH 20 [522a13-19] 47a-b

12 LUCRETIUS: *Nature of Things*, BK V [1161-1240] 76b-77b; BK VI [43-79] 80d-81b; [379-422] 85b-d

12 EPICTETUS: *Discourses*, BK I, CH 17, 123c-124a; BK III, CH 1, 177a-b

13 VIRGIL: *Aeneid*, BK I [387-401] 113b-114a; BK II [162 233] 128b-130b; [679-704] 143b-144a; BK III [90-101] 149b-150a; [135-191] 150b 152b; [388-393] 157b-158a; [523-547] 161b-162a; BK VI [190-211] 216a-b; BK VII [59-80] 237b-238a; BK VIII [26-89] 259b-261b; [520-540] 273a-b; BK XII [244-265] 360b-361a

14 PLUTARCH: *Numa Pompilius*, 52b-c / *Poplicola*, 82a-b / *Timoleon*, 198c-d / *Pelopidas*, 239d-240c / *Aristides*, 268a-d / *Sulla*, 371d-372c / *Lucullus*, 404d-405a; 405c / *Agesilaus*, 483a-b / *Alexander*, 568a-b / *Demosthenes*, 698b-699a / *Dion*, 781d-782a / *Marcus Brutus*, 818a-b; 822b

15 TACITUS: *Annals*, BK I, 9a-b; BK II, 26c; 27b; BK IV, 79b; BK VI, 95d-96a; BK XI, 105c; BK XII, 112d-113a; 119b; 124b; BK XIV, 149b-c; BK XV, 168d-169a / *Histories*, BK I, 206a; 212d-213a; BK II, 228a-b; 235a-c; BK III, 256d; BK IV, 293a-294a

18 AUGUSTINE: *Confessions*, BK III, par 19-20 18b-19a / *City of God*, BK X, CH 8 303a-d; CH 12-13 306d-307c; CH 16-18 308b-310d; BK XI, CH 2, 323b; BK XXII, CH 8-10 591d-599b

19 AQUINAS: *Summa Theologica*, PART I, Q 51, A 2, REP 1 276b-277a; Q 104, A 4, ANS 538a-c; Q 105, A 7 544a-d; Q 106, A 3, ANS and REP 2 547c-548b; Q 110, A 4 567c-568b

21 DANTE: *Divine Comedy*, PURGATORY, IX [13-69] 66a-c; XIX [1-63] 81c-82a; XXVII [91-108] 95c

22 CHAUCER: *Troilus and Cressida*, BK V, STANZA 52-55 127a-b; STANZA 177-186 143b-144b; STANZA 207-219 147a-149a; STANZA 245 152a

23 HOBBES: *Leviathan*, PART I, 51b-52a; 80b-d; 81d-82b; PART II, 160b; PART III, 165d-167a; 177a-c; 183b-187a; 188a-191a

26 SHAKESPEARE: *Julius Caesar*, ACT I, SC III [1-71] 572c-573b; ACT IV, SC III [275-289] 591c; ACT V, SC I [71-89] 592d

27 SHAKESPEARE: *Hamlet*, ACT I, SC I [64-125] 30b-31a / *Macbeth*, ACT II, SC IV [1-20] 294a-b / *Cymbeline*, ACT V, SC IV [91-122] 482a-b

29 CERVANTES: *Don Quixote*, PART II, 381a-b

30 BACON: *Advancement of Learning*, 8c; 19b; 41b-c; 54c-d; 55b-d / *New Atlantis*, 202c-203c

32 MILTON: *Paradise Lost*, BK I [594-599] 106b; BK V [28-128] 176a-178a; BK XI [193-366] 303b-307a / *Areopagitica*, 389a-b

33 PASCAL: *Pensées*, 803-856 328b-341b passim

35 LOCKE: *Human Understanding*, BK IV, CH XVI, SECT 13 371a-b; CH XIX, SECT 15 388a-c

35 BERKELEY: *Human Knowledge*, SECT 63 425b-c

35 HUME: *Human Understanding*, SECT X, DIV 92-101 491c-497b esp DIV 98-101 495d-497b

40 GIBBON: *Decline and Fall*, 180b-c; 189b-190d; 206b-d; 294a-296b; 445d-446b; 465d-467a; 547a-b; 571a; 605b-d; 614b-c

41 GIBBON: *Decline and Fall*, 232a-c; 398b-399b

44 BOSWELL: *Johnson*, 126b-c

47 GOETHE: *Faust*, PART I [430-513] 12b-14b

51 TOLSTOY: *War and Peace*, BK IX, 377b-379a; BK XII, 561b-562a

52 DOSTOEVSKY: *Brothers Karamazov*, BK I, 11a-b; BK V, 129c-135a

54 FREUD: *Interpretation of Dreams*, 138a-c / *General Introduction*, 477b-c

5c. The symbolism of the sacraments and of sacramental or ritualistic acts

OLD TESTAMENT: *Genesis*, 17:9-14 / *Exodus*, 12:1-13:16; 20:8-11; 24:5-8; 31:13-17 / *Leviticus* passim, esp 16, 23 / *Numbers*, 15:37-41; 16:37-40 / *Deuteronomy*, 5:12-15; 6:5-9; 11:18-21; 16:1-17 / *Joshua*, 4:1-9—(*D*) *Josue*, 4:1-9 / *Esther*, 9:20-32 / *Ezekiel*, 20:12,20—(*D*) *Ezechiel*, 20:12,20

APOCRYPHA: *Rest of Esther*, 16:20-22—(*D*) OT, *Esther*, 16:20-22 / *II Maccabees*, 1:18-22—(*D*) OT, *II Machabees*, 1:18-22

NEW TESTAMENT: *Matthew*, 26:26-28 / *Mark*, 14:22-24 / *Luke*, 22:19-20 / *John*, 3:3-7; 6:30-59 / *Acts*, 2:38-39; 22:16 / *Romans*, 6:3-4 / *I Corinthians*, 10:16-17; 11:23-27

18 AUGUSTINE: *City of God*, BK X, CH 5-6 301b-302d; CH 19-20 310d-311c; BK XVI, CH 26 438c-439a; BK XXI, CH 20 575c-d; CH 25 579d-581a / *Christian Doctrine*, BK II, CH 3 637c-d; BK III, CH 5-9 659d-661c; BK IV, CH 21, 690d-691b

19 AQUINAS: *Summa Theologica*, PART I, Q 92, A 3, ANS 490c-491b

20 AQUINAS: *Summa Theologica*, PART I-II, QQ 101-103 265d-304a; PART III, QQ 60-65 847a-884a,c

22 CHAUCER: *Parson's Tale*, par 1-22 495a-510b esp par 22, 510b

23 HOBBES: *Leviathan*, PART III, 177d-178a; 180c-d; 206c-207a; 211c-212a; PART IV, 249b-250c; 263d-264a
32 MILTON: *Paradise Lost*, BK XII [436-445] 328b-329a
33 PASCAL: *Provincial Letters*, 71b-80b; 128b-137b / *Pensées*, 862, 343a; 870 344a-b; 923 351b
35 HUME: *Human Understanding*, SECT V, DIV 41, 468a-b; DIV 43, 468c
40 GIBBON: *Decline and Fall*, 82a; 294b-d
41 GIBBON: *Decline and Fall*, 83d; 334b
46 HEGEL: *Philosophy of History*, PART IV, 331d-332c; 338a-d
51 TOLSTOY: *War and Peace*, BK V, 198b-203a; BK VI, 244b-c; 248b-249a
54 FREUD: *General Introduction*, 512a

5d. The symbolism of numbers in theology

OLD TESTAMENT: *Exodus*, 20:8-11
APOCRYPHA: *Wisdom of Solomon*, 11:20—(*D*) OT, *Book of Wisdom*, 11:21
NEW TESTAMENT: *Revelation*—(*D*) *Apocalypse*
14 PLUTARCH: *Numa Pompilius*, 56d-57a
16 KEPLER: *Epitome*, BK IV, 853b-854a / *Harmonies of the World*, 1049b-1050a; 1077b
18 AUGUSTINE: *Confessions*, BK III, par 16, 17c / *City of God*, BK XI, CH 30-31 339c-340b; BK XII, CH 18 354b-d; BK XV, CH 20, 414d-415b; BK XX, CH 7 535b-536d; BK XXII, CH 30, 618c-d / *Christian Doctrine*, BK II, CH 16, 644d-645d; BK III, CH 35 672a-d
19 AQUINAS: *Summa Theologica*, PART I, Q 5, A 5, REP I 26c-27c; Q 74, A 3, REP 3 375a-377a,c
20 AQUINAS: *Summa Theologica*, PART III SUPPL, Q 96, A 4 1054b-1055c
21 DANTE: *Divine Comedy*
36 STERNE: *Tristram Shandy*, 259a-b
51 TOLSTOY: *War and Peace*, BK VI, 248b-c; BK IX, 377c-378c
54 FREUD: *General Introduction*, 511c

5e. The interpretation of the word of God

OLD TESTAMENT: *Daniel*, 2:47; 5:5-28
NEW TESTAMENT: *Matthew*, 12:1-12; 13; 15:10-20; 18:23-35; 19:3-9; 20:1-16; 21:28-45; 22:1-14,31-32; 25:1-30 / *Mark*, 2:23-28; 4:1-34; 10:2-9; 12:1-12,18-27 / *Luke*, 6:1-5,39-49; 8:4-18; 12:16-21,36-48; 14:7-11,15-33; 15-16; 18:1-8; 19:11-27; 20:9-19,37-38 / *John*, 5:38-39,46-47; 10:1-14,33-36 / *Acts*, 7; 13:16-36 / *Romans*, 4; 9-11 passim; 12:19-20; 14:10-13; 15:1-4 / *Galatians*, 3-4 passim / *I Peter*, 1:10-16; 2:5-8 / *II Peter*, 1:19-21
5 AESCHYLUS: *Prometheus Bound* [645-668] 46d-47a
5 SOPHOCLES: *Oedipus the King* [463-512] 103c-d; [1432-1445] 112b-c
5 ARISTOPHANES: *Knights* [40-222] 470c-472c; [960-1089] 482a-483c / *Peace* [1043-1126] 537d-539a / *Birds* [959-991] 554c-555a / *Lysistrata* [762-780] 593a-b / *Plutus* [1-55] 629a-d
6 HERODOTUS: *History*, BK I, 11b-c; 21b-22a; BK VI, 199d-201a; BK IX, 295d-296c
6 THUCYDIDES: *Peloponnesian War*, BK II, 392a-b; 401a-b
7 PLATO: *Apology*, 201d-203a
18 AUGUSTINE: *Confessions*, BK III, par 9 15a-b; BK V, par 24 34a-b; BK VI, par 6 36c-d; BK XII, par 32-36 107a-108c; BK XII, par 41-BK XIII, par 53 110a-125a,c / *City of God*, BK XI, CH 30-32 339c-340d; BK XIII, CH 21 371a-c; BK XV, CH 2-3 398c-399c; CH 25-27 419a-421d; BK XVI, CH 2 422b-423d; CH 6 426c-427a; CH 37 444b-445a; BK XVII, CH 3 450c-451c; BK XVIII, CH 42-44 496d-498c; BK XX 530a-560a,c esp CH 21, 549d, CH 28-29 556c-557c / *Christian Doctrine*, BK I-III 624a-674d
19 AQUINAS: *Summa Theologica*, PART I, Q 1, AA 9-10 8d-10c; Q 3, A 1, REP 1-5 14b-15b; Q 29, A 3, REP 1 164c-165c; Q 51, A 2, REP 1 276b-277a; QQ 65-74 339a-377a,c passim, esp Q 68, A 1, ANS 354a-355c, A 2, ANS 355d-357a
20 AQUINAS: *Summa Theologica*, PART II-II, Q 1, AA 9-10 388d-390d; PART III, Q 60, A 4, ANS 849c-850b; A 5, REP 1 850b-851b
21 DANTE: *Divine Comedy*, PARADISE, IV [28-48] 111a
23 HOBBES: *Leviathan*, PART I, 70c-71a; PART II, 160b-c; PART III, 165a-188a; 191b-199a; 215b-216b; 246c; PART IV, 247a-258b; 259a-260c
27 SHAKESPEARE: *Cymbeline*, ACT V, SC V [426-485] 488b-d
30 BACON: *Advancement of Learning*, 2c-4c; 17b-20a; 98a-100b
33 PASCAL: *Provincial Letters*, 78b-80b; 163a-164b / *Pensées*, 570-588 273b-277b; 642-692 290b-301a; 775 323b-324a
35 LOCKE: *Toleration*, 21c-22d / *Human Understanding*, BK III, CH IX, SECT 9 286d-287b; SECT 23 291b-c; CH X, SECT 12 294b-c
36 STERNE: *Tristram Shandy*, 256a-258a
41 GIBBON: *Decline and Fall*, 329d-330a
42 KANT: *Judgement*, 547b-d
43 MILL: *Liberty*, 290a-b
47 GOETHE: *Faust*, PART I [1220-1237] 30a-b
51 TOLSTOY: *War and Peace*, BK IX, 377c-378c
52 DOSTOEVSKY: *Brothers Karamazov*, BK V, 129c-135a; BK VI, 150d-153d

5f. The names of God: the use of words to signify the divine nature

OLD TESTAMENT: *Exodus*, 3:13-14; 6:2-3; 15:3; 20:7; 34:5-7,14 / *Leviticus*, 19:12; 21:6; 22:32 / *Deuteronomy*, 5:11; 28:58-59 / *II Samuel*, 22:2-3; 23:3—(*D*) *II Kings*, 22:2-3; 23:3 / *Psalms*, 8 esp 8:9; 68:4; 83:15-18; 135:13—(*D*) *Psalms*, 8 esp 8:10; 67:5; 82:16-19; 134:13 / *Isaiah*, 41:4; 42:8; 44:6; 47:4; 48:2; 51:15; 54:5; 63:16—(*D*) *Isaias*, 41:4; 42:8; 44:6; 47:4; 48:2; 51:15; 54:5; 63:16 / *Jeremiah*, 10:16; 16:21; 23:6; 31:35; 32:18; 33:2; 50:34;

(5. *Symbolism in theology and religion.* 5f. *The names of God: the use of words to signify the divine nature.*)

51:19—(*D*) *Jeremias*, 10:16; 16:21; 23:6; 31:35; 32:18; 33:2; 50:34; 51:19 / *Daniel*, 7:9,13 / *Amos*, 4:13; 5:8; 9:6

APOCRYPHA: *Wisdom of Solomon*, 14:20-21—(*D*) OT, *Book of Wisdom*, 14:20-21

NEW TESTAMENT: *Matthew*, 6:9 / *Luke*, 11:2 / *Revelation*, 1:8; 21:6; 22:13—(*D*) *Apocalypse*, 1:8; 21:6; 22:13

5 AESCHYLUS: *Agamemnon* [160-183] 53d-54a

6 HERODOTUS: *History*, BK II, 49d-50a; 60a-d; 80a-c; BK IV, 134a

7 PLATO: *Cratylus*, 91c-d; 93d-97d

18 AUGUSTINE: *Christian Doctrine*, BK I, CH 6 626a-b

19 AQUINAS: *Summa Theologica*, PART I, Q 3, A 2, REP 1 2 15c-16a; A 3, REP 1 16a-d; A 6, REP 1 18c 19a; Q 4, A 1, REP 1 20d-21b; A 3, ANS 22b 23b; Q 5, A 2, REP 1 24b-25a; Q 13 62b-75b; Q 14, A 1, RLP 1-2 75d-76c; PART I II, Q 14, A 1, REP 2 677b-678a; Q 47, A 1, REP 1 819c 820b

21 DANTE: *Divine Comedy*, PARADISE, IV [28 48] 111a; XXVI [124-138] 147a-b; XXX [34-99] 152a d

23 HOBBES: *Leviathan*, PART I, 54b; 78d-79a; 79d 80b passim; PART II, 162a-163b; PART III, 172d-173a; 183d-184a

25 MONTAIGNE: *Essays*, 238d-239b

28 HARVEY: *On Animal Generation*, 443c

31 SPINOZA: *Ethics*, PART I, PROP 17, SCHOL 362c-363c

34 NEWTON: *Principles*, BK III, GENERAL SCHOL, 370a 371a

35 LOCKE: *Human Understanding*, BK II, CH XIII, SECT 18 152a-c

38 ROUSSEAU: *Social Contract*, BK IV, 435b

42 KANT: *Pure Reason*, 176a-b

47 GOETHE: *Faust*, PART I [3432-3468] 84a-b esp [3455 3457] 84b

51 TOLSTOY: *War and Peace*, BK VI, 248d

6. Symbolism in psychological analysis

54 FREUD: *Origin and Development of Psycho-Analysis*, 9b-14a esp 9d, 10d-11a, 12c-d, 13c-d / *Psycho-Analytic Therapy*, 123d-124a / *Interpretation of Dreams*, 279b-291c / *General Introduction*, 504d-513d esp 508c-513b; 526d / *Civilization and Its Discontents*, 778b,d [fn 2] / *New Introductory Lectures*, 815a-816b; 848c-849b

6a. The symbolism of dreams: their latent and manifest content

4 HOMER: *Odyssey*, BK XIX [509-581] 294c-295a,c

5 AESCHYLUS: *Persians* [176-230] 17a-c / *Choephoroe* [523-552] 75b-c

5 SOPHOCLES: *Oedipus the King* [977-982] 108b

5 EURIPIDES: *Iphigenia Among the Tauri* [42-66] 411c-d

6 HERODOTUS: *History*, BK I, 25b-d; 28c-29a; 47a-c; BK II, 78d; BK VII, 218b-220b esp 219a-c

7 PLATO: *Crito*, 213b-d / *Phaedo*, 221d 222a

8 ARISTOTLE: *Prophesying* 707a-709a,c esp CH 2 [464b7-18] 709c

14 PLUTARCH: *Pyrrhus*, 329c-d / *Cimon*, 398d-399b / *Eumenes*, 473a-b / *Alexander*, 548d-549a / *Demosthenes*, 702c-703b / *Demetrius*, 727b-d

21 DANTE: *Divine Comedy*, PURGATORY, IX [13-69] 66a-c; XIX [1-63] 81c-82a; XXVII [91-108] 95c

22 CHAUCER: *Troilus and Cressida*, BK V, STANZA 52-55 127a-b; STANZA 177-186 143b-144b; STANZA 207-219 147a-149a; STANZA 245 152a / *Nun's Priest's Tale* [14,898-15,162] 451a-455b

25 MONTAIGNE: *Essays*, 533d-534a

26 SHAKESPEARE: *2nd Henry VI*, ACT I, SC II [17-55] 36c-37a / *Richard III*, ACT I, SC IV [1-74] 114d-115b / *Romeo and Juliet*, ACT I, SC IV [49 103] 291a-c / *Midsummer-Night's Dream*, ACT II, SC II [145 156] 360b-c / *Julius Caesar*, ACT II, SC II [58 107] 578d-579b

27 SHAKESPEARE: *Macbeth*, ACT V, SC I 306b-307a / *Cymbeline*, ACT V, SC IV [30-150] 481c-482c; SC V [126-485] 488b-d

32 MILTON: *Paradise Lost*, BK V [28-128] 176a-178a esp [100-109] 177b

46 HEGEL: *Philosophy of History*, PART II, 263d-265c

48 MELVILLE: *Moby Dick*, 19a-20a

51 TOLSTOY: *War and Peace*, BK II, 86a; BK VI, 249a-250a; BK XI, 481a-482a; BK XII, 561b-562a; BK XIV, 608a-b; EPILOGUE I, 673d-674a,c

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6b. The symbolism of apparently normal acts: forgetting, verbal slips, errors

54 FREUD: *Origin and Development of Psycho-Analysis*, 13a-c / *General Introduction*, 453b-476a,c esp 467d-468a; 546b-547a / *New Introductory Lectures*, 852a-b

6c. The symbolism of anxieties, obsessions, and other neurotic manifestations

5 EURIPIDES: *Orestes* [1-423] 394a-398b esp [255-259] 396c, [385-400] 397c-398a

12 LUCRETIUS: *Nature of Things*, BK III [978–1023] 42d-43b

27 SHAKESPEARE: *Macbeth*, ACT V, SC I 306b-307a

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CROSS-REFERENCES

For: The theory of language, and for the distinction between the natural and the conventional in language, *see* LANGUAGE 1–3c.

The conception of ideas as intentions of the mind, *see* IDEA 6a.

The treatment of things or events in nature as signs or symbols, *see* LANGUAGE 10; MEDICINE 3c.

Another discussion of the distinction between first and second intentions, *see* IDEA 3a.

Other discussions bearing on the distinction between proper and common names and between abstract and concrete names, *see* IDEA 4b(1)–4b(2); UNIVERSAL AND PARTICULAR 2c, 5a.

The problems of verbal ambiguity, and for the distinction between univocal and equivocal speech, *see* IDEA 4b(4); LANGUAGE 5–5b.

Discussions relevant to the theory of analogical names, or to the problem of how names can signify what is common to heterogeneous things, *see* BEING 1; IDEA 4b(4); RELATION 1d; SAME AND OTHER 3a(3)-3b, 4c.

The relation of the univocal and the equivocal to definition and demonstration, *see* DEFINITION 3; LANGUAGE 1a, 7; REASONING 3b; and for other logical considerations in the use of language, *see* LANGUAGE 6–7; LOGIC 3a.

Other discussions of the language of poetry, and of problems of style in the exposition of knowledge, *see* LANGUAGE 9; POETRY 8b; RHETORIC 2c.

The role of signs in divination and prophecy, *see* LANGUAGE 10; PROPHECY 3b–3c.

The general theory of the sacraments, *see* GOD 9c; RELIGION 2c.

The problem of the names of God and the problem of the interpretation of Sacred Scripture, *see* GOD 6a; LANGUAGE 12; THEOLOGY 4b.

Other discussions of the symbolism of dreams, *see* LANGUAGE 10; MEMORY AND IMAGINATION 8d(1)–8e; and for the theory of the neuroses and neurotic behavior relevant to the interpretation of psychological signs, *see* DESIRE 4a–4d; EMOTION 3a–3c(4); MEMORY AND IMAGINATION 2e(2); OPPOSITION 4c.

ADDITIONAL READINGS

Listed below are works not included in *Great Books of the Western World*, but relevant to the idea and topics with which this chapter deals. These works are divided into two groups:

I. Works by authors represented in this collection.
II. Works by authors not represented in this collection.

For the date, place, and other facts concerning the publication of the works cited, consult the Bibliography of Additional Readings which follows the last chapter of *The Great Ideas*.

I.

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———. *The Harmony of the Gospels*
AQUINAS. *Summa Contra Gentiles*, BK I, CH 22–25
AQUINAS. *Quaestiones Disputatae, De Veritate*, Q 4
DANTE. *Convivio (The Banquet)*, SECOND TREATISE, CH 1, 14–16
———. *Epistle to Can Grande della Scala*
HOBBES. *Concerning Body*, PART I, CH 2

J. S. MILL. *A System of Logic*, BK I
FREUD. *The Psychopathology of Everyday Life*, CH 8–12
——. *A Review of "The Antithetical Sense of Primal Words"*
——. *A Connection Between a Symbol and a Symptom*

II.

PHILODEMUS. *On Methods of Inference*
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DUNS SCOTUS. *Opus Oxoniense*, BK IV
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Chapter 86: SIN

INTRODUCTION

THE sin of Satan and the sin of Adam are among the great mysteries of the Christian religion. Satan is highest among the angels, the first of God's spiritual creatures. He is only less than God in the perfection of his nature. Adam is created with supernatural graces and gifts, his immortal body is completely responsive to his spirit, his appetite in all things is submissive to his reason, and his reason is turned toward God, according to the original justice which harmonized his faculties and the elements of his nature.

The only evil latent in either Satan or Adam would seem to reside in the privation of infinite being, power, and knowledge. But this is not a moral evil in them; it is neither a sin nor a predisposition to sin. Hence the only cause of their sinning, if God himself does not predestine them to sin, must be a free choice on their part between good and evil. If God positively predestines them to sin, then they would seem to be without responsibility, and so without sin. If they are not predetermined to evil—if, except for the weakness of being finite, they are without positive blemish—how does the conflict arise in them which opens the choice between good and evil and impels them, almost against the inclination of their natures, away from good and toward evil?

In Milton's *Paradise Lost*, God says of Adam: "I made him just and right, sufficient to have stood, though free to fall." Of Satan and fallen angels, as well as of Adam, God observes:

They therefore as to right belongd,
So were created, nor can justly accuse
Thir maker, or thir making, or thir Fate;
As if Predestination over-rul'd
Their will, dispos'd by absolute Decree
Of high foreknowledge; they themselves decreed
Thir own revolt, not I: if I foreknew,
Foreknowledge had no influence on their fault,
Which had no less prov'd certain unforeknown.

Yet there is a difference between Adam and Satan. The fallen angels "by their own suggestion fell, self-tempted, deprav'd." Satan, having sinned, becomes man's tempter. "Man falls deceiv'd by the other first: Man therefore shall find grace, the other none."

As Satan approaches the Garden of Eden to work his will on man, he contemplates his plight. He does not deny his sin, he does not repent it, he does not seem fully to understand it. Thus Milton has him speak:

O thou that with surpassing Glory crowned,
Look'st from the sole Dominion like the God
Of this new World; at whose sight all the Starrs
Hide thir diminisht heads; to thee I call,
But with no friendly voice, and add thy name
O Sun, to tell thee how I hate thy beams
That bring to my remembrance from what state
I fell, how glorious once above thy Spheare;
Till Pride and worse Ambition threw me down
Warring in Heav'n against Heav'ns matchless King;
Ah wherefore! he deserved no such return
From me, whom he created what I was
In that bright eminence, and with his good
Upbraided none; nor was his service hard.
What could be less than to afford him praise,
The easiest recompense, and pay him thanks,
How due! yet all his good prov'd ill in me,
And wrought but malice; lifted up so high
I sdeind subjection, and thought one step higher
Would set me highest, and in a moment quit
The debt immense of endless gratitude,
So burthensome, still paying, still to owe . . .
O had his powerful Destiny ordained
Me some inferior Angel, I had stood
Then happie; no unbounded hope had rais'd
Ambition. Yet why not? some other Power
As great might have aspir'd, and me through mean
Drawn to his part; but other Powers as great
Fell not, but stand unshak'n, from within
Or from without, to all temptations arm'd.
Hads't thou the same free Will and Power to stand?
Thou hads't: whom has thou then or what to accuse,
But Heav'ns free Love, dealt equally to all?
Be then his Love accurst, since love or hate
To me alike, it deals eternal woe.
Nay cursed be thou; since against his, thy will

Chose freely what it now so justly rues.
Me miserable! which way shall I flie
Infinite wrauth, and infinite despaire?
Which way I flie is Hell; my self am Hell;
And in the lowest deep a lower deep
Still threatning to devour me opens wide,
To which the Hell I suffer seems a Heav'n.
O then at last relent: is there no place
Left for Repentance, nor for Pardon left?
None left but by submission; and that word
Disdain forbids me, and my dread of shame
Among the spirits beneath, whom I seduc'd
With other promises and other vaunts
Then to submit, boasting I could subdue
Th' Omnipotent.

Before Satan approaches Eve, Adam reminds her of their debt of obedience, saying that God requires

From us no other service than to keep
This one, this easie charge, of all the Trees
In Paradise that beare delicious fruit
So various, not to taste that onely Tree
Of Knowledge, planted by the Tree of Life.
So neer grows Death to Life, what ere Death is,
Some dreadful thing no doubt; for well thou knowst
God hath pronounc'd it death to taste that Tree,
The only sign of our obedience left
Among so many signes of power and rule
Conferrd upon us, and Dominion giv'n
Over all other Creatures that possesse
Earth, Aire, and Sea. Then let us not think hard
One easie prohibition, who enjoy
Free leave so large to all things else, and choice
Unlimited of manifold delights.

The temptation to disobey first moves Eve in a dream in which the apparition of an angel speaks of the forbidden fruit

. . . . . as onely fit
For Gods, yet able to make Gods of Men;
And why not Gods of Men, since good, the more
Communicated, more abundant growes,
The Author not impair'd, but honourd more?

"Here, happie Creature," the vision says to her,

Happier thou mayst be, worthier canst not be:
Taste this, and be henceforth among the Gods
Thy self a Goddess, not to Earth confind,
But sometimes in the Air, as wee, sometimes
Ascend to Heav'n, by merit thine, and see
What life the Gods live there, and such live thou.

Later when Satan in the guise of the Serpent actually addresses Eve, he argues in the same vein, that as he, by tasting of this fruit, speaks as a man, so Eve and Adam, if they too partake, "shall be as Gods, knowing both Good and Evil as they know." Eve succumbs and, as Milton tells the story, Adam, knowing fully the evil of his act, joins Eve in disobedience, not from envy of the gods, but out of love for her, willing to die because unwilling to live without her.

Willing "to incurr divine displeasure for her sake, or Death. . . .

. . . . . he scrupl'd not to eat
Against his better knowledge, not deceav'd,
But fondly overcome with Femal charm.
Earth trembled from her entrails, as again
In pangs, and Nature gave a second groan,
Skie lowr'd, and muttering Thunder, som sad drops
Wept at compleating of the mortal Sin
Original.

IN THE POET'S expansion of the third chapter of Genesis, the basic elements in the Judaeo-Christian conception of sin seem to be plainly accented: the pride and envy which move Satan and Eve, the disobedience which results from the disorder of Adam's loving Eve more than he loves God. In the *Divine Comedy*, another great poem of sin and salvation, Adam speaks to Dante in Paradise and tells him that "the tasting of the tree was not by itself the cause of so great an exile, but only the overpassing of the bound." Earlier Beatrice explains why, in order to redeem man from sin, the Word of God assumed human nature—"the nature which has estranged itself from its Maker." She tells Dante that "this nature, thus united with its Maker, was pure and good such as it was created; but by itself it had been banished from Paradise, because it turned aside from the way of truth and from its own life." Man can fall from his nobility by "sin alone . . . which disfranchises him, and makes him unlike the Supreme Good, so that he is little illumined by Its light; and to his dignity he never returns, unless where fault empties, he fills up with just penalties against evil delight."

In both the pagan and the Christian conceptions of sin, man's pride and his disobedience of divine commandment are usually connected with the very notion of sin. The heroes of the Greek tragedies, exhibiting the tragic fault of pride, seem to forget that, though they strive with gods, they are only men, subject to laws they cannot disobey without catastrophe. In

the *Iliad*, Phoenix cautions Achilles to "battle with your pride and beat it; cherish not your anger for ever; the might and majesty of heaven are more than ours, but even heaven may be appeased; and if a man has sinned he prays the gods, and reconciles them to himself by his piteous cries."

In pride and disobedience we find the deep disorder of love which lies at the heart of sin. Pride is self-love in excess of what the self deserves. Disobedience, as in the case of Milton's Adam, may be prompted by a love which, too, exceeds the worth of the object loved. The measure of that worth, or the bounds put upon the love of self or other, is set by the Supreme Good which, ordering all other goods, should also order our loves in proportion to their goodness.

This seems to be the central insight of the *Divine Comedy*. It is given a summary statement in Purgatory, where Virgil explains how love is the root both of virtue and of sin. "Neither Creator nor creature," he says to Dante, "was ever without love, either natural or of the mind, and this thou knowest. The natural is always without error; but the other may err either through an evil object, or through little or too much vigor. While love is directed on the primal goods, and with due measure on the secondary, it cannot be the cause of ill delight. But when it is bent to evil, or runs to good with more zeal, or with less, than it ought, against the Creator his own creature is working. Hence thou canst comprehend that love is of necessity the seed in you of every virtue, and of every action that deserves punishment."

Dostoevsky offers us further thoughts concerning the relation of love and sin. In the *Brothers Karamazov*, Father Zossima makes lack of love the punishment as well as the substance of sin. To those who ask, "What is Hell?" Father Zossima replies: "I maintain that it is the suffering of being unable to love. . . . They talk of hell fire in the material sense. I don't go into that mystery and I shun it. But I think if there were fire in the material sense, they would be glad of it, for, I imagine, that in material agony, their still greater spiritual agony would be forgotten for a moment. . . . Oh, there are some who remain proud and fierce even in hell, in spite of their certain knowledge and contemplation of the absolute truth; there are some fearful ones who have given themselves over to Satan and his proud spirit entirely. For such, hell is voluntary and ever consuming; they are tortured by their own choice. For they have cursed themselves, cursing God and life."

To avoid sin, the only positive commandment, according to Father Zossima, is to love in accordance with God's love. "Love a man even in his sin," he counsels, "for that is the semblance of Divine Love and is the highest love on earth. . . . And let not the sin of men confound you in your doings. Fear not that it will wear away your work and hinder its being accomplished. There is only one means of salvation; then take unto yourself, and make yourself responsible for, all men's sins; that is the truth, you know, friends, for as soon as you sincerely make yourself responsible for everything and for all men, you will see at once that it is really so, and you are to blame for everyone and for all things. But throwing your own indolence and impotence on others, you will end by sharing the pride of Satan and murmuring against God. Of the pride of Satan, what I think is this: it is hard for us on earth to comprehend it, and therefore it is so easy to fall into error and to share it, even imagining that we are doing something grand and fine."

In the disorder of love which leads to sin, sin is itself enjoyed for its own sake, and the disobedient act is pleasant because it is forbidden. In that also there is the pride of supposing one's self to be a law unto one's self. In his *Confessions*, concerned most immediately with his own sinfulness, Augustine reflects upon the pears he stole in his youth, not, as he says, from "any desire to enjoy the things I stole, but only the stealing of them and the sin." He asks himself: "What was it then that in my wretched folly I loved in you, O theft of mine, deed wrought in that dark night when I was sixteen?" He had no need of the pears. "Once I had gathered them," he says, "I threw them away, tasting only my own sin and savouring that with delight; for if I took so much as a bite of any one of those pears, it was the sin that sweetened it."

He keeps on asking himself what it was that attracted him in that theft, what it was that

he enjoyed in that childish act of stealing. "Perhaps," he finally answers, "it was the thrill of acting against Your law—at least in appearance, since I had no power to do so in fact, the delight a prisoner might have in making some small gesture of liberty—getting a deceptive sense of omnipotence from doing something forbidden without immediate punishment. I was that slave, who fled from his Lord and pursued his Lord's shadow. O rottenness, O monstrousness of life and abyss of death! Could you find pleasure only in what was forbidden, and only because it was forbidden?"

IN THE PAGAN AND Judaeo-Christian conceptions of sin, the fundamental meaning seems to depend upon the relation of man to the gods or to God, whether that itself be considered in terms of law or love. The vicious act may be conceived as one which is contrary to nature or reason. The criminal act may be conceived as a violation of the law of man, injurious to the welfare of the state or to its members. Both may involve the notions of responsibility and fault. Both may involve evil and wrongdoing. But unless the act transgresses the law of God, it is not sinful. The divine law which is transgressed may be the natural law that God instills in human reason, but the act is sinful if the person who commits the act turns away from God to the worship or love of other things.

To disbelieve in God, in divine law and divine punishment, is also to disbelieve in sin—at least in the sense in which religious men have distinguished between saints and sinners, between the righteous and the wicked in the eyes of God. "There are only two kinds of men," writes Pascal: "the righteous who believe themselves sinners; the rest, sinners, who believe themselves righteous."

Those who reject the religious meaning of sin do not deny the wide prevalence of a sense of sin, nor do they deny that many men suffer remorse for transgressions which they suppose to be evil in God's eyes; but, with Freud, they interpret these feelings of guilt in terms of natural causes. They hold that the person who is tormented by conscience suffers from an illusion concerning the true nature of his guilt. When the sense of sin is intensely active and is, in addition, apparently unexplained by the character and conduct of the person, the guilt-feelings, according to the Freudian view, take on the attributes of pathological distortion and become part of the symptomology of the neuroses. There is no question about the sincerity of the person who is thus agonized, but only about the true causes of the agony.

"When one asks how a sense of guilt arises in anyone," Freud says, "one is told something one cannot dispute: people feel guilty (pious people call it 'sinful') when they have done something they know to be 'bad.' But then one sees how little this answer tells one." What accounts for the judgment a man makes of himself as good or bad? Freud's answer is that "what is bad is, to begin with, whatever causes one to be threatened with a loss of love; because of the dread of this loss, one must desist from it. That is why it makes little difference whether one has already committed the bad deed or only intends to do so."

The external authority of the father and, through him, of society becomes, according to Freud, "internalized by the development of a super-ego. The manifestations of conscience are then raised to a new level; to be strict one should not call them conscience and sense of guilt before this. . . . At this second stage of development, conscience exhibits a peculiarity which was absent in the first. . . . That is, the more righteous a man is, the stricter and more suspicious will his conscience be, so that ultimately it is precisely those people who have carried holiness farthest who reproach themselves with the deepest sinfulness. . . . A relatively strict and vigilant conscience is the very sign of a virtuous man, and though saints may proclaim themselves sinners, they are not so wrong, in view of the temptations of instinctual gratifications to which they are peculiarly liable—since, as we know, temptations do but increase under constant privation, whereas they subside, at any rate, temporarily, if they are sometimes gratified."

Freud applies his theory of the origin of feelings of guilt (in "the dread of authority" first and later in "the dread of the super-ego,") to the religious sense of sin. "The people of Israel," he writes, "believed themselves to be God's favorite child, and when the great Father hurled visitation after visitation upon

them, it still never shook them in this belief or caused them to doubt His power and His justice; they proceeded instead to bring their prophets into the world to declare their sinfulness to them, and out of their sense of guilt they constructed the stringent commandments of their priestly religion."

In general, Freud thinks, the great religions "have never overlooked the part played by the sense of guilt in civilization. What is more, they come forward with a claim . . . to save mankind from this sense of guilt which they call sin. We have drawn our conclusion from the way in which in Christianity this salvation is won—the sacrificial death of one who therewith takes the whole of the common guilt of all upon himself, about the occasion on which this primal sense of guilt was first acquired." The conclusion referred to is developed in two of Freud's works which are devoted to the consideration of religion and sin—the *Future of an Illusion* and *Totem and Taboo*. In the latter of these books, Freud tells us, he had first "expressed a suspicion that perhaps the sense of guilt in mankind as a whole, which is the ultimate source of religion and morality, was acquired in the beginning of history through the Oedipus complex."

OTHER WRITERS, who approach the problem of sin in legalistic rather than psychological terms, either make no distinction between crime and sin or make the distinction without referring to God. Spinoza, for example, prefaces his explanation of the meanings of "praise and blame, merit and crime," with a discussion of the difference between "the natural and civil state of man." In a state of nature, he says, no one is "bound by any law to obey any one but himself. Hence in a natural state sin cannot be conceived, but only in a civil state, where it is decided by universal consent what is good and what is evil, and where everyone is bound to obey the State. Sin, therefore, is nothing but disobedience, which is punished by the law of the State alone."

Though Hobbes does not identify crime and sin, his distinction between them does not seem to be based on the contrast between the civil law and the divine law, unless the latter is equated with the law of nature. "A crime is a sin," he writes, "consisting in the committing (by deed or word) of that which the law forbiddeth, or the omission of that which it hath commanded. So that every crime is a sin, but not every sin a crime. To intend to steal or kill is a sin, though it never appear in word or fact, for God that seeth the thoughts of man, can lay it to his charge; but till it appear by something done, or said, by which the intention may be argued by a human judge, it hath not the name of crime.

"From this relation of sin to the law," Hobbes continues, "and of crime to the civil law, may be inferred, first, that where law ceaseth, sin ceaseth. But because the law of nature is eternal, violation of covenants, ingratitude, arrogance, and all facts contrary to any moral virtue, can never cease to be sin. Secondly, that the civil law ceasing, crimes cease; for there being no other law remaining, but that of nature, there is no place for accusation; every man being his own judge, and accused only by his own conscience, and cleared by the uprightness of his own intention. When therefore his intention is right, his fact is no sin; if otherwise, his fact is sin, but not crime."

The more strictly religious conception of sin seems to be exemplified by Pascal's remark that "all that God does not permit is forbidden" and that "sins are forbidden by the general declaration that God has made, that He did not allow them." Whatever God does not permit, "we ought to regard as sin," for "the absence of God's will, which is all goodness and all justice, renders it unjust and wrong."

With the precision of a theologian in these matters, Aquinas defines the peculiar type of evil which is sin. "Evil," he writes, "is more comprehensive than sin, as also is good than right. . . . Now in those things that are done by the will, the proximate rule is the human reason, while the supreme rule is the eternal law. When, therefore, a human act tends to the end according to the order of reason and of the eternal law, then that act is right; but when it turns aside from that rectitude, then it is said to be a sin." Elsewhere he says that "every created will has rectitude of act only so far as it is regulated according to the divine will. . . . Thus only in the divine will can there be no sin,

whereas in the will of every creature, considered according to its nature, there can be sin."

THE THEOLOGICAL DISCUSSION of sin involves a tremendous range of topics, and problems as significant as they are subtle. The dogma of original sin, for example, raises questions not only about the cause and character of Adam's transgression, but also about the punishment which is visited upon the children of Adam in perpetuity, and about the conditions under which man can be reclaimed from his bondage to sin, both original and actual or personal.

There seems to be some resemblance between the Christian doctrine that Adam's sin merits a penalty to be paid by all subsequent generations, and the Jewish doctrine of the collective responsibility of the people of Israel for the sins of their ancestors, even unto the third and fourth generation. But the points of difference appear to be more fundamental than the similarity.

In the first place, the sins of the fathers from which later generations suffer are the individual sins of men whose natures are predisposed to sin, as Adam's, before the fall, was not. In the second place, the punishment is visited not upon the whole human race, but only upon the Chosen People, and in the form of temporal scourges rather than in a corruption of human nature itself.

Furthermore, the Hebrew prophet Ezekiel questions the justice of collective responsibility. "What mean ye," he asks,

> that ye use this proverb concerning the land of Israel, saying, The fathers have eaten sour grapes, and the children's teeth are set on edge?
>
> As I live, saith the Lord God, ye shall not have occasion any more to use this proverb in Israel. . . .
>
> The soul that sinneth, it shall die. The son shall not bear the iniquity of the father, neither shall the father bear the iniquity of the son: the righteousness of the righteous shall be upon him, and the wickedness of the wicked shall be upon him.
>
> But if the wicked will turn from all his sins that he hath committed, and keep all my statutes, and do that which is lawful and right, he shall surely live, he shall not die.
>
> All his transgressions that he hath committed, they shall not be mentioned unto him: in his righteousness that he hath done he shall live.
>
> Have I any pleasure at all that the wicked should die? saith the Lord God: and not that he should return from his ways, and live?
>
> But when the righteous turneth away from his righteousness, and committeth iniquity, and doeth according to all the abominations that the wicked man doeth, shall he live? All his righteousness that he hath done shall not be mentioned: in his trespass that he hath trespassed, and in his sin that he hath sinned, in them shall he die.

According to Christian teaching, the justice of individual punishment for the sins which individuals commit in their own lifetime does not apply to the penalty which all men must pay for the sin of Adam. "Wherefore, as by one man sin entered into the world," St. Paul writes to the Romans,

> and death by sin; and so death passed upon all men, for that all have sinned:
>
> (For until the law sin was in the world: but sin is not imputed when there is no law.
>
> Nevertheless, death reigned from Adam to Moses, even over them that had not sinned after the similitude of Adam's transgression, who is the figure of him that was to come.
>
> But not as the offence, so also is the free gift. For if through the offence of one many be dead, much more the grace of God, and the gift by grace, which is by one man, Jesus Christ, hath abounded unto many.
>
> And not as it was by one that sinned, so is the gift: for the judgment was by one to condemnation, but the free gift is of many offences unto justification.
>
> For if by one man's offence death reigned by one; much more they which receive abundance of grace and of the gift of righteousness shall reign in life by one, Jesus Christ.)
>
> Therefore as by the offence of one judgment came upon all men to condemnation; even so by the righteousness of one the free gift came upon all men unto justification of life.
>
> For as by one man's disobedience many were made sinners, so by the obedience of one shall many be made righteous.

The Christian doctrine of original sin thus appears to be closely connected with the Christian doctrine of the need for a divine saviour —God Himself become man to redeem man from the taint of sin, and through the sacraments He instituted to provide the instruments of healing grace and the means of repentance for, and absolution from, both original sin and the individual's own personal sins.

The understanding of the sacraments; the theory of grace in relation to the original and fallen nature of man; the issue concerning grace and good works, or God's justification and man's merit, in the achievement of sanctity and salvation; the distinction between the everlasting perdition of Hell and the expiatory punishments of Purgatory—all these fundamental theological problems are involved in the consideration of sin and its consequences, both temporal and eternal.

Some of these problems are discussed in the chapters on MAN, ANGEL, IMMORTALITY, and PUNISHMENT. Other matters, such as the classification of sins according to the distinction between spiritual and carnal, mortal and venial, and the enumeration of the various species of both mortal and venial sin in the order of their gravity, are problems of moral theology. Though they belong primarily to this chapter, they are also related to the classification of virtues and vices, especially to the theory of the theological virtues; and among the theological virtues, especially to charity, which is the principle of sanctity, even as pride is the principle of sin.

Of all points in the consideration of sin, the distinction between original and acquired sin is perhaps the most important, not only because inherited sinfulness is conceived as the predisposing cause of all other sins, but also because the human nature corrupted by sin is conceived as fallen below the perfection of a purely natural man as well as below the state of grace in which Adam was created. As Adam had gifts which made him superior to the natural man—immortality, infused knowledge and freedom from error, immunity from concupiscence, exemption from labor and servility—so the children of Adam, cast out of Eden, have ingrained weaknesses which make them unable to achieve the goods or attain the ends proportionate to their human nature.

According to some theologians, the purely natural man, without either the gifts of grace or the wounds of sin, has never existed. It is this mystery of man, having natural aspirations which exceed the weakened powers of his fallen nature, that Pascal seems to contemplate in all his observations on "the greatness and wretchedness of man"—the "astonishing contradictions" which he thinks only the Christian religion explains. In the state in which men now are, he writes, "there remains to them some feeble instinct of the happiness of their former state; and they are plunged in the evils of their blindness and their lust, which have become their second nature."

"As the result of original justice," Aquinas writes, "the reason had perfect hold over the lower parts of the soul, while reason itself was perfected by God in being subject to Him. Now this same original justice was forfeited by the sin of our first parent . . . so that all the powers of the soul are left, as it were, destitute of their proper order, whereby they are naturally directed to virtue. This destitution is called a wounding of nature. . . . In so far as the reason is deprived of its order to the true, there is the wound of ignorance; in so far as the will is deprived of its order to the good, there is the wound of malice; in so far as the irascible is deprived of its order to the arduous, there is the wound of weakness; and in so far as the concupiscible is deprived of its order to the delectable as moderated by reason, there is the wound of concupiscence. Accordingly, these are the four wounds inflicted on the whole of human nature as a result of our first parent's sin."

Aquinas rejects the supposition that "the entire good of human nature can be destroyed by sin," arguing that what sin diminishes is "the natural inclination to virtue, which is befitting to man from the very fact that he is a rational being." But "sin cannot entirely take away from man the fact that he is a rational being, for then he would no longer be capable of sin."

Other theologians take a more extreme view than Aquinas and Augustine. They attribute depravity rather than weakness to human nature as a consequence of original sin. "On the Calvinistic theory," Mill writes, "the one great offense of man is self-will." Under the maxim that "whatever is not a duty, is a sin," men are left with no choice. "Human nature being radically corrupt," Mill continues, "there is no redemption for any one until human nature is killed within him." But, according to Augustine and Aquinas, original sin does not deprive the individual man entirely of the power to estab-

lish his worth, though it puts him in need of God's help to be worthy of salvation. Between the one extreme which holds that men can be saved by God's grace alone, and the other extreme which supposes that men can win salvation by the merit of their own good works, Augustine and Aquinas try to take the middle position, according to which neither grace without good works nor good works without grace will avail.

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REFERENCES

To find the passages cited, use the numbers in heavy type, which are the volume and page numbers of the passages referred to. For example, in **4** HOMER: *Iliad*, BK II [265–283] **12d**, the number **4** is the number of the volume in the set; the number **12d** indicates that the passage is in section d of page 12.

PAGE SECTIONS: When the text is printed in one column, the letters **a** and **b** refer to the upper and lower halves of the page. For example, in **53** JAMES: *Psychology*, **116a-119b**, the passage begins in the upper half of page 116 and ends in the lower half of page 119. When the text is printed in two columns, the letters **a** and **b** refer to the upper and lower halves of the left-hand side of the page, the letters **c** and **d** to the upper and lower halves of the right-hand side of the page. For example, in **7** PLATO: *Symposium*, **163b-164c**, the passage begins in the lower half of the left-hand side of page 163 and ends in the upper half of the right-hand side of page 164.

AUTHOR'S DIVISIONS: One or more of the main divisions of a work (such as PART, BK, CH, SECT) are sometimes included in the reference; line numbers, in brackets, are given in certain cases; *e.g.*, *Iliad*, BK II [265–283] **12d**.

BIBLE REFERENCES: The references are to book, chapter, and verse. When the King James and Douay versions differ in title of books or in the numbering of chapters or verses, the King James version is cited first and the Douay, indicated by a *(D)*, follows; *e.g.*, OLD TESTAMENT: *Nehemiah*, 7:45—*(D) II Esdras*, 7:46.

SYMBOLS: The abbreviation "esp" calls the reader's attention to one or more especially relevant parts of a whole reference; "passim" signifies that the topic is discussed intermittently rather than continuously in the work or passage cited.

For additional information concerning the style of the references, see the Explanation of Reference Style; for general guidance in the use of *The Great Ideas*, consult the Preface.

1. The nature of sin: violation of divine law; disorder in man's relation to God

OLD TESTAMENT: *Genesis*, 2:15–17; 3 esp 3:11; 4:7; 6:11–13 / *Exodus*, 20:1–17 / *Deuteronomy*, 5:6–21 / *Job*, 35:6 / *Psalms*, 36:1–4—*(D) Psalms*, 35:1–5 / *Isaiah*, 59:2—*(D) Isaias*, 59:2

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(1. *The nature of sin: violation of divine law; disorder in man's relation to God.*)

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33 PASCAL: *Provincial Letters*, 19b; 24b-26b; 45a-b; 78b-80b / *Pensées*, 668 294b-295a
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2. The kinds and degrees of sin

OLD TESTAMENT: *Exodus*, 20:1-17 / *Deuteronomy*, 5:6-21; 25:2
NEW TESTAMENT: *Matthew*, 4:1-11; 5:22; 12:31-32 / *Mark*, 3:29 / *Luke*, 4:1-13; 12:10,47-48 / *John*, 19:11 / *I Corinthians*, 8:10-12 / *Galatians*, 5:19-21 / *I Timothy*, 1:13 / *Hebrews*, 10:26-29 / *James*, 2:10 / *I John*, 2:16; 5:16-17
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2*a*. The distinction between original and actual sin

NEW TESTAMENT: *Romans*, 5:14-16
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2*b*. The distinction between spiritual and carnal sin

OLD TESTAMENT: *Exodus*, 20:1-17 / *Deuteronomy*, 5:6-21
NEW TESTAMENT: *Matthew*, 4:1-11 / *Luke*, 4:1-13 / *II Corinthians*, 7:1 / *I John*, 2:16
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2*c*. The distinction between mortal and venial sin

NEW TESTAMENT: *Matthew*, 12:31-32 / *I John*, 5:16-17
18 AUGUSTINE: *City of God*, BK XXI, CH 24, 577d-578a
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2*c*(1) The classification and order of mortal sins

OLD TESTAMENT: *Exodus*, 20:1-17 / *Deuteronomy*, 5:6-21
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42 KANT: *Science of Right*, 440b-441b

2*c*(2) The classification and order of venial sins

NEW TESTAMENT: *I Corinthians*, 3:12-15
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22 CHAUCER: *Parson's Tale*, par 22 509b-510b
33 PASCAL: *Provincial Letters*, 67b; 118a-119b

3. The doctrine of original sin

OLD TESTAMENT: *Genesis*, 2:16–17; 3 esp 3:17–19
APOCRYPHA: *Wisdom of Solomon*, 2:23–24—(*D*) OT, *Book of Wisdom*, 2:23–25
NEW TESTAMENT: *Romans*, 5 esp 5:12–19
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3a. The condition of Adam before sin: his supernatural state of grace; his preternatural gifts

OLD TESTAMENT: *Genesis*, 1:27–29; 2:7–8,15–25 / *Ecclesiastes*, 7:29—(*D*) *Ecclesiastes*, 7:30
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31 SPINOZA: *Ethics*, PART IV, PROP 68, SCHOL 445a-b
32 MILTON: *Paradise Lost*, BK I [650 654] 107b; BK III [56–371] 136b-143b; BK IV [32 538] 153a-164a esp [131–171] 155a-156a, [205 392] 157a-161a; [610–775] 165b-169a; BK V [1–560] 175a-187b; BK VII [40–108] 218a-219b; [519–550] 228b-229a; [617–632] 230b-231a; BK VIII 232a-246b; BK IX [192–454] 251b-257a; BK XI [45–71] 300a-b; BK XII [63–110] 320b-321b
33 PASCAL: *Pensées*, 560 272b
46 HEGEL: *Philosophy of History*, INTRO, 179d-180c; PART III, 304d-305a
51 TOLSTOY: *War and Peace*, BK VII, 275a

3b. The sin of Adam

OLD TESTAMENT: *Genesis*, 3 / *Ecclesiastes*, 7:29—(*D*) *Ecclesiastes*, 7:30
APOCRYPHA: *Wisdom of Solomon*, 1:13–16; 2:23–24—(*D*) OT, *Book of Wisdom*, 1:13–16; 2:23–25
NEW TESTAMENT: *Romans*, 5:12
18 AUGUSTINE: *City of God*, BK XII, CH 21 357a-b; BK XIII, CH 1 360a-b; CH 12–15 365d-366d; BK XIV, CH 11–15 385d-390a; BK XXI, CH 12 571a-c; BK XXII, CH 24, 609a-b
20 AQUINAS: *Summa Theologica*, PART I-II, Q 81, A 5 167a-d; Q 82, A 2, REP 1 168d-169c; Q 89, A 3 200d-201d
21 DANTE: *Divine Comedy*, PURGATORY, XXVIII [91–96] 97a; XXIX [22–30] 97d-98a; PARADISE, VII [16–120] 115b-116b; XXVI [109–117] 147a
22 CHAUCER: *Pardoner's Tale* [12,432–445] 375a / *Monk's Tale* [14,013–020] 434b / *Parson's Tale*, par 18, 507a-b
23 HOBBES: *Leviathan*, PART II, 112a-b; PART III, 177d; 191b-c; 195d
25 MONTAIGNE: *Essays*, 233b
30 BACON: *Advancement of Learning*, 81a
31 SPINOZA: *Ethics*, PART IV, PROP 68, SCHOL 445a-b
32 MILTON: *Paradise Lost*, BK I [27–75] 94a-95a; BK III [167–216] 139a-140a; [274–294] 141b; BK IV [505–535] 163b-164a; BK IX [647–1004] 261b-269a / *Areopagitica*, 394b-395a
33 PASCAL: *Provincial Letters*, 82a-b
46 HEGEL: *Philosophy of History*, PART III, 304d-305b

(3. *The doctrine of original sin.*)

3c. The nature of fallen man in consequence of Adam's sin

OLD TESTAMENT: *Genesis*, 3:9–24; 6:5–13; 8:21 / *Job*, 15:14–16; 25:4–6 / *Psalms*, 14:1–3; 39:5–6,11; 51:2–5; 53:1–3—(*D*) *Psalms*, 13:1–3; 38:6–7,12; 50:4–7; 52:1–4 / *Proverbs*, 20:9 / *Ecclesiastes*, 7:20,27–29; 9:3—(*D*) *Ecclesiastes*, 7:21,28–30; 9:3 / *Jeremiah*, 17:9—(*D*) *Jeremias*, 17:9

APOCRYPHA: *Wisdom of Solomon*, 2:23–24—(*D*) OT, *Book of Wisdom*, 2:23–25

NEW TESTAMENT: *John*, 8:3–8 / *Romans*, 3:9–5:21 esp 5:12–21; 7; 8:20–21; 9:29 / *I Corinthians*, 15:21–22 / *Galatians*, 2:16; 3 esp 3:11, 3:22; 4:1–7; 5:19–21 / *Ephesians*, 2:1–5 / *I John*, 2:15–17

18 AUGUSTINE: *Confessions*, BK I, par 18 5c-d / *City of God*, BK XII, CH 21–22 357a-c; BK XIII, CH 1–15 360a-366d; BK XIII, CH 23–BK XIV, CH 5 372a-380b; BK XIV, CH 12–13 387a-388c; CH 15–27 388d-397a; BK XXI, CH 12 571a-c; CH 15 572c-573b; BK XXII, CH 22 606d-608b; CH 30, 617c-618a

19 AQUINAS: *Summa Theologica*, PART I, Q 97, A 1, REP 3 513c-514c; Q 98, A 2 517d-519a; PART I-II, Q 17, A 9, REP 3 692d-693d

20 AQUINAS: *Summa Theologica*, PART I-II, QQ 81–83 162d-174b; Q 85 178b-184a; Q 91, A 6 212c-213c; Q 94, A 6, REP 1-2 225d-226b; Q 109, A 2, ANS 339c-340b; A 3, ANS 340c-341b; A 8, ANS 344d-346a; PART III, Q 8, A 5, REP 1 760a-d; QQ 14–15 784a-796a

21 DANTE: *Divine Comedy*, PURGATORY, III [16–45] 56a-b; X [121–129] 68c-d; XXVIII [91–96] 97a; XXIX [16–30] 97d-98a; PARADISE, VII [16–120] 115b-116b

22 CHAUCER: *Tale of Man of Law* [4778–4791] 240b-241a / *Pardoner's Tale* 374a-382b esp [12,432–445] 375a, [12,829–837] 381b / *Parson's Tale*, par 18, 507b

23 HOBBES: *Leviathan*, PART II, 112a-b; PART III, 191b-c; 192a-c; 195d

24 RABELAIS: *Gargantua and Pantagruel*, BK II, 81a-b

25 MONTAIGNE: *Essays*, 213a-215b; 218c-219a; 233a-234a; 238b-239c; 250a-b; 294a-b

30 BACON: *Novum Organum*, BK II, APH 52, 195c-d

32 MILTON: *Paradise Lost*, BK III [167–216] 139a-140a; [274–304] 141b-142a; BK IX [780–1189] 264b-273a; BK X 274a-298b esp [103–123] 276b-277a, [229–409] 279b-283a, [585–640] 287a-288b, [720–844] 290a-292b; BK XI [84–98] 301a; [162–180] 302b-303a; [251–262] 304b-305a; BK XI [423]–BK XII [371] 308b-327a

33 PASCAL: *Provincial Letters*, 82a / *Pensées*, 426–427 244b; 430–431 245a-247b; 434–435 248a-251a; 439–450 251a-253a; 560 272b

37 FIELDING: *Tom Jones*, 38d

40 GIBBON: *Decline and Fall*, 183b-c

44 BOSWELL: *Johnson*, 482a

46 HEGEL: *Philosophy of Right*, ADDITIONS, 14 118c-d / *Philosophy of History*, PART III, 304d-305b; PART IV, 354a-c

50 MARX: *Capital*, 354b

51 TOLSTOY: *War and Peace*, BK VII, 215a

3d. The need for a mediator between God and man to atone for original sin

NEW TESTAMENT: *Matthew*, 1:21; 9:2–6; 18:11–14; 26:26–28 / *Mark*, 2:3–11 / *Luke*, 1:67–69; 2:11; 5:20–24; 7:37–50; 9:56; 19:1–10; 24:44–47 / *John*, 1:29; 3:16–17; 4:42; 6:31–39; 10:9–18; 14:18–19 / *Acts*, 3:19–26; 4:10–12; 5:30–31; 10:37–43; 13:23,26,32–39; 16:30–31 / *Romans*, 1:16; 3:20–26; 5–6; 8:1–11,31–39; 9:29–10:21 / *I Corinthians*, 5:7; 15:1–4,12–23,55–57 / *II Corinthians*, 5:14–21 / *Galatians*, 1:3–4; 2:16–21; 3:19–27; 5:1–5 / *Ephesians*, 1:5–7,12–14; 2 / *Colossians*, 1:12–14,19–24; 2:11–15; 3:1–10 / *I Timothy*, 1:15; 2:5–7 / *II Timothy*, 1:8–10 / *Titus*, 3:4–7 / *Hebrews*, 1:1–3; 2:9–18; 5; 7:1–10:22; 12:24; 13:12 / *I Peter*, 1:7–9,18–21; 3:18; 4:1 / *I John*, 2:1–2,12; 3:5–10 / *Revelation*, 1:4–6—(*D*) *Apocalypse*, 1:4–6

18 AUGUSTINE: *Confessions*, BK VII, par 24 50d-51a / *City of God*, BK IX, CH 1–18 285b,d-295d esp CH 15–17 293a-295c; BK X, CH 22 312a-b; CH 24–25 312d-314c; BK XI, CH 2–3 323a-d; BK XIII, CH 2–4 360b-362a; CH 23–24 372a-376a,c; BK XVII, CH 11 462c-463a; BK XXI, CH 16 573b-574a / *Christian Doctrine*, BK I, CH 14–18 627d-629a; CH 34 634b-c; BK II, CH 41 656a-c

19 AQUINAS: *Summa Theologica*, PART I, Q 97, A 1, REP 3 513c-514c; PART I-II, Q 5, A 7, REP 2 642a-d

20 AQUINAS: *Summa Theologica*, PART I-II, Q 100, A 12 264d-265d; Q 103, A 2 299b-300d; PART III, PROLOGUE–Q 1 701a-709c; Q 3, A 8 729b-730b; Q 22, A 3 829c-830c

21 DANTE: *Divine Comedy*, PARADISE, VI [82–93] 114c; VII [19–120] 115b-116b

22 CHAUCER: *Pardoner's Tale* [12,834–837] 381b / *Parson's Tale*, par 87, 545a

23 HOBBES: *Leviathan*, PART III, 191c-d; 197d-198a; 204a-c

32 MILTON: *Christs Nativity* [1–14] 1a-b; [125–156] 4b-5a / *The Passion* 10b-12a / *Upon the Circumcision* 12b-13a / *Paradise Lost* 93a-333a esp BK I [1–26] 93b-94a, BK III [56–415] 136b-144b, BK XI [1–44] 299a-300a, BK XII [285–484] 325b-329b

33 PASCAL: *Pensées*, 430 245a-247b; 527–550 264b-267b; 556 270b-272a; 560 272b; 692 300b-301a; 780–783 324b-325a

44 BOSWELL: *Johnson*, 482a-d

46 HEGEL: *Philosophy of History*, PART III, 306b-c; PART IV, 331d-333b

52 DOSTOEVSKY: *Brothers Karamazov*, BK V, 127b-137c passim

54 FREUD: *Civilization and Its Discontents*, 797b-c

3e. The remission of sin: baptism; the state of the unbaptized

NEW TESTAMENT: *Matthew*, 3:11–17; 28:19 / *Mark*, 1:4–8; 16:16 / *Luke*, 3:3,16 / *John*, 1:25–26,33; 3:5 / *Acts*, 1:5; 2:38–41 esp 2:38; 3:19; 8:35–38; 10:43–48; 11:16; 19:1–5; 22:16 / *Romans*, 3:20–26; 5–6; 8:1–11; 9:29–10:10 / *I Corinthians*, 12:13 / *II Corinthians*, 5:14–19 / *Galatians*, 3:19–27 / *Ephesians*, 2; 4:5 / *Colossians*, 2:8–15 / *Titus*, 3:5–7 / *Hebrews*, 6:1–6 / *I Peter*, 1:18–23

18 AUGUSTINE: *Confessions*, BK I, par 6 2b-c; par 17–18 5b-d; BK II, par 15 12b-c; BK IV, par 7–8 20d-21b / *City of God*, BK X, CH 22 312a-b; BK XII, CH 22 357c; BK XIII, CH 7 362d-363b; BK XXI, CH 16 573b-574a

19 AQUINAS: *Summa Theologica*, PART I, Q 97, A 1, REP 3 513c-514c

20 AQUINAS: *Summa Theologica*, PART I-II, Q 81, A 1, ANS 163a-164d; Q 89, A 6, ANS 203b-204a,c; Q 113 360d-370b; PART III, Q 3, A 8, ANS and REP 3 729b-730b; Q 65, A 1, ANS 879c-881d; A 4, ANS 883d-884a,c; PART III SUPPL, Q 69, AA 4–7 889c-893c

21 DANTE: *Divine Comedy*, HELL, IV 5c-7a; PURGATORY, VII [1–36] 62c-d; XXII [55–93] 87a-c; PARADISE, XIX [22–111] 135b-136a; XX [31–148] 137a-138b; XXXII [37–84] 155a-c

22 CHAUCER: *Parson's Tale*, par 3 496a; par 18–19, 507b-508a

23 HOBBES: *Leviathan*, PART III, 206c-207a; 211c-212b; 244d-245a

32 MILTON: *Paradise Lost*, BK XII [436–445] 328b-329a

36 STERNE: *Tristram Shandy*, 221a-224a

40 GIBBON: *Decline and Fall*, 297c-298b

4. Actual or personal sin

4a. The relation of original sin to actual sin

NEW TESTAMENT: *Romans*, 3:7–26; 5:12–21

18 AUGUSTINE: *Confessions*, BK I, par 17–18 5b-d / *City of God*, BK XIV, CH 1 376b,d-377a; CH 3 378a-d

19 AQUINAS: *Summa Theologica*, PART I, Q 114, A 3, ANS 583b-d

20 AQUINAS: *Summa Theologica*, PART I-II, Q 81, A 1, ANS 163a-164d; Q 89, A 6 203b-204a,c; PART III, Q 1, A 4 706a-707a

22 CHAUCER: *Parson's Tale*, par 18–19 507b-508b

32 MILTON: *Paradise Lost*, BK III [167–216] 139a-140a; [274–343] 141b-143a; BK IX [994–1080] 269a-271a / *Areopagitica*, 394b-395b

4b. The causes and occasions of actual sin

OLD TESTAMENT: *Numbers*, 15:27–31 / *Job*, 1:1–5; 31 / *Proverbs*, 1:10–19; 10–19 passim; 21:4; 24:9; 28:20; 30:8–9 / *Ecclesiastes*, 7:26—(*D*) *Ecclesiastes*, 7:27 / *Isaiah*, 5:11–12,22–23; 28:7–8—(*D*) *Isaias*, 5:11–12,22–23; 28:7–8

APOCRYPHA: *Wisdom of Solomon*, 2 esp 2:24; 14:22–29—(*D*) OT, *Book of Wisdom*, 2 esp 2:24–25; 14:22–29 / *Ecclesiasticus*, 8:2; 10:9,13; 11:10; 12:13–14; 19:2; 23:1–6,13,16,18; 25:24; 26:29; 27:2,10; 31:5–11,25–31; 47:19–20—(*D*) OT, *Ecclesiasticus*, 8:2–3; 10:9,15–16; 11:10; 12:13; 19:2–3; 23:1–6,17,21–23,25–26; 25:33; 26:28; 27:2,11; 31:5–11,30–42; 47:21–22

NEW TESTAMENT: *Matthew*, 13:18–23; 15:10–20 / *Mark*, 4:1–20; 7:14–23 / *Luke*, 4:1–13; 8:4–15 / *Romans*, 1:18–32; 6:19; 7:22–23 / *I Corinthians*, 7:4–5; 8:9–13; 9:27; 15:56 / *II Corinthians*, 2:10–11; 4:3–4 / *Galatians*, 5:16–21 / *Ephesians*, 4:22 / *Colossians*, 3:5–7 / *I Timothy*, 6:9–10 / *II Timothy*, 2:25–26 / *Titus*, 3:3 / *James*, 1:15; 2; 4:1–6 / *I Peter*, 4:1–3; 5:8–9 / *II Peter*, 1:4; 2:10–22 / *I John*, 3:4–9

18 AUGUSTINE: *Confessions*, BK II, par 6–18 10a-13a; BK III, par 16 17c-d; BK VII, par 4–5 44b-d; BK VIII, par 10–11 55c-56b; BK X, par 41–66 81c-88b / *City of God*, BK I, CH 16–27 139c-146a; BK XIV, CH 3–6 378a-380c; CH 13–14 387c-388d; BK XV, CH 22 416a-c; BK XIX, CH 6 514b-515a

19 AQUINAS: *Summa Theologica*, PART I, Q 48, A 5, REP 3 263a-d; Q 63, A 7, ANS 331c-332b; A 8 332c-333b; Q 92, A 1, REP 3 488d-489d; Q 114 581d-585c; PART I-II, Q 1, A 7, REP 1 614c-615a; Q 42, A 3 802d-803c

20 AQUINAS: *Summa Theologica*, PART I-II, QQ 75–84 137c-178a

21 DANTE: *Divine Comedy*, HELL 1a-52d passim, esp XI 15a-16b, XIII [31–108] 18b-19a, XXIV [1–78] 34d-35b, XXVII [55–132] 40a-41a; PURGATORY 53a-105d passim, esp XI 68d-70b, XIII [103–129] 73a-b, XV [40–81] 75d-76a, XVI [52–114] 77b-78a, XVII [91]-XVIII [75] 79b-80c, XIX [1–69] 81c-82a, XXX-XXXI 99b-102b; PARADISE, I [94–142] 107b-d

22 CHAUCER: *Friar's Tale* 278a-284a / *Prologue of Pardoner's Tale* 372a-374a / *Pardoner's Tale* 374a-382b esp [12,397–593] 374a-377b, [12,829–852] 381b / *Tale of Melibeus*, par 48–52 421b-425b / *Second Nun's Prologue* [15,469–489] 461a / *Parson's Tale* 495a-550a esp par 3 496a, par 20–86 508b-544a

23 HOBBES: *Leviathan*, PART I, 85d; PART II, 138d-139c; 151b; PART IV, 272d

26 SHAKESPEARE: *2nd Henry VI*, ACT V, SC I [175–190] 66d-67a

27 SHAKESPEARE: *Hamlet*, ACT I, SC II [129–137] 32d-33a; ACT III, SC III [36–72] 53d-54a; SC IV [144–152] 56a-b / *Measure for Measure*, ACT II, SC II [162–187] 183d-184a; SC III [10–39] 184b-c; ACT III, SC I [95–151] 187d-188b / *Othello*, ACT I, SC III [60–69] 209c / *Pericles*, ACT I, PROLOGUE-SC I 421b-423c / *Cymbeline*, ACT III, SC IV [76–80] 467c / *Henry VIII*, ACT III, SC II [435–457] 573c-d

31 DESCARTES: *Objections and Replies*, 125d-126a

32 MILTON: *Paradise Lost*, BK IV [505–535] 163b-164a; BK V [26–94] 175b-177a / *Samson*

(*4. Actual or personal sin. 4b. The causes and occasions of actual sin.*)

Agonistes [766-842] 356b-358a esp [831-842] 357b-358a

33 PASCAL: *Provincial Letters*, 19b-26b; 29b-61b; 66a-70b; 72a; 74a-80b; 91a-111b passim; 112b-113a / *Geometrical Demonstration*, 440a-b

47 GOETHE: *Faust*, PROLOGUE 7a-9b

48 MELVILLE: *Moby Dick*, 3b-4a

52 DOSTOEVSKY: *Brothers Karamazov*, BK III, 53c-54b; 64c-67a; BK IV, 88d-89a

4c. Pride as the principle of sin: the tragic fault of *hybris*

OLD TESTAMENT: *Numbers*, 15:30 / *Job*, 31:26-28; 33:16 17; 35:12 / *Psalms*, 10:1 6; 12:1-5; 101:5—(*D*) *Psalms*, 9:1-6; 11:1-5; 100:5 / *Proverbs*, 6:16-17; 8:13; 11:2; 14:3; 15:25; 16:18-19; 18:12; 21:4; 29:23 / *Isaiah*, 2:11-17; 10:12 15; 13:11; 14:4-22 esp 14:11-17; 16:6-7; 23:9—(*D*) *Isaias*, 2:11-17; 10:12-15; 13:11; 14:4-22 esp 14:11-17; 23:9 / *Jeremiah*, 48:26,29-31; 50:29 32—(*D*) *Jeremias*, 48:26,29-31; 50:29 32 / *Ezekiel*, 16:49-50—(*D*) *Ezechiel*, 16:49-50 / *Daniel*, 5:18-20 / *Hosea*, 5:5; 7:10—(*D*) *Osee*, 5:5; 7:10 / *Zephaniah*, 2:9-10—(*D*) *Sophonias*, 2:9-10

APOCRYPHA: *Tobit*, 4:13—(*D*) OT, *Tobias*, 4:14 / *Ecclesiasticus*, 10:7-18 esp 10:13; 11:30-31; 13:1; 23:4,8; 32:12—(*D*) OT, *Ecclesiasticus*, 10:7-22 esp 10:15; 11:32-33; 13:1; 23:5,8; 32:16

NEW TESTAMENT: *Luke*, 18:10-14 / *Acts*, 12:20-23 / *I Timothy*, 3:6 / *James*, 4:6-7 / *I Peter*, 5:5 / *I John*, 2:16

4 HOMER: *Iliad*, BK I 3a-9a,c; BK IX 57a-64a,c

5 AESCHYLUS: *Persians* 15a-26d esp [739 831] 23a-24a / *Seven Against Thebes* [375-675] 31b-34b / *Prometheus Bound* 40a-51d esp [1-87] 40a-41a, [944-1093] 50b-51d / *Agamemnon* [905-957] 61c-62b

5 SOPHOCLES: *Oedipus the King* 99a-113a,c esp [863-910] 107b-c / *Antigone* [100-147] 132a-b / *Ajax* 143a-155a,c

6 HERODOTUS: *History*, BK I, 8a-b; BK VII, 217c; BK VIII, 279d-280a

12 EPICTETUS: *Discourses*, BK III, CH 14 189c-190a

18 AUGUSTINE: *Confessions*, BK III, par 16 17c-d; BK V, par 3-5 27c-28c; BK X, par 58-64 86a-87d; BK XII, par 34-35 107c-108b / *City of God*, BK XII, CH 6, 345b-c; BK XIV, CH 9, 384b-385b; CH 13-15 387c-390a; CH 27-28 396c-397d

20 AQUINAS: *Summa Theologica*, PART I-II, Q 77, A 4 148b-149a; Q 84, A 2 175b-176a; A 4, ANS and REP 4 176d-178a

21 DANTE: *Divine Comedy*, HELL, VIII [65]-IX [103] 11c-13b; XIV [43-72] 20a-b; XXV [1-15] 36b-c; PURGATORY, X-XII 67b-71d

22 CHAUCER: *Monk's Tale* 434a-448b esp [13,997-14,012] 434a, [14,189 684] 437b-447a / *Parson's Tale*, par 23-29 510b-515b

25 MONTAIGNE: *Essays*, 233b-234a; 238b-c

27 SHAKESPEARE: *Troilus and Cressida*, ACT II, SC III [122-228] 117a-118a / *Henry VIII*, ACT III, SC II [350-372] 572c-d

32 MILTON: *Paradise Lost*, BK I 93a-110b esp [27 75] 94a-95a, [84-124] 95b-96a, [622-662] 107a-108a; BK II [1-105] 111a-113b; [299 389] 117b-119b; BK IV [32-119] 153a-155a; [505-535] 163b-164a; BK V [600 904] 188b-195a; BK IX [99-178] 249b-251a / *Samson Agonistes* [521-540] 351a-b

33 PASCAL: *Provincial Letters*, 66a-b / *Pensées*, 430 245a-247b; 455-460 253b-254b; 492 259b

36 SWIFT: *Gulliver*, PART IV, 183b-184a

37 FIELDING: *Tom Jones*, 379c-380a

52 DOSTOEVSKY: *Brothers Karamazov*, BK IV, 83c-84a; BK V, 130b-135a; BK VI, 168a-c

4d. The consequences of actual sin: the loss of charity and grace

OLD TESTAMENT: *Isaiah*, 57:21—(*D*) *Isaias*, 57:21 / *Jeremiah*, 13:23—(*D*) *Jeremias*, 13:23

APOCRYPHA: *Tobit*, 12:10—(*D*) OT, *Tobias*, 12:10 / *Ecclesiasticus*, 19:4; 21:2-3—(*D*) OT, *Ecclesiasticus*, 19:4; 21:2-4

NEW TESTAMENT: *Matthew*, 27:3-5 / *John*, 8:34 / *Romans*, 1:16-32; 7:5 13 / *Hebrews*, 3:13 / *James*, 1:15 / *II Peter*, 2:18-22

18 AUGUSTINE: *Confessions*, BK X, par 65-66 87d-88b / *City of God*, BK XII, CH 3 343d-344b; BK XIV, CH 3, 378a-b; CH 8-9 381c-385b; CH 12-15 387a-390a; BK XIX, CH 13 519a-520a

19 AQUINAS: *Summa Theologica*, PART I, Q 64, AA 1-3 334a-337c; Q 114, A 3 583b-d

20 AQUINAS: *Summa Theologica*, PART I-II, QQ 85-87 178b-192d; Q 89, A 1 199a-c; Q 94, A 6 225d-226b; Q 109 338a-347d passim; PART II-II, Q 24, A 12 499c-500d

21 DANTE: *Divine Comedy*, HELL 1a-52d; PURGATORY, II [118-133] 55d; XI 68d-70b

22 CHAUCER: *Parson's Tale*, par 53 526b-527a

32 MILTON: *Paradise Lost*, BK XI-XII 299a-333a

33 PASCAL: *Provincial Letters*, 19b-26b; 28b-31b; 36a-61b; 132a-b; 137a

4e. The prevention and purging of sin: purification by sacrifice; the sacrament of penance; contrition, confession, and absolution

OLD TESTAMENT: *Exodus*, 29:36-37; 30:10-16 / *Leviticus* passim, esp 4-6, 16:5-34, 17:11, 19:20-22, 23:26-32, 26:39-43 / *Numbers*, 5:5-9; 6:9-12; 8:19; 15:22-29; 16:46-48; 19:1-10; 25:1-13 / *Deuteronomy*, 21:1-9 / *II Samuel*, 12:7-23—(*D*) *II Kings*, 12:7-23 / *I Kings*, 8:31-50—(*D*) *III Kings*, 8:31-50 / *II Chronicles*, 6:24-42; 7:12-14; 29:21-24; 33:12-19—(*D*) *II Paralipomenon*, 6:24-42; 7:12-14; 29:21-24;

33:12-19 / *Job*, 1:4-5; 42:1-6 / *Psalms*, 32: 1-5,10; 34:18; 38:17-18; 40:6; 51; 69:5-13—(*D*) *Psalms*, 31:1-5,10; 33:19; 37:18-19; 39:7; 50; 68:6-14 / *Isaiah*, 1:16-20; 58:1-7—(*D*) *Isaias*, 1:16-20; 58.1-7 / *Ezekiel*, 43:18-27—(*D*) *Ezechiel*, 43:18-27 / *Daniel*, 9:3 20 / *Joel*, 1:8-15; 2:12-17 / *Jonah*, 3—(*D*) *Jonas*, 3 / *Micah*, 6:6-8—(*D*) *Micheas*, 6:6-8

APOCRYPHA: *Wisdom of Solomon*, 12:19—(*D*) OT, *Book of Wisdom*, 12:19 / *Ecclesiasticus*, 1:21; 3:3,14-15; 17:24-26; 18:21; 20:2-3; 21: 1,6; 23:1-6; 28:2-5; 34:18-19,25-26—(*D*) OT, *Ecclesiasticus*, 1:27; 3:4,15-17; 17:20-24; 18: 21; 20:11; 21:1,7; 23:1-6; 28:2-5; 34:21-23,30-31 / *II Maccabees*, 12:39-45—(*D*) OT, *II Machabees*, 12:39-46

NEW TESTAMENT: *Matthew*, 3:1-12; 4:17; 9:13; 11:20-21 / *Mark*, 1:14-15 / *Luke*, 3:8; 5:32; 7:35-50; 10:13; 13:1-5; 15; 16:27 31 / *John*, 20:22-23 / *Acts*, 3:19; 5:31; 8:9-24; 17:30; 26:20 / *Romans*, 2:4-6 / *I Corinthians*, 6.9-11 / *II Corinthians*, 7.8-12 / *II Timothy*, 2:25-26 / *Hebrews*, 5:1-10; 6:4-8; 7:20-10:18 / *James*, 4:8-10; 5:13-16,20 / *I Peter*, 4:1-2 / *II Peter*, 3:9 / *I John*, 1:9; 3:4-5 / *Revelation*, 2 18-23; 3:1-6,19—(*D*) *Apocalypse*, 2:18-23; 3:1-6,19

4 HOMER: *Iliad*, BK IX [485 526] 62a-b

5 AESCHYLUS: *Choephoroe* [1021-1076] 80a-d / *Eumenides* 81a-91d esp [276-298] 84a-b, [413-453] 86a

5 EURIPIDES: *Electra* [1233-1359] 338b-339a,c

18 AUGUSTINE: *Confessions*, BK I, par 17 5b c; BK II, par 1 9a; par 15 12b-c; BK V, par 1 27a-b; BK IX, par 12 64d-65a / *City of God*, BK XIII, CH 7 362d-363b

19 AQUINAS: *Summa Theologica*, PART I-II, Q 35, A 5, REP 1 775d-777a; Q 37, A 2, REP 1 784c-785b

20 AQUINAS: *Summa Theologica*, PART I-II, Q 87, A 6, ANS and REP 2 189c-190c; A 7, ANS and REP 3 190c-191d; A 8, ANS 191d-192d; Q 102, A 3, REP 8-11 272b-276c; PART III, QQ 61-65 855a 884a,c

21 DANTE: *Divine Comedy*, HELL, XXVII [55-132] 40a-41a; PURGATORY, III [103-145] 57a-c; IV [97 135] 58c-d; V [37-136] 59b-60c; IX 65d-67b; XXII [1-54] 86c-87a; XXX-XXXI 99b-102b

22 CHAUCER: *Prologue* [208-234] 162b-163a / *Prologue of Pardoner's Tale* 372a-374a / *Parson's Tale* 495a-550a esp par 1-22 495a-510b, par 85-103 543a-550a / *L'Envoi* 550a-b

23 HOBBES: *Leviathan*, PART III, 207a; 212a-b

25 MONTAIGNE: *Essays*, 152b-153d; 156a-d; 388c-395b

26 SHAKESPEARE: *Henry V*, ACT IV, SC I [309-322] 554c-d

27 SHAKESPEARE: *Hamlet*, ACT I, SC V [74-80] 37d; ACT III, SC III [36-72] 53d-54a; SC IV [140-180] 56a-c / *Winter's Tale*, ACT III, SC II [204-243] 503c-504a

29 CERVANTES: *Don Quixote*, PART II, 427d-429d

32 MILTON: *Paradise Lost*, BK X [1086]-BK XI [44] 298a-300a / *Samson Agonistes* [472-540] 350a-351b

33 PASCAL: *Provincial Letters*, 21b; 28b-34b; 43b; 62b-64b; 71b-80b passim; 124a; 132a-b; 137a / *Pensées*, 870 344a-b; 904-905 348b-349a; 923 351b

36 STERNE: *Tristram Shandy*, 260b-261a; 476a-477a

40 GIBBON: *Decline and Fall*, 191b-c; 199b-c; 452b-d

41 GIBBON: *Decline and Fall*, 384b-385b

44 BOSWELL: *Johnson*, 314c-315b

46 HEGEL: *Philosophy of History*, PART IV, 332b-333b; 349a-b; 354a-c

48 MELVILLE: *Moby Dick*, 34b-36b

51 TOLSTOY: *War and Peace*, BK I, 38b; 43b 44b; BK XI, 476c-478a

52 DOSTOEVSKY: *Brothers Karamazov*, BK II, 22b-24c; BK III, 64c-67a; BK V, 127b-137c passim; BK VI, 157b-164a; 167b-169c

54 FREUD: *Civilization and Its Discontents*, 793b

5. The remorse of conscience and feelings of guilt: the psychogenesis and pathological expression of the sense of sin

OLD TESTAMENT: *Job*, 42:5-6 / *Psalms*, 34:18; 38; 51:17—(*D*) *Psalms*, 33:19; 37; 50:19 / *Proverbs*, 28:1 / *Isaiah*, 57:15; 66:2—(*D*) *Isaias*, 57:15; 66:2 / *Joel*, 2:12-13

APOCRYPHA: *Wisdom of Solomon*, 5:1-13; 17—(*D*) OT, *Book of Wisdom*, 5:1-14; 17 / *Ecclesiasticus*, 14:1-2—(*D*) OT, *Ecclesiasticus*, 14:1-2 / *I Maccabees*, 6:1-15 esp 6:12 13—(*D*) OT, *I Machabees*, 6:1-15 esp 6:12 13

NEW TESTAMENT: *Matthew*, 27:3-5 / *Luke*, 7: 36-38; 15:11-32 / *John*, 8:1-9 / *II Corinthians*, 7:8-12 / *James*, 4:8-10

5 SOPHOCLES: *Antigone* [1091-1353] 140b-142d

5 EURIPIDES: *Andromache* [802-879] 322a c / *Electra* [1177-1232] 337d-338a / *Heracles Mad* [1229-1428] 375c-377d / *Orestes* [1-423] 394a-398b

6 HERODOTUS: *History*, BK I, 9d-10a

9 ARISTOTLE: *Ethics*, BK IX, CH 4 [1166^{b}12-24] 419d-420a

12 LUCRETIUS: *Nature of Things*, BK III [978-1023] 42d-43b; BK V [1143-1160] 76a-b

15 TACITUS: *Annals*, BK VI, 87b-c

18 AUGUSTINE: *Confessions*, BK II, par 17 12d-13a; BK III, par 5 14b; BK V, par 2 27b-c / *City of God*, BK XIV, CH 8 381c-383a; CH 13-14, 388b-d

20 AQUINAS: *Summa Theologica*, PART III SUPPL, Q 87 997a-1000c; Q 97, A 2 1066d-1067b

21 DANTE: *Divine Comedy*, HELL, XXX [130]-XXXI [6] 45d-46a; PURGATORY, II [106]-III [15] 55c-56a; XIII [130-144] 73b-c; XXX-XXXI 99b-102b

22 CHAUCER: *Physician's Tale* [12,211-220] 370b-371a / *Parson's Tale*, par 5-15 496b-506b

25 MONTAIGNE: *Essays*, 14a-c; 174d-176c; 388c-395b passim

(5. The remorse of conscience and feelings of guilt: the psychogenesis and pathological expression of the sense of sin.)

26 SHAKESPEARE: *2nd Henry VI*, ACT III, SC III 55d-56a / *Richard III*, ACT I, SC IV [1-75] 114d-115b; ACT V, SC III [177-206] 145c-d / *Titus Andronicus*, ACT V, SC I [73-85] 193a; SC III [184-190] 198c / *Richard II*, ACT V, SC VI [30-52] 351c-d / *King John*, ACT IV, SC II [215-248] 396d-397a / *Merchant of Venice*, ACT II, SC II [1-33] 412a-b

27 SHAKESPEARE: *Hamlet*, ACT II, SC II [616-633] 46c-d; ACT III, SC I [44-54] 47b-c; SC III [36-72] 53d-54a; SC IV [88 96] 55c; ACT IV, SC V [16-20] 59d / *King Lear*, ACT III, SC IV [23-36] 264c / *Macbeth*, ACT II, SC II 291a-292a; ACT III, SC II 296b-297a; SC IV [60-144] 298b-299b; ACT V, SC I 306b-307a; SC III [37-46] 308a / *Cymbeline*, ACT V, SC I [1]-SC II [10] 479a-c; SC III [63-83] 480c-d

29 CERVANTES: *Don Quixote*, PART I, 123a-b

30 BACON: *Advancement of Learning*, 96a-c

31 SPINOZA: *Ethics*, PART III, PROP 51, SCHOL 411d-412a; PART IV, PROP 53-54 440b-c

32 MILTON: *Comus* [170-229] 37a-38b / *Paradise Lost*, BK III [167-216] 139a-140a / *Samson Agonistes* [590-605] 352b

33 PASCAL: *Provincial Letters*, 19b-26b; 72a-b; 73b-80b

35 LOCKE: *Human Understanding*, BK I, CH II, SECT 9 106a-d

36 STERNE: *Tristram Shandy*, 255a-268a esp 261b-262a

37 FIELDING: *Tom Jones*, 57c-58a; 379c-380c; 398d-399a

40 GIBBON: *Decline and Fall*, 54d-55a

42 KANT: *Practical Reason*, 306d-307d; 333a-334a / *Pref. Metaphysical Elements of Ethics*, 374c-379d esp 375b-d, 379b-d / *Intro. Metaphysic of Morals*, 389a-b / *Judgement*, 593a-d

43 MILL: *Utilitarianism*, 458b-459b

46 HEGEL: *Philosophy of History*, PART III, 304c-d; PART IV, 354a-c

47 GOETHE: *Faust*, PART I [3544-3619] 86b-88a; [3776-3834] 92a-93b; 108b-109b; [4405-4612] 110a-114b

49 DARWIN: *Descent of Man*, 312d-314c esp 313a-b

51 TOLSTOY: *War and Peace*, BK III, 115d-116a; BK V, 216b-d; BK VI, 248b-250a; 251a-b; BK VII, 275a; 301b-d; BK VIII, 320b-323a; BK IX, 370c-372a; 373b-374d; BK X, 406c-410c; 416c-417b; 465c-467a; BK XI, 505a-511b passim, esp 509b-511b; BK XII, 549d-551c; BK XIV, 598d-599a; 606b-607a; EPILOGUE II, 689b

52 DOSTOEVSKY: *Brothers Karamazov*, BK II, 24a-c; BK IV, 95b-109a,c passim; BK VI, 157b-164a; BK VIII, 217c-218c; BK XI, 317b-320a; 337a-346a; EPILOGUE, 402a-408a

54 FREUD: *Interpretation of Dreams*, 247d-248b / *General Introduction*, 582a-b / *Group Psychology*, 690c-691c / *Ego and Id*, 703b-c; 706b-707c; 712a-715c / *War and Death*, 763b-c / *Civilization and Its Discontents*, 792a-799a esp 792b-794a, 795c-796b, 797c-798c / *New Introductory Lectures*, 831b; 852a-d

6. Guilt and the punishment of sin

6a. Man's freedom in relation to responsibility and guilt for sin: divine predestination or election

OLD TESTAMENT: *Genesis*, 3 / *Deuteronomy*, 30:15-20 / *Joshua*, 11:19-20—(*D*) *Josue*, 11:19-20 / *Psalms*, 81:11-12—(*D*) *Psalms*, 80:12-13 / *Isaiah*, 6:8-10; 63:17—(*D*) *Isaias*, 6:8-10; 63:17 / *Jeremiah*, 46:27-28—(*D*) *Jeremias*, 46:27-28

APOCRYPHA: *Wisdom of Solomon*, 19:4—(*D*) OT, *Book of Wisdom*, 19:4 / *Ecclesiasticus*, 15:11-20—(*D*) OT, *Ecclesiasticus*, 15:11-21

NEW TESTAMENT: *Matthew*, 13:13-15 / *Luke*, 22:3-4 / *John*, 6:64-66; 10:26-29; 12:37-40; 13:18-27 / *Acts*, 4:27-28; 7:51; 28:25-27 / *Romans*, 1:16-32; 9:9-24; 11 passim / *Ephesians*, 1:3-12 / *II Thessalonians*, 2:11-14—(*D*) *II Thessalonians*, 2:12-14 / *I Peter*, 1:1-5

4 HOMER: *Iliad*, BK VI [342-358] 43c-d

5 AESCHYLUS: *Choephoroe* 70a-80d esp [269-314] 72d-73b, [885-1076] 78d-80d / *Eumenides* 81a-91d

5 SOPHOCLES: *Oedipus the King* 99a-113a,c / *Oedipus at Colonus* 114a-130a,c esp [258-291] 116c-d, [939-1015] 123a-d

5 EURIPIDES: *Electra* 327a-339a,c esp [1168-1359] 337d-339a,c / *Orestes* 394a-410d esp [478-629] 398d-400b

12 AURELIUS: *Meditations*, BK II, SECT 11 258a-b

18 AUGUSTINE: *City of God*, BK V, CH 9 10 213b-216c; BK XII, CH 3 343d-344b; CH 8 346d-347b; BK XIV, CH 11-12 385d-387b; CH 15 388d-390a; BK XV, CH 1 397b,d-398c; BK XXII, CH 1 586b,d-587b; CH 30, 617c-618a

19 AQUINAS: *Summa Theologica*, PART I, Q 17, A 1, ANS 100d-101d; Q 19, A 9 116d-117d; Q 22, A 2, REP 4-5 128d-130d; Q 23, A 3 134b-135a; Q 24, A 3 142d-143c; Q 62, A 3, REP 2 319c-320b; A 8, REP 3 323c-324a; Q 113, A 1, REP 3 576a-d; PART I-II, Q 6, A 4, REP 3 647b-648a; Q 24, A 3, REP 3 728c-729c; Q 42, A 3, ANS 802d-803c

20 AQUINAS: *Summa Theologica*, PART I-II, Q 73, A 6 123d-124c; A 10 128a-d; Q 74 128d-137c; Q 75, AA 1-2 137d-139b; Q 76, AA 3-4 142d-144d; Q 77, AA 6-7 150a-151c; QQ 78-80 152b-162d; PART II-II, Q 186, A 10 662b-663b

21 DANTE: *Divine Comedy*, PURGATORY, XVI [52-114] 77b-78a; XVIII [1-75] 79d-80c; PARADISE, I [94-142] 107b-d; IV [64-114] 111b-d; XIX [22-111] 135b-136a; XX [31-148] 137a-138b

25 MONTAIGNE: *Essays*, 250a

30 BACON: *Advancement of Learning*, 17d-18a

31 DESCARTES: *Meditations*, IV 89a-93a passim, esp 91b
32 MILTON: *Paradise Lost* 93a-333a esp BK III [80–134] 137a-138a, [167–216] 139a-140a, [274–302] 141b-142a, BK IV [505–535] 163b-164a, BK V [224–245] 180a-b, [506–543] 186a-187a, BK X [615–640] 287b-288b / *Samson Agonistes* [23–67] 340a-341a; [373–419] 347b-348b / *Areopagitica*, 394b-395b
33 PASCAL: *Provincial Letters*, 19b-26b; 155b-157b; 158b-159a
35 HUME: *Human Understanding*, SECT VIII, DIV 78-81 485c-487a
42 KANT: *Judgement*, 594d [fn 1]
47 GOETHE: *Faust*, PROLOGUE [296–335] 8a-9a
51 TOLSTOY: *War and Peace*, EPILOGUE II, 689b
52 DOSTOEVSKY: *Brothers Karamazov*, BK V, 121a-135a
54 FREUD: *Interpretation of Dreams*, 246c-247d / *General Introduction*, 581d-582b

6b. Collective responsibility for sin: the sins of the fathers

OLD TESTAMENT: *Genesis*, 3:16-19 / *Exodus*, 20:5-6; 34:6-7 / *Numbers*, 14:18 / *Deuteronomy*, 5:9-10; 24:16 / *II Samuel*, 21:1-9—(*D*) *II Kings*, 21:1-9 / *II Kings*, 14:1-6—(*D*) *IV Kings*, 14:1-6 / *II Chronicles*, 25:4—(*D*) *II Paralipomenon*, 25:4 / *Psalms*, 109:1-16—(*D*) *Psalms*, 108:1-16 / *Jeremiah*, 31:29-30—(*D*) *Jeremias*, 31:29-30 / *Ezekiel*, 18—(*D*) *Ezechiel*, 18
APOCRYPHA: *Wisdom of Solomon*, 3:11-13—(*D*) OT, *Book of Wisdom*, 3:11-13 / *Ecclesiasticus*, 41:5 7—(*D*) OT, *Ecclesiasticus*, 41:8-10 / *Baruch*, 3:7-8—(*D*) OT, *Baruch*, 3:7 8
NEW TESTAMENT: *Romans*, 5:12-19 / *I Corinthians*, 15:21-22
5 AESCHYLUS: *Seven Against Thebes* 27a-39a,c esp [568-614] 33b-d, [653-956] 34b-37d / *Agamemnon* 52a-69d / *Choephoroe* 70a-80d / *Eumenides* 81a-91d
5 SOPHOCLES: *Oedipus the King* 99a-113a,c / *Oedipus at Colonus* 114a-130a,c / *Antigone* 131a-142d esp [582–626] 136b-c / *Electra* 156a-169a,c
5 EURIPIDES: *Phoenician Maidens* 378a-393d / *Orestes* 394a-410d
6 HERODOTUS: *History*, BK VI, 203a-b; BK VII, 237d-239a; 246b-c; 246d-247a
6 THUCYDIDES: *Peloponnesian War*, BK I, 380a-d
18 AUGUSTINE: *City of God*, BK XII, CH 21-22 357a-c; BK XIII, CH 3 361a-c; CH 23, 372c-373c; BK XIV, CH 1 376b,d-377a; CH 20, 392b; BK XVI, CH 27 439a-d; BK XXI, CH 12 571a-c
20 AQUINAS: *Summa Theologica*, PART I-II, Q 81 162d-167d; Q 87, A 8 191d-192d
26 SHAKESPEARE: *Henry V*, ACT IV, SC I [136–202] 553a-c; [309–322] 554c-d
32 MILTON: *Paradise Lost*, BK III [274–302] 141b-142a
37 FIELDING: *Tom Jones*, 20b-d
51 TOLSTOY: *War and Peace*, BK XIV, 606b-607a
52 DOSTOEVSKY: *Brothers Karamazov*, BK IV, 83c-84a; BK V, 122b-d; BK VI, 149d-150a; 167b-169c; BK XI, 313c-314d

6c. The temporal punishment of sin: divine scourges

OLD TESTAMENT: *Genesis*, 3:9-19; 4:8-15; 6:1-7,11-13; 18:20-19:29 / *Exodus*, 7-12; 14; 22:18-20,22-24; 32 / *Leviticus*, 10:1-3; 18:24-30; 20; 24:10-23; 26 / *Numbers*, 12; 14; 15:32-36; 16; 21:5-9; 25 / *Deuteronomy*, 4:20-31; 11:16-17; 28:15-68; 29:16-29 / *Joshua*, 5:6; 7—(*D*) *Josue*, 5:6; 7 / *Judges*, 9 / *I Samuel*, 3:11-15; 5; 15; 28:3-20—(*D*) *I Kings*, 3:11-15; 5; 15; 28:3-20 / *II Samuel*, 6:6-8; 12; 21:1; 24—(*D*) *II Kings*, 6:6-8; 12; 21:1; 24 / *I Kings*, 8:31-53; 9:6 9; 11; 13; 14:7-16; 16.1-13; 21:18-24—(*D*) *III Kings*, 8:31-53; 9:6-9; 11; 13; 14:7-16; 16:1-13; 21:18-24 / *II Kings*, 2:23-24; 5:20-27; 9:1-10:11; 17:6-18:12—(*D*) *IV Kings*, 2:23-24; 5:20-27; 9:1-10:11; 17:6 18:12 / *I Chronicles*, 10; 13:9-11; 21—(*D*) *I Paralipomenon*, 10; 13:9-11; 21 / *II Chronicles*, 6:24-42; 12; 21:12-20; 26:16 21; 36—(*D*) *II Paralipomenon*, 6:24-42; 12; 21:12-20; 26:16-21; 36 / *Job* passim, esp 4-5, 8, 11, 15:20-35, 18:1-21, 20:1-29, 22:1-30, 24:1-25, 27:1-23, 32:1-36:33 / *Psalms*, 11; 21; 37; 39:10-11; 89:28-33; 94—(*D*) *Psalms*, 10; 20; 36; 38:11-12; 88:29-34; 93 / *Proverbs*, 1:20-33; 2:10-22; 3:33-35; 5:3-14,21-23; 10-30 passim / *Ecclesiastes*, 2:26; 8:11-13 / *Isaiah* passim, esp 1, 2:5-3:26, 5:1-30, 9:13-10:27, 13:1-24:23, 28:1-32:20, 33:7-14, 34:1-17, 40:1-2, 42:13-25, 43:22-28, 47:1-15, 51:17-23, 63:1-6, 65:1-66:24—(*D*) *Isaias* passim, esp 1, 2:5-3:26, 5:1-30, 9:13-10:27, 13:1-24:23, 28:1-32:20, 33:7-14, 34:1-17, 40:1-2, 42:13-25, 43:22-28, 47:1-15, 51:17-23, 63:1-6, 65:1-66:24 / *Jeremiah* passim, esp 1:11-16, 4:1-9:26, 11:1-23, 13:9-14:12, 15:1-9, 16:1-21, 17:27-19:13, 21:1-29:32, 34:1-22, 44:1-30, 46:1-52:34—(*D*) *Jeremias* passim, esp 1:11-16, 4:1-9:26, 11:1-23, 13:9-14:12, 15:1-9, 16:1-21, 17:27-19:13, 21:1-29:32, 34:1-22, 44:1-30, 46:1-52:34 / *Lamentations* passim, esp 1:18-22, 3:42, 4:11-14 / *Ezekiel*, 3-39 passim—(*D*) *Ezechiel*, 3-39 passim / *Daniel*, 4; 5:17-30; 9:3-20 / *Hosea* passim—(*D*) *Osee* passim / *Joel* passim / *Amos* passim / *Obadiah*—(*D*) *Abdias* / *Jonah*, 3—(*D*) *Jonas*, 3 / *Micah* passim—(*D*) *Micheas* passim / *Nahum* passim / *Habakkuk* passim—(*D*) *Habacuc* passim / *Zephaniah* passim—(*D*) *Sophonias* passim / *Zechariah*, 9:3-6; 11:1-9—(*D*) *Zacharias*, 9:3-6; 11:1-9 / *Malachi*, 2; 4—(*D*) *Malachias*, 2; 4
APOCRYPHA: *Tobit*, 3:1-6—(*D*) OT, *Tobias*, 3:1-6 / *Judith*, 5:17-18; 8:18-25; 9; 11:9-19—(*D*) OT, *Judith*, 5:21-22; 8:18-25; 9; 11:9-19 / *Wisdom of Solomon*, 1:7-8,12-16; 2:24; 3:9-19; 5:17-6:9; 10:1-8; 11:9-20; 12; 14:7-31;

(6. Guilt and the punishment of sin. 6c. The temporal punishment of sin: divine scourges.)

15:18-16:19; 17; 18:10-19:22—(*D*) OT, *Book of Wisdom*, 1:7-8,12-16; 2:24; 3:9-19; 5:17-6:9; 10:1-8; 11:9-20; 12; 14:7-31; 15:18-16:19; 17; 18:10-19:20 / *Ecclesiasticus*, 5:2-7; 10:13-16; 11:26; 16:6-13; 23:18-26; 27:25-28:6; 39:27-30—(*D*) OT, *Ecclesiasticus*, 5:2-7; 10:13-16; 11:28; 16:6-13; 23:25-36; 27:25-28:6; 39:32-36 / *Baruch*, 1-5 passim—(*D*) OT, *Baruch*, 1-5 passim / *I Maccabees*, 2:62-63; 6:1-16—(*D*) OT, *I Machabees*, 2:62-63; 6:1-16 / *II Maccabees*, 6:12-17; 7:31-38; 9; 10:4; 12:40-42—(*D*) OT, *II Machabees*, 6:12-17; 7:31-38; 9; 10:4; 12:40-42

NEW TESTAMENT: *Acts*, 12:20-23; 13:4-12 / *I Corinthians*, 11:32 / *Revelation*, 8-9; 11; 16-18—(*D*) *Apocalypse*, 8-9; 11; 16-18

5 AESCHYLUS: *Persians* 15a-26d / *Seven Against Thebes* 27a-39a,c / *Prometheus Bound* 40a-51d / *Agamemnon* 52a-69d / *Choephoroe* 70a-80d / *Eumenides* 81a-91d

5 SOPHOCLES: *Oedipus the King* 99a-113a,c / *Oedipus at Colonus* 114a-130a,c / *Antigone* 131a-142d esp [582-626] 136b-c / *Ajax* 143a-155a,c

5 EURIPIDES: *Electra* 327a-339a,c / *Bacchantes* 340a-352a,c / *Orestes* 394a-410d

6 HERODOTUS: *History*, BK I, 4d; BK II, 70d-71a; BK III, 95c-d; 103b-d; BK IV, 159d; BK VI, 199c-d; 201b-c; 201d-202c; 203a-b; BK VII, 217c; 237d-239a; 246b-c; 246d-247a; BK VIII, 279d-280a; 283d

12 LUCRETIUS: *Nature of Things*, BK III [978-1023] 42d-43b; BK VI [379-422] 85b-d

14 PLUTARCH: *Camillus*, 107b-d

18 AUGUSTINE: *Confessions*, BK III, par 5 14b / *City of God*, BK XIX, CH 15 521a-c; BK XXI, CH 13-14, 571d-572c / *Christian Doctrine*, BK II, CH 23 648a-c

20 AQUINAS: *Summa Theologica*, PART I-II, Q 79, AA 3-4 158a-159c; Q 87, A 4 188b-d

21 DANTE: *Divine Comedy*, PURGATORY, III [103-145] 57a-c; V [85-129] 59d-60c; XX [34 96] 83c-84a; XXIII [85-111] 89a-b; XXXIII [34-78] 104c-105a; PARADISE, XVII [46-99] 132c-133a; XVIII [115-136] 134d 135a; XXI [121]-XXII [18] 139c-d; XXVII [1-66] 147b-148a; [121-148] 148c-d

22 CHAUCER: *Physician's Tale* [12,211-220] 370b-371a / *Pardoner's Tale* 374a-382b / *Monk's Tale* [14,149-684] 437a-447a

23 HOBBES: *Leviathan*, PART II, 160c-161a; 163d-164a

30 BACON: *New Atlantis*, 204d-205b

32 MILTON: *Paradise Lost*, BK XII [101-120] 321b / *Samson Agonistes* [667-709] 354a-355a; [1156-1177] 364b-365a; [1669-1707] 376a-b

33 PASCAL: *Provincial Letters*, 139a-140a

35 LOCKE: *Toleration*, 1a-2c; 5c-6a; 14a-15a

36 STERNE: *Tristram Shandy*, 282a-287b

37 FIELDING: *Tom Jones*, 20b-21a

38 MONTESQUIEU: *Spirit of Laws*, BK XII, 85d-86a

40 GIBBON: *Decline and Fall*, 180b; 188b-c; 198d-200a; 302d-303c; 452b-d

41 GIBBON: *Decline and Fall*, 93c-94c passim

44 BOSWELL: *Johnson*, 314c-315b

48 MELVILLE: *Moby Dick*, 30a-36b

51 TOLSTOY: *War and Peace*, BK XIV, 606b-607a

52 DOSTOEVSKY: *Brothers Karamazov*, BK II, 30b-32a

***6d.* The eternal punishment of sin: the everlasting perdition of the unrepentant in Hell**

OLD TESTAMENT: *Psalms*, 9:16-17—(*D*) *Psalms*, 9:17-18 / *Proverbs*, 7:6-27; 11:31 / *Isaiah*, 33:10-14; 66:24—(*D*) *Isaias*, 33:10-14; 66:24 / *Daniel*, 12:2

APOCRYPHA: *Judith*, 16:17—(*D*) OT, *Judith*, 16:20-21 / *Wisdom of Solomon*, 4:16-20; 5:1-14—(*D*) OT, *Book of Wisdom*, 4:16-20; 5:1-15 / *Ecclesiasticus*, 7:16-17; 12:6; 18:22,24; 21:9-10—(*D*) OT, *Ecclesiasticus*, 7:17-19; 12:4; 18:22,24; 21:10-11

NEW TESTAMENT: *Matthew*, 3:7-12; 5:22,29-30; 8:12; 10:14-15,28; 11:20-24; 13:41-42,49-50; 18:7-9; 25:31-46 esp 25:41, 25:46 / *Mark*, 3:29; 9:42-49; 16:16 / *Luke*, 12:5; 16:19-26 / *John*, 15:6 / *Romans*, 6:23; 7:5 / *I Corinthians*, 6:9-11; 7:9; 15:55-56 / *Galatians*, 6:8 / *II Thessalonians*, 1:7-9 / *Hebrews*, 10:26-31 / *James*, 5:1-6 / *I Peter*, 4:18 / *Jude*, 6-13 / *Revelation*, 2:20-23; 14:9-11; 19:17-20:15; 21:8—(*D*) *Apocalypse*, 2:20-23; 14:9-11; 19:17-20:15; 21:8

4 HOMER: *Odyssey*, BK XI [568-600] 248d-249a

5 ARISTOPHANES: *Frogs* [143-153] 565d-566a

12 LUCRETIUS: *Nature of Things*, BK III [978-1023] 42d-43b

18 AUGUSTINE: *City of God*, BK XIII, CH 2 360b-361a; CH 12 365d-366a; CH 14-15 366b-d; CH 23, 372b-d; BK XIV, CH 1 376b,d-377a; CH 15 388d-390a; BK XV, CH 1 397b,d-398c; BK XIX, CH 13 519a-520a; CH 28 529d-530a,c; BK XX, CH 15 543d-544b; BK XXI 560a-586a,c esp CH 1-3 560a-562a, CH 9-10 568d-570b, CH 13 571c-572a, CH 17 574a-b, CH 23 576c-577b

19 AQUINAS: *Summa Theologica*, PART I, Q 10, A 3, REP 2 42c-43b; Q 21, A 4, REP 1 126c-127c; Q 63, A 8, ANS 332c-333b

20 AQUINAS: *Summa Theologica*, PART I-II, Q 87, AA 3-5 187b-189c; PART III SUPPL, Q 70, A 3 897d-900d; Q 87, A 1, REP 4 997b-998c; QQ 97-99 1066a-1085a,c

21 DANTE: *Divine Comedy*, HELL 1a-52d esp III 4a-5b, V [1-51] 7a-c, VI [94-115] 9b-c, VII [100-130] 10c-d, XI 15a-16b, XIV [16-72] 19c-20b, XXVII [55-136] 40a-41b, XXVIII [112-142] 42c-43a, XXXIII [91-150] 50c-51a; PARADISE, XV [10-12] 128c

22 CHAUCER: *Friar's Tale* 278a-284a / *Monk's Tale* [14,005-020] 434a-b / *Parson's Tale*, par 8

497b-498a; par 10 498b-502a; par 15 506a-b; par 75, 536a; par 99 548b; par 101 549a
23 HOBBES: *Leviathan*, PART III, 193d-195d; PART IV, 250c-251b; 253b-255b
24 RABELAIS: *Gargantua and Pantagruel*, BK II, 119b-122a
26 SHAKESPEARE: *Richard III*, ACT I, SC IV [42-63] 115a-b
27 SHAKESPEARE: *Macbeth*, ACT II, SC III [1-23] 292b
31 DESCARTES: *Meditations*, 69b
32 MILTON: *Paradise Lost*, BK I [1]-BK II [628] 93b-125a esp BK II [85-92] 113a; BK IV [1-113] 152b-155a
33 PASCAL: *Provincial Letters*, 82a
35 LOCKE: *Human Understanding*, BK II, CH XXI, SECT 62 194c-d; SECT 72 198a-c; CH XXVIII, SECT 8 230a
40 GIBBON: *Decline and Fall*, 188d-189a
41 GIBBON: *Decline and Fall*, 149c-150c; 234a-b
44 BOSWELL: *Johnson*, 363a-b
48 MELVILLE: *Moby Dick*, 3b-4a
52 DOSTOEVSKY: *Brothers Karamazov*, BK I, 10b-11a; BK VI, 169c-170b; BK XI, 337a-346a passim

6e. The purifying punishments of Purgatory

OLD TESTAMENT: *Isaiah*, 4:4—(*D*) *Isaias*, 4:4 / *Zechariah*, 13:8-9—(*D*) *Zacharias*, 13:8-9 / *Malachi*, 3:1-6—(*D*) *Malachias*, 3:1-6
APOCRYPHA: *II Maccabees*, 12:43-46—(*D*) OT, *II Machabees*, 12:43-46
NEW TESTAMENT: *Matthew*, 3:11-12; 12:32 / *Luke*, 3:16-17 / *I Corinthians*, 3:10-15
13 VIRGIL: *Aeneid*, BK VI [724-751] 230b-231a
18 AUGUSTINE: *City of God*, BK XX, CH 25-26 554c-556b; BK XXI, CH 13 571c-572a
20 AQUINAS: *Summa Theologica*, PART III SUPPL, Q 69, A 2, ANS and REP 2 886c-887d; A 7, ANS and REP 6 891d-893c
21 DANTE: *Divine Comedy*, PURGATORY 53a-105d esp I-II 53a-55d, III [103-145] 57a-c, V [85-129] 59d-60c, IX 65d-67b, X [97]-XI [90] 68b-69c, XIII 71d-73c, XVII [76-139] 79b-d, XVIII [76-145] 80d-81b, XXI [34-75] 85b-d, XXV [109]-XXVI [90] 92c-93d, XXX-XXXI 99b-102b
23 HOBBES: *Leviathan*, PART III, 244b-c; PART IV, 250c-251c; 255b-258b
27 SHAKESPEARE: *Hamlet*, ACT I, SC V [9-22] 37a
41 GIBBON: *Decline and Fall*, 234b; 520b-c
44 BOSWELL: *Johnson*, 173d
52 DOSTOEVSKY: *Brothers Karamazov*, BK XI, 341d-342c

7. Grace and good works in relation to salvation from sin

OLD TESTAMENT: *Exodus*, 34:7-9 / *Numbers*, 14:18-20 / *I Kings*, 8:33-39,46-50—(*D*) *III Kings*, 8:33-39,46-50 / *II Chronicles*, 6:20-30,36-39; 7:14—(*D*) *II Paralipomenon*, 6:20-30,36-39; 7:14 / *Psalms*, 32:1-5; 51; 78:38; 85:2; 86:5; 99:8; 103:1-13; 130—(*D*) *Psalms*, 31:1-5; 50; 77:38; 84:3; 85:5; 98:8; 102:1-13; 129 / *Isaiah*, 44:22; 55:7—(*D*) *Isaias*, 44:22; 55:7 / *Jeremiah*, 3:12; 31:34; 33:8; 36:3; 50:20—(*D*) *Jeremias*, 3:12; 31:34; 33:8; 36:3; 50:20 / *Daniel*, 9:9 / *Hosea*, 14:1-7—(*D*) *Osee*, 14:2-8 / *Micah*, 7:18-20—(*D*) *Micheas*, 7:18-20
APOCRYPHA: *Wisdom of Solomon*, 11:23; 12:19—(*D*) OT, *Book of Wisdom*, 11:24; 12:19 / *Ecclesiasticus*, 2:11; 16:11-14; 18:11-14; 28:2-5—(*D*) OT, *Ecclesiasticus*, 2:13; 16:11-15; 18:9-14; 28:2-5
NEW TESTAMENT: *Matthew*, 5:7; 6:12,14-15; 9:2-6; 12:31-32; 18:21-35 / *Mark*, 2:5-10; 3:28; 4:12; 11:25-26 / *Luke*, 1:77-78; 5:20-24; 6:36-37; 7:37-50; 11:4; 12:10; 18:9-14; 23:34 / *John*, 3:16-17 / *Acts*, 5:31; 15:1-11 esp 15:11; 26:18 / *Romans*, 3-8; 9:15-18; 9:30-10:21; 11:5-32 / *II Corinthians*, 5:15-6:2 / *Galatians*, 2:16-21; 3:13-14 / *Ephesians*, 1:1-10; 2:4-9; 4:32 / *Philippians*, 2:12-13 / *Colossians*, 1:13-14; 2:13; 3:13 / *II Timothy*, 1:8-10 / *Titus*, 2:11-14; 3:3-8 / *Hebrews*, 4:16; 8:1-10:22 / *James*, 1:22-27; 2:14-26; 5:15,20 / *I Peter*, 1:3,13; 2:10; 4:8 / *II Peter*, 1:3-11 / *I John*, 1:9; 2:12; 3:1-10
18 AUGUSTINE: *Confessions*, BK II, par 15 12b-c / *City of God*, BK XIV, CH 1 376b,d-377a; CH 15, 388d-389b; CH 20 392a-b; CH 27 396c-397a; BK XIX, CH 4 511a-513c; BK XXI, CH 12 571a-c; CH 16 573b-574a; BK XXII, CH 30, 617c-618c
19 AQUINAS: *Summa Theologica*, PART I, Q 62, AA 2-4 318d-321b
20 AQUINAS: *Summa Theologica*, PART I-II, Q 63, A 2, REP 2 64b-65a; Q 109, AA 7-10 344a-347d; Q 111, A 2 352d-353d
21 DANTE: *Divine Comedy*, HELL, I-II 1a-4a; IV [13-66] 5c-6a; VIII [65]-IX [103] 11c-13b; XXIV [1-60] 34d-35b; PURGATORY 53a-105d esp I 53a-54c, IV [25-51] 57d-58a, [85-96] 58b-c, VII [37-60] 62d-63a, VIII [1-108] 64a-65b, IX 65d-67b, XI [1-36] 68d-69a, XXX [85-145] 100b-d; PARADISE, XXVIII [94-114] 149d-150a; XXXII [37-84] 155a-c
22 CHAUCER: *Troilus and Cressida*, BK I, STANZA 144 19b-20a / *Second Nun's Tale* [15,787-821] 467a-b / *Parson's Tale* 495a-550a esp par 13 504b-505a, par 56, 527b-528a / *L'Envoi* 550a-b
26 SHAKESPEARE: *Henry V*, ACT IV, SC I [309-322] 554c-d
32 MILTON: *Sonnets*, XIV 66a / *Paradise Lost*, BK II [1028-1033] 133b; BK III [56-415] 136b-144b esp [130-134] 138a, [227-238] 140b; BK X [1-84] 274b-276a; [209-223] 279a; [1046-1104] 297a-298b; BK XI [1-21] 299a-b; [251-262] 304b-305a; BK XII [411-551] 328a-331a esp [421-427] 328b, [543-551] 331a; [574-605] 331b-332a
33 PASCAL: *Provincial Letters*, 1a-13a; 15a-b; 19b-26b; 29b-34b; 65a-b; 78b-80b; 155b-157b; 158b-159a

(7. *Grace and good works in relation to salvation from sin.*)

37 FIELDING: *Tom Jones*, 38d
41 GIBBON: *Decline and Fall*, 233d-234b; 334b-c
44 BOSWELL: *Johnson*, 295b
46 HEGEL: *Philosophy of History*, PART IV, 332d-333a; 349c-d; 354a-c; 362a
47 GOETHE: *Faust*, PART II [11,934-941] 290b
52 DOSTOEVSKY: *Brothers Karamazov*, BK VI, 164a-169c; BK VII, 180a-191 c
53 JAMES: *Psychology*, 200b

CROSS-REFERENCES

For: The meaning of sin, and for discussions bearing on the difference of sin from crime and vice, *see* LAW 3a-3b, 6e-6e(3); PUNISHMENT 3b, 5b; RELIGION 2; VIRTUE AND VICE 1, 8a-8b.

Discussions relevant to the doctrine of original sin, *see* ANGEL 5a; GOOD AND EVIL 3f; MAN 9b-9b(2); VIRTUE AND VICE 8a; WILL 7e(1); and for the conditions of man's atonement for and remission from original sin, *see* GOD 9c, 9e; RELIGION 2c.

The causes and consequences of actual or personal sin, *see* GOOD AND EVIL 3f; VIRTUE AND VICE 8b; WILL 8b(1).

The conditions of man's salvation from sin, and the issue concerning grace and good works, *see* GOD 7d; LIBERTY 5c; NATURE 6b; PUNISHMENT 5c; VIRTUE AND VICE 8b.

The nature of sanctity and heroic virtue, *see* PLEASURE AND PAIN 7b; RELIGION 3d; TEMPERANCE 6a; VIRTUE AND VICE 8f-8g.

Other considerations of man's freedom and responsibility for sin in relation to divine predestination, *see* FATE 4; GOD 7f; LIBERTY 5a-5b; PUNISHMENT 2a; WILL 5b(4), 7e(2).

Other discussions of the divine punishment of sin, both temporal and eternal, *see* ETERNITY 4d; GOD 5i; HAPPINESS 7c(3); IMMORTALITY 5d-5e; PUNISHMENT 2, 5d-5e(2); VIRTUE AND VICE 8c.

Treatments of the sense of sin in relation to duty, honor, conscience, and abnormal feelings of guilt, *see* DUTY 4-4b; HONOR 2a; PUNISHMENT 5c, 6.

ADDITIONAL READINGS

Listed below are works not included in *Great Books of the Western World*, but relevant to the idea and topics with which this chapter deals. These works are divided into two groups:

I. Works by authors represented in this collection.
II. Works by authors not represented in this collection.

For the date, place, and other facts concerning the publication of the works cited, consult the Bibliography of Additional Readings which follows the last chapter of *The Great Ideas.*

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AUGUSTINE. *On Free Will*, BK III, CH 14
——. *On Baptism, Against the Donatists*
——. *Reply to Faustus*, BK XXII (27)
——. *On the Merits and Remissions of Sins*
——. *On the Grace of Christ and on Original Sin*
——. *Against Two Letters of the Pelagians*, BK IV, CH 7
——. *Of Marriage and Concupiscence*, BK II (XXIV)
AQUINAS. *Summa Contra Gentiles*, BK III, CH 139-162; BK IV, CH 50-52
——. *Quaestiones Disputatae, De Veritate*, Q 17; *De Malo*, QQ 2-5, 7-15
——. *Summa Theologica*, PART II-II, QQ 161-165
F. BACON. "Of Envy," in *Essays*
HOBBES. *Philosophical Rudiments Concerning Government and Society*, CH 14
——. *The Elements of Law, Natural and Politic*, PART I, CH 7
SPINOZA. *Correspondence*, XIX, XXI
W. JAMES. *The Varieties of Religious Experience*, LECT VI-VII
FREUD. *Totem and Taboo*
——. *The Future of an Illusion*

II.

Pirke Aboth (*Sayings of the Fathers*), CH 4 (5)
BENEDICT OF NURSIA. *The Rule*
GREGORY THE GREAT. *Morals*, BK XXXI
SAADIA GAON. *The Book of Beliefs and Opinions*, TREATISE IV-V

ANSELM OF CANTERBURY. *Cur Deus Homo?*
——. *De Conceptu Virginali et Originali Peccato*
ABAILARD. *Ethics* (*Scito Teipsum*)
MAIMONIDES. *The Guide for the Perplexed*, PART III, CH 40–41
FRANCIS OF ASSISI. *The Rules*
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ALBO. *The Book of Principles* (*Sefer ha-Ikkarim*), BK IV, CH 5–6
THOMAS À KEMPIS. *The Imitation of Christ*, BK I
IGNATIUS OF LOYOLA. *Spiritual Exercises*
LUTHER. *A Treatise on Christian Liberty*
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——. *Of Holy Dying*
RACINE. *Phèdre*
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LAW. *A Serious Call to a Devout and Holy Life*
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——. *Perelandra*

Chapter 87: SLAVERY

INTRODUCTION

MORALISTS and political philosophers who appear to be in substantial agreement on the principles of justice differ remarkably from one another on whether slavery is just. The sharpness of this disagreement is made all the more remarkable by the almost unanimous condemnation of slavery—in two senses of that term.

As appears in the chapter on TYRANNY, the condition of those who live under tyrannical rule is generally conceived as a kind of slavery, involving not only the loss of political freedom but also the suffering of other abuses or injuries. With the possible exception of Hobbes, who says that tyranny is merely monarchy "misliked," none of the great authors from Plato and Aristotle to Rousseau, Hegel, and Mill, writes of tyranny except as a perversion of government—unjust, lawless, or illegitimate. The evil of tyranny for them lies in the enslavement of men who deserve to be free, who should govern themselves or at least should be governed for their own good, not exploited by a ruler who uses them for his own private interests.

Some writers, like Montesquieu, who tend to identify despotism and tyranny see little difference between subjection and slavery, regarding both alike as degradations. Yet Montesquieu—and with him Aristotle—also thinks that for certain races of mankind subjection or slavery may be justified. Mill later makes the comparable point that for a people at a certain stage of political development, subjection may be necessary for a time in preparation for citizenship. The two basic distinctions in political status which are here implied —between slavery and subjection and between subjection and citizenship—are developed more fully in the chapter on CITIZEN. The first of these distinctions relates to the difference in the condition of men under tyranny and under benevolent despotism; the second, to the difference in the condition of men under absolute and under constitutional government.

The other sense in which the word "slavery" seems always to be used with the connotation of evil is the sense in which Augustine speaks of man's slavery to lust as a consequence of original sin; or in which Spinoza writes of human bondage—the condition of men enslaved by the tyranny of their passions—as compared with human freedom under the rule of reason. This meaning of slavery is discussed in other chapters, such as EMOTION and LIBERTY.

The slavery which results from the tyranny of the passions is a disorder from which any man may suffer; it stems from a weakness in the human nature which is common to all. Similarly, the slavery of a whole people under tyrannical rule is a perversion of government for all the members of the community, not just for some. But whenever slavery is defended, it is justified only for *some men* within a community, not for all; or if for a whole people, not for all mankind, but only for *certain peoples* under certain conditions. With regard to slavery, the basic issue of justice is, therefore, whether *some* men should be slaves or *all* should be free, not whether *all* should be slaves or *all* free.

THE DISTINCTION BETWEEN the slavery of some men within a community and the enslavement of a whole people appears to be related to the distinction between economic and political enslavement. In the ancient meaning of the word "economic," the economic slave is the slave of the household or family. "A complete household," writes Aristotle, "consists of slaves and freemen." The elements of a family are

"master and slave, husband and wife, father and children."

That the distinction between slave and free man signifies economic rather than political status for Aristotle, and for the ancients generally, seems to be indicated by the fact that, under certain types of oligarchical constitution, free men are excluded from citizenship without thereby becoming slaves. But in all ancient republics, democratic as well as oligarchical, slaves are incligible for citizenship.

Though the relation of master and slave is essentially economic rather than political, such slavery has a political aspect in the sense that some men have no function in the state except to serve other men. Aristotle speaks of them as necessary to the state, but not, as are citizens, parts of it. "The necessary people," he says, "are either slaves who minister to the wants of individuals, or mechanics and laborers who are the servants of the community."

The mark of economic slavery seems to be the kind of work a man does and the conditions under which he labors, whereas political slavery seems to depend upon the kind of life a man leads and the conditions under which he lives in society. The economic slave serves a master by his work. The political slave lives under a tyrant. In Aristotle's view it is only the man who is economically free who has anything to lose from being enslaved by a tyrant. "No free man, if he can escape from it, will endure such government," he writes; but the barbarians, who "are by nature slaves," do not rebel against tyranny. Where some men are by nature free, there is also a natural distinction between women and slaves, "but among barbarians," according to Aristotle, "no distinction is made between women and slaves, because there is no natural ruler among them: they are a community of slaves, male and female."

The difference between economic bondage—which can include what Marx calls the wage slavery of the proletariat, as well as chattel slavery and other forms of serfdom—and the political condition of those enslaved by a tyrant does not seem to affect the issue of justice. Those, like Hobbes and Locke, who think that the vanquished in war must pay for being allowed to live by submitting to slavery, do not seem concerned whether the servitude takes the form of private possession by an individual master or the subjugation of a whole people by the conquering state. Nor do those, like Aristotle and Montesquieu, who regard some men or some races as naturally servile, seem to offer reasons for political slavery different from those which they think justify economic servitude.

What does seem to affect the issue concerning the justice of slavery is the difference between the natural slave and the slave by force or law. This is the difference between the man who is born a slave (not merely born of slaves and into slavery) and the man who, born with a nature fit for freedom, is made a slave, either because his parents before him were slaves, because he is sold into slavery, or because, for one reason or another, he forfeits his birthright to freedom.

If no men are by nature slaves, then the only questions of justice concern the conditions which justify making slaves of free men. These may remain the only questions even if there are natural slaves, since it cannot be unjust to treat as slaves those who are by nature slaves, any more than it is unjust to treat animals as brutes.

In both cases some consideration may be given to how slaves or animals should be treated. "The right treatment of slaves," Plato declares in the *Laws*, "is to behave properly to them, and to do to them, if possible, even more justice than to those who are our equals." Justice also requires, according to Plato, that if a slave or an animal do any harm, the master shall pay for the injury.

WE HAVE ALREADY observed that, with regard to natural slavery, the main issue is one of fact. The fact in question concerns human equality and inequality. Within that equality of all men which rests upon their common possession of human nature, are some men by nature inferior to others in their use of reason or their capacity for leading the life of reason? Does such inferiority prevent them from directing their own lives or even their own work to the ends which are the natural fulfillment of man's powers? And if so, do not such men profit from being directed by their superiors, as well as from serving them and, through serving them,

participating in the greater good their betters are able to achieve?

These are the questions of fact which Aristotle seems to answer affirmatively as he develops his theory of natural slavery. If the facts are granted, then no issue of justice arises, for Aristotle can say that "the slave by nature and the master by nature have in reality the same interests." It is by the justice inherent in the relation of master and slave *when both are naturally so related* that Aristotle can criticize the injustice of all *conventional* forms of slavery. But the question of fact must be faced, as Aristotle himself is aware.

"Is there any one intended by nature to be a slave," he asks, "and for whom such a condition is expedient and right, or is all slavery a violation of nature?" Aristotle recognizes that "others affirm the rule of a master over slaves to be contrary to nature and that the distinction between slave and free man exists by law only, and not by nature, and being an interference with nature is therefore unjust." He himself questions the justice of making slaves of captives taken in war, for that may violate the natures of men of high rank who have had the misfortune to be captured or sold. But he thinks that the same kind of difference which exists between male and female—the male being by nature superior, the female inferior; the one ruling, the other submitting to rule—can be extended to all mankind.

"Where there is such a difference," Aristotle explains, "as that between soul and body, or between men and animals ... the lower sort are by nature slaves, and it is better for them as for all inferiors that they should be under the rule of a master. For he who can be, and therefore is, another's and he who participates in a rational principle enough to apprehend, but not to have, such a principle, is a slave by nature; whereas the lower animals cannot even apprehend a principle; they obey their instincts. And indeed the use made of slaves and of tame animals is not very different; for both with their bodies minister to the needs of life ... If men differed from one another in the mere forms of their bodies as much as the statues of the gods do from men, all would acknowledge that the inferior class should be slaves of the superior. And if this is true of the body, how much more just that a similar distinction should exist in the soul ... It is clear, then, that some are by nature free, and others slaves, and that for these latter slavery is both expedient and right."

According to the theory of natural slavery, it is as good for the slave to have a master as for the master to have a slave. This reciprocity of interest does not occur in legal or conventional slavery. In both types of slavery, the slave is a piece of property, a possession. Whether by nature or by institution, a slave does not own himself; he is another's man. "He may be called another's man," Aristotle says, "who, being a human being, is also a possession." Does this mean that the slave belongs wholly to the master, in all that he is and has? He would seem to belong to his master insofar as he is a *possession*; but not wholly—in all that he is and has—insofar as he is a *human being*. Aristotle does not introduce such a qualification where he says that "the slave is a part of the master, a living but separated part of his bodily frame"; yet he adds: "where the relation of master and slave is natural they are friends and have a comon interest, but where it rests merely on law and force, the reverse is true."

Aristotle considers the difference between the natural slave and other forms of personal property, whether domestic animals, beasts of burden, or the inanimate instruments used in the household for productive purposes. Do slaves, he asks, have any excellence "beyond and higher than merely instrumental and ministerial qualities" of the sort to be found in tools and animals? Do they have virtues, and if so, then "in what way will they differ from freemen?"

Aristotle answers by saying that "since they are men and share in the rational principle, it seems absurd to say that they have no virtue." But since the rational principle in them is weak and consists only in the ability to execute decisions—not to make them or to know the end for which they are made—the slave will have a capacity for only so much virtue as he requires; enough virtue, for example, to "prevent him from failing in his duty through cowardice or lack of self-control."

It is precisely because of his limited competence and virtue that the slave needs, and

profits by having, a master. Aristotle thinks that he is better off than the artisan out of bondage. "The slave shares in his master's life; the artisan is less closely connected with him, and only attains excellence in proportion as he becomes a slave. The meaner sort of mechanic has a special and separate slavery, and whereas the slave exists by nature, not so the shoemaker or other artisan."

The "separate slavery" of the artisan makes him more like an animal or an inanimate tool in the way he is used; for, according to Aristotle, he is an instrument of production, while the natural slave participates in his master's life by being an instrument not of production, but of action. The work the slave does enables the master to live well—to achieve the happiness of the political or contemplative life—and since "life is action, not production . . . the slave is a minister of action." If the slave had in his own nature the capacity for human happiness, he would not be by nature a slave, nor be limited to the good of serving another man's happiness.

"Slaves and brute animals cannot form a state," Aristotle says, because "the state exists for the sake, not of life, but the good life" and slaves "have no share in happiness or in a life of free choice. . . . No one assigns to a slave a share in happiness," he says in another place, "unless he assigns to him also a share in human life." At best, that share could come only from being a part of the master and contributing to the master's happiness. But though to this extent "the slave by nature and the master by nature have in reality the same interests," the rule under which the slave lives "is nevertheless exercised primarily with a view to the interest of the master."

ARISTOTLE'S DOCTRINE OF natural slavery is rejected by those who affirm the fundamental equality of all men in their common humanity and who, in addition, insist that their inequality as individuals in talent or capacity, should not affect their status or determine their treatment. On these grounds, Roman Stoics and Christian theologians seem to agree—and with them such modern thinkers as Rousseau, Kant, Hegel, and Mill—that all men are by nature born to be free. Freedom, writes Kant, belongs "to every man in virtue of his Humanity. There is, indeed, an innate Equality belonging to every man which consists in his right to be independent of being bound to others . . . in virtue of which he ought to be *his own master by Right.*" That "all persons are deemed to have a *right* to equality of treatment" seems to follow for Mill from the principle that "one person's happiness, supposed equal in degree (with the proper allowance made for kind), is counted for exactly as much as another's." The "equal claim of everybody to happiness" involves "an equal claim to all the means of happiness," among them freedom.

But though theologians like Augustine and Aquinas deny that slavery is instituted by nature, they do not seem to regard it as contrary to natural law or to the will of God. Something can be according to natural law in two ways, Aquinas says: "First, because nature inclines thereto. . . . Secondly, because nature does not require the contrary." Just as we can say, in the second sense, that nakedness is natural for man, "because nature did not give him clothes, but art invented them," so we can say that all men are by nature free because slavery was not instituted by nature, "but devised by human reason for the benefit of human life."

The institution of slavery, whereby one man belongs to another for his use, seems due to the fallen nature of man, as one of the penal consequences of original sin. If man had remained in a state of innocence, one man would have ruled another for the latter's good, but no man would have been the master of slaves to be used for the master's good. Since "it is a grievous matter to anyone to yield to another what ought to be one's own," it follows, says Aquinas, that "such dominion necessarily implies a pain inflicted on the subject." This painfulness of slavery in turn seems to imply a contradiction to Aristotle's view that slavery fits certain natures and is for their benefit.

"By nature, as God first created us," writes Augustine, "no one is the slave either of man or of sin." Both sorts of slavery are "introduced by sin and not by nature." Both are punishments for sin, though one seems to Augustine more grievous than the other. "It is a happier thing," he says, "to be the slave of a man than of a lust; for even this very lust of ruling . . .

lays waste men's hearts with the most ruthless dominion. Moreover, when men are subjected to one another in a peaceful order, the lowly position does as much good to the servant as the proud position does harm to the master."

Not sin, but climate, according to Montesquieu, is the cause of slavery and to some extent its excuse. Though he thinks that "the state of slavery is in its own nature bad . . . neither useful to the master nor to the slave," Montesquieu, like Hippocrates before him, regards the Asiatics as reduced to servility by the physical conditions of their life. "There reigns in Asia," he writes, "a servile spirit which they have never been able to shake off." Under Asiatic despotism, where whole peoples live in political servitude, domestic slavery is more tolerable than elsewhere. In those countries "where the excess of heat enervates the body and renders men so slothful that nothing but the fear of chastisement can oblige them to perform any laborious duty, slavery is . . . more reconcilable to reason."

Montesquieu seems to accept Aristotle's doctrine with some qualifications. "Aristotle endeavors to prove that there are natural slaves, but what he says is far from proving it. If there be any such, I believe they are those of whom I have been speaking." Slavery is both natural and unnatural. "As all men are born equal," Montesquieu declares, "slavery must be accounted unnatural, though in some countries it be founded on natural reason . . . Natural slavery, then, is to be limited to some particular parts of the world." But in arguing the right of Europeans "to make slaves of the negroes," he concludes with the equivocal remark that "it is impossible for us to suppose these creatures to be men, because, allowing them to be men, a suspicion would follow that we ourselves are not Christians."

Hegel's comment on the enslavement of African negroes by Europeans runs somewhat differently. "Bad as this may be," he writes, "their lot in their own land is even worse, since there a slavery quite as absolute exists." But though Hegel thinks that the negroes are naturally given to slavery, he regards "the 'natural condition' itself as one of absolute and thorough injustice." To remove this injustice, however, is not easy. "Man must be matured" for freedom, Hegel writes. "The gradual abolition of slavery is therefore wiser and more equitable than its sudden removal."

Mill also looks upon slavery as a stage in the rise of certain peoples from savagery to political life, and maintains that the transition to freedom must be gradually effected. "A slave properly so called," he says, "is a being who has not learnt to help himself. He is, no doubt, one step in advance of a savage. He has not the first lesson of political life still to acquire. He has learnt to obey. But what he obeys is only a direct command. It is the characteristic of *born* slaves to be incapable of conforming their conduct to a rule, or a law. . . . They have to be taught self-government, and this, in its initial stage, means the capacity to act on general instructions." Extenuations of the injustice of ruling men as slaves, such as those proposed by Hegel and Mill, are rejected by Rousseau.

The notion that some men are by nature slaves, whether in Asia or in Europe, seems to Rousseau to be an illusion due to the fact that those who are made slaves by force have had their natures debased to slavishness. Aristotle, he says, "took the effect for the cause. Nothing can be more certain than that every man born in slavery is born for slavery. Slaves lose everything in their chains, even the desire of escaping from them . . . If then there are slaves by nature, it is because there have been slaves against nature. Force made the first slaves, and their cowardice perpetuated the condition."

It is sophistry, he thinks, for philosophers to "attribute to man a natural propensity to servitude, because the slaves within their observation are seen to bear the yoke with patience; they fail to reflect that it is with liberty as with innocence and virtue; the value is known only to those who possess them, and the taste for them is forfeited when they are forfeited themselves."

THE ISSUE CONCERNING slavery as a social or legal institution does not seem to be resolved by the views men take of natural slavery. Aristotle, who holds that *only* natural slavery is justified, criticizes those who "affirm to be unjust and inexpedient in their own case what they are not ashamed of practising towards others; they demand just rule for themselves,"

he writes, "but where other men are concerned they care nothing about it. Such behavior is irrational, unless the one party is, and other is not, born to serve." This cannot be determined by conquest. Aristotle questions, therefore, the convention "by which whatever is taken in war is supposed to belong to the victors," or the principle that "because one man has the power of doing violence and is superior in brute strength, another shall be his slave and subject." Those who "assume that slavery in accordance with the custom of war is justified by law," are confronted by Aristotle with the question: "What if the cause of the war be unjust?"

Hobbes and Locke appear to take an opposite view. Men in a state of nature are free, though they can actually enjoy only as much freedom as they have power to secure. Yet the natural inequality in their powers does not establish a natural right on the part of the stronger to enslave the weaker. Hobbes makes the right of mastership or what he calls "despotical dominion" depend not merely upon victory in war, but upon a covenant into which the vanquished enter voluntarily, "when the vanquished, to avoid the present stroke of death, covenanteth . . . that so long as his life, and the liberty of his body, is allowed him, the victor shall have the use thereof at his pleasure." Only "after such covenant is made, the vanquished is a servant, and not before . . . It is not, therefore, the victory, that giveth the right of dominion over the vanquished, but his own covenant." That Hobbes means chattel slave when he says "servant," seems to be indicated by his remark that "the master of the servant is master also of all he hath, and may exact the use thereof; that is to say, of his goods, of his labour, of his servants, and of his children, as often as he shall think fit."

Locke disagrees with Hobbes that one man can give another the right to enslave him by contracting to become a slave in order to avoid death. "A man not having the power of his own life," he writes, "cannot by compact, or his own consent, enslave himself to anyone. . . . Nobody can give more power than he has himself; and he that cannot take away his own life, cannot give another power over it." As among the ancient Jews, men can sell themselves into temporary service to requite a debt. But this was a kind of drudgery, not slavery; "the person sold was not under an absolute, arbitrary, despotical power, for the master could not have the power to kill him at any time, whom at a certain time he was obliged to let go free out of his service." No Jew, Aquinas concurs, "could own a Jew as a slave absolutely, but only in a restricted sense, as a hireling for a time. And in this way the Law permitted that through stress of poverty a man might sell his son or daughter."

Absolute slavery, for Locke, "is nothing else but the state of war continued between a lawful conqueror and a captive." It is lawful, he thinks, to kill a violent aggressor, "for to that hazard does he justly expose himself whoever introduces a state of war, and is aggressor in it." But he who has forfeited his life necessarily forfeits his freedom. Slaves, then, are those "who, being captives taken in a just war, are by right of nature subjected to the absolute dominion and arbitrary power of their masters." In contrast to the limited servitude which a man can contract for wages, absolute slavery "is the effect only of forfeiture which the aggressor makes of his own life when he puts himself into the state of war with another."

Against Locke and Hobbes, as well as Aristotle, Rousseau denies that there is any justice in slavery—by nature, by covenant or compact, or by right of war. To think as Hobbes appears to, that "the child of a slave comes into the world as a slave," is, in Rousseau's opinion, to say that "a man shall come into the world not a man." Holding that slavery is "contrary to nature," Rousseau also holds that it "cannot be authorized by any right or law." A man cannot alienate his freedom by selling himself into slavery, for "to renounce liberty is to renounce being a man."

In Kant's language, "a contract by which the one party renounces his *whole* freedom for the advantage of the other, ceasing thereby to be a person and consequently having no duty even to observe a contract, is self-contradictory, and is therefore of itself null and void." Agreeing that such a contract is a nullity, Hegel holds that the "slave has an absolute right to free himself," but he adds that "if a man is a slave, his own will is responsible for his slavery. . . . Hence the wrong of slavery lies at the door not simply of enslavers or conquerors, but of the slaves and the conquered themselves."

As for Grotius and the others who "find in war another origin for the so-called right of slavery"—on the ground that "the victor having . . . the right of killing the vanquished, the latter can buy back his life at the price of his liberty"—Rousseau thinks their argument begs the question. "The right of conquest," he says, "has no foundation other than the right of the strongest. If war does not give the conqueror the right to massacre the conquered peoples, the right to enslave them cannot be based upon a right which does not exist."

Since Rousseau denies that victory gives the victors a right to kill those who have laid down their arms, he regards it unfair to make the captive "buy at the price of his liberty his life, over which the victor holds no right. . . . From whatever aspect we regard the question," he concludes, "the right of slavery is null and void, not only as being illegitimate, but also because it is absurd and meaningless. The words *slave* and *right* contradict each other and are mutually exclusive."

In modern as well as ancient times, in the European colonies in the New World if not in Europe itself, slave labor characterizes a certain type of economy and determines the mode of production, especially in agriculture and mining. The slave as chattel is bought and sold like other property. He may be a source of profit to his owner in exchange as well as in production. The traffic in slaves depends upon an original acquisition, either through the spoils of war or by the activity of slave traders who hunt men as if they were animals, to transport them in chains and sell them into slavery.

In the ancient world, individual slave owners emancipated their slaves, even as, under modern feudalism, a great landowner like Prince Andrew in *War and Peace* freed his serfs. Aristotle speaks of those in his own time who opposed the institution of slavery; and the Roman Stoics did a great deal to ameliorate the condition of the slave and to protect him legally against abuse. But there seems to have been no political party or active political movement among the ancients corresponding to the abolitionists and their struggle in the 18th and 19th centuries. Even then, however, the abolitionists were looked upon as a radical minority who had no respect for the rights of property in their overzealous sentimentality about the rights of men. Those who were willing to outlaw the African slave trade as outrageous were less outraged by the treatment of men as chattel, once they were possessed.

Madison, for example, referring to the prohibition affecting the importation of slaves into the United States, which the Constitution postponed until 1808, thinks it "a great point gained in favor of humanity, that a period of twenty years may terminate forever, within these States, a traffic which has so long and so loudly upbraided the barbarism of modern policy." But in another paper the writers of *The Federalist* present their version of the Southern argument defending the Constitution's apportionment of representation, "determined by adding to the whole number of free persons, including those bound to service for a term of years, and excluding Indians not taxed, three-fifths of all other persons." They do not object to the view of the negro slave as two-fifths property and three-fifths a person, confessing themselves reconciled to reasoning which, though "it may appear a little strained in some points," appeals to a principle they themselves approve, namely, that "government is instituted no less for the protection of property than of persons."

There are even those, in the 18th century, who defend the slave trade. Boswell reports an argument set forth by Dr. Johnson in favor of granting liberty to a negro, who claimed his freedom before a Scottish Court of Session. The sum of Dr. Johnson's argument, according to Boswell, came to this: "No man is by nature the property of another; the defendant is, therefore, by nature free. The rights of nature must be in some way forfeited before they can be justly taken away . . . and if no proof of such forfeiture can be given, we doubt not but the justice of the court will declare him free." Admitting that Johnson may have been right in the particular case at hand, Boswell protests his general attitude toward slavery and the slave trade.

"To abolish a status," Boswell writes, "which in all ages God has sanctioned, and man has continued, would not only be robbery to an innumerable class of our fellow-subjects; but it

would be extreme cruelty to the African savages, a portion of whom it saves from massacre, or intolerable bondage in their own country, and introduces into a much happier state of life, especially now when their passage to the West Indies and their treatment there is humanely regulated."

Issues of justice aside, economists like Smith and Marx question the productivity of slave labor. Improvements in machinery "are least of all to be expected," writes Smith, when the proprietors "employ slaves for their workmen. The experience of all ages and nations, I believe, demonstrates that the work done by slaves, though it appears to cost only their maintenance, is in the end the dearest of any. A person who can acquire no property, can have no interest but to eat as much, and to labor as little as possible." He explains the lack of mechanical progress in Greece and Rome by the fact that "slaves . . . are very seldom inventive; and all the most important improvements in machinery, or in the arrangement and distribution of work, which facilitate and abridge labor, have been the discoveries of free men."

Marx also judges "production by slave labor" to be "a costly process . . . The principle, universally applied in this method of production," is "to employ the rudest and heaviest implements and such as are difficult to damage owing to their sheer clumsiness. In the slave-states, bordering on the Gulf of Mexico, down to the date of the civil war, ploughs constructed on old Chinese models, which turned up the soil like a hog or a mole, instead of making furrows, were alone to be found."

But Marx does not limit his judgment of slavery to criteria of efficiency, nor does he limit his consideration of servitude to its more obvious forms of chattel slavery and feudal serfdom. For him, all use of labor by those who own the instruments of production involves exploitation; it differs only in the degree to which the owner derives a surplus value from the labor power he possesses, through property rights or wage payments.

According to Marx, "the essential difference between the various economic forms of society, between, for instance, a society based on slave labor and one based on wage labor, lies only in the mode in which this surplus-labor is in each case extracted from the actual producer, the laborer." As all the value produced by a slave, in excess of the cost of keeping him alive, profits his owner, so during "the period of surplus-labor, the usufruct of the labor-power creates a value for the capitalist that costs him no equivalent . . . In this sense it is that surplus-labor can be called unpaid labor"—whether it is the labor of chattel or wage slaves.

Because a laborer is forced to sell his labor-power in the open market in order to subsist, Marx regards his so-called "freedom" as a pious fiction. "The contract by which he sold to the capitalist his labor-power proved in black and white," Marx writes, "that he disposed of himself freely. The bargain concluded, it is discovered that he was no 'free-agent,' that the time for which he is free to sell his labor-power is the time for which he is forced to sell it."

Others take the view that there is a fundamental moral difference between chattel slaves and men who work for wages. Hobbes, for example, thinks that between slaves who "are bought and sold as beasts" and servants "to whose service the masters have no further right than is contained in the covenants made betwixt them," there is only this much in common—"that their labor is appointed them by another." In slightly varying terms, Aquinas, Locke, and Kant make a similar distinction between the free servant, or paid worker, and the slave. The point is summarized by Hegel as a difference between alienating to someone else "products of my particular physical and mental skill," and alienating "the whole of my time, as crystallized in my work." In the latter case, "I would be making into another's property the substance of my being."

Debating with Douglas, Lincoln insisted that political freedom was the difference between the white slaves of the North and the black slaves of the South. The legal right, won by the proletariat, to organize and strike, seems to be a difference which Marx himself recognizes between the wage earner and the bonded slave. Until his chains are struck, the slave is not in the position of the free workingman to fight for political rights and privileges. Citizenship is not always extended to the laboring classes, but it is never conferred upon slaves.

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REFERENCES

To find the passages cited, use the numbers in heavy type, which are the volume and page numbers of the passages referred to. For example, in **4** HOMER: *Iliad*, BK II [265–283] **12d**, the number **4** is the number of the volume in the set; the number **12d** indicates that the passage is in section d of page 12.

PAGE SECTIONS: When the text is printed in one column, the letters **a** and **b** refer to the upper and lower halves of the page. For example, in **53** JAMES: *Psychology*, **116a-119b**, the passage begins in the upper half of page 116 and ends in the lower half of page 119. When the text is printed in two columns, the letters **a** and **b** refer to the upper and lower halves of the left-hand side of the page, the letters **c** and **d** to the upper and lower halves of the right-hand side of the page. For example, in **7** PLATO: *Symposium*, **163b-164c**, the passage begins in the lower half of the left-hand side of page 163 and ends in the upper half of the right-hand side of page 164.

AUTHOR'S DIVISIONS: One or more of the main divisions of a work (such as PART, BK, CH, SECT) are sometimes included in the reference; line numbers, in brackets, are given in certain cases; *e.g.*, *Iliad*, BK II [265–283] **12d**.

BIBLE REFERENCES: The references are to book, chapter, and verse. When the King James and Douay versions differ in title of books or in the numbering of chapters or verses, the King James version is cited first and the Douay, indicated by a (*D*), follows; *e.g.*, OLD TESTAMENT: *Nehemiah*, 7:45—(*D*) *II Esdras*, 7:46.

SYMBOLS: The abbreviation "esp" calls the reader's attention to one or more especially relevant parts of a whole reference; "passim" signifies that the topic is discussed intermittently rather than continuously in the work or passage cited.

For additional information concerning the style of the references, see the Explanation of Reference Style; for general guidance in the use of *The Great Ideas*, consult the Preface.

1. The nature of enslavement: the relation of master and slave

OLD TESTAMENT: *Genesis*, 9:25
APOCRYPHA: *Ecclesiasticus*, 33:24-31—(*D*) OT, *Ecclesiasticus*, 33:25-33
NEW TESTAMENT: *Ephesians*, 6:5-9 / *Colossians*, 3:22-4:1 / *I Timothy*, 6:1-3 / *Titus*, 2:9-10 / *Philemon* / *I Peter*, 2:18-25
4 HOMER: *Odyssey*, BK I [421-444] **187c-d**; BK XIV **260a-265d**; BK XV [351-492] **269c-271a**; BK XVIII [313-345] **287b-d**; BK XXII [390-477] **309d-310d**
5 AESCHYLUS: *Agamemnon* [1035-1046] **63a-b**
5 SOPHOCLES: *Ajax* [1226-1263] **153c-154a** / *Trachiniae* [246-290] **172b-c**
5 EURIPIDES: *Helen* [722-738] **305a**; [1621-1641] **313b-d** / *Iphigenia at Aulis* [303-316] **427b**
5 ARISTOPHANES: *Plutus* [1-8] **629a**
6 HERODOTUS: *History*, BK I, **21b**; BK IV, **124a-d**; BK VII, **223c-d**
7 PLATO: *Lysis*, **16c-18a** / *Gorgias*, **271c** / *Theaetetus*, **528c-d** / *Statesman*, **597a-b** / *Laws*, BK VI, **709a-710a**; BK XI, **772a-773a**
8 ARISTOTLE: *Metaphysics*, BK I, CH 2 [982^b25-27] **501a**
9 ARISTOTLE: *Ethics*, BK VIII, CH 11 [1161^a30-$^b10$] **413c-d**; BK X, CH 6 [1177^a6-10] **431c** / *Politics*, BK I, CH 2 [1252^a24-$^b12$] **445b-d**; CH 3-7 **446d-449c**; CH 13 **454a-455a,c**; BK III, CH 5 [1278^a1-14] **475a-b**; CH 6 [1278^b30-37] **476a-b**; CH 9 [1280^a30-34] **477d-478a**; BK IV, CH 4 [1291^a7-10] **490b**; BK VII, CH 10 [1330^a25-34] **534d**; CH 15 [1334^a16-40] **539a-b**
10 HIPPOCRATES: *Airs, Waters, Places*, par 16 **15d-16a**
12 EPICTETUS: *Discourses*, BK I, CH 19, **126a**; CH 29, **137c-d**
14 PLUTARCH: *Lycurgus*, **46c-47a** / *Lycurgus-Numa*, **62a** / *Coriolanus*, **185b-186a** / *Marcus Cato*, **278b-279a**; **287b-d** / *Crassus*, **439a-c**
15 TACITUS: *Annals*, BK XIV, **151d-152c**
18 AUGUSTINE: *City of God*, BK XIX, CH 15 **521a-c**
19 AQUINAS: *Summa Theologica*, PART I, Q 21, A 1, REP 3 **124b-125b**; Q 81, A 3, REP 2 **430c-431d**; Q 92, A 1, REP 2 **488d-489d**; Q 96, A 4 **512d-513c**; PART I-II, Q 2, A 4, REP 3 **618a-d**
20 AQUINAS: *Summa Theologica*, PART I-II, Q 98, A 6, REP 2 **244c-245b**; Q 104, A 1, REP 3 **304a-305a**; A 4, ANS **306d-307c**; Q 105, A 4, ANS and REP 1-4 **318b-321a**; PART II-II, Q 10, A 10, REP 3 **434c-435d**; Q 183, A 1 **625a-626a**
22 CHAUCER: *Parson's Tale*, par 65-67, **531a-532a**
23 HOBBES: *Leviathan*, PART II, **110b-111a**; PART IV, **261d-262a**
25 MONTAIGNE: *Essays*, **219b-d**; **344d-345d**

(1. *The nature of enslavement: the relation of master and slave.*)

35 LOCKE: *Civil Government*, CH IV 29d-30b; CH VII, SECT 85 43c-d; CH XV, SECT 172-174 65b-d
38 MONTESQUIEU: *Spirit of Laws*, BK XV, 109a; 111d-112a; 114a-c
38 ROUSSEAU: *Social Contract*, BK I, 388a-c; 389a-390d
39 SMITH: *Wealth of Nations*, BK IV, 298c-299a
40 GIBBON: *Decline and Fall*, 16c-d
42 KANT: *Science of Right*, 404d; 421c-422d; 445c-446a
43 CONSTITUTION OF THE U.S.: AMENDMENTS, XIII 18c
43 FEDERALIST: NUMBER 54, 170b-171b
43 MILL: *Representative Government*, 339d-340c
46 HEGEL: *Philosophy of Right*, PART I, par 57 26b-27a; par 66, 29b; ADDITIONS, 36 122b-c / *Philosophy of History*, INTRO, 198a-199c; PART II, 273c
48 MELVILLE: *Moby Dick*, 3b
50 MARX: *Capital*, 79c-d esp 79d-80b [fn 4]; 95a-b [fn 1]; 128d-129a; 266c; 267c
51 TOLSTOY: *War and Peace*, BK V, 211a-213a; BK VII, 277a-287a passim, esp 278c, 280b-281d; BK X, 410c-421c; EPILOGUE I, 654a-655c

2. The theory of natural slavery and the natural slave

7 PLATO: *Laws*, BK VI, 709a-710a
9 ARISTOTLE: *Politics*, BK I, CH 2 [1252^{a}24-^{b}12] 445b-d; CH 3-6 446d-449b; CH 8 [1256^{b}20-25] 450c; BK VII, CH 14 [1333^{b}38-1334^{a}2] 538d
12 EPICTETUS: *Discourses*, BK I, CH 13 120b-c
18 AUGUSTINE: *City of God*, BK XIX, CH 15 521a-c
19 AQUINAS: *Summa Theologica*, PART I, Q 96, A 4 512d-513c
20 AQUINAS: *Summa Theologica*, PART I-II, Q 94, A 5, REP 3 224d-225d
22 CHAUCER: *Parson's Tale*, par 65-67, 531a-532a
23 HOBBES: *Leviathan*, PART I, 94b-c
35 LOCKE: *Civil Government*, CH IV 29d-30b; CH VI, SECT 54 36c
38 MONTESQUIEU: *Spirit of Laws*, BK XV, 109b-111c; BK XVII, 122a-b
38 ROUSSEAU: *Inequality*, 347a-d; 356b-357a / *Social Contract*, BK I, 388a-c
42 KANT: *Science of Right*, 401c-402a; 445a-c
43 FEDERALIST: NUMBER 54, 170c-d
44 BOSWELL: *Johnson*, 363c-364a
46 HEGEL: *Philosophy of Right*, PART I, par 57 26b-27a; ADDITIONS, 36 122b-c / *Philosophy of History*, INTRO, 198a-199c

2a. Characteristics of the natural slave: individual and racial differences in relation to slavery

6 HERODOTUS: *History*, BK IV, 124a-d
7 PLATO: *Laws*, BK VI, 709a-710a
9 ARISTOTLE: *Ethics*, BK VIII, CH 11 [1161^{a}30-^{b}10] 413c-d; BK X, CH 6 [1177^{a}1-11] 431c / *Politics*, BK I, CH 2 [1252^{a}24-^{b}12] 445b-d; CH 5 [1254^{b}15-1255^{a}3] 448b-c; CH 13 [1260^{a}36-^{b}7] 454a-455a,c; BK III, CH 9 [1280^{a}30-34] 477d-478a; BK IV, CH 4 [1291^{a}7-10] 490b; BK VII, CH 7 [1327^{b}19-32] 531d-532a; CH 10 [1330^{a}25-34] 534d; CH 15 [1334^{a}16-40] 539a-b
10 HIPPOCRATES: *Airs, Waters, Places*, par 16 15d-16a
14 PLUTARCH: *Crassus*, 439b-c
23 HOBBES: *Leviathan*, PART I, 94b-c
38 MONTESQUIEU: *Spirit of Laws*, BK XV, 110c-111b; BK XVII, 122a-b; 123a-b; 124c-d
38 ROUSSEAU: *Inequality*, 347a-d / *Social Contract*, BK I, 388b-c
40 GIBBON: *Decline and Fall*, 402b
43 FEDERALIST: NUMBER 54, 170b-171b
43 MILL: *Representative Government*, 340a-c
46 HEGEL: *Philosophy of History*, INTRO, 198a-199c
50 MARX: *Capital*, 95a-b [fn 1]
51 TOLSTOY: *War and Peace*, BK V, 215b-d; 216c-d

2b. The conception of the natural slave as the property or instrument of his master

7 PLATO: *Laws*, BK VI, 709a-710a; BK XI, 772a-773a
9 ARISTOTLE: *Ethics*, BK VIII, CH 11 [1161^{a}30-^{b}10] 413c-d / *Politics*, BK I, CH 4 447b-c; CH 5 [1254^{b}15-26] 448b
19 AQUINAS: *Summa Theologica*, PART I, Q 96, A 4 512d-513c; PART I-II, Q 20, A 6, REP 3 716b-d
42 KANT: *Science of Right*, 445c-446a
43 FEDERALIST: NUMBER 54, 170b-171b
46 HEGEL: *Philosophy of History*, INTRO, 198a-199c

2c. Slavery in relation to natural or to divine law

OLD TESTAMENT: *Genesis*, 9:25
APOCRYPHA: *Ecclesiasticus*, 33:24-31-(*D*) OT, *Ecclesiasticus*, 33:25-33
NEW TESTAMENT: *Ephesians*, 6:5-9 / *Colossians*, 3:22-4:1 / *I Timothy*, 6:1-3 / *Philemon*
18 AUGUSTINE: *City of God*, BK XIX, CH 15 521a-c
19 AQUINAS: *Summa Theologica*, PART I, Q 92, A 1, REP 2 488d-489d; Q 96, A 4 512d-513c
20 AQUINAS: *Summa Theologica*, PART I-II, Q 94, A 5, REP 3 224d-225d; Q 105, A 4, ANS and REP 1-4 318b-321a
22 CHAUCER: *Parson's Tale*, par 65-67, 531a-532a
23 HOBBES: *Leviathan*, PART I, 94b-c
32 MILTON: *Paradise Lost*, BK XII [79-110] 321a-b esp [101-104] 321b
35 LOCKE: *Civil Government*, CH II, SECT 4 25d-26a; CH IV 29d-30b; CH XV, SECT 172 65b-c
38 MONTESQUIEU: *Spirit of Laws*, BK XV, 109b-111c

38 ROUSSEAU: *Inequality*, 357c-358b / *Political Economy*, 368a / *Social Contract*, BK I, 389a
42 KANT: *Science of Right*, 401c-402a; 445c-446a
43 DECLARATION OF INDEPENDENCE: [7-9] 1a
43 MILL: *Liberty*, 316b-d
44 BOSWELL: *Johnson*, 363c-364a
48 MELVILLE: *Moby Dick*, 3b

2d. Criticisms of the doctrine of natural slavery

9 ARISTOTLE: *Politics*, BK I, CH 3 [1253^{b}20-23] 447a; CH 6 448c-449b
12 EPICTETUS: *Discourses*, BK I, CH 13 120b-c
19 AQUINAS: *Summa Theologica*, PART I, Q 96, A 4 512d-513c
20 AQUINAS: *Summa Theologica*, PART I-II, Q 94, A 5, REP 3 224d-225d
22 CHAUCER: *Parson's Tale*, par 65-67, 531a-532a
23 HOBBES: *Leviathan*, PART I, 94b-c
35 LOCKE: *Civil Government*, CH VI, SECT 54 36c; CH XV, SECT 172 65b-c
38 MONTESQUIEU: *Spirit of Laws*, BK XV, 109a; 110d-111c; BK XVII, 124b-c
38 ROUSSEAU: *Inequality*, 347a-d; 356b-357a; 357c-358b / *Political Economy*, 368a / *Social Contract*, BK I, 388a-390d
42 KANT: *Science of Right*, 401b-402a; 421c-422d; 445c-446a
43 DECLARATION OF INDEPENDENCE: [7-9] 1a
43 MILL: *Liberty*, 316b-d
44 BOSWELL: *Johnson*, 363b-364c
46 HEGEL: *Philosophy of Right*, PART I, par 48 24b-c; par 57 26b-27a; ADDITIONS, 36 122b-c / *Philosophy of History*, INTRO, 161a-c; 199c
50 MARX: *Capital*, 25c-d

3. Slavery as a social institution: the conventionality of slavery

7 PLATO: *Laws*, BK VI, 709a-710a
9 ARISTOTLE: *Politics*, BK I, CH 3 [1253^{b}20-23] 447a; CH 6 448c-449b; BK VII, CH 10 [1330^{a}33-34] 534d
14 PLUTARCH: *Lycurgus*, 46c-47a / *Lycurgus-Numa*, 62a / *Coriolanus*, 185b-186a
15 TACITUS: *Annals*, BK XIII, 132a-c
20 AQUINAS: *Summa Theologica*, PART I-II, Q 94, A 5, REP 3 224d-225d; Q 105, A 4, ANS and REP 1,3 318b-321a
22 CHAUCER: *Parson's Tale*, par 65-67, 531a-532a
23 HOBBES: *Leviathan*, PART I, 94b-c
35 LOCKE: *Civil Government*, CH IV 29d-30b; CH VII, SECT 85 43c-d; CH XV, SECT 172 65b-c
38 MONTESQUIEU: *Spirit of Laws*, BK XV 109a-115d; BK XVII, 122a-124d
38 ROUSSEAU: *Inequality*, 347a-d / *Social Contract*, BK I, 387b,d-390d; BK III, 422c-d
39 SMITH: *Wealth of Nations*, BK I, 34b-c; BK III, 167a-c; BK IV, 239c-240a; 253c-254a; 298c-299a
40 GIBBON: *Decline and Fall*, 16c-17b; 620a-c; 628d
41 GIBBON: *Decline and Fall*, 45b
42 KANT: *Science of Right*, 421c-422d; 445c-447c; 454d-455a
43 CONSTITUTION OF THE U.S.: AMENDMENTS, XIII, SECT I-XIV, SECT I 18c-d
43 FEDERALIST: NUMBER 42, 137b-c; NUMBER 54, 170c-d
43 MILL: *Liberty*, 316b-d / *Representative Government*, 332c-d; 339d-340c; 428c; 430c-d / *Utilitarianism*, 467a
44 BOSWELL: *Johnson*, 363c-364c
46 HEGEL: *Philosophy of Right*, ADDITIONS, 36 122b-c / *Philosophy of History*, INTRO, 161a-c; 199b-c; PART II, 273c; PART IV, 364d
49 DARWIN: *Descent of Man*, 315a
50 MARX: *Capital*, 113d-114a; 114d [fn 3]; 145c-146a; 361b [fn 1]; 364a-366a
54 FREUD: *New Introductory Lectures*, 882d

3a. The acquisition of slaves: conquest, purchase, indenture, forfeiture

OLD TESTAMENT: *Genesis*, 44:1-10 / *Exodus*, 21:2-6 esp 21:5-6 / *Leviticus*, 25:39-55 / *Deuteronomy*, 15:12-17 esp 15:16-17 / *I Kings*, 9:22—(*D*) *III Kings*, 9:22 / *II Chronicles*, 28:8-15—(*D*) *II Paralipomenon*, 28:8-15 / *Nehemiah*, 5:1-12—(*D*) *II Esdras*, 5:1-12
4 HOMER: *Odyssey*, BK XIV [109-120] 261b; BK XV [380-492] 270a-271a
5 SOPHOCLES: *Trachiniae* [293-306] 172c-d
5 EURIPIDES: *Trojan Women* [1260-1333] 280d-281a,c / *Andromache* [1-146] 315a-316c / *Hecuba* [342-378] 355d-356a
5 ARISTOPHANES: *Plutus* [144-148] 630d; [507-526] 635a-b
7 PLATO: *Republic*, BK VIII, 404a / *Laws*, BK XI, 772a-773a; 780b-c; 783b-c
9 ARISTOTLE: *Politics*, BK I, CH 6 448c-449b; CH 7 [1255^{b}37-40] 449c; CH 8 [1256^{b}20-25] 450c; BK VII, CH 14 [1333^{b}38-1334^{a}2] 538d
12 EPICTETUS: *Discourses*, BK I, CH 19, 126a
14 PLUTARCH: *Marcus Cato*, 278b-279a; 287b-d
20 AQUINAS: *Summa Theologica*, PART I-II, Q 105, A 4, ANS and REP 1,4 318b-321a
22 CHAUCER: *Parson's Tale*, par 65-67, 531a-532a
23 HOBBES: *Leviathan*, PART II, 110b-111a; PART IV, 261d-262a
35 LOCKE: *Civil Government*, CH IV, SECT 22-23 30a-b; CH VII, SECT 85 43c-d; CH XV, SECT 172-174 65b-d
38 MONTESQUIEU: *Spirit of Laws*, BK X, 62d-63a; BK XV, 109b-111a
38 ROUSSEAU: *Social Contract*, BK I, 389d-390d
40 GIBBON: *Decline and Fall*, 16c-d; 144b; 147a-b; 402b; 510d-511a; 620a-c; 628d; 880d [n 96]
41 GIBBON: *Decline and Fall*, 45b; 551d-552c
42 KANT: *Science of Right*, 445c-446a; 447b; 454d-455a
43 CONSTITUTION OF THE U.S.: ARTICLE I, SECT 9 [260-266] 13d
43 FEDERALIST: NUMBER 42, 137b-c
44 BOSWELL: *Johnson*, 363c-364c

(*3. Slavery as a social institution: the conventionality of slavery. 3a. The acquisition of slaves: conquest, purchase, indenture, forfeiture.*)

46 HEGEL: *Philosophy of Right*, PART I, par 57 26b-27a / *Philosophy of History*, PART I, 216a-b; PART II, 276d-277a
50 MARX: *Capital*, 114d [fn 3]; 128d-129a; 361b [fn 1]; 364a-366a esp 364c-365b; 376c-377a
54 FREUD: *New Introductory Lectures*, 882d

3b. Laws regulating slavery: the rights and duties of master and slave

OLD TESTAMENT: *Exodus*, 21:1-11,20-21,26-27, 32 / *Leviticus*, 19:20-22; 25:39-55 / *Deuteronomy*, 5:14; 15:12-18; 23:15-16 / *Jeremiah*, 34: 8-17—(*D*) *Jeremias*, 34:8-17
APOCRYPHA: *Ecclesiasticus*, 4:30; 33:24-31—(*D*) OT, *Ecclesiasticus*, 4:35; 33:25-33
NEW TESTAMENT: *Ephesians*, 6:5-9 / *Colossians*, 3:22-4:1 / *I Timothy*, 6:1-3 / *Titus*, 2:9-10 / *Philemon* / *I Peter*, 2:18
5 ARISTOPHANES: *Clouds* [1-7] 488a / *Frogs* [605-628] 571a-b
6 HERODOTUS: *History*, BK I, 21b; BK VII, 223c-d
7 PLATO: *Gorgias*, 271c / *Theaetetus*, 528c-d / *Laws*, BK VI, 709a-710a; BK IX, 757c-d; BK XI, 772a-773a; 780b-c; 783b-c
9 ARISTOTLE: *Politics*, BK I, CH 7 [1255^{b}20-37] 449b-c; CH 13 [1260^{a}31-^{b}8] 454d-455a,c; BK III, CH 4 [1277^{a}30-^{b}1] 474b-c; BK VII, CH 10 [1330^{a}33-34] 534d
14 PLUTARCH: *Lycurgus-Numa*, 62a / *Coriolanus*, 185b-186a / *Marcus Cato*, 287b-d / *Crassus*, 439a-c
15 TACITUS: *Annals*, BK II, 30b-c; BK XII, 121d-122a; BK XIII, 133c; BK XIV, 151d-152c
19 AQUINAS: *Summa Theologica*, PART I, Q 81, A 3, REP 2 430c-431d
20 AQUINAS: *Summa Theologica*, PART I-II, Q 104, A 4, ANS 306d-307c; Q 105, A 4, ANS and REP 1-4 318b-321a; PART II-II, Q 10, A 10, REP 3 434c-435d; Q 189, A 5, ANS 693b-694c
22 CHAUCER: *Parson's Tale*, par 65 67, 531a-532a
29 CERVANTES: *Don Quixote*, PART II, 280c
35 LOCKE: *Civil Government*, CH IV, SECT 22-23 30a-b; CH VII, SECT 85 43c-d
38 MONTESQUIEU: *Spirit of Laws*, BK XV, 112a-115b
39 SMITH: *Wealth of Nations*, BK IV, 253c-254a; 298c-299a
40 GIBBON: *Decline and Fall*, 16d-17a; 620a-c
42 KANT: *Science of Right*, 400b,d-402a; 421c-422d
43 CONSTITUTION OF THE U.S.: ARTICLE IV, SECT 2 [529-535] 16b
43 FEDERALIST: NUMBER 42, 137b-c; NUMBER 54, 170b-171b
43 MILL: *Liberty*, 316b-d / *Utilitarianism*, 467a
46 HEGEL: *Philosophy of Right*, ADDITIONS, 99 133a / *Philosophy of History*, PART I, 216a-b; PART II, 276d-277a
50 MARX: *Capital*, 364c-365b
51 TOLSTOY: *War and Peace*, BK V, 197c; 215a-d; 216c-d

3c. The emancipation o manumission of slaves: the rebellion of slaves

OLD TESTAMENT: *Exodus*, 1-14; 21:2-4 / *Leviticus*, 25:39-55 / *Deuteronomy*, 15:12-15; 23:15-16; 26:5-9 / *II Chronicles*, 28:8-15—(*D*) *II Paralipomenon*, 28:8-15 / *Jeremiah*, 34:8-17—(*D*) *Jeremias*, 34:8-17
6 HERODOTUS: *History*, BK II, 71b-c; BK III, 117a-c; 118a-119b; BK IV, 124a-d
6 THUCYDIDES: *Peloponnesian War*, BK III, 435b; BK IV, 467a-b
7 PLATO: *Republic*, BK IX, 420a-b / *Laws*, BK XI, 772a-b
9 ARISTOTLE: *Politics*, BK II, CH 9 [1269^{a}29-^{b}13] 465b-d; CH 10 [1272^{b}17-19] 469a; BK V, CH 11 [1315^{a}32-39] 518b; BK VII, CH 10 [1330^{a}33-34] 534d
12 EPICTETUS: *Discourses*, BK II, CH 1, 139d; BK IV, CH 1, 214c-d
15 TACITUS: *Annals*, BK IV, 70c-d; BK XIII, 132a-c
20 AQUINAS: *Summa Theologica*, PART I-II, Q 105, A 4, ANS and REP 1,3 318b-321a
29 CERVANTES: *Don Quixote*, PART II, 280c
38 MONTESQUIEU: *Spirit of Laws*, BK X, 62d-63a; BK XV, 112c-113a; 114c-115b
40 GIBBON: *Decline and Fall*, 16d-17b; 144a-d; 505c; 509a; 628c-d
41 GIBBON: *Decline and Fall*, 82a-b; 452d-453a,c
43 CONSTITUTION OF THE U.S.: AMENDMENTS, XIII, SECT 1-XIV, SECT 1 18c-d
43 MILL: *Representative Government*, 332c-d; 340a-c; 351d-352b
44 BOSWELL: *Johnson*, 364a-b
46 HEGEL: *Philosophy of History*, INTRO, 199c; PART II, 273c; 277a
50 MARX: *Capital*, 145c-146a
51 TOLSTOY: *War and Peace*, BK V, 211a-213a; 216c-d; BK VI, 235a; BK X, 410c-421c; BK XV, 640b-c

3d. Criticisms of the institution of slavery: the injustice of slavery; its transgression of inalienable human rights

9 ARISTOTLE: *Politics*, BK I, CH 3 [1253^{b}20-23] 447a; CH 6 448c-449b
12 EPICTETUS: *Discourses*, BK I, CH 13 120b-c
14 PLUTARCH: *Lycurgus*, 46c-47a / *Lycurgus-Numa*, 62a / *Coriolanus*, 185b-186a / *Marcus Cato*, 278d-279c
22 CHAUCER: *Parson's Tale*, par 65-67, 531a-532a
23 HOBBES: *Leviathan*, PART I, 94b-d
35 LOCKE: *Civil Government*, CH II-IV 25d-30b esp CH IV 29d-30b
38 MONTESQUIEU: *Spirit of Laws*, BK X, 62d-63a; BK XV, 109a-110d
38 ROUSSEAU: *Inequality*, 357c-358b / *Political*

Economy, 368a / *Social Contract*, BK I, 388a-c; 389a-390d
39 SMITH: *Wealth of Nations*, BK I, 34b-c; BK III, 167a-c; BK IV, 298c-299a
40 GIBBON: *Decline and Fall*, 620b-c
41 GIBBON: *Decline and Fall*, 45b-c
42 KANT: *Science of Right*, 401b-402a; 421c-422d; 445c-446a; 454d-455a
43 DECLARATION OF INDEPENDENCE: [7-9] 1a
43 CONSTITUTION OF THE U.S.: AMENDMENTS, XIII 18c
43 FEDERALIST: NUMBER 42, 137b-c; NUMBER 54, 170d-171a
43 MILL: *Liberty*, 316b-d / *Representative Government*, 339d-340a
44 BOSWELL: *Johnson*, 363b-364c
46 HEGEL: *Philosophy of Right*, PART I, par 57 26b-27a; ADDITIONS, 36 122b-c / *Philosophy of History*, INTRO, 161a-c; PART III, 310d-311a; PART IV, 364d
49 DARWIN: *Descent of Man*, 315a
50 MARX: *Capital*, 25c-d; 113d-114a; 376c-377a
51 TOLSTOY: *War and Peace*, BK V, 216c-d

4. The forms of economic slavery

4a. Chattel slavery: slaves of the household and slaves of the state

OLD TESTAMENT: *Exodus*, 1:8-14; 21:1-11 / *Leviticus*, 25:39-55 / *Deuteronomy*, 15:12-18
5 ARISTOPHANES: *Plutus* [507-526] 635a-b
7 PLATO: *Lysis*, 16c-18a / *Laws*, BK VI, 709a-710a; BK VII, 722d
9 ARISTOTLE: *Politics*, BK I, CH 3-4 446d-447c; CH 8 [1256^{a}1-3] 449d; BK II, CH 7 [1267^{b}10-19] 463b-c; BK VII, CH 8 [1328^{a}35-38] 532c-d; CH 10 [1330^{a}25-34] 534d / *Rhetoric*, BK I, CH 5 [1361^{a}12-14] 601c
14 PLUTARCH: *Marcus Cato*, 278d-279a / *Crassus*, 439a-c
20 AQUINAS: *Summa Theologica*, PART I-II, Q 87, A 8, ANS 191d-192d; Q 105, A 4, REP 1-4 318b-321a
23 HOBBES: *Leviathan*, PART IV, 261d-262a
38 MONTESQUIEU: *Spirit of Laws*, BK XV, 111d-112a; BK XVI, 116a
38 ROUSSEAU: *Inequality*, 353c-d
39 SMITH: *Wealth of Nations*, BK IV, 239c-240a; 253c-254a
40 GIBBON: *Decline and Fall*, 16d; 17b-c; 147a-b; 498b-500b passim; 620a-b
42 KANT: *Science of Right*, 445c-446a
43 CONSTITUTION OF THE U.S.: ARTICLE I, SECT 9 [260-266] 13d
43 FEDERALIST: NUMBER 42, 137b-c; NUMBER 54, 170b-171b
46 HEGEL: *Philosophy of Right*, PART I, par 66 29a-c
50 MARX: *Capital*, 95a-b [fn 1]; 113c-114a; 128d-129a; 266c; 267c
51 TOLSTOY: *War and Peace*, BK VII, 285b-d passim

4b. Serfdom or peonage

38 MONTESQUIEU: *Spirit of Laws*, BK XIII, 96d-97b
39 SMITH: *Wealth of Nations*, BK III, 165b-171c
40 GIBBON: *Decline and Fall*, 144a-b; 628c-d
41 GIBBON: *Decline and Fall*, 404c-d; 452d-453a,c
43 MILL: *Representative Government*, 351d-352b
46 HEGEL: *Philosophy of Right*, PART I, par 66, 29b / *Philosophy of History*, PART IV, 346a-b; 352a
50 MARX: *Capital*, 34b; 79d-80b [fn 4]; 113d-115c; 266b-c; 355d-364a passim
50 MARX-ENGELS: *Communist Manifesto*, 424d-425a
51 TOLSTOY: *War and Peace*, BK V, 211a-213a; BK VI, 235a; BK VII, 285b-d passim; BK VIII, 308c; BK X, 410c-421c; EPILOGUE I, 654a-655c

4c. Wage slavery: the exploitation of the laborer

39 SMITH: *Wealth of Nations*, BK I, 20b-21c; 27b-37b passim, esp 27b-28d
50 MARX: *Capital*, 82d-84a,c; 88d-89b; 104b-105c; 111c-146c passim, esp 112c, 138b, 146a-c; 150a-c; 161b-163c; 173b-180d passim, esp 176a-178d; 192c-248c passim; 251c-253b; 262a-275c esp 263c-d, 266b-c, 272c-275c; 282b-286a esp 283c-d, 285c-286a; 302d-368b esp 307a-c, 316d-317c, 318a-320a, 354b-355d, 364a-368b; 369c-371c
50 MARX-ENGELS: *Communist Manifesto*, 420c-d; 422c-423a; 424d-425a; 426b-c

5. The political aspect of economic slavery

5a. The disfranchisement of chattel slaves and serfs: their exclusion from the body politic or political community

6 THUCYDIDES: *Peloponnesian War*, BK I, 374a; BK IV, 467b; BK VII, 545b; BK VIII, 573c
7 PLATO: *Laws*, BK VIII, 740d-741a
9 ARISTOTLE: *Politics*, BK II, CH 5 [1264^{a}20-23] 459b-c; CH 7 [1267^{b}14-19] 463b-c; CH 8 [1268^{a}16-33] 464a-b; BK III, CH 4 [1277^{a}30-^{b}6] 474b-c; CH 5 [1277^{b}33-1278^{a}14] 475a-b; [1278^{a}31-34] 475c; CH 9 [1280^{a}32-34] 477d-478a; BK IV, CH 6 [1292^{b}22-1293^{a}10] 492b-c; BK V, CH 3 [1303^{a}6-8] 504b-c; BK VI, CH 4 [1319^{b}3-31] 523a-b; BK VII, CH 9 533a-d; CH 10 [1330^{a}25-34] 534d / *Athenian Constitution*, CH 2-5 553a-555a
20 AQUINAS: *Summa Theologica*, PART I-II, Q 98, A 6, REP 2 244c-245b
35 LOCKE: *Civil Government*, CH VII, SECT 85 43c-d
38 MONTESQUIEU: *Spirit of Laws*, BK XV, 114c-115b
38 ROUSSEAU: *Social Contract*, BK III, 422c-d; BK IV, 429c-d
39 SMITH: *Wealth of Nations*, BK III, 168d
40 GIBBON: *Decline and Fall*, 16c; 17a-b; 144b

(5. *The political aspect of economic slavery.* 5a. *The disfranchisement of chattel slaves and serfs: their exclusion from the body politic or political community.*)

41 GIBBON: *Decline and Fall*, 82a-b; 404d; 452d
43 CONSTITUTION OF THE U.S.: ARTICLE I, SECT 2 [17-25] 11b
43 FEDERALIST: NUMBER 54, 170b-171b
46 HEGEL: *Philosophy of History*, PART II, 273c; PART IV, 356d

5b. The political deprivations of the laboring classes or wage slaves: the struggle for enfranchisement; the issue between oligarchy and democracy with respect to suffrage

7 PLATO: *Republic*, BK VIII, 405c-407a / *Laws*, BK VIII, 740d-741a
9 ARISTOTLE: *Politics*, BK II, CH 7 [1267^{b}10-19] 463b-c; CH 8 [1268^{a}16-33] 464a-b; CH 11 [1273^{a}22-^{b}7] 469d-470a; BK III, CH 4 [1277^{a}30-^{b}7] 474b-c; CH 5 [1277^{b}33-1278^{a}25] 475a-c; CH 9-12 477c-481b passim; BK IV, CH 11 [1295^{b}2-1296^{b}2] 495c-496c; BK V 502a-519d esp CH 1 [1301^{a}25-39] 502b-c, [1301^{b}26-1302^{a}8] 503a-b, CH 2 503b-d, CH 3 [1302^{b}34-1303^{a}14] 504b-c, [1303^{b}4-7] 505a, CH 4 [1304^{a}18-39] 505d-506a, CH 6 [1305^{a}36-^{b}21] 507b-c, CH 7 [1306^{b}22-1307^{a}28] 508c-509b, CH 8 [1308^{a}3-14] 510a-b, [1308^{b}31-1309^{a}32] 511a-c, CH 9 [1309^{b}14-1310^{a}13] 511d-512b, CH 12 [1316^{a}39-^{b}24] 519c-d; BK VI, CH 7 [1321^{a}26-32] 525a / *Athenian Constitution*, CH 2-5 553a-555a
14 PLUTARCH: *Solon*, 68d-71c / *Poplicola*, 79d-80a / *Poplicola-Solon*, 87a / *Tiberius Gracchus*, 674c-681a,c / *Caius Gracchus* 681b,d-689a,c
18 AUGUSTINE: *City of God*, BK III, CH 17, 178d-179a
38 ROUSSEAU: *Social Contract*, BK III, 412b-c
39 SMITH: *Wealth of Nations*, BK I, 27b-37b; BK III, 168d-169a
41 GIBBON: *Decline and Fall*, 73b
42 KANT: *Science of Right*, 436d-437c
43 FEDERALIST: NUMBER 54, 170b-171b passim; NUMBER 57, 178d
43 MILL: *Representative Government*, 345c-346a; 383d-384a; 392b-399d passim, esp 393c-395a; 419a-c
46 HEGEL: *Philosophy of History*, PART II, 273c; PART IV, 356d; 364a-c
50 MARX: *Capital*, 137b-141b esp 138b, 140a-b; 283d-286a; 364a-368b esp 367c-368b
50 MARX-ENGELS: *Communist Manifesto*, 415b-c; 423b; 424d-425a; 428a; 428d; 429b-c

6. Political enslavement or subjection

6a. Slavery as the condition of men living under tyrannical government

5 EURIPIDES: *Suppliants* [429-456] 262a-b
6 HERODOTUS: *History*, BK VII, 238b-c
7 PLATO: *Republic*, BK VIII, 413d-416a; BK IX, 420a / *Laws*, BK VI, 709d-710a / *Seventh Letter*, 805d
9 ARISTOTLE: *Politics*, BK III, CH 14 [1285^{a}17-29] 483b-c; BK IV, CH 10 [1295^{a}17-24] 495a-b; BK V, CH 11 [1313^{a}34-13$_{14}$ 29] 516a-517a; BK VII, CH 7 [1327^{b}19-32] 531d-532a
10 HIPPOCRATES: *Airs, Waters, Places*, par 16 15d-16a; par 23 18a-c
15 TACITUS: *Annals*, BK I, 1b-c; 3a-b
19 AQUINAS: *Summa Theologica*, PART I, Q 81, A 3, REP 2 430c-431d; Q 96, A 4 512d-513c
20 AQUINAS: *Summa Theologica*, PART I-II, Q 105, A 1, REP 5 307d-309d
23 HOBBES: *Leviathan*, PART II, 110b-111a; 114d-115a; 150c-151a
35 LOCKE: *Civil Government*, CH III, SECT 17 28d-29a; CH IV 29d-30b; CH VII, SECT 93 45d-46a; CH XIV, SECT 163 63a-b
38 MONTESQUIEU: *Spirit of Laws*, BK III, 12a-13c; BK IV, 15a-c; BK V, 28c; BK VI, 33d-34d; BK XII, 94d-95a; BK XIII, 99b-100c; BK XV, 109a-b; 110d-111a
38 ROUSSEAU: *Inequality*, 356b-358b; 360a-b; 361c-d / *Social Contract*, BK I, 388a-c; 389a-390d
40 GIBBON: *Decline and Fall*, 33a-34a,c; 51c-d; 154b-c; 342a-b; 523d-524a; 592a
41 GIBBON: *Decline and Fall*, 125a; 161c-162b; 320d-321b
43 MILL: *Representative Government*, 342b-344d
46 HEGEL: *Philosophy of History*, PART I, 222a-c; PART III, 289b; 302a-d

6b. Subjection as the condition of men living under benevolent despotism or paternalistic government

9 ARISTOTLE: *Ethics*, BK VIII, CH 11 [1161^{a}10-22] 413b-c / *Politics*, BK I, CH 2 [1252^{b}19-26] 446a; CH 7 [1255^{b}16-20] 449b; BK III, CH 14 [1285^{b}29-34] 484a
14 PLUTARCH: *Romulus*, 21a-27c
15 TACITUS: *Histories*, BK IV, 271b
19 AQUINAS: *Summa Theologica*, PART I, Q 81, A 3, REP 2 430c-431d; Q 92, A 1, REP 2 488d-489d; Q 96, A 4 512d-513c
23 HOBBES: *Leviathan*, PART II, 110b-111a
30 BACON: *Advancement of Learning*, 27a-c
35 LOCKE: *Civil Government*, CH VI, SECT 61 38a-b; SECT 74-76 41b-42b; CH XIV, SECT 162 63a
36 STERNE: *Tristram Shandy*, 216b
38 MONTESQUIEU: *Spirit of Laws*, BK XII, 94d-95a
38 ROUSSEAU: *Inequality*, 357a-b
40 GIBBON: *Decline and Fall*, 50a; 154b-c; 255c-d; 342a-b
41 GIBBON: *Decline and Fall*, 81d-82a
42 KANT: *Science of Right*, 439a-c
43 MILL: *Liberty*, 271d-272a; 273b-d / *Representative Government*, 340a-c; 342b-344d
46 HEGEL: *Philosophy of Right*, ADDITIONS, 111 134d-135a / *Philosophy of History*, INTRO, 172b-d

52 DOSTOEVSKY: *Brothers Karamazov*, BK V, 127b-137c passim

6c. **The transition from subjection to citizenship: the conditions fitting men for self-government**

6 HERODOTUS: *History*, BK III, 120b-c; BK V, 167a-b; 171c-175b; BK VI, 187d; 193b-c; BK IX, 314a,c
9 ARISTOTLE: *Politics*, BK II, CH 12 470b-471d; BK III, CH 15 [1286^{b}8-22] 484d-485a; BK IV, CH 12 496d-497b; CH 13 [1297^{b}16-28] 498a; BK V, CH 4 [1304^{a}18-38] 505d-506a; BK VI, CH 4 522a-523b / *Athenian Constitution*, CH 2-13 553a-558c
10 HIPPOCRATES: *Airs, Waters, Places*, par 16 15d-16a; par 23 18a-c
14 PLUTARCH: *Romulus*, 22c
15 TACITUS: *Annals*, BK XI, 106a-107b
35 LOCKE: *Civil Government*, CH VIII, SECT 100-111 47c-51a; CH XIV, SECT 162-166 63a-64a
38 MONTESQUIEU: *Spirit of Laws*, BK XIV, 107b-d; BK XV, 114c-115b; BK XVI, 118b-c; BK XVII-XVIII, 122a-125c; BK XVIII, 126a-c
38 ROUSSEAU: *Inequality*, 324a / *Social Contract*, BK II, 402b-403a; BK III, 411a-c; 422c-423a
40 GIBBON: *Decline and Fall*, 15b-c; 513b-c; 521a-523a,c; 624b-c
41 GIBBON: *Decline and Fall*, 562c-565a esp 562c-d, 563d-564a
42 KANT: *Science of Right*, 436d-437c
43 FEDERALIST: NUMBER 39, 125b; NUMBER 55, 174c-d
43 MILL: *Liberty*, 267d-268b; 271d-272a / *Representative Government*, 328d-331a; 339d-340c; 344a-d passim; 350b-355b
46 HEGEL: *Philosophy of History*, INTRO, 161a-c; 199b-c; PART I, 222a-c; PART II, 271c-d; 273c; PART IV, 346a-c; 364d

6d. **The imperialistic subjection or enslavement of conquered peoples or colonial dependencies**

OLD TESTAMENT: *Exodus*, 1:8-14; 5 / *I Kings*, 9:20-23—(*D*) *III Kings*, 9:20-23 / *II Chronicles*, 8:7-8—(*D*) *II Paralipomenon*, 8:7-8
APOCRYPHA: *I Maccabees*, 1:41-64—(*D*) OT, *I Machabees*, 1:43-67 / *II Maccabees*, 5:21-7:42—(*D*) OT, *II Machabees*, 5:21-7:42
6 HERODOTUS: *History*, BK I, 4a-6c; 16b-20b; 30b-31a; 35c-36a; 37b-40b; 46a-48a; BK IV, 139a-159d; BK V-VI, 184a-191c; BK VII, 222b-c; 225d-226b
6 THUCYDIDES: *Peloponnesian War*, BK I, 358a; 367b-369a; 379b-c; 384d-385b; BK II, 403b-404a; 406a-407b; BK III, 424d-434c; BK IV, 461c-463a; 468a-469b; BK V, 504c-508a,c; BK VI, 529b-d; BK VII, 559b-d
9 ARISTOTLE: *Politics*, BK I, CH 2 [1252^{b}1-9] 445c-d; CH 6 448c-449b; CH 8 [1256^{b}20-25] 450c; BK III, CH 13 [1284^{a}26-^{b}2] 482b-c; BK VII, CH 2 [1324^{b}23-41] 528d-529a; CH 14 [1333^{b}38-1334^{a}2] 538d
13 VIRGIL: *Aeneid*, BK VI [845-853] 233b-234a; BK VIII [714-731] 278a-b
15 TACITUS: *Annals*, BK I, 17c-d; BK IV, 76a; 82d-83a; BK XII, 117c-d; BK XIV, 149a-b / *Histories*, BK IV, 286c-287a; 290a-d
18 AUGUSTINE: *City of God*, BK IV, CH 15 196c-197a; BK V, CH 12, 216d-218a; BK XIX, CH 21, 524c-d
23 MACHIAVELLI: *Prince*, CH III-V 3c-8c; CH VIII, 14a-c
23 HOBBES: *Leviathan*, PART II, 110b-111a; CONCLUSION, 280b-281a
26 SHAKESPEARE: *1st Henry VI* 1a-32a,c / *2nd Henry VI* 33a-68d / *Henry V* 532a-567a,c
32 MILTON: *Samson Agonistes* [241-276] 344b-345b
35 LOCKE: *Civil Government*, CH XVI 65d-70c esp SECT 176 66a-b
36 SWIFT: *Gulliver*, PART I, 24b-25a; PART IV, 182b-183a
38 MONTESQUIEU: *Spirit of Laws*, BK X, 62b-63d; BK XI, 83c-84c; BK XIII, 96d-97a; BK XV, 109b-c
38 ROUSSEAU: *Social Contract*, BK I, 389d-390d
39 SMITH: *Wealth of Nations*, BK IV, 248b-d; 251c-d; 253a-c; 288b-c
40 GIBBON: *Decline and Fall*, 14d-16b; 17d-18a; 33d-34a,c; 147a-b; 420b-d; 518b-519a passim; 550b-551b; 608b,d-609a; 620a; 632d
41 GIBBON: *Decline and Fall*, 51a-53b passim; 420c; 443b-c
42 KANT: *Science of Right*, 413d; 454a-455a
43 DECLARATION OF INDEPENDENCE: 1a-3b
43 MILL: *Representative Government*, 427a-b; 436b-442d passim
46 HEGEL: *Philosophy of Right*, PART III, par 351 112a-b / *Philosophy of History*, PART III, 299a-c
50 MARX: *Capital*, 372c-374b; 379a-383d passim

7. The analogy of tyranny and slavery in the relations between passions and reason or will: human bondage

NEW TESTAMENT: *John*, 8:31-36 / *Romans*, 6:16-23; 7:14-8:21 / *Galatians*, 4:1-5:1 / *Titus*, 3:3 / *Hebrews*, 2:14-15 / *II Peter*, 2:19
7 PLATO: *Phaedrus*, 120b-c / *Gorgias*, 275c-276a / *Republic*, BK I, 296b-c; BK IV, 347d-348d; BK IX, 416a-418c; 419b-421a; 425c-427b / *Theaetetus*, 528c-529a / *Seventh Letter*, 806a; 814b
9 ARISTOTLE: *Ethics*, BK VII, CH 5 [1148^{b}32-1149^{a}15] 399b-c / *Politics*, BK I, CH 5 [1254^{a}33-^{b}9] 448a
12 EPICTETUS: *Discourses*, BK I, CH 29, 137c-d; BK IV, CH 1 213a-223d; CH 4, 225a-b
12 AURELIUS: *Meditations*, BK VII, SECT 68 284c-d
17 PLOTINUS: *Sixth Ennead*, TR VIII, CH 1, 343a-b
18 AUGUSTINE: *Confessions*, BK VI, par 25 42c-d / *City of God*, BK IV, CH 3, 190c; BK XIV, CH 11, 386b; CH 15, 389a-b; BK XIX, CH 15 521a-c; BK XXI, CH 16 573b-574a

(7. The analogy of tyranny and slavery in the relations between passions and reason or will: human bondage.)

20 AQUINAS: *Summa Theologica*, PART I-II, Q 72, A 2, REP 4 112b-113a
22 CHAUCER: *Parson's Tale*, par 65-67, 531a-b
27 SHAKESPEARE: *Hamlet*, ACT III, SC II [61-79] 49c-d
31 SPINOZA: *Ethics*, PART IV, PREF, 422b
32 MILTON: *Paradise Lost*, BK VI [169-188] 200a; BK X [144-156] 277b; BK XII [79-110] 321a-b
36 SWIFT: *Gulliver*, PART IV 135a-184a
38 ROUSSEAU: *Social Contract*, BK I, 393c
42 KANT: *Judgement*, 586d-587a
46 HEGEL: *Philosophy of History*, PART I, 233b-c
52 DOSTOEVSKY: *Brothers Karamazov*, BK VI, 164b-d
54 FREUD: *Ego and Id*, 715d-716a / *New Introductory Lectures*, 838d-839b

CROSS-REFERENCES

For: Other discussions relevant to the theory of natural slavery, *see* JUSTICE 6, 6c; LAW 4h; LIBERTY 1a; WILL 7a.

Other discussions of the institution of slavery, *see* JUSTICE 6c; LABOR 1f, 5a-5c, 7c(1); PROGRESS 3b; PUNISHMENT 4b(3); STATE 5a, 5c; TYRANNY 1b; WEALTH 7b(1).

The discussion of slave rebellions and of the emancipation of slaves, *see* LIBERTY 6b; PROGRESS 3b; REVOLUTION 4a.

Other discussions of the forms of economic slavery or servitude in relation to different systems of production, *see* JUSTICE 8c(1); LABOR 1f, 5a-5c; WEALTH 6a, 7b(1); and for the political aspects of economic slavery or servitude, *see* CITIZEN 2c; CONSTITUTION 5a; DEMOCRACY 4a(1)-4a(2); LABOR 7d, 7f; LIBERTY 2d; OLIGARCHY 4, 5a.

The differentiation of citizenship, subjection, and slavery as three conditions of men under political rule, *see* CITIZEN 2b; LIBERTY 1f; TYRANNY 5a-5b; and for factors involved in the change from subjection to citizenship, *see* DEMOCRACY 4d; MONARCHY 4e(2); TYRANNY 4b.

Discussions of imperialism and of the government of colonial dependencies and conquered peoples, *see* GOVERNMENT 5b; LIBERTY 6c; MONARCHY 5-5b; STATE 10b; TYRANNY 6.

Other discussions of the slavery of men in bondage to their passions, *see* LIBERTY 3a.

ADDITIONAL READINGS

Listed below are works not included in *Great Books of the Western World*, but relevant to the idea and topics with which this chapter deals. These works are divided into two groups:

I. Works by authors represented in this collection.
II. Works by authors not represented in this collection.

For the date, place, and other facts concerning the publication of the works cited, consult the Bibliography of Additional Readings which follows the last chapter of *The Great Ideas.*

I.

HOBBES. *Philosophical Rudiments Concerning Government and Society*, CH 8
——. *The Elements of Law, Natural and Politic*, PART II, CH 3
HEGEL. *The Phenomenology of Mind*, IV (A)
DOSTOEVSKY. *Poor Folk*

II.

SENECA. *De Beneficiis* (*On Benefits*), BK III, CH 18-25
LA BOÉTIE. *Anti-Dictator, the Discours de la servitude volontaire*
BODIN. *The Six Bookes of a Commonweale*, BK I, CH 5
GROTIUS. *The Rights of War and Peace*, BK II, CH 5; BK III, CH 7
VOLTAIRE. "Master," "Slaves," in *A Philosophical Dictionary*
FRANKLIN. *Essay on the African Slave Trade*
CHANNING. *Slavery*
GOGOL. *Dead Souls*
WHEWELL. *The Elements of Morality*, BK II, CH 24
THOREAU. *Civil Disobedience*
COMTE. *The Positive Philosophy*, BK VI, CH 6-12
——. *System of Positive Polity*, VOL III, *Social Dynamics*
NIEBOER. *Slavery as an Industrial System*
VINOGRADOFF. *The Growth of the Manor*
HOBHOUSE. *Morals in Evolution*, PART I, CH 7
KOHLER. *Philosophy of Law*, CH 6 (12)
MARITAIN. *Freedom in the Modern World*
MANN. *Joseph and His Brothers*
——. *Young Joseph*
——. *Joseph in Egypt*
BERDYAYEV. *Slavery and Freedom*

Chapter 88: SOUL

INTRODUCTION

IN the language of the poets as well as in the discourse of the philosophers, body and soul are correlative terms. Each affects the meaning of the other. The words are used together in daily speech. Men who are unaware of, or deny, the metaphysical and theological significance of having a soul, nevertheless use the word "soul" with a sense of contrast to body, even if only to refer to vague manifestations of spirit —feelings and sympathies which seem to be alien to the world of matter.

With few exceptions, traditional theories of the soul involve its distinction from and relation to the body. Berkeley represents one of the major exceptions. Denying the reality of matter, he conceives the soul as existing in and by itself; souls or spirits differ from God as finite from infinite spiritual beings. The something "which knows and perceives" and which "exercises divers operations, as willing, imagining, remembering," Berkeley says, "is what I call *mind, spirit, soul,* or *myself.*" Berkeley, therefore, would not speak of himself or other men as having souls, but rather as *being* souls.

The other major exception is exemplified by Lucretius. It is not that Lucretius denies soul as Berkeley denies body. Nor does he deny that soul adds something to body which differentiates living organisms from inorganic things. On the contrary, he declares the mind to be "a part of man no whit less than hand and foot and eyes are parts of the whole living being." Distinct from mind, soul is also part of a living being. "Mind and soul are held in union one with the other, and form of themselves a single nature," but whereas the mind is, as it were, the lord or head of the whole body, "the rest of the soul, spread abroad throughout the body, obeys and is moved at the will and inclination of the mind."

But when Lucretius refers to mind and soul as parts of the body, he means no more than is implied in speaking of the hand and eye as parts of the body. "The nature of mind and soul is bodily," he writes. Just as flesh and bones are composed of atomic particles, so the mind is formed of atoms "exceeding small and smooth and round," and the soul is "made of very tiny seeds linked together throughout veins, flesh, and sinews."

APART FROM THESE exceptions, the traditional discussion of soul considers it as somehow conjoined with body to constitute a whole of which it is the immaterial principle or part. Even those who, like Descartes, define the soul as an immaterial substance, capable of existing by itself, do not actually ascribe to the human soul complete independence of the human body. Nor do the theologians who think of God as a purely spiritual being and of angels as immaterial substances attribute soul to them.

Precisely because God and the angels do not have bodies, neither do they have souls. Whether everything which has a body also has a soul is another question. It is variously answered; but certainly those who, like Plato and Plotinus, speak of a world-soul or a soul of the universe, confirm the point that soul is the co-principle or complement of body. The same point appears in theories of the celestial bodies which conceive them as being alive and as therefore having souls.

Unfolding to Socrates the story of the creation, Timaeus says: "Using the language of probability, we may say that the world became a living creature endowed with soul and intelligence by the providence of God." To the world, Timaeus explains, God "gave a body, smooth and even, having a surface in every direction equidistant from the center, a body entire and perfect, and formed out of perfect

bodies. And in the center, he put the soul which he diffused throughout the body, making it also to be the exterior environment of it."

Comparing the magnetic force of the loadstone with the animation of a soul, Gilbert says that "this one eminent property is the same which the ancients held to be a soul in the heavens, in the globes, and in the stars, in sun and moon. . . . The ancient philosophers . . . all seek in the world a certain universal soul, and declare the whole world to be endowed with a soul. Aristotle held that not the universe is animate, but the heavens only. . . . As for us," Gilbert writes, "we deem the whole world animate, and all globes, stars, and this glorious earth, too, we hold to be from the beginning by their own destinate souls governed . . . Pitiable is the state of the stars, abject the lot of earth, if this high dignity of soul is denied them, while it is granted to the worm, the ant, the roach, to plants and morels; for in that case, worms, roaches, moths, were more beauteous objects in nature and more perfect, inasmuch as nothing is excellent, nor precious, nor eminent, that hath not a soul."

On the question whether the earth, each heavenly body, or the whole world is endowed with life, intelligence, and soul, Kepler differs from Gilbert, Augustine from Plato and Plotinus, Aquinas from Aristotle. Nevertheless, the many-sided controversy indicates the traditional connection of soul with life and mind on the one hand, and with animate or organic bodies on the other—bodies which manifest certain properties and tendencies to motion.

THE MAJOR ISSUES CONCERNING soul seem to follow from these traditional associations. Does the soul which is somehow conjoined with a body exist as an immaterial substance or principle, in such a way that the being composed of body and soul consists of two distinct substances or entities, united as related parts of a whole? Or is the soul the substantial form of an organic body, with the consequence that the form and matter together constitute a single composite substance, which is the living thing? In the latter alternative the unity of soul and body, according to Aristotle, is like that of "the wax and the shape given to it by the die."

On either conception of soul and its relation to body or matter, further questions arise concerning the soul's existence apart from the body. Does it exist before being united to the body? Does it exist after the ion is dissolved? How does it exist when it exists separately or apart from matter? For those, like Lucretius, who conceive the soul as itself composed of material particles within the framework of the body, such questions can have little meaning. For those, like Plato and Descartes, who conceive the soul as an immaterial entity having being in its own right, these questions can be immediately answered in favor of the soul's capacity for separate existence. Only when the soul is conceived as a form which, together with matter, constitutes the substance of a living body, does there seem to be both meaning and difficulty to the question whether the soul continues to endure separately when a plant, an animal, or a man dies, *i.e.*, when such composite substances decompose.

If the individual soul ceases to be when the body with which it is somehow united perishes, it is as mortal as the body. The traditional theories of personal immortality—such as the Platonic myths concerning the transmigration or reincarnation of souls, and the Christian doctrine of man's immortal soul, specially created for union with the body, but destined to survive its separation from the body—are theories which involve conceptions of the soul as capable of self-subsistence. The controversy over these doctrines is dealt with in the chapter on IMMORTALITY. Here are we concerned to see how different implications for immortality necessarily follow from various theories of the soul.

Still other issues concerning soul arise in connection with other chapters. For example, the question whether soul is to be found only in living things, or only in animals but not in plants, or in man alone, is discussed in the chapters on LIFE AND DEATH and on MIND. If soul, on any conception, is the principle or cause of life, then the distinction between animate and inanimate bodies is identical with the distinction between things which have and things which do not have a soul. If, furthermore, the kind of life possessed by a vegetable or plant is radically different from animal life, and that in turn from human life, then souls, too, may have

to be differentiated in kind according to the mode of life or the range of vital powers of which each type is the principle.

Some writers, however, tend to equate "soul" with "mind" or "understanding." When, as by Descartes, soul is identified with rational soul or thinking substance, it is usually attributed to man alone. Soul is then not thought necessary to explain the phenomena of life in plants and animals, at least in no sense of soul which implies either an incorporeal or a formal principle; that is, anything beyond the complex interaction of organic parts. Other authors, like Locke, who conceive soul or understanding not merely in terms of rational thought, but also in terms of sensation, imagination, and memory, may exclude plants, but not animals, from the possession of soul or mind.

Descartes takes notice of these ambiguities in the traditional use of the word "soul." Probably because "men in the earliest times," he writes, "did not distinguish in us that principle in virtue of which we are nourished, grow, and perform all those operations which are common to us with the brutes . . . from that by which we think, they called both by the single name *soul*; then, perceiving the distinction between nutrition and thinking, they called that which thinks *mind*, believing also that this was the chief part of the soul. But I, perceiving that the principle by which we are nourished is wholly distinct from that by means of which we think have declared that the name *soul* when used for both is equivocal; and I say that, when soul is taken to mean the *primary actuality* or *chief essence of man*, it must be understood to apply only to the principle by which we think, and I have called it by the name *mind* as often as possible to avoid ambiguity; for I consider the mind not as part of the soul, but as the whole of that soul which thinks."

In another place, he uses the word "soul" to stand for "that subtle fluid styled the animal spirits" which, pervading the organs of brute animals, accounts for their peculiar type of animation. "We can recognize no principle of motion in them beyond the disposition of their organs and the continual discharge of the animal spirits that are produced by the beat of the heart as it rarefies the blood." Soul in this sense is not to be confused with "the incorporeal and spiritual nature of man's soul." It is "something corporeal, of a fine structure and subtle, spread throughout the external body, and the principle of all sensation, imagination, and thought. Thus there are three grades of being, Body, the Corporeal or soul, and Mind or spirit."

IN THE OPENING PAGES of his treatise *On the Soul*, Aristotle says that "to attain any assured knowledge about the soul is one of the most difficult things in the world." The difficulty seems to apply both to *what the soul is* and to *whether it exists*. The questions are connected. Even Lucretius, who regards the soul as material in nature, does not claim to know its existence by direct observation. It is not, like the body itself or like other parts of the body, a sensible object. It must be inferred to exist. Just as the existence of unobservable atoms is inferred in order to explain the constitution and change of all natural objects, so the existence of soul is inferred in order to explain the constitution and motion of living things. Those who conceive the soul as immaterial—whether as substance, principle, or form—would seem to face an even greater difficulty in establishing its existence and in describing its nature. Admittedly, the soul as some sort of immaterial being cannot be discovered by observation and experiment. The alternatives, which represent traditional solutions of the problem, seem to include the soul's reflexive knowledge of its own existence, inferential knowledge about the soul based on observed facts, various religious beliefs concerning the nature and destiny of the soul, and the postulation of the soul's existence on practical, not theoretic, grounds.

Not all writers agree with Aristotle that the soul is an object difficult to know, or with Kant that it is absolutely impossible for us to reach any sound theoretic conclusions about the soul's existence. Descartes, for example, says that if there are "any persons who are not sufficiently persuaded of the existence of God and of the soul by the reasons which I have brought forward, I wish them to know that all other things of which they perhaps think themselves more assured (such as possessing a body, and that there are stars and an earth and so on) are less certain."

The argument for the soul's existence which

precedes this remark is the famous *Cogito, ergo sum*—"I think; therefore, I am." From the fact that, in the very act of doubting the existence of everything else, he could not doubt that he was doubting, and hence thinking, Descartes assures himself of his own existence, or, more precisely, of the existence of himself as a thinking being. "I knew," he writes, "that I was a substance the whole essence or nature of which is to think, and that for its existence there is no need of any place, nor does it depend on any material thing; so that this 'me,' that is to say, the soul by which I am what I am, is entirely distinct from body, and is even more easy to know than is the latter; and even if the body were not, the soul would not cease to be what it is."

Locke appears to agree that "if I doubt of all other things, that very doubt makes me perceive my own existence, and will not suffer me to doubt of that.... I have as certain perception of the existence of the thing doubting," he goes on, "as of that thought which I call doubt. Experience then convinces us that we have an intuitive knowledge of our own existence, and an internal infallible perception that we are."

But Locke does not turn the proposition that a thinking being exists into the assertion that a spiritual being, the soul as an immaterial substance, exists. "We have the idea of matter and thinking," he writes, "but possibly shall never be able to know whether any mere material being thinks or no; it being impossible for us, by the contemplation of our own ideas, without revelation, to discover whether Omnipotency has not given to some systems of matter fitly disposed, a power to perceive and think, or else joined and fixed to matter so disposed, a thinking immaterial substance: it being, in respect of our notions, not much more remote from our comprehension to conceive that God can, if he pleases, superadd to matter a faculty of thinking, than that he should superadd to it another substance with a faculty of thinking."

For Locke, however, our idea of soul is as clear as our idea of body. "Our idea of body," he says, "is an extended, solid substance capable of communicating motion by impulse; and our idea of soul, as an immaterial spirit, is of a substance that thinks, and has a power of exciting motion in body, by willing or thought ... I know that people whose thoughts are immersed in matter, and have so subjected their minds to their senses, that they seldo reflect on anything beyond them, are apt to say, that they cannot comprehend a thinking thing; which, perhaps, is true: but I affirm, when they consider it well, they can no more comprehend an extended thing." And in another place, he adds: "If this notion of immaterial spirit may have, perhaps, some difficulties in it, not easy to be explained, we have, therefore, no more reason to deny or doubt the existence of such spirits, than we have to deny or doubt the existence of body, because the notion of body is cumbered with some difficulties, very hard, and, perhaps, impossible to be explained or understood by us."

Berkeley differs from Locke not only in maintaining that we have no idea of matter at all, but also in holding that, if we use the word "idea" for sense-impressions or the images derived from them, we can have no idea of soul or spiritual substance. But we can, he thinks, form what he calls a "notion" of the soul, which grasps the meaning of the word "spirit" as signifying "that which thinks, wills, or perceives." He differs from Locke further in proportion as he tends to agree with Descartes, asserting that the existence of a spiritual substance, a thinking being, necessarily follows from the undeniable existence of thinking itself.

For both Descartes and Berkeley, the immortality of the soul can be directly concluded from our knowledge of the soul's existence and nature. "The soul," writes Berkeley, "is indivisible, incorporeal, unextended, and it is consequently incorruptible. Nothing can be plainer than that the motions, changes, decays and dissolutions which we hourly see befall natural bodies ... cannot possibly affect an active, simple, uncompounded substance; such a being therefore is indissoluble by the force of nature; that is to say, 'the soul of man is naturally immortal.'"

The arguments in Plato's *Phaedo* for the proper existence of the soul before it joins a particular body, and for its existence after it leaves the body to dwell apart before entering another body—arguments, in short, for the

soul's immortality—seem to stem from a slightly different principle. It is not merely that the soul is simple or uncompounded and hence indissoluble, or that the knowledge we have of the absolute ideas requires us to posit a principle of knowledge other than the bodily senses which can apprehend only changing things. In addition, Socrates argues that the knower must be like the known. If it is the soul which knows the unchangeable and eternal essences, it must be as unchangeable and eternal as they are. When the soul uses "the body as instrument of perception," Socrates says, it is "then dragged by the body into the region of the changeable . . . But when returning into herself she reflects, then she passes into the other world, the region of purity, and eternity, and immortality, and unchangeableness, which are her kindred."

AGAINST ANY FORM of argument for the existence and immortality of the human soul which proceeds from the nature of our thought or knowledge, Kant takes the position that the premises do not warrant the conclusion. He claims to expose the fallacies in what he calls the "paralogism of a rational psychology." The "I" of the *Cogito, ergo sum* may be the necessary logical subject of all our judgments, but this does not give us intuitive knowledge of a really existing substance which has the attributes of simplicity, spirituality, and permanence or immortality.

"In all our thinking," Kant writes, "the I is the subject in which our thoughts are inherent; nor can that I ever be used as a determination of any other thing. Thus everybody is constrained to look upon himself as the substance, and on thinking as the accident of his being." But, he goes on, "though the I exists in all thoughts, not the slightest intuition is connected with that representation by which it might be distinguished from other objects of intuition. . . . Hence it follows that in the first syllogism of transcendental psychology reason imposes upon us an apparent knowledge only, by representing the constant logical subject as the knowledge of the real subject in which that knowledge inheres. Of that subject, however, we have not and cannot have the slightest knowledge. . . . In spite of this, the proposition that the soul is a substance may well be allowed to stand, if only we see that this concept cannot help us on in the least or teach us any of the ordinary conclusions of rational psychology, as, for instance, the everlasting continuance of the soul amid all changes and even in death; and that it therefore signifies a substance in idea only, and not in reality."

Similarly with respect to the simplicity of the soul, Kant contends that the absolute, but merely logical, unity of apperception or thought is illegitimately converted into the absolute unity of a real substance. The proposition, *I am a simple substance*, he declares, "teaches us nothing at all with reference to myself as an object of experience." Its only value is to enable us "to distinguish the soul from all matter, and thus to exempt it from that decay to which matter is at all times subject."

To this extent, rational psychology may "guard our thinking self against the danger of materialism." The concept of the soul as an immaterial and simple substance may thus function regulatively, but we deceive ourselves with the illusion of knowledge when we treat that concept as if it had intuitive content—when, as he says, we change "thoughts into things." Kant does not deny that the "I" is substantial in concept or simple in concept. Though these propositions are "incontestably true," he says, "nevertheless, what we really wish to know of the soul, becomes by no means known to us in that way, because all these predicates are with regard to intuition non-valid, entailing no consequences with regard to objects of experience, and therefore entirely empty."

The existence and immortality of the soul is, for Kant, a postulate or demand of the practical reason. "Of the psychic substance, regarded as an immortal soul, it is absolutely impossible to obtain any proof from a theoretical point of view," but if such an object must be thought *a priori* in order for "pure practical reason to be used as duty commands," it becomes what Kant calls "matter of faith." Immortality seems to him rationally required as the practically necessary condition for the fulfillment of the moral law and the endless progress of the soul toward holiness of will.

William James questions even such practical arguments for the soul. The imperishability of

a simple substance does not, he thinks, guarantee "immortality of a sort *we care for*." Nor, following Locke, does it seem to him that a substantial soul is required for personal identity and moral responsibility. Writing as an empirical or scientific psychologist, who feels "entirely free to discard the word Soul" because he finds the concept useless "so far as accounting for the actually verified facts of conscious experience goes," James tells those who may find "any comfort in the idea" that they are "perfectly free to continue to believe in it; for our reasonings have not established the nonexistence of the Soul; they have only proved its superfluity for scientific purposes."

JAMES' CONCLUSION THAT "the substantial Soul . . . explains nothing and guarantees nothing," along with the arguments of Kant and Locke, may not apply to the soul conceived as the principle of life rather than as the agent of thought, or to the soul conceived as the form of an organic body rather than as a spiritual being associated with or somehow imprisoned in the body. Precisely because this other conception affirms reality of soul as something other than a complete substance, precisely because it applies to plants and animals as well as men, this other conception of soul would seem to require a different sort of criticism.

The Greek and Latin words—*psyche* and *anima*—which we translate by "soul" seem to have life as their primary connotation. In the *Cratylus*, Socrates suggests that "those who first used the name *psyche* meant to express that the soul when in the body is the source of life, and gives the power of breath and revival." Other dialogues express the Greek conception of the living thing as that which has the power of self-motion, and ascribe this power to the soul as source. In the *Phaedo*, for example, Socrates asks, "What is that the inherence of which will render the body alive?" to which Cebes answers, "Soul," and agrees with Socrates' further statement that "whatever the soul takes possession of, to that she comes bearing life." In the *Laws*, Cleinias having identified the power of self-motion with life, the Athenian Stranger gains his assent to the proposition that whatever has life or self-motion also has soul.

To this much Aristotle also agrees. "What has soul in it," he says, "differs from what has not, in that the former displays life"; to which he adds that "living may mean thinking or perception or local movement, or movement in the sense of nutrition and growth," so that we must "think of plants also as living," and as having souls. But Aristotle goes further. In defining soul as the cause of life, and in differentiating three kinds of souls—vegetative, sensitive, and rational—according to the vital powers manifested by the activities of plants, animals, and men, he uses his general theory of corporeal substances to state precisely what the soul is and how it is related to the body.

Corporeal substances are, according to him, all composite of two principles, form and matter. "What is called matter is potentiality, what is called form, actuality." As exemplified in works of art, wood is the matter which has the potentiality for a certain shape and a certain function that is the actuality or form of a chair. In the case of natural things, that which determines "the essential whatness" of a body is its form or, as Aristotle sometimes says, "its formulable essence."

If living things are essentially distinct from inert bodies, as Aristotle supposes them to be, then the forms which determine their essences must be different from the forms of inanimate substances. It is this difference in forms which Aristotle appropriates the word "soul" to signify. In each kind of living thing, the soul is the substantial form or "the first grade of actuality of a natural body having life potentially in it."

He speaks of the first grade of actuality here to distinguish merely being alive or besouled from the various acts which, as operations of the vital powers, constitute living. If an axe or an eye had a soul, it would consist of its power to cut or to see, not in its actually cutting or seeing. While nourishing or thinking "is actuality corresponding to the cutting and the seeing, the soul is actuality in the sense corresponding to the power of sight and the power in the tool . . . As the pupil *plus* the power of sight constitutes the eye, so the soul *plus* the body constitutes the animal."

From this conception of soul as the form or actuality of a living substance, "it indubitably

follows," Aristotle says, "that the soul is inseparable from its body, or at any rate certain parts of it are—for the actuality of some of them is nothing but the actualities of their bodily parts." Where Plato holds that the soul is prior in existence to the body, Aristotle holds that soul and body come into existence together when the organism is generated. Where Plato attributes an independent mode of being to the soul, distinct in character from that of bodies, Aristotle says that "the soul cannot be without a body. Yet it cannot *be* a body; it is not a body, but something relative to a body. That is why it is *in* a body and a body of a definite kind," being nothing more than "the actuality or formulable essence of something that possesses the potentiality of being besouled."

FURTHER CONSEQUENCES follow from these conflicting conceptions of soul. In the *Timaeus*, Plato advances the view that only the lowest grade of soul—the plant soul—is mortal, in contrast to the souls of animals and men. Aristotle would seem to attribute mortality to every grade of soul. If any exception is to be made, it is only for the human soul because it involves the power of rational thought. Mind or the power to think, he writes, "seems to be a widely different kind of soul, differing as what is eternal from what is perishable."

The critical point is whether thinking, unlike all other psychic powers, is an activity of the soul alone. For the most part, "there seems to be no case in which the soul can act or be acted upon without involving the body.... Thinking seems the most probable exception; but," Aristotle adds, "if this too proves to be a form of imagination or to be impossible without imagination, it too requires a body as the condition of its existence. If there is any way of acting or being acted upon proper to soul, soul will be capable of separate existence; if there is none, its separate existence is impossible."

Is there any way of acting or being acted upon proper to soul? Aristotle seems to answer this question affirmatively when he says that "insofar as the realities it knows are capable of being separated from their matter, so is it also with the powers of mind." On one interpretation this means that the mind or intellect is as immaterial in its mode of operation as some of its objects are in their mode of being; with the further consequence that what is capable of acting apart from body is also able to exist apart from body. But whether Aristotle's further statement that "mind set free from its present conditions . . . is immortal and eternal" applies to the intellect alone or to the rational soul as a whole, has been disputed by various interpreters. Adopting Aristotle's conception of soul as the form which is the actuality of life in an organic body, Aquinas for one seems to think that the immortality of a rational soul can be demonstrated from the special character of its intellectual powers.

A theory of the soul which regarded it as a simple and incorporeal substance, or as having a being independent of the body, would seem to harmonize more readily with the Christian belief in the human soul's special creation and its individual survival after death. But Aquinas rejects such a theory on the ground that then man would be two substances or two beings, not one; or else if the human person is identified with the soul, man would be a soul using a body rather than a single substance of composite nature. The doctrine of body and soul which holds them to be related as matter and form, preserves the unity of man and, in the opinion of Aquinas, fits the way in which man learns through his senses, experiences passions, and, in thinking, depends upon imagination.

But though he admits that men cannot think without images, Aquinas also insists, contrary to Locke, that thinking, insofar as it involves abstract concepts, cannot be performed by matter. To make matter think is beyond even the power of God. Unlike nourishing or sensing, *understanding* is not and cannot be "the act of a body, nor of any corporeal power."

This theory—that the acts of understanding by which the intellect abstracts and receives universal concepts cannot be accounted for by the motions of the brain—is further discussed in the chapter on UNIVERSAL AND PARTICULAR. Here we are concerned simply to note that, for Aquinas, the fact that the concepts with which men think are universal, means that they are abstracted from matter; and the fact that they are abstracted from matter means that the

various acts of understanding must also be immaterial—that is, not acts of bodily organs like the brain. To these premises Aquinas adds one further principle, namely, that a thing's mode of being is indicated by its mode of operation. In these terms he concludes that, since the intellect has "an operation *per se* apart from the body," the human soul, which is called rational because of its power of understanding, can have a being *per se* apart from the body. Hence it is "something incorporeal and subsistent."

Nevertheless, according to Aquinas, though the human soul can subsist separately, it belongs to its nature to be embodied, that is, to be the form of a material substance. "The soul, as part of human nature," he writes, "has its natural perfection only as united to the body. Therefore it would have been unfitting for the soul to be created without the body." Furthermore, if the entire nature of man were to be a soul—the soul making "use of the body as an instrument, or as a sailor uses a ship"—there would be no need for the resurrection of the body after the Last Judgment. The Christian dogma of the resurrected body more properly accords, in Aquinas' view, with a conception of soul "united to the body as form to matter"; for, as he says in another place, "if it is natural to the soul to be united to the body, it is unnatural for it to be without a body, and as long as it is without a body it is deprived of its natural perfection."

In the consideration of the relation of body and soul, an opposite estimation of the body's role goes with an opposite theory of the soul's nature. Socrates, in the *Phaedo*, describes the body as the soul's prison-house, or worse, the source of the soul's contamination by the impurities of sense and passion. "In this life," he says, "we make the nearest approach to knowledge when we have the least possible intercourse or communion with he body, and are not surfeited with the bodily nature." But complete purification requires "the separation of the soul from the body . . the release of the soul from the chains of the body." That is why, Socrates tells his friends gathered in the cell where he is to drink the hemlock, "true philosophers are ever seeking to release the soul" and "are always occupied in the practice of dying."

It is also the opinion of Plotinus that it is evil for the soul to be in the body. But Christian theologians, for the most part, take a contrary view. Aquinas, for example, criticizes Origen for holding that "souls were embodied in punishment of sin." To him there is nothing "of a penal and afflicting nature" in the soul's union with the body. Though Scripture says that "the corruptible body weigheth down the soul, and the earthly tabernacle presseth down the mind," Augustine interprets this to mean, not that the flesh is evil in itself, but that man is beset by sin when "the flesh lusteth against the spirit."

"There is no need, therefore," according to Augustine, "that in our sins and vices we accuse the nature of the flesh to the injury of the Creator, for in its own kind and degree the flesh is good." Man is both body and soul, human nature is a thing of both flesh and spirit, and "he who extols the nature of the soul as the chief good," Augustine continues, "and condemns the nature of the flesh as if it were evil, assuredly is fleshly both in his love of the soul and his hatred of the flesh."

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REFERENCES

To find the passages cited, use the numbers in heavy type, which are the volume and page numbers of the passages referred to. For example, in **4** HOMER: *Iliad*, BK II [265–283] **12d**, the number **4** is the number of the volume in the set; the number **12d** indicates that the passage is in section d of page 12.

PAGE SECTIONS: When the text is printed in one column, the letters a and b refer to the upper and lower halves of the page. For example, in **53** JAMES: *Psychology*, **116a-119b**, the passage begins in the upper half of page 116 and ends in the lower half of page 119. When the text is printed in two columns, the letters a and b refer to the upper and lower halves of the left-hand side of the page, the letters c and d to the upper and lower halves of the right-hand side of the page. For example, in **7** PLATO: *Symposium*, **163b-164c**, the passage begins in the lower half of the left-hand side of page 163 and ends in the upper half of the right-hand side of page 164.

AUTHOR'S DIVISIONS: One or more of the main divisions of a work (such as PART, BK, CH, SECT) are sometimes included in the reference; line numbers, in brackets, are given in certain cases; *e.g.*, *Iliad*, BK II [265–283] **12d**.

BIBLE REFERENCES: The references are to book, chapter, and verse. When the King James and Douay versions differ in title of books or in the numbering of chapters or verses, the King James version is cited first and the Douay, indicated by a *(D)*, follows; *e.g.*, OLD TESTAMENT: *Nehemiah*, 7:45—*(D) II Esdras*, 7:46.

SYMBOLS: The abbreviation "esp" calls the reader's attention to one or more especially relevant parts of a whole reference; "passim" signifies that the topic is discussed intermittently rather than continuously in the work or passage cited.

For additional information concerning the style of the references, see the Explanation of Reference Style; for general guidance in the use of *The Great Ideas*, consult the Preface.

1. Conceptions of soul

1*a*. Soul as the ordering principle of the universe: the world soul and its relation to the intellectual principle; the souls of the heavenly bodies

7 PLATO: *Cratylus*, 93c-d / *Phaedrus*, 124b-d / *Apology*, 204d-205a / *Phaedo*, 241b-242b / *Timaeus*, 447a-455d esp 449c-450c / *Philebus*, 618b-619d / *Laws*, BK X, 757d-765d esp 762b-765d; BK XII, 797c-798b

8 ARISTOTLE: *Heavens*, BK II, CH 1 [284^a27–$^b1$] 376a; CH 12 383b-384c / *Metaphysics*, BK XII, CH 6 [1071^b32–1072^a3] 601d / *Soul*, BK I, CH 3 [406^b26–407^b25] 636b-637b; CH 5 [411^a6–23] 641a-b

12 EPICTETUS: *Discourses*, BK I, CH 14 120d-121c

12 AURELIUS: *Meditations*, BK IV, SECT 29 266a; SECT 40 267a-b; BK V, SECT 30 273a; BK VI, SECT 38 277c-d; BK VII, SECT 9–10 280b-c; BK VIII, SECT 7 286a; BK X, SECT 6–7 297a-c; BK XII, SECT 30 310a-b

13 VIRGIL: *Aeneid*, BK VI [724–751] 230b-231a

16 KEPLER: *Epitome*, BK IV, 853b-856a; 890a-895b; 896a-897a; 914a-b; 932a-933a; 959a-960a / *Harmonies of the World*, 1080b-1085b esp 1083b-1085b

17 PLOTINUS: *Second Ennead*, TR I, CH 4 36d-37b; TR II 40a-42a; TR III, CH 2 42c-d; CH 13 46c-47b; CH 16–18 48b-50a; TR IX, CH 4 67c-68a; CH 7–9 69c-72a passim / *Third Ennead*, TR I, CH 4 79d-80a; TR II, CH 3, 84b; TR IV, CH 6, 99d; TR V, CH 6 103b-104a; TR VII, CH 11–13 126a-129a; TR VIII, CH 4–5 130b-131d / *Fourth Ennead*, TR III, CH 1–2 141c-143b; CH 4 143d-144b; CH 6–7 144c-145d; CH 9–10 146d-148b; TR IV, CH 6–16 161b-166b; CH 22 168d-169c; CH 26–27 171b-172a; CH 29–45 173b-183a passim; TR VIII, CH 1–2 200d-202a passim; TR VIII, CH 7–TR IX, CH 5 204b-207a,c / *Fifth Ennead*, TR I, CH 2, 208d-209a; CH 6–8 211a-213a; CH 10, 213c; TR II, CH 2 215a-c; TR IX, CH 3 247b-d; CH 13–14 251a-d

18 AUGUSTINE: *City of God*, BK IV, CH 11–12 194c-196a; BK VII, CH 6 248a-b; CH 9, 249d-250a; CH 13 251c-252a; CH 23 256b-257b; BK XIII, CH 16, 367c

19 AQUINAS: *Summa Theologica*, PART I, Q 3, A 8, ANS 19d-20c; Q 18, A 1, REP 1 104c-105c; Q 47, A 1, ANS 256a-257b; Q 70, A 3 365b-367a

20 AQUINAS: *Summa Theologica*, PART III SUPPL, Q 79, A 1, ANS 951b-953b

23 HOBBES: *Leviathan*, PART II, 162b

28 GILBERT: *Loadstone*, BK II, 38b; BK V, 104b-105d

28 HARVEY: *On Animal Generation*, 426b-429b
34 NEWTON: *Principles*, BK III, GENERAL SCHOL, 370a / *Optics*, BK III, 542b-543a
40 GIBBON: *Decline and Fall*, 767c [n 18]
42 KANT: *Judgement*, 565d
48 MELVILLE: *Moby Dick*, 115b-117a
51 TOLSTOY: *War and Peace*, BK V, 216d-218b; BK XII, 561b-c; BK XIV, 608a-b
53 JAMES: *Psychology*, 658b-659a

1b. Soul as the principle of self-motion or life in living things: soul as the form of an organic body

7 PLATO: *Cratylus*, 93b-d / *Phaedrus*, 124b-c / *Phaedo*, 244b-246c / *Laws*, BK X, 763a-764a
8 ARISTOTLE: *Topics*, BK IV, CH 6 [127^{b}13-18] 177a-b / *Metaphysics*, BK V, CH 8 [1017^{b}10-17] 538b; BK VII, CH 10 [1035^{b}14-28] 559a-b; BK VIII, CH 3 [1043^{a}29-^{b}4] 567d; BK XII, CH 5 [1071^{a}2-4] 600c; BK XIII, CH 2 [1077^{a}20-23] 608c / *Soul* 631a-668d esp BK II, CH 1-3 642a-645b
9 ARISTOTLE: *Parts of Animals*, BK I, CH 1 [640^{b}30-641^{a}33] 163c-164b / *Generation of Animals*, BK I, CH 19 [726^{b}15-30] 266d-267a; BK II, CH 1 [731^{b}29-31] 272a; [733^{b}23-735^{a}28] 274a-276a; CH 3 [737^{a}18-34] 278a-b; CH 4 [738^{b}18-27] 279c; CH 4 [740^{b}25]-CH 5 [741^{a}30] 281d-282b; BK III, CH 11 [762^{a}18-^{b}27] 303b-d
10 GALEN: *Natural Faculties*, BK I, CH 1 167a-b
12 AURELIUS: *Meditations*, BK IV, SECT 21 265b-c; BK IX, SECT 9 292b-d
17 PLOTINUS: *First Ennead*, TR I 1a-6b passim / *Second Ennead*, TR III, CH 13 46c-47b; TR IX, CH 7 69c-70a / *Fourth Ennead*, TR I 139a-b; TR III, CH 8, 146b-d; CH 19, 151d; CH 23, 153d; TR IV, CH 29 173b-174b; TR V, CH 7, 188b-c; TR VII 191c-200c / *Fifth Ennead*, TR I, CH 2 208c-209b; TR II, CH 2 215a-c / *Sixth Ennead*, TR IV, CH 16, 305a
18 AUGUSTINE: *City of God*, BK VII, CH 23, 256b-c; BK XIII, CH 2 360b-361a; BK XIX, CH 3, 510a-b; BK XXI, CH 3, 561c-d; BK XXII, CH 4 588b-d
19 AQUINAS: *Summa Theologica*, PART I, Q 3, A 1, ANS 14b-15b; Q 18, A 3, ANS and REP 1 106b-107c; Q 51, A 1, REP 3 275b-276b; Q 70, A 3, ANS and REP 2 365b-367a; Q 72, A 1, REP 1 368b-369d; QQ 75-76 378a-399b; Q 97, A 3, ANS 515a-d
20 AQUINAS: *Summa Theologica*, PART I-II, Q 56, A 1, REP 1 30a-c; PART II-II, Q 23, A 2, REP 2 483d-484d; PART III, Q 2, A 5, ANS and REP 3 715a-716b; Q 5, A 3 737d-739a
21 DANTE: *Divine Comedy*, PURGATORY, XVIII [40-54] 80b-c; XXV [1-108] 91b-92c; PARADISE, II [127-148] 109a-b; IV [49-54] 111b
23 HOBBES: *Leviathan*, INTRO, 47a-b; PART IV, 251a
28 HARVEY: *On Animal Generation*, 384d-390b passim; 488d-496d passim
53 JAMES: *Psychology*, 139b-140a

1c. Soul as the principle of distinction between thinking and non-thinking beings: the identity or distinction between soul and mind or intellect

8 ARISTOTLE: *Soul*, BK I, CH 3 [406^{b}26-407^{b}13] 636b-637b
12 LUCRETIUS: *Nature of Things*, BK III [94-416] 31b-35c
31 DESCARTES: *Discourse*, PART IV, 51d-52a; PART V, 56a-b; 59a-60c / *Meditations*, 71b-d; II 77d-81d / *Objections and Replies*, 119d-120a; DEF VI 130c; 135b-136b; 152b,d-156a passim; 207a; 208c-d; 219b-220a; 224d-226d; 249d-250b
35 LOCKE: *Human Understanding*, BK II, CH XXIII, SECT 5 205a-b; SECT 15 208c-d; SECT 18-22 209a-d; SECT 28-32 211b-212d; CH XXVII, SECT 12-14 223a-224b passim
35 BERKELEY: *Human Knowledge*, SECT 26-28 418a-c; SECT 89 430b-c; SECT 98 432a; SECT 135-142 440a-441c passim; SECT 148 442b-d
46 HEGEL: *Philosophy of Right*, PART I, par 47 24a-b
53 JAMES: *Psychology*, 85a-b; 130b-131a; 139b-140a

1d. Soul as the principle of personal identity: the doctrine of the self; the empirical and the transcendental ego

35 LOCKE: *Human Understanding*, BK I, CH III, SECT 4-5 113b-c; BK II, CH XXVII, SECT 7 220d-221a; SECT 9-29 222a-228c esp SECT 12-14 223a-224b
35 BERKELEY: *Human Knowledge*, SECT 139 440d
42 KANT: *Pure Reason*, 49c-51d esp 51c-d; 120c-129c esp 121a-124d, 126a-128b; 200c-204c esp 203d-204c
46 HEGEL: *Philosophy of Right*, PART I, par 47 24a-b; ADDITIONS, 28 121b
53 JAMES: *Psychology*, 188a-197a esp 191a-192b, 194b-196a; 213a-240a esp 213a, 216b-220a, 221a-225b, 232b-238b

2. The analysis of the powers of the soul

2a. The distinction between the soul and its powers or acts

8 ARISTOTLE: *Soul*, BK I, CH 1 [402^{b}9-12] 631d; CH 5 [411^{b}5-31] 641c-d; BK II, CH 1 [412^{a}21-28] 642b; CH 2 [413^{b}10-414^{a}4] 643c-644a; BK III, CH 9 [432^{a}15-^{b}9] 664d-665a; CH 10 [433^{a}33-^{b}4] 666a-b
9 ARISTOTLE: *Parts of Animals*, BK II, CH 7 [652^{b}7-16] 177d-178a
10 GALEN: *Natural Faculties*, BK I, CH 2, 168b-c
17 PLOTINUS: *Third Ennead*, TR VI, CH 2 107a-108a / *Fourth Ennead*, TR IV, CH 23-25 169c-171b
19 AQUINAS: *Summa Theologica*, PART I, Q 77, A 1 399c-401b; AA 5-6 403d-405c; Q 79, A 1 414a-d

(2. *The analysis of the powers of the soul.* 2*a. The distinction between the soul and its powers or acts.*)

20 AQUINAS: *Summa Theologica*, PART I-II, Q 50, A 2 7c-8a; Q 83, A 2, REP 3 172b-173a; Q 110, A 4 350d-351d; PART III, Q 6, A 2, ANS and REP 1,3 741c-742a; PART III SUPPL, Q 70, A 1, REP 4 893d-895d
21 DANTE: *Divine Comedy*, PURGATORY, IV [1-18] 57c; XXV [37-84] 91d-92b
30 BACON: *Advancement of Learning*, 54b-c
31 DESCARTES: *Rules*, XII, 20a-b / *Objections and Replies*, 135b-136b; 208c-209a
35 LOCKE: *Human Understanding*, BK II, CH I, SECT 9-25 123a-127d esp SECT 10 123b-d; CH XIX, SECT 4 176a-b; CH XXI, SECT 6 179d-180a; SECT 14-20 181b-183a
35 BERKELEY: *Human Knowledge*, SECT 98 432a
53 JAMES: *Psychology*, 130b-131a

2*b*. The order, connection, and interdependence of the parts of the soul: the id, ego, and super-ego in the structure of the psyche

7 PLATO: *Phaedrus*, 128a-129c / *Republic*, BK II-IV, 316a-356a; BK IX, 425c-426a / *Timaeus*, 466a-467a
8 ARISTOTLE: *Soul*, BK I, CH 5 [411a23-b31] 641b-d; BK III, CH 6-13 662d-668d
9 ARISTOTLE: *Motion of Animals*, CH 10 [703a 28-b1] 239a / *Ethics*, BK I, CH 13 347b-348d; BK V, CH 11 [1138b5-15] 387a,c; BK VI, CH 1 [1138b35]-CH 2 [1139b13] 387b-388b; BK IX, CH 4 [1166b13-24] 419d-420a / *Politics*, BK I, CH 5 [1254a34-1255a2] 448a-c; CH 13 [1260a4-8] 454c; BK III, CH 4 [1277a5-12] 474a; BK VII, CH 14 [1333a17-25] 538a
11 NICOMACHUS: *Arithmetic*, BK I, 826d-827a
17 PLOTINUS: *First Ennead*, TR 1 1a-6b passim / *Fourth Ennead*, TR III, CH 3 143b-c; CH 19 151d-152b; TR IV, CH 17, 166c-d / *Sixth Ennead*, TR IV, CH 15, 304c-d
18 AUGUSTINE: *City of God*, BK XIX, CH 13, 519a
19 AQUINAS: *Summa Theologica*, PART I, Q 77, AA 4-7 403a-406b; PART I-II, Q 9, AA 1-2 657d-659c; Q 37, A 1, ANS 783d-784c
20 AQUINAS: *Summa Theologica*, PART III, Q 15, A 9, REP 3 794c-795b
21 DANTE: *Divine Comedy*, PURGATORY, IV [1-18] 57c; XXV [37-84] 91d-92b
23 HOBBES: *Leviathan*, PART II, 151a-d
28 HARVEY: *On Animal Generation*, 444c-445c; 447a-b
32 MILTON: *Paradise Lost*, BK XII [79-97] 321a / *Areopagitica*, 407b
54 FREUD: *Ego and Id*, 701d-703a; 703c-708c; 712a-717a,c esp 712b-c, 714b-c, 715c-716a / *Inhibitions, Symptoms, and Anxiety*, 721d-722c esp 722b-c / *New Introductory Lectures*, 830a-840a esp 836d-839d

2*c*. The kinds of soul and the modes of life: vegetative, sensitive, and rational souls and their special powers

7 PLATO: *Republic*, BK [illegible]V, 350c-353c; BK IX, 421a-427b / *Timaeus*, [illegible]9d-470a
8 ARISTOTLE: *Topics*, BK V, CH 4 [133a28-33] 184c; BK VI, CH 10 [148a23-37] 202b-c / *Heavens*, BK II, CH 12 [292b1-11] 384a / *Soul*, BK I, CH 1 [402b1-403a2] 631c-632a; CH 3 [407a3-6] 636b-c; CH 5 [410b16-411a2] 640d-641a; BK II, CH 2-3 643a-645b
9 ARISTOTLE: *Parts of Animals*, BK I, CH 1 [641a33-b10] 164b-c / *Generation of Animals*, BK II, CH 3 [736a25-737a19] 276d-278a; CH 4 [740b25]-CH 5 [741a30] 281d-282b; BK III, CH 7 [757b14-30] 298c-d
10 GALEN: *Natural Faculties*, BK I, CH 1 167a-b
12 LUCRETIUS: *Nature of Things*, BK III [231-322] 33a-34b
12 AURELIUS: *Meditations*, BK III, SECT 16 262d-263a,c; BK IX, SECT 9 292b-d
16 KEPLER: *Epitome*, BK IV, 854b
17 PLOTINUS: *First Ennead*, TR 1 1a-6b passim / *Second Ennead*, TR II, CH 3 41c-42a; TR IX, CH 2, 67a / *Third Ennead*, TR IV, CH 2, 97d / *Fourth Ennead*, TR III, CH 19 151d-152b; CH 23 153d-154b; TR IV, CH 13 164d-165b; CH 28 172a-173b; TR VII, CH 14 200b-c; TR IX, CH 3 206a-b / *Fifth Ennead*, TR II, CH 2 215a-c; TR III, CH 9 220d-221b
18 AUGUSTINE: *City of God*, BK VII, CH 23, 256b-c; CH 29 261a-b; BK XIX, CH 13, 519a / *Christian Doctrine*, BK I, CH 8, 626c-d
19 AQUINAS: *Summa Theologica*, PART I, Q 18, AA 1-2 104c-106b; A 3, ANS 106b-107c; Q 69, A 2, REP 1 361c-362c; Q 70, A 3 365b-367a; QQ 77-83 399b-440b; Q 118, AA 1-2 600a-603b; PART I-II, Q 17, AA 8 9 692a-693d
20 AQUINAS: *Summa Theologica*, PART I-II, Q 110, A 4, REP 3 350d-351d
21 DANTE: *Divine Comedy*, PURGATORY, IV [1-18] 57c; XXV [37-84] 91d-92b; PARADISE, VII [121-148] 116b-c
28 HARVEY: *On Animal Generation*, 369d-370b; 386b-388a; 397c-398c; 441a-443b; 445c; 447a-b
31 DESCARTES: *Discourse*, PART V, 60b-c / *Objections and Replies*, 156a-d; 207a
32 MILTON: *Paradise Lost*, BK V [469-490] 185b-186a
35 LOCKE: *Human Understanding*, BK II, CH IX, SECT 11-15 140b-141a; CH XXVII, SECT 4-5 220a-c
36 STERNE: *Tristram Shandy*, 271a
42 KANT: *Judgement*, 465c-467a

2*c*(1) The vegetative powers: the powers proper to the plant soul

7 PLATO: *Timaeus*, 469d-470a
8 ARISTOTLE: *Generation and Corruption*, BK I, CH 5 417b-420b / *Soul*, BK I, CH 5 [411b27-31] 641d; BK II, CH 2 [413a20-34] 643b-c; [413b5-

9] 643c; CH 4 645b-647b; BK III, CH 12 [434a22-26] 667a-b
9 ARISTOTLE: *Generation of Animals*, BK II, CH 4 [740b9-741a5] 281c-282a
10 GALEN: *Natural Faculties* 167a-215d esp BK I, CH 1 167a-b, CH 5-8 169b-171a
17 PLOTINUS: *Third Ennead*, TR IV, CH 2 97d-98a / *Fourth Ennead*, TR IV, CH 22 168d-169c; CH 26-27 171b-172a
18 AUGUSTINE: *City of God*, BK VII, CH 23, 256b-c; CH 29 261a-b
19 AQUINAS: *Summa Theologica*, PART I, Q 18, A 3, REP 3 106b-107c; Q 78, A 1, ANS 407b-409a; A 2 409a-410a; Q 118, A 1 600a-601c; Q 119, A 1, ANS 604c-607b; A 2, ANS 607b-608d; PART I-II, Q 17, A 8 692a-c
20 AQUINAS: *Summa Theologica*, PART I-II, Q 50, A 3, REP 1 8b-9a; PART III SUPPL, Q 80, A 4, ANS 959c-963a
28 HARVEY: *On Animal Generation*, 384d-390b passim; 404b; 418b-419d; 427c-428b
31 DESCARTES: *Meditations*, II, 78d-79a / *Objections and Replies*, 207a; 244b-c

2c(2) The sensitive powers: the powers proper to the animal soul

7 PLATO: *Timaeus*, 466a-467d
8 ARISTOTLE: *Soul*, BK I, CH 5 [411b27-31] 641d; BK II, CH 2 [413b4-10] 643c; [413b17-24] 643d; [414a1-3] 644a; CH 3 [414a29-b20] 644c-d; BK II, CH 5-BK III, CH 3 647b-661b; BK III, CH 8-13 664b-668d / *Sense and the Sensible*, CH 7 [448b17-449a21] 687d-688d
9 ARISTOTLE: *Parts of Animals*, BK I, CH 1 [641a33-b10] 164b-c; BK III, CH 5 [667b21-32] 196a / *Motion of Animals*, CH 10 238c-239a / *Generation of Animals*, BK II, CH 3 [736a24-737a19] 276d-278a; CH 5 [741a6-30] 282a-b / *Ethics*, BK VI, CH 2 [1139a17-21] 387d
10 GALEN: *Natural Faculties*, BK I, CH 1 167a-b
12 AURELIUS: *Meditations*, BK IX, SECT 9 292b-d
17 PLOTINUS: *First Ennead*, TR I, CH 11 5b-c / *Fourth Ennead*, TR III, CH 19 151d-152b; CH 23 153d-154b; TR IV, CH 20-21 167d-168c; CH 23-25 169c-171b
18 AUGUSTINE: *City of God*, BK VII, CH 23, 256b-c; CH 29 261a-b
19 AQUINAS: *Summa Theologica*, PART I, Q 72, A 1, REP 1 368b-369d; Q 75, A 3 380c-381b; Q 78, A 1 407b-409a; AA 3-4 410a-413d; QQ 80-81 427a-431d; Q 118, A 1 600a-601c; PART I-II, Q 17, A 2, REP 2 687d-688b
21 DANTE: *Divine Comedy*, PURGATORY, XXV [34-78] 91d-92a
28 HARVEY: *On Animal Generation*, 369d-370a
31 DESCARTES: *Rules*, XII, 19a-20a / *Discourse*, PART V, 56a-b; 59a-60c / *Meditations*, II, 78d-79a / *Objections and Replies*, 156a-d; 226a-d
35 LOCKE: *Human Understanding*, BK II, CH IX-X 138b-143d passim, esp CH IX, SECT 11 15 140b-141a, CH X, SECT 10 143c-d; CH XXVII, SECT 5 220b-c

2c(3) The rational powers: the powers proper to the human soul

7 PLATO: *Republic*, BK IV, 350b-353d; BK VI, 386d-388a; BK VII, 389d-390b; BK IX, 421a-c / *Timaeus*, 453b-454a / *Theaetetus*, 535b-536a
8 ARISTOTLE: *Metaphysics*, BK IX, CH 2 571c-572a; CH 5 573a-c / *Soul*, BK II, CH 3 [414b17-20] 644d; [415a7-12] 645b; BK III, CH 3-8 659c-664d
9 ARISTOTLE: *History of Animals*, BK VIII, CH 1 [588a18-b4] 114b,d / *Ethics*, BK I, CH 7 [1097b23-1098a19] 343a-c; CH 13 347b-348d; BK VI, CH 1 [1138b35]-CH 2 [1139b5] 387b-388a / *Rhetoric*, BK I, CH 1 [1355b1-3] 594d
10 GALEN: *Natural Faculties*, BK I, CH 12, 173a-c
12 EPICTETUS: *Discourses*, BK II, CH 23, 170a-171d; BK IV, CH 7, 233a-b
12 AURELIUS: *Meditations*, BK III, SECT 15-16 262d-263a,c; BK V, SECT 16 271c-d; BK IX, SECT 8-9 292b-d; BK XI, SECT 1 302a-b
17 PLOTINUS: *Fourth Ennead*, TR VIII, CH 3, 202c / *Fifth Ennead*, TR I, CH 10, 213d-214a
18 AUGUSTINE: *City of God*, BK VII, CH 23, 256b-c; CH 29 261a-b; BK XII, CH 23 357d-358a
19 AQUINAS: *Summa Theologica*, PART I, Q 3, A 1, REP 2 14b-15b; Q 7, A 2, REP 2 31d-32c; Q 76, A 5, REP 4 394c-396a; Q 78, A 1, ANS 407b-409a; QQ 79-80 413d-428d; QQ 82-83 431d-440b; Q 118, A 2 601c-603b
20 AQUINAS: *Summa Theologica*, PART I-II, Q 50, AA 4-5 9a-10d
21 DANTE: *Divine Comedy*, PURGATORY, XVIII [1-75] 79d-80c; XXV [61-84] 92a-b
28 HARVEY: *On Animal Generation*, 427d-428a
30 BACON: *Advancement of Learning*, 55b-d
31 DESCARTES: *Discourse*, PART V, 56a-b; 59c-60c / *Meditations*, 71b-d; III, 82d-83a; IV 89a-93a; VI 96b-103d passim / *Objections and Replies*, 156a-d; 207a
31 SPINOZA: *Ethics*, PART II, AXIOM 2 373d
32 MILTON: *Paradise Lost*, BK V [95-116] 177b
35 LOCKE: *Human Understanding*, BK II, CH VI 131b-c; CH XI 143d-147b esp SECT 9-11 145b-146a; CH XXI, SECT 4-21 178d-183b passim, esp SECT 5-6 179c-180a, SECT 15-20 181c-183a; CH XXIII, SECT 5 205a-b; SECT 15 208c-d; SECT 18 209a; SECT 22 209d; SECT 28-30 211b-212b; BK IV, CH XIV, SECT 3-4 364d-365a; CH XVII, SECT 1-3 371c-372b
36 STERNE: *Tristram Shandy*, 270a-271b
42 KANT: *Pure Reason*, 41c-42b; 164b-c / *Judgement*, 465c-467a esp 466a-c; 474b-475d; 522b; 568c-575b esp 568c-d, 570c-571c, 572b-575b
46 HEGEL: *Philosophy of History*, INTRO, 168b-d; PART I, 257d-258a; PART III, 304d-305b
49 DARWIN: *Descent of Man*, 278a-b
53 JAMES: *Psychology*, 85a-b
54 FREUD: *Interpretation of Dreams*, 384c-385c esp 385b-c / *Unconscious*, 429c-d / *General Introduction*, 532a

3. The immateriality of the soul

3a. The soul as an immaterial principle, form, or substance

7 PLATO: *Phaedrus*, 124b-126c / *Phaedo*, 223d-225c; 231c-234b / *Republic*, BK X, 435a-436c / *Timaeus*, 449b-450c; 452d-454a / *Sophist*, 567c-d / *Laws*, BK X, 761a-765d

8 ARISTOTLE: *Metaphysics*, BK VII, CH 10 [1035^{b}14-28] 559a-b; BK VIII, CH 3 [1043^{a}29-^{b}4] 567d; BK XIII, CH 2 [1077^{a}20-23] 608c / *Soul*, BK I, CH 1 [403^{a}3-^{b}19] 632a-d; BK II, CH 1-2 642a-644c

12 AURELIUS: *Meditations*, BK IV, SECT 21 265b-c; BK XII, SECT 30 310a-b

17 PLOTINUS: *First Ennead*, TR I 1a-6b / *Third Ennead*, TR I, CH 8-9 81d-82b; TR VI, CH 2 107a-108a / *Fourth Ennead*, TR I-II 139a-141c; TR III, CH 2 142a-143b; CH 8, 146b-d; CH 20-23 152b-154b; TR VII 191c-200c; TR IX, CH 4, 206c-d / *Fifth Ennead*, TR II, CH 2 215a-c / *Sixth Ennead*, TR IV, CH 1 297b-d; CH 4-5 299a-300a; CH 12-16 303a-305c

19 AQUINAS: *Summa Theologica*, PART I, Q 51, A 1, RLP 3 275b-276b; Q 75, A 1 378b-379c; AA 4-5 381b-383b; Q 76, A 1 385d-388c; A 4, REP 1 393a-394c

23 HOBBES: *Leviathan*, PART IV, 269d-271b

31 DESCARTES: *Discourse*, PART IV, 51d-52a; PART V, 59c-60c / *Meditations*, 71b-d; 72d-73c; II, 78a-80a; VI 96b-103d passim, esp 98c-d, 101d-102a / *Objections and Replies*, 114d-115a,c; 119d-120a; 127c-d; DEF VI-VII 130c-d; DEF X 130d; PROP IV 133c; 135d-136b; 153c-155d; 170b-c; 207d-208a; 209c; 224d-225d; 231a-232d; 261a-b; 276b-c

31 SPINOZA: *Ethics*, PART V, PREF 451a-452c

35 LOCKE: *Human Understanding*, BK II, CH XXIII, SECT 5 205a-b; SECT 15 208c-d; SECT 22 209d; SECT 28-32 211b-212d passim; CH XXVII, SECT 12-17 223a-225a passim; SECT 27 227d-228a; SECT 29 228b-c; BK IV, CH III, SECT 6 313c-315b

35 BERKELEY: *Human Knowledge*, SECT 26 418a; SECT 89 430b-c; SECT 141 441a-b; SECT 148 442b-d

36 STERNE: *Tristram Shandy*, 271a-b

40 GIBBON: *Decline and Fall*, 186b

42 KANT: *Pure Reason*, 120c-129c esp 124d-128a; 203d-204c

48 MELVILLE: *Moby Dick*, 27b-28a

53 JAMES: *Psychology*, 220b-223b esp 221a-222b

3b. The immateriality of the human soul in comparison with the materiality of the plant and animal soul: the intellect as an incorporeal power

8 ARISTOTLE: *Soul*, BK I, CH 4 [408^{b}18-29] 638c; CH 5 [411^{b}13-18] 641c-d; BK II, CH 2 [413^{b}24-29] 643d-644a; BK III, CH 4 [429^{a}10-^{b}23] 661b-662a; CH 5 662c-d

9 ARISTOTLE: *Generation of Animals*, BK II, CH 3 [736^{b}15-737^{a}12] 277b-d

17 PLOTINUS: *Third Ennead*, TR VI, CH 2, 107b-c / *Fourth Ennead*, TR VII, CH 8, 195b-196a

18 AUGUSTINE: *Confessions*, BK VII, par 2, 43c-d

19 AQUINAS: *Summa Theologica*, PART I, Q 3, A 1, REP 2 14b-15b; Q 7, A , REP 2 31d-32c; Q 75, AA 2-3 379c-381b; AA 5-6 382a-384c; Q 79, A 1, REP 4 414a-d; A 2, REP 1 414d-416a; A 3, REP 3 416a-417a; A 4, REP 4-5 417a-418c; A 5, REP 1-2 418c-419b; A 6, REP 1-2 419b-420d; Q 83, A 1, REP 5 436d-438a; Q 84, A 1, ANS 440d-442a; A 2, ANS 442b-443c; A 4, ANS 444d-446b; A 6, ANS 447c-449a; Q 85, A 6, ANS 458d-459c; Q 87, A 3, REP 3 467b-468a; Q 89, A 1, ANS 473b-475a; PART I-II, Q 2, A 6, ANS 619d-620d; Q 35, A 5, ANS 775d-777a

20 AQUINAS: *Summa Theologica*, PART I-II, Q 50, A 4 9a-10b; Q 53, A 1, ANS and REP 2-3 19d-21a

21 DANTE: *Divine Comedy*, PURGATORY, XXV [61-84] 92a-b

28 HARVEY: *On Animal Generation*, 494a-b

31 DESCARTES: *Rules*, XII, 20a-b / *Discourse*, PART V, 60b-c / *Objections and Replies*, 226a-b

3c. The relation of soul and body: the relation of formal and material principles, or of spiritual and corporeal substances

7 PLATO: *Charmides*, 2d-3c / *Cratylus*, 93b-d / *Phaedo* 220a-251d / *Republic*, BK III, 334b-c / *Timaeus*, 453b-454a; 466a-467d; 474d-475d / *Laws*, BK X, 761b-765d

8 ARISTOTLE: *Topics*, BK VI, CH 14 [151^{a}20-31] 206a / *Metaphysics*, BK VII, CH 10 [1035^{b}14-28] 559a-b; BK VIII, CH 3 [1043^{a}29-^{b}4] 567d; CH 6 569d-570d; BK XII, CH 10 [1075^{b}34-37] 606d / *Soul*, BK I, CH 1 [403^{a}3-24] 632a-b; CH 3 [407^{b}13-25] 637b; CH 5 [410^{b}10-16] 640c; [411^{a}23-^{b}31] 641b-d; BK II, CH 1-2 642a-644c; CH 4 [415^{b}8-28] 645d-646a / *Sense and the Sensible*, CH 1 [436^{b}3-8] 673b-c / *Longevity*, CH 2 [465^{a}18-32] 710c-d / *Youth, Life, and Breathing*, CH 1-4 714a-716b passim; CH 14 720d-721a

9 ARISTOTLE: *Parts of Animals*, BK I, CH 1 [640^{b}30-641^{a}33] 163c-164b; CH 5 [645^{b}14-19] 169c; BK II, CH 7 [652^{b}7-17] 177d-178a; BK III, CH 5 [667^{b}15-32] 195d-196a / *Motion of Animals*, CH 9-10 238a-239a / *Generation of Animals*, BK II, CH 4 [738^{b}18-27] 279c / *Politics*, BK I, CH 5 [1254^{a}34-1255^{a}2] 448a-c

12 LUCRETIUS: *Nature of Things*, BK III [94-829] 31b-40c

12 AURELIUS: *Meditations*, BK III, SECT 3 260b; BK IV, SECT 21 265b-c; BK XII, SECT 30 310a-b

13 VIRGIL: *Aeneid*, BK VI [724-751] 230b-231a

14 PLUTARCH: *Romulus*, 29a-b

16 KEPLER: *Epitome*, BK IV, 893a

17 PLOTINUS: *First Ennead*, TR I 1a-6b / *Second Ennead*, TR I, CH 5, 37c; TR II, CH 3 41c-42a / *Third Ennead*, TR VI, CH 4-5 108c-109d / *Fourth Ennead*, TR I-II 139a-141c; TR III, CH 4 143d-144b; CH 8-23, 146b-154b; TR IV, CH 18 166d-167b; CH 20-21 167d-168c; CH 23-25 169c-171b; CH 29 173b-174b; TR V, CH 7,

188b-c; TR VII 191c-200c esp CH 8, 197c-198b; TR IX 205a-207a,c / *Fifth Ennead*, TR I, CH 2 208c-209b / *Sixth Ennead*, TR IV, CH I 297b-d; CH 4-5 299a-300a; CH 12-16 303a-305c; TR VII, CH 4-5 323c-324b

18 AUGUSTINE: *City of God*, BK X, CH 29, 317b-c; BK XIII, CH 2 360b-361a; BK XIV, CH 5 379c-380b; BK XIX, CH 3, 510a-b; CH 13, 519a; BK XXI, CH 3 561a-562a; BK XXII, CH 4 588b-d

19 AQUINAS: *Summa Theologica*, PART I, Q 8, A 1, REP 2 34d-35c; A 2, REP 2-3 35c-36b; Q 51, A 1, ANS and REP 3 275b-276b; Q 52, A 1 278d-279b; Q 75, A 1 378b-379c; A 2, ANS 379c-380c; A 4 381b-382a; A 5, ANS 382a-383b; Q 76 385c-399b; Q 81, A 3, REP 2 430c-431d; Q 84, A 4, ANS 444d-446b; Q 89, A 1, ANS 473b-475a; Q 110, A 2, REP 1 565d-566d; PART I-II, Q 4, A 5, REP 5 632c-634b

20 AQUINAS: *Summa Theologica*, PART I-II, Q 56, A 4, REP 3 32b-33c; Q 58, A 2, ANS 42a-43a; PART III, Q 2, A 1, ANS and REP 2 710a-711c; A 5 715a-716b; Q 6, A 1 740b-741b; AA 3-4 742a-743d; Q 8, A 2, ANS 757c-758a; Q 17, A 2, REP 4 808d-809d; Q 62, A 1, REP 2 858c-859d; A 4, REP 1,3 861a-862a; PART III SUPPL, Q 70, A 3, ANS 897d-900d; Q 75, A 1, REP 3-4 935b-937a; Q 80, A 1, ANS and REP 1 956c-957c; Q 92, A 1, ANS and REP 8-10 1025c-1032b; Q 93, A 1 1037d-1039a

21 DANTE: *Divine Comedy*, PURGATORY, XXV [10-108] 91c-92c

23 HOBBES: *Leviathan*, PART IV, 250c-251b

25 MONTAIGNE: *Essays*, 264a-b

28 HARVEY: *On Animal Generation*, 431b-434a esp 433c-d

30 BACON: *Advancement of Learning*, 49b-50b

31 DESCARTES: *Discourse*, PART IV, 51d-52a; PART V, 56a-b; 60b-c / *Meditations*, 72d-73c; II 77d-81d passim; VI 96b-103d esp 99d-101a / *Objections and Replies*, 114d-115a,c; 119d-120c; 127c-d; DEF VI-VII 130c-d; DEF X 130d; PROP IV 133c; 135d-136b; 152b,d-156a; 170b-c; 207d-208a; 219b-220a; 224d-226d; 231a-232d; 248b; 261a-b; 276a-c

31 SPINOZA: *Ethics*, PART II, PROP 11-13 377b-378c; PART V, PREF 451a-452c

33 PASCAL: *Pensées*, 512 262a

35 LOCKE: *Human Understanding*, BK II, CH 1, SECT 11-12 123d-124c; CH XXI, SECT 4 178d-179c; CH XXIII, SECT 15-32 208c-212d; CH XXVII, SECT 27 227d-228a

35 BERKELEY: *Human Knowledge*, SECT 18-20 416b-417a; SECT 26-27 418a-b; SECT 148 442b-d

35 HUME: *Human Understanding*, SECT VII, DIV 51-52 472b-473c esp DIV 52, 472d; DIV 58 476a-b

36 STERNE: *Tristram Shandy*, 231a-b; 270a-271b

41 GIBBON: *Decline and Fall*, 136d

42 KANT: *Judgement*, 557c-558a

46 HEGEL: *Philosophy of Right*, PART I, par 48 24b-c; ADDITIONS, 2 115d; 16 118d-119a / *Philosophy of History*, PART I, 255c-256b

47 GOETHE: *Faust*, PART II [6891-6896] 168b

48 MELVILLE: *Moby Dick*, 27b-28a; 68a-b

53 JAMES: *Psychology*, 1a-4a esp 2b-3a; 118b-119b; 139a-140a

54 FREUD: *Interpretation of Dreams*, 154c-155a

3d. The denial of soul as an immaterial principle, form, or substance: the atomic theory of the soul

7 PLATO: *Phaedo*, 235b-236c; 238b-240a / *Sophist*, 567a-568a / *Laws*, BK X, 761b

8 ARISTOTLE: *Generation and Corruption*, BK II, CH 6 [334^{a}10-15] 435a / *Soul*, BK I, CH 2-5 633a-641d

10 GALEN: *Natural Faculties*, BK I, CH 12 172d-173c

12 LUCRETIUS: *Nature of Things*, BK III [94-829] 31b-40c; BK IV [722-817] 53d-54d; [877-961] 55d-56d

17 PLOTINUS: *Third Ennead*, TR I, CH 3 79b-c / *Fourth Ennead*, TR VII 191c-200c esp CH 1-4 191c-193c, CH 8, 195b-196a, 196c-197c

18 AUGUSTINE: *City of God*, BK VIII, CH 5, 268b-d

19 AQUINAS: *Summa Theologica*, PART I, Q 75, A 1 378b-379c; Q 84, A 2, ANS 442b-443c; A 6, ANS 447c-449a

23 HOBBES: *Leviathan*, PART I, 80a-b; PART III, 176d; PART IV, 250c-251c; 269d-271b

25 MONTAIGNE: *Essays*, 264b-267a

31 DESCARTES: *Objections and Replies*, 226a-d

35 LOCKE: *Human Understanding*, BK IV, CH III, SECT 6 313c-315b; CH X, SECT 5 350a-b; SECT 10 351b-352a; SECT 17 353b-c

35 BERKELEY: *Human Knowledge*, SECT 93 431b; SECT 137 440b-c; SECT 141 441a-b

42 KANT: *Pure Reason*, 126c-d / *Judgement*, 582b-c; 600c-d

46 HEGEL: *Philosophy of History*, PART I, 255d

51 TOLSTOY: *War and Peace*, EPILOGUE II, 689c-690a

53 JAMES: *Psychology*, 95a-119b

3e. The corporeal or phenomenal manifestation of disembodied souls as ghosts, wraiths, or spirits

OLD TESTAMENT: *I Samuel*, 28:8-19—(*D*) *I Kings*, 28:8-19

4 HOMER: *Iliad*, BK XXIII [54-107] 161d-162b / *Odyssey*, BK XI 243a-249d; BK XXIV [1-203] 317a-319a

5 AESCHYLUS: *Persians* [623-842] 21d-24b / *Eumenides* [94-139] 82a-c

5 ARISTOPHANES: *Birds* [1552-1564] 561b

6 HERODOTUS: *History*, BK IV, 126d-127a; BK V, 179c-180a

7 PLATO: *Phaedo*, 232d-233b

12 LUCRETIUS: *Nature of Things*, BK I [102-135] 2b-d; BK IV [26-41] 44b-d

13 VIRGIL: *Aeneid*, BK II [771-794] 146a-b; BK V [719-745] 206a-b; BK VI 211a-235a

14 PLUTARCH: *Cimon*, 392b-c / *Cæsar*, 603d-604d / *Dion*, 781d-782a / *Marcus Brutus*, 816d-817c

(3. *The immateriality of the soul.* 3e. *The corporeal or phenomenal manifestation of disembodied souls as ghosts, wraiths, or spirits.*)

17 PLOTINUS: *Fourth Ennead*, TR VII, CH 15 200c
19 AQUINAS: *Summa Theologica*, PART I, Q 89, A 8, REP 2 479c-480c
20 AQUINAS: *Summa Theologica*, PART III SUPPL, Q 69, A 3 887d-889c
21 DANTE: *Divine Comedy*, PURGATORY, III [16-33] 56a; XXV [79-108] 92b-c; PARADISE, III [1-30] 109b-c
23 HOBBES: *Leviathan*, PART I, 51b-52b; 80a; PART IV, 250c-251c passim; 258c-d; 270c-271b passim; 274b-c
26 SHAKESPEARE: *Richard III*, ACT V, SC III [118-176] 144d-145c / *Julius Caesar*, ACT IV, SC III [275-308] 591c-d
27 SHAKESPEARE: *Hamlet*, ACT I, SC I [40-175] 30a-31c; SC IV [38]-SC V [91] 36b-37d; ACT III, SC IV [102-136] 55d-56a / *Macbeth*, ACT III, SC IV [37-107] 298a-d / *Cymbeline*, ACT V, SC IV [30-122] 481c-482b
44 BOSWELL: *Johnson*, 95b; 114b-115a esp 115a-b [fn 1]; 189a-b; 193b-c; 373a; 394c-d; 412a-b; 472b-c
54 FREUD: *War and Death*, 763d-764a

4. The being of the soul

4a. The unity of the human soul: the human mode of the vegetative and sensitive powers

8 ARISTOTLE: *Soul*, BK I, CH 5 [410^{b}10-16] 640c; [411^{a}23-^{b}31] 641b-d; BK II, CH 2 [413^{b}10-414^{a}4] 643c-644a; BK III, CH 9 [432^{a}15-^{b}8] 664d-665a; CH 10 [433^{a}32-^{b}4] 666a-b
9 ARISTOTLE: *Ethics*, BK I, CH 13 [1102^{a}27-32] 347d
17 PLOTINUS: *Fourth Ennead*, TR III, CH 3 143b-c; CH 19 151d-152b; TR VII, CH 14 200b-c; TR IX, CH 2-3 205c-206b
19 AQUINAS: *Summa Theologica*, PART I, Q 76, AA 1-3 385d-393a; Q 78, A 4, REP 5 411d-413d; Q 81, A 3, REP 2 430c-431d
20 AQUINAS: *Summa Theologica*, PART III, Q 2, A 2, REP 2 711d-712d; PART III SUPPL, Q 79, A 2, REP 3 953b-955c
21 DANTE: *Divine Comedy*, PURGATORY, IV [1-12] 57c; XXV [37-84] 91d-92b; PARADISE, II [127-148] 109a-b

4b. The issue concerning the self-subsistence or immortality of the human soul: its existence or capacity for existence in separation from the human body

5 EURIPIDES: *Helen* [1013-1016] 307d
6 HERODOTUS: *History*, BK II, 75b
7 PLATO: *Phaedrus*, 124b-c / *Meno*, 179d-183a / *Apology*, 211b-212a,c / *Phaedo* 220a-251d / *Republic*, BK X, 434d-436a / *Laws*, BK XII, 793c-d / *Seventh Letter*, 806a
8 ARISTOTLE: *Metaphysics*, BK XII, CH 3 [1070^{a}21-28] 599c / *Soul*, BK CH I [403^{a}2-24] 632a-b; CH 2 [405^{a}29-34] 634d; BK II, CH 1 [413^{a}3-9] 643a; CH 2 [413^{b}24-29] 643d-644a; BK III, CH 4 [429^{a}29-^{b}4] 661c-d; CH 5 662c-d
9 ARISTOTLE: *Generation of Animals*, BK II, CH 3 [736^{b}15-737^{a}12] 277b-d
12 LUCRETIUS: *Nature of Things*, BK III [323-349] 34b-c; [417-1094] 35c-44a,c
12 AURELIUS: *Meditations*, BK II, SECT 14 258d; SECT 17 259b-d; BK IV, SECT 21 265b-c; BK V, SECT 13 271b; BK VIII, SECT 37 288c; BK XII, SECT 5 307d-308a; SECT 14 308c
14 PLUTARCH: *Romulus*, 29a-b
17 PLOTINUS: *First Ennead*, TR I, CH 2, 1c / *Fourth Ennead*, TR I 139a-b; TR IV, CH 15 165c-d; TR VII 191c-200c
18 AUGUSTINE: *City of God*, BK VI, CH 12, 243c-d; BK X, CH 31 319b-d; BK XIII, CH 2 360b-361a
19 AQUINAS: *Summa Theologica*, PART I, Q 61, A 2, REP 3 315c-316a; Q 75, A 2 379c-380c; A 6 383c-384c; Q 76, A 3, REP 1-2 391a-393a; PART I-II, Q 22, A 1, REP 3 720d-721c
20 AQUINAS: *Summa Theologica*, PART I-II, Q 85, A 6 182d-184a
21 DANTE: *Divine Comedy*, PURGATORY, XXV [1-108] 91b-92c; PARADISE, VII [121-148] 116b-c
22 CHAUCER: *Second Nun's Tale* [15,787-800] 467a
23 HOBBES: *Leviathan*, PART III, 192c-193c; PART IV, 250c-251c; 253b-255b; 269d-271b
25 MONTAIGNE: *Essays*, 264a-269b
31 DESCARTES: *Discourse*, PART V, 60b-c / *Meditations*, 69a-71a,c passim; 72d-73c / *Objections and Replies*, 127c-d; DEF VI-VII 130c-d; DEF X 130d; PROP IV 133c
31 SPINOZA: *Ethics*, PART V, PROP 23 458b-d; PROP 29-33 459b-460c; PROP 36-40 461a-462d
32 MILTON: *Paradise Lost*, BK X [720-844] 290a-292b
33 PASCAL: *Pensées*, 194-195, 206b-210b; 556, 271b
35 BERKELEY: *Human Knowledge*, SECT 141 441a-b
40 GIBBON: *Decline and Fall*, 186a-187b
42 KANT: *Pure Reason*, 120c-129c esp 124d-128a; 201b-c; 203d-204c; 218d-223d esp 219b-d; 234c-240b esp 234c-235c, 237d-238a / *Practical Reason*, 291a-292a; 344a-c; 348b-351b / *Judgement*, 600c-d; 603b-d; 606d-607c; 610a-b
46 HEGEL: *Philosophy of History*, PART I, 246d-247a; 255c-256b
48 MELVILLE: *Moby Dick*, 25b-28a esp 27b-28a; 380b-381a
49 DARWIN: *Descent of Man*, 593c-d
51 TOLSTOY: *War and Peace*, BK VII, 295b-c
53 JAMES: *Psychology*, 224a-225a
54 FREUD: *War and Death*, 763d-764b

4c. The origin of the human soul: its separate creation; its emanation or derivation from the world soul

OLD TESTAMENT: *Genesis*, 1:26-27; 2:7; 5:1-2 / *Ecclesiastes*, 12:7 / *Isaiah*, 42:5; 57:16—(*D*) *Isaias*, 42:5; 57:16 / *Ezekiel*, 18:4—(*D*) *Ezechiel*, 18:4 / *Zechariah*, 12:1—(*D*) *Zacharias*, 12:1

APOCRYPHA: *Wisdom of Solomon*, 2:23; 15:11—(*D*) OT, *Book of Wisdom*, 2:23; 15:11

NEW TESTAMENT: *I Corinthians*, 15:45

7 PLATO: *Timaeus*, 452c-454a / *Philebus*, 618b-619d

12 LUCRETIUS: *Nature of Things*, BK III [323-349] 34b-c; [670-712] 38d-39b

12 AURELIUS: *Meditations*, BK IV, SECT 21 265b-c; BK XII, SECT 30 310a-b

13 VIRGIL: *Aeneid*, BK VI [724-751] 230b-231a

17 PLOTINUS: *Second Ennead*, TR IX, CH 3-4 67b-68a; CH 7 8 69c-70d / *Third Ennead*, TR IV, CH 2-5 97d-99b / *Fourth Ennead*, TR II, CH 1—TR III, CH 7 139c-145d; TR III, CH 9-18 146d-151c; TR VII, CH 13 200a-b; TR VIII, CH 3—TR IX, CH 5 202a-207a,c / *Sixth Ennead*, TR IV, CH 4 299a-d; CH 12-16 303a-305c

18 AUGUSTINE: *City of God*, BK VII, CH 29 261a-b; BK X, CH 31 319b-d; BK XI, CH 22, 334c; BK XII, CH 23 357d-358a

19 AQUINAS: *Summa Theologica*, PART I, Q 75, A 6, REP 1 383c-384c; Q 90 480c-484a; Q 100, A 1, REP 2 520d-521c; Q 118 600a-604b

20 AQUINAS: *Summa Theologica*, PART III, Q 6, A 3, REP 2 742a-743a

21 DANTE: *Divine Comedy*, PURGATORY, XVI [85-93] 77d; XXV [37-84] 91d-92b; PARADISE, IV [49-54] 111b; VII [64-75] 115d-116a; [121-148] 116b-c

23 HOBBES: *Leviathan*, PART III, 173d; 176d; PART IV, 251a-b

25 MONTAIGNE: *Essays*, 264b-c

30 BACON: *Advancement of Learning*, 54b-c

31 DESCARTES: *Discourse*, PART V, 56a-b; 60b-c / *Meditations*, III, 88b-c

31 SPINOZA: *Ethics*, PART I, PROP 29-31 366b-367a; PART II, PROP 11, COROL 377b-c

40 GIBBON: *Decline and Fall*, 186b

41 GIBBON: *Decline and Fall*, 640a-b [n 8]

42 KANT: *Judgement*, 565d

4d. The life of the soul apart from the body

4d(1) The doctrine of transmigration or perpetual reincarnation

4 HOMER: *Odyssey*, BK XI [298-304] 246a

6 HERODOTUS: *History*, BK II, 75b

7 PLATO: *Phaedrus*, 125b-126a / *Meno*, 179d-183a / *Phaedo*, 226c-234c; 246d-250b / *Republic*, BK X, 437c-441a,c / *Timaeus*, 452d-453b; 476b-477a,c / *Laws*, BK X, 767c-768d

8 ARISTOTLE: *Soul*, BK I, CH 3 [406^{a}30-^{b}5] 635d; [407^{b}13-25] 637b

12 LUCRETIUS: *Nature of Things*, BK I [102-119] 2b-c; BK III [670-783] 38d-40a

12 AURELIUS: *Meditations*, BK IV, SECT 21 265b-c

13 VIRGIL: *Georgics*, IV [219-227] 89b / *Aeneid*, BK VI [703-751] 229b-231a

14 PLUTARCH: *Romulus*, 29a-b

17 PLOTINUS: *First Ennead*, TR I, CH II 5b-c / *Third Ennead*, TR II, CH 13 88d-89b; CH 17, 91d-92b; TR III, CH 4, 95b-c; TR IV, CH 2-3 97d-98c; CH 6 99b-100b / *Fourth Ennead*, TR III, CH 8, 145d; CH 9, 146d; CH 13-15 149b-150c; CH 24 154b-d; CH 27, 156d; TR IV, CH 5, 161a-b; TR VII, CH 14 200b-c; TR VIII, CH 3-5 202a-203d / *Sixth Ennead*, TR IV, CH 14-16 304a-305c; TR VII, CH 6-7, 324c-325a

18 AUGUSTINE: *City of God*, BK X, CH 30 318b-319b; BK XII, CH 20 355b-357a; BK XIV, CH 5 379d-380b; BK XXII, CH 27-28 613b-614a

20 AQUINAS: *Summa Theologica*, PART III SUPPL, Q 77, A 1, ANS 943a-944d; Q 79, A 1, ANS 951b-953b

21 DANTE: *Divine Comedy*, PARADISE, IV [49-63] 111b

25 MONTAIGNE: *Essays*, 206c-207a; 249b-250a; 264b-265c; 268a-269a

35 LOCKE: *Human Understanding*, BK II, CH XXVII, SECT 6 220c-d; SECT 14 223d-224b; SECT 27 227d-228a

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48 MELVILLE: *Moby Dick*, 316b

51 TOLSTOY: *War and Peace*, BK VII, 295b-c

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4d(2) Comparison of separated souls with men and angels

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17 PLOTINUS: *Fourth Ennead*, TR III, CH 18 151b-c

18 AUGUSTINE: *City of God*, BK XIII, CH 1 360a-b; BK XXI, CH 10 569d-570b; BK XXII, CH 29, 614b-d

19 AQUINAS: *Summa Theologica*, PART I, Q 29, A 1, REP 5 162a-163b; Q 62, A 5, CONTRARY 321b-322a; Q 77, A 8 406b-407a; Q 89 473a-480c; PART I-II, Q 4, A 5, REP 6 632c-634b

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44 BOSWELL: *Johnson*, 192d-193a; 363a-b

52 DOSTOEVSKY: *Brothers Karamazov*, BK II, 22c-23a

(4d. The life of the soul apart from the body.)

4d(3) The need of the soul for its body: the dogma of the body's resurrection for the soul's perfection

18 AUGUSTINE: *City of God*, BK X, CH 29, 317b-318b; BK XIII, CH 16-20 367a-371a; BK XIV, CH 3 378a-d; CH 5 379c-380b; BK XXI, CH 3, 561d-562a; BK XXII, CH 26-27 612c-613c / *Christian Doctrine*, BK I, CH 24 630c-631a

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25 MONTAIGNE: *Essays*, 311a-b

4d(4) The contamination of the soul by the body: the purification of the soul by release from the body

7 PLATO: *Cratylus*, 93d; 95c / *Phaedo*, 223a-226c; 230d-234c / *Republic*, BK IV, 350c-355c; BK VII, 388a-390b; BK IX, 425c-427b; BK X, 434c-441a,c / *Timaeus*, 474b-476b / *Seventh Letter*, 805d-806a

12 EPICTETUS: *Discourses*, BK I, CH 9, 115a-c

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17 PLOTINUS: *First Ennead*, TR I, CH 4, 2b; CH 9-10 4c-5b; CH 12 5c-6a; TR II 6b-10a esp CH 4-5 8a-9a; TR IV, CH 4-16 14a-19b; TR VI, CH 6 24a-c; TR VII, CH 3 26d-27a; TR VIII, CH 4 28c-29a; CH 7-8 30c-31c; CH 11 33a-d / *Second Ennead*, TR IX, CH 15 74d-75b; CH 17-18 76b-77d / *Third Ennead*, TR I, CH 8-10 81d-82b; TR IV, CH 2-6 97d-100b passim; TR VI, CH 4-5 108c-109d / *Fourth Ennead*, TR III, CH 32 158c-159a; TR IV, CH 17, 166c-d; TR VII, CH 10 198d-199c; TR VIII, CH 1 200d-201b; CH 3-8 202a-205a passim / *Fifth Ennead*, TR I, CH 1-2 208a-209b; CH 10-12 213c-214c; TR III, CH 17 226a-c / *Sixth Ennead*, TR IV, CH 14-16 304a-305c; TR VII, CH 34-36 338b-339d; TR IX, CH 8-11 358b-360d

18 AUGUSTINE: *City of God*, BK XIII, CH 16 367a-d; BK XIV, CH 3 378a-d; CH 5 379c-380b; BK XIX, CH 4, 512a-513c

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5. Our knowledge of the soul and its powers

5a. The soul's knowledge of itself by reflection on its acts: the soul as a transcendental or noumenal object; the paralogisms of rational psychology

7 PLATO: *Phaedo* 220a-251d / *Republic*, BK IV, 350c-353d

8 ARISTOTLE: *Soul*, BK I, CH 1 631a-632d; BK II, CH 4 [415^{a}14-22] 645b-c; BK III, CH 4 [429^{b}5-9] 661d; [429^{b}25-29] 662b; [430^{a}2-9] 662b-c

9 ARISTOTLE: *Ethics*, BK IX, CH 9 [1170^{a}28-^{b}1] 424a

12 EPICTETUS: *Discourses*, BK I, CH 1, 105a-b

12 AURELIUS: *Meditations*, BK XI, SECT 1 302a-b

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53 JAMES: *Psychology*, 121a-b; 122b-126a; 177a-178a; 191a-197a esp 191a-193a, 196a-197a; 232b-238b esp 233a-b, 236b [fn 1]

54 FREUD: *Interpretation of Dreams*, 383b-c / *Unconscious*, 429c-430c / *General Introduction*, 451b; 620a

5b. The concept of the soul in empirical psychology: experimental knowledge of the soul

53 JAMES: *Psychology*, xiiib-xiva; 1a-4a; 118b-119b; 126a-127b; 221a-226a esp 221b-223a, 225b-226a; 822b

54 FREUD: *Origin and Development of Psycho-Analysis*, 12d-13d esp 13c-d / *Interpretation of Dreams*, 154d-155a / *Unconscious*, 428a-429c; 431b-d; 434c / *General Introduction*, 549d-550b / *New Introductory Lectures*, 830a-831c passim, esp 831c

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For: Other discussions of the notion of a world soul and of the theory that the heavenly bodies have souls, *see* ASTRONOMY 8b; WORLD 1a.

Another consideration of the soul as the principle of life, *see* ANIMAL 1a; LIFE AND DEATH 1–2; and for other considerations of the soul as identical with mind or intellect and as the principle of thought, *see* MIND 1b–1d, 1f.

The problem of personal identity, *see* ONE AND MANY 3b(5); SAME AND OTHER 1b.

Other discussions of the parts or powers of the soul, and for discussions relevant to the distinction of several kinds of soul, *see* ANIMAL 1–1c(2); LIFE AND DEATH 3–3b; MAN 1–1c, 4–5a; SENSE 1a, 2a–2c.

The treatment of specific powers of the soul and of their relation to one another, *see* DESIRE 3–3d, 5–6c; EMOTION 1–1a, 2–2c, 4a; MEMORY AND IMAGINATION 1–1d; MIND 1a–1a(4), 1e–1f, 1g(2); ONE AND MANY 3b(5), 4a; OPPOSITION 4a; SENSE 1a–1d, 3–3e; WILL 1–3b.

The controversy over the immateriality of the soul and its relation to the body, *see* ANIMAL 1e; BEING 7b(2), 7b(4); ELEMENT 5e–5f; FORM 2c–2c(1), 2d; LIFE AND DEATH 2; MAN 3a–3c; MATTER 2d, 3a, 4c–4d; MECHANICS 4c; MIND 2a–2e; ONE AND MANY 3b(4); and for the related controversy over the immortality of the soul, *see* IMMORTALITY 2–3b; METAPHYSICS 2d.

Other discussions of the transmigration of souls, *see* IMMORTALITY 5a.

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The nature and problems of psychology as the science of the soul or of man, *see* KNOWLEDGE 5a(6); MAN 2a–2b(4); MIND 6; and for discussions relevant to the distinction between rational and empirical, or philosophical and scientific psychology, *see* PHYSICS 2; SCIENCE 1c.

ADDITIONAL READINGS

Listed below are works not included in *Great Books of the Western World*, but relevant to the idea and topics with which this chapter deals. These works are divided into two groups:

I. Works by authors represented in this collection.
II. Works by authors not represented in this collection.

For the date, place, and other facts concerning the publication of the works cited, consult the Bibliography of Additional Readings which follows the last chapter of *The Great Ideas.*

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——. *The Magnitude of the Soul*

——. *The Soul and Its Origin*

AQUINAS. *On Being and Essence*, CH IV

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——. *On Spiritual Creatures*, A 11

——. *Quaestiones Disputatae, De Veritate*, Q 19; *De Anima*, AA 1–2, 6–15, 17–21

——. *The Unicity of the Intellect*, II

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DESCARTES. *The Principles of Philosophy*, PART I, 7–8, 11–12, 52–53, 62–65; PART IV, 196–197

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II.

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Chapter 89: SPACE

INTRODUCTION

ON the level of our everyday observations, space and time seem to be the obvious, the common, and the connected properties of physical things. We distinguish things from one another by their position in space, as we mark happenings by the date of their occurrence. The where and when of a thing is often used to identify it, for it is generally agreed that two bodies cannot occupy the same place at the same time, and that at the same time two distinct places cannot be occupied by the same body. According to a theologian like Aquinas, these limitations of space and time apply even to bodiless things, *i.e.*, to angels.

"An angel and a body are said to be in a place," he writes, "in quite a different sense." Whereas a body is in the place which contains it, "an angel is said to be in a corporeal place by application of the angelic power . . . not as being contained, but as somehow containing it." It follows, nevertheless, that at a given time an angel "is not everywhere, nor in several places, but in only one place." Nor does the incorporeality of angels permit more than one angel to be at the same time in the same place. According to the manner in which an angel is at a place—by the action of his power—"there can be only one angel in one place," Aquinas declares, even as there can be only one body in one place at a time.

Location or position in space, and spatial relationships such as higher and lower, nearer and farther, are so familiar and intelligible that they provide terms of reference whereby men speak metaphorically of the moral hierarchy and spiritual distances. The whole of Dante's *Divine Comedy*, for example, involves a spatial metaphor which sets forth the gradations of sin and the degrees of blessedness in terms of places beneath the earth and in the heavens above.

As he mounts from sphere to sphere in Paradise, Dante meets Piccarda Donati in the Heaven of the Moon. She explains to him that this place "which appears so far down," is assigned to those who have violated their vows in some particular. Dante wonders why she and the others do not "desire a more exalted place, in order to see more." Piccarda replies: "Brother, virtue of charity quiets our will, and makes us wish only for that which we have, and quickens not our thirst for aught else. . . . So that as we are, from seat to seat throughout this realm, to all the realm is pleasing, as to the King who inwills us with His will; and His will is our peace."

This speech of Piccarda's makes it clear to Dante "how everywhere in Heaven is Paradise, even if the grace of the Supreme Good does not there rain down in one measure." These different measures of beatitude in the diffusion of God's love and light are represented by the celestial spheres from the earth-adjacent moon to the Crystalline Heaven, the outermost bound of the physical universe, of which Dante says that it "has no other Where than in the Divine Mind."

WHEN THE WHOLE EXPANSE of physical space or the boundary of the universe is considered, Newton no less than Dante conceives the omnipresence and eternity of God as that which somehow encompasses all space and time. God "is not duration or space," Newton writes at the end of the *Principles*, "but He endures and is present . . . and by existing always and everywhere, He constitutes duration and space." In the concluding queries of the *Optics*, Newton appears to think of infinite space as the Divine Sensorium in which all things are at once present to God, who "being in all places is more able by His will to move the bodies within His boundless uniform sensorium, and thereby to form and reform the parts of the Universe, than

we are by our will to move the parts of our own bodies."

The physicist does not have to turn theologian, however, to be confronted with the mysteries of space. Even without the modern complication of the relation of its three dimensions to time as a fourth dimension, the physical concept of space raises difficulties for analysis.

In the tradition of western thought conflicting definitions of space seem to result from a fundamental difference in the object being defined—whether it is an inseparable property of bodies, perhaps even identical with unformed matter, or a reality apart from the bodies which move and have their being in it. Sometimes this difference is signified by a difference between the meaning of the word "place" or "extension" and the meaning of "space." It appears also to be involved in the contrast between filled space and empty space (*i.e.*, the void or vacuum); and it bears some relation to Aristotle's distinction between space and place, and to Newton's distinction between absolute and relative space.

The controversial character of space in physical theory may be appreciated in terms of these oppositions in meaning, and the issues which they raise. In addition, physical theory is confronted with the problem of action-at-a-distance (*i.e.*, action through a void or through an ethereal medium), the problem of the infinity of space (or the question of a bounded or unbounded universe), and the distinction between one physical space and the variety of geometrical spaces.

Space, which at first seems easily apprehended by sense and susceptible to measurement, becomes upon examination so subtle as to be almost a vanishing object. Reason finds it difficult to say precisely *what* space is in itself, and how it is related to matter and motion. Even the familiar space of ordinary sense-perception seems to have its puzzles. A psychologist like James is concerned with how the different fields of touch, vision, and hearing coalesce to form the single space of our experience; and in dealing with the process by which we learn to perceive the spatial manifold of positions and directions, he cannot avoid the issue of innate as opposed to acquired space-perception.

PLATO'S THEORY OF SPACE is set forth in the *Timaeus* as part of "the likely story" which Timaeus tells about the production and constitution of the universe. The sensible things which come into being and pass away are, according to him, patterned after the eternal forms. To the eternal patterns and their copies in the world of change, Timaeus finds it necessary to add a third factor in order to account for the physical elements and their generation. This factor, he says, is "difficult to explain and dimly seen. . . . It is the receptacle, and in a manner the nurse, of all generation." In contrast to the elements which are perpetually changing into and out of one another, the receptacle "never departs from her own nature, and never in any way assumes a form like that of any of the things which enter into her. . . . The forms which enter into and go out of her are the likenesses of real existences modelled after their patterns in a wonderful and inexplicable manner."

Timaeus distinguishes the three principles as that which comes to be and passes away in the process of generation, that in which the generation takes place, and that which the generated thing resembles and which is its source. He likens the receptacle or "receiving principle to a mother, the source to a father, and the intermediate nature to a child," and adds that "if the model is to take every variety of form, then the matter in which the model is fashioned will not be duly prepared, unless it is formless and free from the impress of any of those shapes which it is hereafter to receive from without. . . . Wherefore, that which is to receive all forms should have no form. . . . The mother and receptacle of all created, visible, and in any way sensible things, is not to be termed earth, or air, or fire, or water, or any of their compounds, or any of the elements from which these are derived, but is an invisible and formless being which receives all things, and in some mysterious way partakes of the intelligible, and is most incomprehensible."

This third factor which Timaeus sometimes calls "matter" as well as "receptacle," he also sometimes calls "space." When matter and space are identified with each other under the conception of a receptacle for the forms, they have the characteristics of being absolutely

formless and imperceptible to the senses. Nor are they, as are the forms, genuinely intelligible to reason. "The third nature, which is space, and is eternal," Timaeus says, "admits not of destruction and provides a home for all created things, and is apprehended without the help of sense, by a kind of spurious reason, and is hardly real; which we beholding as in a dream, say of all existence that it must of necessity be in some place and occupy a space, but that which is neither in heaven nor on earth has no existence."

The precise meaning of this conception of space is difficult to determine. Does it, for example, find an echo in Plotinus' statement that "space is a container, a container of body; it is the home of such things as consist of isolated parts"? But he also says that space "in a strict sense is unembodied and is not, itself, body," and that "body is not a void," but rather that "the void must be that in which body is placed," seeming thereby to imply that space is essentially the void. The statement in the *Timaeus* that "there can be no such thing as a vacuum," may apply only to the filled space of the created heaven and earth. May it not also be said that space is a void when it is identified with the formless matter of the receptacle prior to creation?

This raises further questions. Is the receptacle space or matter? And is the conception of space in the *Timaeus* rightly interpreted by Aquinas, in commenting on Augustine's reading of "the earth was void and empty" in Genesis 1:2? Augustine holds that by the word "earth" in this passage formless matter is to be understood. Because of its formlessness, Aquinas writes, "the earth is said to be *void and empty*, or *invisible and shapeless*," and, he adds, "that is why Plato says matter is place."

HOWEVER THESE QUESTIONS are answered, one thing seems to be clear. Space, functioning as receptacle, can be identified only with matter devoid of form, not with the matter of three-dimensional bodies. The relation of space to matter seems to be differently conceived by Descartes. Space is for him not an antecedent principle involved in the original production of sensible things, but rather—as the extension of bodies—it is inseparable in existence from them. It is a property which signifies the essence of material substances, as thinking signifies the essence of mind or soul. "By extension," Descartes writes, "we understand whatever has length, breadth, and depth, not inquiring whether it be a real body or merely space." Nevertheless, he goes on to say that "by extension we do not here mean anything distinct and separate from the extended object itself."

Descartes considers the significance of three statements: "*extension occupies place, body possesses extension*, and *extension is not body*." The first statement, he thinks, means no more than "*that which is extended occupies place*." The second statement seems to imply that "the meaning of *extension* is not identical with that of *body*; yet," Descartes insists, "we do not construct two distinct ideas in our imagination, one of body, the other of extension, but merely a single image of extended body; and from the point of the view of the thing it is exactly as if I had said: *body is extended*, or better, *the extended is extended*." Finally, in the statement that *extension is not body*, the word "extension," according to Descartes, expresses a purely abstract conception—nothing which in itself has any sensible reality. So far as its existence is concerned, the thing conceived as extension cannot be separated from body. Those who think otherwise, Descartes asserts, are involved in "the contradiction of saying that *the same thing is at the same time body and not body*."

The point is summarized in his *Principles of Philosophy* by the statement that "the nature of matter or of body in its universal aspect, does not consist in being hard, or heavy, or colored . . . but solely in the fact that it is a substance extended in length, breadth, and depth." But, it may be asked, are the dimensions of a body the same as space? Descartes replies that "the same extension which constitutes the nature of a body constitutes the nature of space . . . not only that which is full of body, but also of that which is called a vacuum."

If there were a vacuum, or empty space, extension might be separated from body. This Descartes flatly denies. "As regards a vacuum in the philosophic sense of the word, *i.e.*, a space in which there is no substance, it is evident that such cannot exist, because the extension of space or internal place is not different from that of body." And even "when we take

this word vacuum in its ordinary sense," Descartes goes on, "we do not mean a place or space in which there is absolutely nothing, but only a place in which there are none of those things which we expected to find there."

These points made in the *Principles* confirm the identification of three-dimensional space or extension with body which appears in the *Rules*. They seem to be further confirmed in the *Discourse* by the reference to "a continuous body, or a space indefinitely extended in length, height or depth" which is "the object of the geometricians." Descartes does not, however, neglect the distinction between space as the extension of body, and place as the position one body occupies in relation to another. According to common usage, he says, the word "place" signifies that "in virtue of which a body is said to be here or there." He objects to those who, like Aristotle, mean by "place" the surrounding surface of a body. Local motion or change of place is not, he argues, a change in the body's surrounding surface, but a change in its relative position.

IT IS PLACE RATHER THAN space which Aristotle seeks to define, and place in the sense of the circumference of a body rather than its position in space. He rejects the notion that place is the extension of a magnitude, for that would, he thinks, identify it with matter. Place belongs to body, not as matter or a property of matter, but as its boundary. It is, Aristotle writes, "the innermost motionless boundary . . . a kind of surface and, as it were, a vessel, *i.e.*, a container of the thing." This boundary is itself made at the surface of a body by a surrounding body or bodies. "If a body has another body outside it and containing it," Aristotle writes, "it is in place, and if not, not."

The consequences of this conception of place are, first, a denial of space in the sense of void or empty place, since place is always "coincident with the thing" contained or bounded; second, a denial of any infinite place, since that would presuppose an actually infinite body—to Aristotle, an impossibility; and third, the conclusion that the whole universe itself does not have a place, for outside the outermost heaven which bounds the world, there can be no containing body by which the universe is bounded.

Aristotle explains that by "heaven" he means "the extreme circumference of the whole"—a whole "composed of all natural perceptible body." The two words which Einstein uses when he discusses "the possibility of a 'finite' and yet 'unbounded' universe" seem to apply to Aristotle's conception of the world—finite in body or matter, yet unbounded, *i.e.*, without anything outside itself to determine or define its boundary.

Aristotle's view of the world seems to be directly opposed to that of the ancient atomists. For them, the whole of matter is discontinuous, existing in indivisible units or atoms, each of which is a plenum—that is, a unit of matter absolutely continuous without void in it—but between which there is void or empty space. For Aristotle, the material world as a whole is a plenum, *i.e.*, continuous body without void. Hence if by "space" is meant not place but void—a bodyless interval between or within bodies—there is no space. Aristotle considers the arguments of Democritus that without void local motion would be impossible, but he thinks "there is no necessity for there being a void if there is movement."

Following Democritus, Lucretius gives another reason for positing void or empty space. As the indivisibility of the simple bodies or atoms consists in their absolute solidity—their lack of void—so the divisibility of composite bodies derives from their being constituted by both atoms and void. "Wherever space lies empty, which we call the void," Lucretius writes, "body is not there; moreover wherever body has its station, there is by no means empty void. Therefore the first bodies are solid and free from void. . . . If there were nothing which was empty and void, the whole would be solid; unless . . . there were bodies determined, to fill all the places that they held, the whole universe would be but empty void space."

For Aristotle, in contrast, the divisibility of matter seems to depend upon its being continuous. On his view, the composite body, constituted by atoms separated from one another by void, is not divisible, but is already actually divided; whereas the very thing which Lucretius regards as indivisible because it is continuous—the voidless atom—is for Aristotle divisible. To call an atom divisible is, of course,

to deny that it is atomic or, in the language of Lucretius, an uncuttable bit of "solid singleness."

Thus diametrically opposite theories of space and place seem to be connected with opposite theories of matter or body. Space as the empty interval or void *between* solid bodies goes along with atomism, whereas place as "the boundary of the containing body at which it is in contact with the contained body" goes along with the theory of the world as a material plenum.

The atomic theory and the plenum theory are opposed in one other fundamental respect concerning space. According to Aristotle, the impossibility of an actually infinite body makes the largest place finite. According to Lucretius, the infinite number of atoms requires an infinite space. Asking whether "the void that we have discovered, or room or space . . . is altogether bounded or spreads out limitless and immeasurably deep," Lucretius answers that "the whole universe is bounded in no direction." His argument seems to be like Aristotle's for an "unbounded universe." Since there can be "nothing outside the whole sum," he writes, "it lacks therefore bound or limit." But where Aristotle's meaning seems to be that the universe has no place, since all places are inside it, Lucretius appears to mean that empty space extends infinitely in all directions.

MODERN ATOMISTS like Newton and Locke hold a theory of space which accords with the view of matter existing in discontinuous units, separated by intervals of emptiness. Newton's distinction, for example, between absolute and relative space acknowledges a space that is relative to bodies, but also affirms an absolutely independent space, which has being in separation from matter or bodies. "Absolute space, in its own nature, without relation to anything external," he writes, "remains always similar and immovable. Relative space is some movable dimension or measure of the absolute spaces, which our senses determine by its position to bodies and which is commonly taken for immovable space." As for place in distinction from space, Newton holds that it is "a part of space which a body takes up, and is according to the space, either absolute or relative." In opposing Aristotle's view, he adds that place is "not the situation, nor the external surface of the body. For the places of equal solids are always equal; but their surfaces, by reason of their dissimilar figures, are often unequal."

Locke also distinguishes between space and place, the one consisting in "the relation of distance between any two bodies or points," the other in "the relation of distance betwixt any thing and any two or more points which are considered as keeping the same distance one with another and, so considered, as at rest." With this conception of place, he holds in apparent agreement with Aristotle that "we can have no idea of the place of the universe, though we can of all the parts of it." Yet he goes on to say that what lies beyond the universe is "one uniform space or expansion, wherein the mind finds no variety or marks."

This seems to indicate that Locke's idea of space, like that of Lucretius, conceives an infinite void. "Those who assert the impossibility of space existing without matter must," he writes, "make body infinite." Furthermore, "those who dispute for or against a vacuum, do thereby confess that they have distinct ideas of vacuum and plenum, *i.e.*, that they have an idea of extension void of solidity, though they deny its existence, or else they dispute about nothing at all. For they who so much alter the signification of words, as to call extension, body, and consequently make the whole essence of body to be nothing but pure extension, must talk absurdly whenever they speak of vacuum, since it is impossible for extension to be without extension: for vacuum, whether we affirm or deny it, signifies space without body, whose very existence no one can deny to be possible who will not make matter infinite, and take from God a power to annihilate any particle of it."

Precisely because he thinks no one can affirm an infinite body, and because he conceives space to be a void, distinct from bodies, Locke finds it necessary to affirm the infinity of space. "I would ask," he says, "whether if God placed a man at the extremity of corporeal beings, he could not stretch his hand beyond his body. If he could, then he would put his arm where there was before space without body." Furthermore, if "it be impossible for any particle of matter to move but into empty space, the same possibility of a body's moving into a void space, be-

yond the utmost bounds of body, as well as into a void space interspersed amongst bodies, will always remain clear and evident. . . . So that, wherever the mind places itself by any thought, either amongst or remote from all bodies, it can, in this uniform idea of space, no where find any bounds, any end; and so must necessarily conclude it . . . to be actually infinite."

IT MAY SEEM PARADOXICAL that pure space—space existing without matter—is denied by one who also denies the existence of matter. "When I speak of pure or empty space," Berkeley writes, "it is not to be supposed that the word 'space' stands for an idea distinct from or conceivable without body or motion." What is meant, he suggests, is merely that the resistance one body gives to another in motion is absent when space is relatively empty. But this is always relative. "In proportion as the resistance is lesser or greater," Berkeley says, "the space is more or less *pure*." There would be absolutely pure space only if all bodies other than his own were annihilated. "If that, too, were annihilated," Berkeley concludes, "then there could be no motion, and consequently no Space."

All these contradictions concerning space enter into Kant's statement of the first cosmological antinomy, in which the thesis that the world is limited with regard to space and the antithesis that the world is infinite in space seem to be equally susceptible to proof—and so to disproof! Both alternatives violate our empirical concepts.

If space "is *infinite* and unlimited," Kant writes, "it is *too large* for every possible empirical concept. If it is *finite* and limited, you have a perfect right to ask what determines that limit. Empty space is not an independent correlate of things, and cannot be a final condition, still less an empirical condition forming part of possible experience—for how can there be experience of what is absolutely void? But in order to produce an absolute totality in an empirical synthesis, it is always requisite that the unconditioned should be an empirical concept. Thus it follows that a *limited world* would be *too small* for your concept."

Space itself, however, is for Kant "not an empirical concept which has been derived from external experience." Rather it "is a necessary representation *a priori* forming the very foundation of all external intuitions" and, as Kant explains in his *Prolegomena*, it establishes geometry as an *a priori* science. "Space is nothing but the form of all phenomena of the external senses; it is the subjective condition of our sensibility, without which no external intuition is possible for us. . . . Nothing which is seen in space is a thing by itself," nor is "space a form of things supposed to belong to them by themselves." The external objects which we perceive in space "are nothing but representations of our senses, the form of which is space."

So far as the experience of space is concerned, William James seems to take an opposite view. Time and space relations, he says, "are impressed from without" and "*stamp copies of themselves within.*" To the Kantian theory that space is "a *quality produced* out of the inward resources of the mind, to envelope sensations which, as given originally, are not spatial," James replies that he can find "no introspective experience of mentally producing or creating space."

He proposes two other alternatives: "either (1) there is no spatial *quality* of sensation at all, and space is a mere symbol of succession; or (2) there is an *extensive quality given immediately* in certain particular sensations." The second seems to James best suited to explain the development of our perceptions of space, and he does not think it inconsistent with the *a priori* or non-empirical character of geometry, whose necessary truths refer to ideal objects, not to experienced things in physical space.

THE CHAPTER on MATHEMATICS considers the relation of the postulates of diverse geometries to the diversity of Euclidean and non-Euclidean spaces, such as that of the flat plane, the surface of a sphere, and the surface of a pseudosphere. Just as different parallel postulates select different spaces for geometrical construction, so a postulate like Euclid's concerning the equality of all right angles seems to assume a uniformity of space which permits geometrical figures to be transposed without alteration. "If translation through space warped or magnified forms," James remarks, "then the relations of equality, etc., would always have to be expressed with a position-qualification added."

Confronted with a variety of purely mathematical spaces, the physicist is concerned with the problem of which geometry is, as Einstein says, in "correspondence with a 'real' object," or true of the real world. "According to the general theory of relativity, the geometrical properties of space are not independent," Einstein writes, "but are determined by matter." It follows that our assumptions about the distribution of matter determine the character of the world's space.

On the assumption of a world "not inhabited by matter everywhere," in whose infinite space "the average density of matter would necessarily be *nil*," Einstein says we can imagine "a quasi-Euclidean universe" analogous to "a surface which is irregularly curved in its individual parts, but which nowhere departs appreciably from a plane: something like the rippled surface of a lake." But if the "average density of matter . . . differs from zero, however small may be that difference, then the universe cannot be quasi-Euclidean." It would be spherical (or elliptical) if the matter were uniformly distributed; but "since in reality the detailed distribution of matter is not uniform," Einstein concludes that "the real universe will deviate in individual parts from the spherical, *i.e.*, the universe will be quasi-spherical. But it will be necessarily finite."

The nature of the actual space of the universe thus seems to be related to the issue whether physical as opposed to mathematical space is a void or filled with matter. Defining a vacuum as "a space empty of all bodies known to the senses," Pascal insists that "there is as much difference between nothingness and space, as there is between empty space and a material body," so that "empty space occupies the mean between matter and nothingness." Torricelli's experiments seem to him complete proof against the disciples of Aristotle, for they upset the belief that "nature abhors a vacuum."

Gilbert's observations on magnetic influences, Newton's observations on the transmission of light and heat as well as gravitational pull, and Faraday's on electrical phenomena, all seem to admit the possibility of action at a distance, or through a vacuum. But the question remains whether the so-called physical vacuum is an absolute void or merely empty of "all bodies known to the senses."

"Is not the heat of the warm room conveyed through the *vacuum*," Newton asks, "by the vibrations of a much subtiler medium than air which after the air was drawn out remained in the *vacuum*? And is not this medium the same with that medium by which light is refracted and reflected, and by whose vibrations light communicates heat to bodies? . . . And is not this medium exceedingly more rare and subtile than the air, and exceedingly more elastic and active? And does it not readily pervade all bodies? And is it not (by its elastic force) expanded through all the heavens?"

Huygens also refers to an ethereal matter as the medium for the propagation of light. "One will see," he writes, "that it is not the same that serves for the propagation of sound . . . It is not the same air, but another kind of matter in which light spreads; since if the air is removed from the vessel, the light does not cease to traverse it as before." But this ethereal medium, without which bodies would act at a distance upon one another—gravitationally, magnetically, electrically—through an absolute void, seems to have contrary properties. It is not only "subtiler" than air, but, as Newton suggests, it may be "denser than quick-silver or gold," since "planets and comets, and all gross bodies perform their motions more freely, and with less resistance in this aethereal medium than in any fluid, which fills all space adequately without leaving any pores." And, in still another place, he asks: "What is there in places almost empty of matter, and whence is it that the Sun and Planets gravitate towards one another, without dense matter between them?"

Whatever may be thought of the ether as a physical hypothesis, the problem still remains whether action can take place at a distance through a void or must employ what Faraday calls "*physical* lines of force" through filled space. Faraday thinks the evidences support the latter alternative for both electricity and magnetism. He quotes a letter from Newton to Bentley to show that Newton was "an unhesitating believer in physical lines of gravitating force."

In that letter, posthumously discovered, Newton says: "That gravity should be innate, in-

herent and essential to matter, so that one body may act upon another at a distance through a *vacuum*, without the mediation of anything else, by and through which their action and force may be conveyed from one to another, is to me so great an absurdity, that I believe no man who has in philosophical matters a competent faculty of thinking, can ever fall into it."

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REFERENCES

To find the passages cited, use the numbers in heavy type, which are the volume and page numbers of the passages referred to. For example, in **4** HOMER: *Iliad*, BK II [265-283] **12d**, the number **4** is the number of the volume in the set; the number **12d** indicates that the passage is in section d of page 12.

PAGE SECTIONS: When the text is printed in one column, the letters **a** and **b** refer to the upper and lower halves of the page. For example, in **53** JAMES: *Psychology*, **116a-119b**, the passage begins in the upper half of page 116 and ends in the lower half of page 119. When the text is printed in two columns, the letters **a** and **b** refer to the upper and lower halves of the left-hand side of the page, the letters **c** and **d** to the upper and lower halves of the right-hand side of the page. For example, in **7** PLATO: *Symposium*, **163b-164c**, the passage begins in the lower half of the left-hand side of page 163 and ends in the upper half of the right-hand side of page 164.

AUTHOR'S DIVISIONS: One or more of the main divisions of a work (such as PART, BK, CH, SECT) are sometimes included in the reference; line numbers, in brackets, are given in certain cases; *e.g.*, *Iliad*, BK II [265-283] **12d**.

BIBLE REFERENCES: The references are to book, chapter, and verse. When the King James and Douay versions differ in title of books or in the numbering of chapters or verses, the King James version is cited first and the Douay, indicated by a *(D)*, follows; *e.g.*, OLD TESTAMENT: *Nehemiah*, 7:45—*(D) II Esdras*, 7:46.

SYMBOLS: The abbreviation "esp" calls the reader's attention to one or more especially relevant parts of a whole reference; "passim" signifies that the topic is discussed intermittently rather than continuously in the work or passage cited.

For additional information concerning the style of the references, see the Explanation of Reference Style; for general guidance in the use of *The Great Ideas*, consult the Preface.

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1*a*. Space or extension as the essence or property of bodies: space, the receptacle, and becoming

7 PLATO: *Timaeus*, **455c-458b**
8 ARISTOTLE: *Physics*, BK I, CH 9 [192^a9-14] **268a**; BK IV, CH 2 [209^b5-210^a11] **288b-d**; CH 4 [211^b5-212^a2] **290c-291a**
17 PLOTINUS: *Third Ennead*, TR VI, CH 13 **114c-115b**; CH 19 **118c-119a**
19 AQUINAS: *Summa Theologica*, PART I, Q 66, A 1, REP 1 **343d-345c**
23 HOBBES: *Leviathan*, PART IV, **270d-271a**
31 DESCARTES: *Rules*, XIV, **29b-32a** / *Discourse*, PART IV, **52d-53a** / *Meditations*, II, **78c-d** / *Objections and Replies*, DEF VII **130c-d**; **135d-136a**; **154a**
33 PASCAL: *Vacuum*, **370a**
35 LOCKE: *Human Understanding*, BK II, CH XIII, SECT 11-27 **150d-154d**; CH XV, SECT 4, **162d-163a**; CH XVII, SECT 20 **172d-173c**; BK III, CH VI, SECT 5, **269b-c**; SECT 21 **273c-d**; CH X, SECT 6, **293b**
42 KANT: *Pure Reason*, **28b-33d**

1*b*. Place as the envelope or container of bodies: place as a part of space or as relative position in space

8 ARISTOTLE: *Physics*, BK IV, CH 1-5 **287a-292c** esp CH 4 **289d-291c** / *Heavens*, BK I, CH 7 [275^b5-12] **366d**
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23 HOBBES: *Leviathan*, PART III, **172b**; PART IV, **270d-271c**
31 DESCARTES: *Rules*, XII, **23c-d**; XIII, **26b-c** / *Meditations*, II, **78c-d** / *Objections and Replies*, **228c-229a**
33 PASCAL: *Vacuum*, **375a-376a**
34 NEWTON: *Principles*, DEFINITIONS, SCHOL, **9a**; **10a-11a**
35 LOCKE: *Human Understanding*, BK II, CH IV,

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35 BERKELEY: *Human Knowledge*, SECT III, 434c
42 KANT: *Judgement*, 611d-612a
53 JAMES: *Psychology*, 139a-140a; 626b

1c. The tridimensionality of bodies: the indeterminate dimensions of pure space or prime matter

7 PLATO: *Timaeus*, 455c-458b
8 ARISTOTLE: *Topics*, BK VI, CH 5 [142^{b}20-29] 196b / *Physics*, BK IV, CH 1 [209^{a}5-7] 287d / *Heavens*, BK I, CH 1 359a-c / *Metaphysics*, BK V, CH 6 [1016^{b}25-31] 537b; CH 13 [1020^{a}7-14] 541b; BK VII, CH 3 [1029^{a}11-19] 551c-d
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1d. The exclusiveness of bodily occupation of space: impenetrability

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2. Space, void, and motion

2a. The role of space or place in local motion: the theory of proper places; absolute and relative space

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35 LOCKE: *Human Understanding*, BK II, CH XIII, SECT 7–10 149d-150d; SECT 27, 154c; CH XV, SECT 5–8 163b-164b
35 BERKELEY: *Human Knowledge*, SECT 110–117 434b-436a
42 KANT: *Pure Reason*, 29c-d; 31d-32a; 55c-56a; 84b-c; 135d [fn 2]
51 TOLSTOY: *War and Peace*, BK XI, 469a-d

2b. The issue of the void or vacuum

2b(1) The distinction between empty and filled space

8 ARISTOTLE: *Physics*, BK IV, CH 1 [208^{b}25–26] 287c; CH 6–9 292c-297c esp CH 7 [213^{b}30–214^{a}16] 293b-c / *Heavens*, BK I, CH 9 [279^{a}12–18] 370b-c; BK III, CH 2 [301^{b}32–302^{a}9] 393b
12 LUCRETIUS: *Nature of Things*, BK I [329–369] 5b-c; [418–448] 6b-c; [503–550] 7b-d
17 PLOTINUS: *Fourth Ennead*, TR III, CH 20, 152c
19 AQUINAS: *Summa Theologica*, PART I, Q 46, A 1, REP 4 250a-252d
20 AQUINAS: *Summa Theologica*, PART III SUPPL, Q 83, A 2, ANS 976c-978c
31 SPINOZA: *Ethics*, PART I, PROP 15, SCHOL, 361b-d
33 PASCAL: *Vacuum*, 359b-361a; 363b-365b; 370a; 373b-376a
35 LOCKE: *Human Understanding*, BK II, CH IV, SECT 2–5 129c-131a; CH XIII, SECT 11–27 150d-154d esp SECT 21–27 152d-154d; CH XIV, SECT 26 160c-d; CH XV, SECT 1–4 162b-163b passim; CH XVII, SECT 4 168b-d; SECT 20 172d-173c
35 BERKELEY: *Human Knowledge*, SECT 116–117 435d-436a
42 KANT: *Pure Reason*, 71b-72a; 84b-c; 135d [fn 2]; 152c-d

2b(2) The indispensability of void or vacuum for motion and division: the absence of void in atoms

8 ARISTOTLE: *Physics*, BK IV, CH 6 292c-293b; CH 7 [214^{a}16]–CH 8 [216^{a}26] 293d-295d / *Heavens*, BK I, CH 7 [275^{b}30–276^{a}5] 367a; BK III, CH 2 [301^{b}32–302^{a}9] 393b; BK IV, CH 2 [308^{b}29–310^{a}13] 400b-401c / *Generation and Corruption*, BK I, CH 8 [325^{a}24–^{b}11] 423d-424b
12 LUCRETIUS: *Nature of Things*, BK I [329–397] 5b-6a; [418–448] 6b-c; [483–550] 7a-d; [988–1007] 13b; [1052–1082] 14a-c; BK VI [998–1041] 93c-94a
20 AQUINAS: *Summa Theologica*, PART III SUPPL, Q 84, A 3, REP 2 985d-989b
28 GALILEO: *Two New Sciences*, FIRST DAY, 138b-141d; 151c-153a; 156d-160a passim
30 BACON: *Novum Organum*, BK II, APH 48, 187c
31 SPINOZA: *Ethics*, PART I, PROP 15, SCHOL, 361b-d
33 PASCAL: *Vacuum*, 359a-381b / *Weight of Air*, 405b-415b
34 NEWTON: *Principles*, BK III, PROP 6, COROL III-IV 281b / *Optics*, BK III, 541b
35 LOCKE: *Human Understanding*, BK II, CH XIII, SECT 23 153c-d; CH XVII, SECT 4 168b-d
45 LAVOISIER: *Elements of Chemistry*, PART I, 9a-b
45 FARADAY: *Researches in Electricity*, 850b,d-855a,c esp 851a-b

2b(3) The denial of void or vacuum in favor of a plenum

7 PLATO: *Timaeus*, 460c-d; 470d-471c
8 ARISTOTLE: *Physics*, BK IV, CH 6–9 292c-297c / *Heavens*, BK I, CH 9 [279^{a}12–18] 370b-c; BK III, CH 2 [301^{b}32–302^{a}9] 393b; CH 6 [305^{a}14–22] 396b-c
10 GALEN: *Natural Faculties*, BK II, CH 6, 188c-189c
12 LUCRETIUS: *Nature of Things*, BK I [370–383] 5c-d
19 AQUINAS: *Summa Theologica*, PART I, Q 46, A 1, REP 4 250a-252d; Q 52, A 3, REP 2 280a-d
23 HOBBES: *Leviathan*, PART III, 172b; PART IV, 269d
30 BACON: *Novum Organum*, BK II, APH 8 140b; APH 48, 180a; 187c
31 DESCARTES: *Meditations*, VI, 100d
31 SPINOZA: *Ethics*, PART I, PROP 15, SCHOL, 361b-d
33 PASCAL: *Vacuum*, 376a-b; 379a-380a
35 BERKELEY: *Human Knowledge*, SECT 116–117 435d-436a
42 KANT: *Pure Reason*, 71b-72a; 84b-c; 135d [fn 2]
45 FARADAY: *Researches in Electricity*, 850b,d-855a,c esp 854a-855a,c

2c. Space as a medium of physical action: the ether and action-at-a-distance; the phenomena of gravitation, radiation, and electricity

8 ARISTOTLE: *Physics*, BK VIII, CH 10 [266^{b}25–267^{a}20] 354b-d / *Heavens*, BK III, CH 2 [301^{b}16–31] 393a-b / *Soul*, BK II, CH 7 [418^{a}27]–CH 8 [420^{a}26] 649b-651c; BK III, CH 12 [434^{b}22–435^{a}10] 667c-668a / *Dreams*, CH 2 [459^{a}28–34] 703b
12 LUCRETIUS: *Nature of Things*, BK I [440–448] 6c; BK VI [906–1041] 92b-94a
16 KEPLER: *Epitome*, BK IV, 897b-905a esp 900b-901b; 906a-b; 922a-b; 934b; BK V, 965a-b
19 AQUINAS: *Summa Theologica*, PART I, Q 8, A 1, REP 3 34d-35c
28 GILBERT: *Loadstone*, BK II, 26d-40b esp 30a-32c; 43a-c; 45d-47b; 51a-c; 54d-55c; BK V, 102d-104b; BK VI, 112d
28 GALILEO: *Two New Sciences*, THIRD DAY, 202d
30 BACON: *Novum Organum*, BK II, APH 36, 167b-c; APH 37 168d-169c; APH 45 176a-177c; APH 48, 183a-c; 186a
31 DESCARTES: *Rules*, IX, 15c
33 PASCAL: *Vacuum*, 366a-367a
34 NEWTON: *Principles*, DEF V-VIII 6a-8a; BK I, PROP 69, SCHOL 130b-131a; BK III, GENERAL

(2. *Space, void, and motion.* 2c. *Space as a medium of physical action: the ether and action-at-a-distance; the phenomena of gravitation, radiation, and electricity.*)

SCHOL, 371b-372a / *Optics*, BK III, 516a-b; 520a-522b esp 521a-b; 525b-529a; 531b-542a passim, esp 531b

34 HUYGENS: *Light*, CH I, 553b-560b

35 BERKELEY: *Human Knowledge*, SECT 102–108 432d-434a passim

35 HUME: *Human Understanding*, SECT VII, DIV 57, 475d [fn 2]

36 SWIFT: *Gulliver*, PART III, 118b-119a

42 KANT: *Pure Reason*, 8d [fn 2]; 227b

45 LAVOISIER: *Elements of Chemistry*, PART I, 9b-c

45 FARADAY: *Researches in Electricity*, 441a-442b; 451a-454a; 463d-465d; 513d-514c; 521a-524a; 528c-532a; 604b-c; 631b-c; 648b-d; 685d-686c; 816b,d-819a,c; 819a-d; 824a-b; 832a-c; 840c-842c; 855a,c

51 TOLSTOY: *War and Peace*, EPILOGUE II, 687d; 695c

3. Space, quantity, and relation

3a. The finitude or infinity of space: the continuity and divisibility of space

8 ARISTOTLE: *Categories*, CH 6 [5^a6-23] 9b-c / *Physics*, BK III, CH 5 [205^a10–206^a8] 283b-284b; BK IV, CH 5 [212^b11-21] 292a / *Heavens*, BK I, CH 9 [279^a12 $^b4$] 370b-d / *Metaphysics*, BK V, CH 13 [1020^a25–33] 541c; BK XI, CH 10 [1067^a8–33] 595c-596a

11 ARCHIMEDES: *Sand-Reckoner* 520a-526b passim

12 LUCRETIUS: *Nature of Things*, BK I [951-1007] 12d-13b; BK II [89-94] 16a-b; [1048-1063] 28b-c; BK VI [647–652] 89a

16 PTOLEMY: *Almagest*, BK I, 10b

16 COPERNICUS: *Revolutions of the Heavenly Spheres*, BK I, 516a-517b

16 KEPLER: *Epitome*, BK IV, 882a-886b

18 AUGUSTINE: *City of God*, BK XI, CH 5 324d-325c

19 AQUINAS: *Summa Theologica*, PART I, Q 8, A 4, REP 3 37c-38c; Q 46, A 1, REP 8 250a-252d; Q 52, A 1 278d-279b; Q 53, A 1, ANS and REP 1 280d-282a; A 2, ANS and REP 1 282a-283b

20 AQUINAS: *Summa Theologica*, PART III SUPPL, Q 84, A 3, CONTRARY 985d-989b

23 HOBBES: *Leviathan*, PART I, 54b-c; 61b; PART II, 162b; PART IV, 271b

30 BACON: *Novum Organum*, BK I, APH 48 110d-111a

31 DESCARTES: *Objections and Replies*, 112b

33 PASCAL: *Pensées*, 121 195a; 205-206 211a / *Geometrical Demonstration*, 434b-439b

34 NEWTON: *Principles*, DEFINITIONS, SCHOL, 8b-11a / *Optics*, BK III, 543a

35 LOCKE: *Human Understanding*, BK II, CH XIII, SECT 4 149b; SECT 21 152d-153b; CH XIV, SECT 26 160c-d; CH XV, SECT 1–8 162b-164b passim; CH XVI, SECT 8 167c; CH XVII 167d-174a passim, esp SECT 3–4 .68b-d, SECT 11 170c

35 BERKELEY: *Human Knowledge*, SECT 117 436a

42 KANT: *Pure Reason*, 24c-d; 28b-29c; 135a-137a,c; 152a-d; 160b-163a esp 162b / *Judgement*, 501a-b

51 TOLSTOY: *War and Peace*, EPILOGUE II, 693c-694a passim

53 JAMES: *Psychology*, 631a

54 FREUD: *General Introduction*, 562c-d

3b. The relation of physical and mathematical space: sensible and ideal space

8 ARISTOTLE: *Physics*, BK IV, CH 1 [209^a5-7] 287d; CH 8 [216^b2–11] 296a-b / *Metaphysics*, BK XIV, CH 5 [1092^a18–21] 625a

20 AQUINAS: *Summa Theologica*, PART III SUPPL, Q 83, A 2, ANS 976c-978c; A 3, REP 1–2 978c-980d

31 DESCARTES: *Rules*, XIV 28a-33b / *Discourse*, PART IV, 52d-53a / *Objections and Replies*, 169c-170a

33 PASCAL: *Vacuum*, 370a; 373a-374a

34 NEWTON: *Principles*, DEFINITIONS, SCHOL 8b-13a esp 8b-9a, 12a-b

35 LOCKE: *Human Understanding*, BK II, CH IV, SECT 5 130d-131a; CH XIV, SECT 26 160c-d; CH XV, SECT 1–8 162b-164b passim

35 BERKELEY: *Human Knowledge*, SECT 110–117 434b-436a; SECT 124-128 437d-438d

42 KANT: *Pure Reason*, 24a-26b; 161d-163a / *Judgement*, 574b-575a

53 JAMES: *Psychology*, 877b

3c. Geometrical space, its kinds and properties: spatial relationships and configurations

8 ARISTOTLE: *Categories*, CH 6 [5^a1–23] 9b-c / *Heavens*, BK I, CH 1 359a-c / *Metaphysics*, BK V, CH 6 [1016^b25-31] 537b

11 EUCLID: *Elements*, BK I, DEFINITIONS, 1–2,5 1a; 14 1b; POSTULATES esp 5 2a; COMMON NOTIONS, 4 2a; PROP 4 4a-b; PROP 8 6b-7a; PROP 16 10b-11a; PROP 26 16a-17b; PROP 29 18b-19a; BK X, PROP 1 191b-192a; BK XI, DEFINITIONS, 1 301a

11 ARCHIMEDES: *Sphere and Cylinder*, BK I, ASSUMPTIONS esp 5 404b / *Spirals*, 484b / *Quadrature of the Parabola*, 527b

11 NICOMACHUS: *Arithmetic*, BK II, 832b-d

16 KEPLER: *Epitome*, BK IV, 865a-b

17 PLOTINUS: *Sixth Ennead*, TR III, CH 13–14 287d-289a

19 AQUINAS: *Summa Theologica*, PART I, Q 85, A 8, REP 2 460b-461b

31 DESCARTES: *Rules*, XIV 28a-33b esp 30d-32a / *Discourse*, PART IV, 52d-53a / *Meditations*, V, 93a-d; VI, 96b-d / *Objections and Replies*, 217a-c; 228c-229a

35 LOCKE: *Human Understanding*, BK II, CH XIII, SECT 5-6 149b-d
35 BERKELEY: *Human Knowledge*, SECT 123-132 437c-439c
35 HUME: *Human Understanding*, SECT XII, DIV 124-125 506a-507a passim
42 KANT: *Pure Reason*, 24a-26b
52 DOSTOEVSKY: *Brothers Karamazov*, BK V, 121a-b
53 JAMES: *Psychology*, 550b-551b [fn 1-2]; 876b-878a esp 877b

3d. The measurement of spaces, distances, and sizes: trigonometry; the use of parallax

16 PTOLEMY: *Almagest*, BK V, 165a-176a; BK IX, 270a-b
16 COPERNICUS: *Revolutions of the Heavenly Spheres*, BK I, 516a-b; 521b-529a; BK IV, 705a-714b
16 KEPLER: *Epitome*, BK IV, 861a-863b; 868b-887a / *Harmonies of the World*, 1016b-1018a
30 BACON: *Novum Organum*, BK I, APH 109, 129b; BK II, APH 39, 170b-c; APH 45 176a-177c
31 DESCARTES: *Rules*, XIV, 31b-33b
34 NEWTON: *Principles*, BK III, LEMMA 4 333a-337b
41 GIBBON: *Decline and Fall*, 299b-c
53 JAMES: *Psychology*, 551a-b; 673b

4. The knowledge of space and figures

4a. Space as the divine sensorium and space as a transcendental form of intuition: the *a priori* foundations of geometry

34 NEWTON: *Principles*, BK III, GENERAL SCHOL, 370a-371a / *Optics*, BK III, 529a; 542a-543a
42 KANT: *Pure Reason*, 16a-c; 17d-18d; 23a-26b; 31b-d; 46a-c; 55c-56a; 62a-d; 68a-69c; 86b-c; 87b-c; 94b-95a; 99a-101b; 110a; 131a-c; 135d [fn 2]; 136c-137c [antithesis]; 153c-155a; 186d-187a; 211c-218d esp 211c-212a, 213d-215a / *Practical Reason*, 307d-308b; 312c-313d / *Judgement*, 471b-c; 551a-553c; 574b-575a
53 JAMES: *Psychology*, 629a-631a; 874a; 876b-878a

4b. The controversy concerning innate and acquired space-perception

42 KANT: *Pure Reason*, 23a-24a; 25c-26a; 31d-32c / *Practical Reason*, 307d-308b
53 JAMES: *Psychology*, 474a-475a; 627a-635a esp 628b-631a, 633a-635a; 852b-853a; 860b-861a

4c. The perception of space: differences between visual, auditory, and tactual space; perspective and spatial illusions

8 ARISTOTLE: *Sense and the Sensible*, CH 6 [445^{b}4-18] 683b-d / *Memory and Reminiscence*, CH 2 [452^{b}7-18] 694b-c
12 LUCRETIUS: *Nature of Things*, BK II [308-332] 19a-b; BK IV [230-255] 47b-c; [269-291] 47d-48a; [353-452] 48d-50a
17 PLOTINUS: *Second Ennead*, TR VIII 64c-65c
35 LOCKE: *Human Understanding*, BK II, CH XIII, SECT 2 149a; SECT 5 149b-c
35 BERKELEY: *Human Knowledge*, SECT 42-44 420c-421a
53 JAMES: *Psychology*, 318b; 400a; 406b; 410a-b; 471b-479a esp 474a-477b; 540a-635a esp 541a, 548b-552a, 560a-575a, 627a-635a

5. The mode of existence of geometrical objects: their character as abstractions; their relation to intelligible matter

7 PLATO: *Republic*, BK VI, 387b-c; BK VII, 394b c / *Philebus*, 636b-c / *Seventh Letter*, 809c-810b
8 ARISTOTLE: *Posterior Analytics*, BK I, CH 13 [79^{a}6-10] 108c; CH 18 [81^{a}40-^{b}5] 111b-c / *Topics*, BK VI, CH 6 [143^{b}11-33] 197b-c / *Physics*, BK II, CH 2 [193^{b}23-194^{a}11] 270a-c; BK III, CH 5 [204^{a}17-19] 282a-b; BK IV, CH 1 [208^{b}19-24] 287b-c / *Heavens*, BK III, CH 1 [299^{a}1-17] 390b-c / *Metaphysics*, BK I, CH 6 [987^{b}14-19] 505d; CH 8 [989^{b}29-33] 508a; CH 9 [991^{b}9-992^{b}18] 509d-511a; BK III, CH 1 [995^{b}13-18] 514a; [996^{a}13-15] 514c; CH 2 [997^{b}12-998^{a}19] 516b-d; CH 5 [1001^{b}26] CH 6 [1002^{b}25] 520c-521c; BK VII, CH 2 [1028^{b}18 28] 551a-b; CH 10 [1035^{b}32-1036^{a}12] 559b-c; CH 11 [1036^{b}32-1037^{a}4] 560b-c; BK XI, CH 2 [1060^{a}36-^{b}19] 588c-d; CH 3 [1061^{a}29-^{b}4] 589c; BK XII, CH 1 [1069^{a}30-37] 598b; BK XIII, CH 1-3 607a-610a; CH 6 [1080^{b}23-30] 612c; CH 9 616d-618c; BK XIV, CH 3 622d-623d passim; CH 5 [1092^{a}18-21] 625a; CH 6 [1093^{b}24-29] 626d / *Soul*, BK III, CH 7 [431^{b}13-19] 664b
9 ARISTOTLE: *Motion of Animals*, CH 1 [698^{a}24-^{b}1] 233b-c / *Ethics*, BK VI, CH 8 [1142^{a}16-19] 391b
11 NICOMACHUS: *Arithmetic*, BK I, 811a-812a
18 AUGUSTINE: *Confessions*, BK X, par 19 76a-b
19 AQUINAS: *Summa Theologica*, PART I, Q 5, A 3, REP 4 25a-d; Q 11, A 3, REP 2 49a-c; Q 44, A 1, REP 3 238b-239a; Q 85, A 1, REP 2 451c-453c
20 AQUINAS: *Summa Theologica*, PART III SUPPL, Q 83, A 2, ANS 976c-978c; A 3, REP 2 978c-980d
31 DESCARTES: *Rules*, XIV 28a-33b esp 30d-32a / *Discourse*, PART IV, 52d-53a / *Meditations*, I, 76b-c; V, 93a-d; V-VI, 96a-d / *Objections and Replies*, 169c-170a; 217a-d; 218c; 228c-229a
35 LOCKE: *Human Understanding*, BK II, CH XIII, SECT 5-6 149b-d; BK III, CH III, SECT 19 259c-260a; BK IV, CH IV, SECT 5-8 324d-325c
35 BERKELEY: *Human Knowledge*, INTRO, SECT 12-16 408a-409d; SECT 12-16 415b-416a; SECT 123-128 437c-438d esp SECT 125-126 438a-c
35 HUME: *Human Understanding*, SECT IV, DIV 20 458a-b; SECT XII, DIV 122 505c-d; DIV 124-125 506a-507a esp DIV 125, 507b [fn 1]
42 KANT: *Pure Reason*, 16a-c; 17d-18d; 24d-25b; 31b-d; 35b-36a; 46a-c; 55c; 62a-d; 68a-69c; 86b-c; 87b-c; 91c-d; 94b-95a; 211c-213c;

(5. The mode of existence of geometrical objects: their character as abstractions; their relation to intelligible matter.)

217c-d / *Practical Reason*, 312c-d / *Judgement*, 551a-552c

53 JAMES: *Psychology*, 876b-878a; 880b-881a

6. The spiritual significance of place, position, and space

7 PLATO: *Timaeus*, 455b-c

8 ARISTOTLE: *Heavens*, BK I, CH 3 [270^{b}1-12] 361c-d; BK II, CH 1 375b,d-376a; CH 13 [293^{a}15-^{b}15] 384d-385a

16 COPERNICUS: *Revolutions of the Heavenly Spheres*, BK I, 520b; 526a-528a

16 KEPLER: *Epitome*, BK IV, 853b-854a; 857b-860b; 915b-916a / *Harmonies of the World*, 1080b-1085b

18 AUGUSTINE: *Confessions*, BK VII, par 20-21 49d-50a

19 AQUINAS: *Summa Theologica*, PART I, Q 3, A 1, REP 5 14b-15b; Q 8, A 1, REP 3 34d-35c; Q 61, A 4 316d-317c; Q 66, A 347b-348d; Q 102 523d-527a,c

20 AQUINAS: *Summa Theologica*, PART III SUPPL, Q 84, A 2, REP 5 984c-985d

21 DANTE: *Divine Comedy*, HELL, V [1-15] 7a; VI [77-87] 9a-b; IX [16-33] 12b-c; PURGATORY, IV [1-96] 57c-58c; XVIII [22-33] 80a-b; XX [124]-XXI [72] 84c-85d; PARADISE, I [64-142] 106d-107d; III [34-90] 109d-110b; IV [28-48] 111a; XXVIII 148d-150b; XXX-XXXII 151d-156a

32 MILTON: *Paradise Lost*, BK II [850-1009] 129b-133a; BK III [523-539] 146b-147a; BK VIII [114-130] 234b-235a

33 PASCAL: *Pensées*, 194, 207b; 205-206 211a

42 KANT: *Practical Reason*, 360d-361d

46 HEGEL: *Philosophy of History*, INTRO, 186c-d

54 FREUD: *General Introduction*, 562c-d

CROSS-REFERENCES

For: Other discussions of the theory of the receptacle, *see* FORM 1d(1); MATTER 1; WORLD 4b.

Other discussions of extension as a property of bodies, *see* BEING 7b(4); FORM 2d; MATTER 2a.

Other discussions of the doctrine of prime matter, *see* BEING 7c(3); CHANGE 2a; FORM 2c(3); INFINITY 4c; MATTER 1a.

The role of space or place in local motion, *see* CHANGE 7a; RELATION 6a.

Discussions bearing on the measurement of space, *see* MATHEMATICS 5a; MECHANICS 3a; QUANTITY 6b-6c.

Matters relevant to space as a transcendental form of intuition and to the related problem of the foundations of geometry, *see* FORM 1c; MATHEMATICS 1c; MEMORY AND IMAGINATION 6c(2); MIND 1e(1), 4d(3); TIME 6c; and for other discussions bearing on space-perception, *see* QUALITY 2b; SENSE 3c(3).

The problem of the mode of being which is possessed by the objects of geometry, *see* BEING 7d(3); IDEA 2g; MATHEMATICS 2a-2b; MATTER 1c.

The issue concerning a void or vacuum, and for the related problem of action-at-a-distance, *see* ASTRONOMY 3b; CHANGE 7a; ELEMENT 5c; MECHANICS 5d, 6d(2).

Other considerations of the infinity or continuity of space, *see* INFINITY 3d; MATHEMATICS 2c; ONE AND MANY 3a(4); QUANTITY 2, 5a; and for discussions of astronomical space and the size of the universe, *see* ASTRONOMY 5, 9e; WORLD 6a, 7.

The analysis of geometrical space, spatial relationships and configurations, *see* QUALITY 3b; QUANTITY 3-3e(2).

The relation of spiritual being or action to place or space, *see* ANGEL 3f; ASTRONOMY 6; GOD 7g; IMMORTALITY 5g; SOUL 3e, 4d(3).

ADDITIONAL READINGS

Listed below are works not included in *Great Books of the Western World*, but relevant to the idea and topics with which this chapter deals. These works are divided into two groups:

I. Works by authors represented in this collection.
II. Works by authors not represented in this collection.

For the date, place, and other facts concerning the publication of the works cited, consult the Bibliography of Additional Readings which follows the last chapter of *The Great Ideas*.

I.

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——. *Siris*
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II.

SEXTUS EMPIRICUS. *Against the Physicists*, BK II, CH 1
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HODGSON. *Time and Space*
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Chapter 90: STATE

INTRODUCTION

IS man gregarious in the same sense as other animals are? Is he, unlike other social animals, the only political animal? Does man pattern the state after his own nature, or does he, in imitation of the angels, try to live up to a "city in the skies"—a model of rationality or a utopian illusion? According to the way such questions are answered, different theories of the state develop in the tradition of western thought.

But it is not only the view man takes of his social nature which affects his view of society or the state. His conception of the state is also colored by his understanding of man's place in nature and by his understanding of man's relation to God. On one view the state is ordered to the service of man; on another, man is thought to be a creature of the state, and the state is made God; on still another, man—like Antigone in Sophocles' play—seems to be torn between serving the state and serving God.

If man admits anything to be his superior, he acknowledges his inferiority only to God or to the state. That the idea of God and the idea of the state compete for maximum attention in the tradition of western thought is a significant and readily intelligible fact. That the word "sovereign," which connotes *absolute supremacy*, has both political and religious significance throws further light on this rivalry. It immediately suggests all the issues of church and state, of the spiritual and the temporal power, of the city of God and the city of man.

Even without the aura of divinity, the state, in the conception of many writers, assumes by comparison with the individual man the proportions of the greatest living thing on earth. For Plato it is the counterpart of the human soul, many times magnified. For Aristotle it is like an organic whole to which the individual belongs, just as his own arm or leg belongs to him as an organic part. For Hobbes it is the body politic—that Leviathan which dwarfs its members. For Rousseau it is the corporate person, having a general will more perfect than the individual will—infallible, or almost infallible. When to these images of the state is added the highest transfiguration—that by which the state becomes, according to Hegel, the image of God on earth or the embodiment of Absolute Spirit—the greatness of the state cannot be magnified further.

THE PASSAGES IN WHICH these conceptions first appear are among the most famous in the literature of the theory of the state. In the *Republic*, Socrates proposes that "we inquire into the nature of justice and injustice, first as they appear in the State and secondly in the individual, proceeding from the greater to the lesser and comparing them." After the structure of the state has been examined in terms of its constituent classes and their functions or relations to one another, Socrates returns to the individual. We may assume, he says, that "he has the same three principles in his own soul which are found in the state"; and in another place he adds that "there appear to be as many forms of the soul as there are distinct forms of the State."

Whereas Plato analogizes the social classes in the state with the parts of the soul, Aristotle compares the state in relation to the individual with the body in relation to its members. "The state is by nature clearly prior to the family and to the individual," Aristotle writes, "since the whole is of necessity prior to the part; for example, if the whole body be destroyed, there will be no foot or hand, except in an equivocal sense. . . . The proof that the state is a creation of nature and prior to the individual is that the individual, when isolated, is not self-sufficing;

and therefore he is like a part in relation to the whole."

The analogical conception of the state takes a different turn with Hobbes. The state is a work of art, not a creation of nature. "Nature (the Art whereby God hath made and governs the world)," says Hobbes, "is by the Art of man, as in many other things, so in this also, imitated that it can make an Artificial Animal." The machines men make—"engines that move themselves by springs and wheels as doth a watch"—seem to Hobbes to "have an artificial life." But "Art goes yet further, imitating that Rational and most excellent work of Nature, Man. For by Art is created that great Leviathan called a Commonwealth or State (in Latin *Civitas*) which is but an Artificial Man; though of greater stature and strength than the Natural, for whose protection and defense it was intended; and in which the Sovereignty is an Artificial Soul, as giving life and motion to the whole body."

Hobbes also speaks of the multitude being "united in one Person" as the "generation of that great Leviathan, or rather (to speak more reverently) of that Mortal God, to which we owe under the Immortal God, our peace and defence." It is both divine and human, for "that which is compounded of the powers of most men, united by consent in one person, natural or civil" is, according to Hobbes, "the greatest of human powers."

Rousseau has a number of different names for the "moral and collective body" formed by the association of individuals. "This public person," he says, "formerly took the name *city*, and now takes that of *Republic* or *body politic*; it is called by its members *State* when passive, *Sovereign* when active, and *Power* when compared with others like itself." But Rousseau's primary emphasis seems to be upon the personality of the State; it is a corporate person, with moral qualities and intellectual faculties. He refers repeatedly to the State "as a *persona ficta*" and as "a moral person whose life is in the union of its members."

Many of these comparisons or analogies recur in Hegel's theory of the state. But for Hegel they are no longer metaphors, they are the elements of a literal definition. "The state is an organism," says Hegel. It is the organic whole no part of which can have a separate life. As "occurs with life in the physical organism," he writes, "life is present in every cell" and "separated from that life, every cell dies. This is the same as the ideality of every single class, power, and Corporation as soon as they have the impulse to subsist and be independent. It is with them as with the belly in the organism. It, too, asserts its independence, but at the same time its independence is set aside and it is sacrificed and absorbed into the whole."

But the state is not merely a living organism. "To the mature state," says Hegel, "thought and consciousness essentially belong. . . . As high as mind stands above nature, so high does the state stand above physical life. Man must therefore venerate the state as the divine on earth, and observe that if it is difficult to comprehend nature, it is infinitely harder to understand the state." In saying this Hegel seems to go beyond analogy to the assertion of a definition. "The march of God in the world, that is what the state is," he declares. "The basis of the state is the power of the reason actualizing itself as will. In considering the Idea of the state, we must not have our eyes on particular states or on particular institutions. Instead we must consider the Idea, this actual God, by itself."

To those who object that the state is finite, Hegel replies that "to hold that mind on earth, *i.e.*, the state, is only a finite mind, is a one-sided view, since there is nothing irrational about actuality. Of course, a bad state is worldly and finite and nothing else. But the rational state is inherently infinite." As simply stated by Hegel in the Introduction to his *Philosophy of History*, "the State is the Divine idea as it exists on Earth."

THE DIVERSE CONCEPTIONS of the state raise major issues in political theory concerning the origin of the state and the ends it serves, in both of which is involved the problem of the individual's relation to the state. That problem is touched on in the chapter on CITIZEN, and wherever the problem of the common good or the general welfare is discussed. Here the question whether the state is made for man or man for the state, whether the state subordinates the individual in every phase of his life or only in those matters wherein the public welfare

takes precedence over private interests, serves critically to test the practical significance of different theories of the state. Here also questions concerning the relation of the family to the state—discussed from the point of view of the domestic community in the chapter on FAMILY—throw light on the nature and origin of the political community.

The word "community" and its synonym "society" seem to be more inclusive in meaning than "state." The family and the state are both communities—associations of individuals for a common purpose and sharing in a common life. The word "state" is customarily used only for the developed political society—whether a city-state, a feudal state, or a nation-state; the word "society" usually covers the tribal community, the village, or any community which is politically primitive and has some of the characteristics of a large family. In addition there are within the state, at least in its modern formation, many organized groups which deserve the name "society"—economic corporations and other associations, religious, educational, professional, recreational; and more comprehensive than any particular political community are the cities of God and man which, in Augustine's conception of them, are not to be identified with either the Church or the State.

With the rise of the science of sociology in our time, the idea of society has come to be regarded as more general than that of state. But in the tradition of the great books, particularly those of political theory, the state seems to be considered the epitome of human society. All other forms of association are, for the most part, discussed only in their relation to the state, either as the antecedents from which the state develops, or as the subordinate organizations which it includes, or sometimes, as in the case of the church, a distinct but coordinate community.

The nature of society in general and the problem of different types of social organization and development are not treated in the great books except in their bearing on the family, the church, or the state—the three communities which seem to be taken as representative or basic. Hence there is no chapter on society or community as such. What for modern sociology is a unified subject matter here divides into a number of related but distinct ideas—the domestic community being treated in the chapter on FAMILY, the religious community in the chapter on RELIGION, the various forms of economic organization in the chapters on LABOR and WEALTH. In this chapter, therefore, we shall confine our attention to the specifically political community, both in itself and in relation to these other communities or social groups.

CONCEIVED IN POLITICAL terms, the problems of the state would seem to be inseparable from the problems of government. Yet the ideas of state and government may be separated to the extent that one signifies the political community as a whole and the other the organization of its members according to relationships of ruler and ruled. Furthermore, the state may in one sense remain the same while in another it changes with changes in its form of government.

Some writers, like Aristotle and Hegel, tend to identify state and government. Aristotle, for example, says that "the sameness of the state consists chiefly in the sameness of its constitution." Others, like Locke and Rousseau, seem to regard government as part of the state, the chief institution of a civil society or political community, but definitely a means for securing the ends for which the state is formed. For Locke government is primarily the legislative power, for Rousseau it is "the supreme administration, the legitimate exercise of the executive power," but for both it is a representative body—an organ of the whole body politic.

Insofar as the great political theorists distinguish problems of the external relation of states with one another from those which concern the internal organization of the state, and the relation of the state to its own members, they also tend to distinguish state from government. Hegel's distinction between external and internal sovereignty, for example, conceives the whole community as a sovereign state in relation to other communities and the state as a sovereign government in relation to its own members.

Such questions of sovereignty, or more generally of the relation of states to one another, belong to this chapter as well as to the chapter

on WAR AND PEACE; but the theory of government is for the most part treated elsewhere—in the chapters on GOVERNMENT and CONSTITUTION, and in all the chapters dealing with the special forms of government. Still other problems of government, which have a bearing on the nature of the state, its powers, and its limits, are dealt with in the chapters on JUSTICE and LAW.

THAT IT IS SOMEHOW natural for men to associate politically is generally affirmed, even by those who also think the state is artificial or conventional. No one takes either of the possible extreme positions: that the state as a purely voluntary association is without any basis at all in man's nature and needs; or that the state, like the bee hive and the ant mound, is purely a production of instinct.

Saying that "man is by nature a political animal," Aristotle goes on to remark that "man is more of a political animal than bees or other gregarious animals." But the difference Aristotle points out between man and other social animals may make man the *only* political animal. It consists in the fact that man, being "the only animal . . . endowed with the gift of speech," can communicate with his fellows concerning "the expedient and inexpedient, and therefore likewise the just and the unjust." What characterizes human associations, according to Aristotle, is that they are built upon a shared sense of the expedient and the just. "Justice," he writes, "is the bond of men in states."

Hobbes also distinguishes between human and animal societies, but seems to interpret the distinction differently "Bees and ants live sociably one with another," he says, "and yet have no other direction than their particular judgments and appetites; nor speech, whereby one of them can signify to another what he thinks expedient for the common benefit." Inquiring "why mankind cannot do the same"—that is, live sociably without government and law—Hobbes offers a number of explanations, of which the last is that "the agreement of these creatures is natural; that of men is by covenant only, which is artificial; and therefore it is no wonder if there be somewhat else required (besides covenant) to make their agreement constant and lasting, which is common power to keep them in awe and to direct their actions to the common benefit."

But though Hobbes calls the state artificial because he holds it to be the product of a contract, he does not deny the natural necessity which drives men to the creation of a commonwealth. Man quits the state of nature, which is a "war of every man against every man," to achieve self-preservation, or at least to enjoy the security of civil peace and the freedom from fear of violence.

As natural as it may be for men to be "in that condition which is called war" when "they live without a common power to keep them all in awe," it is equally natural, according to Hobbes, for men to seek peace. "The passions that incline men to peace are fear of death, desire of such things as are necessary to commodious living; and a hope by their industry to obtain them. And reason suggesteth convenient articles of peace, upon which men may be drawn to agreement." The commonwealth is therefore natural, to the extent that man's needs and passions require it and man's reason recognizes certain natural laws for constructing it.

The state is naturally necessary, not as the effect of instinctive determinations, but as the rationally determined means to an end. If the end the state serves were not naturally sought, or if there were any other means which reason could devise for accomplishing that end, the state would be purely conventional—and dispensable. "The final cause, end, or design of men in the introduction of that restraint upon themselves (in which we see them live in commonwealths) is," according to Hobbes, "the sight of their own preservation and of a more contented life thereby."

In this main particular Aristotle's account of the origin of the state seems to be the same. Though he does not attribute its formation to a contract, and does not make fear the predominant motive, he does regard the state as natural *only because* of its indispensability as a means for achieving the ends men naturally seek. The family is natural, Aristotle suggests, because it is necessary for the perpetuation of the race and "for the supply of men's everyday wants." When men aim "at something more than the supply of daily needs, the first society

to be formed is the village"—normally, an association of families. And "when several villages are united in a single complete community, large enough to be nearly or quite self-sufficing, the state comes into existence, originating in the bare needs of life, and continuing in existence for the sake of a good life. Therefore, if the earlier forms of society are natural, so is the state."

The implication seems to be that if men were not naturally impelled to seek a better life than the family or the tribal community can provide —in other words, if the family or village satisfied all of man's natural needs for society—the larger community, the state, would be neither natural nor necessary. That man is by nature a political animal does not, therefore, mean that men have always and everywhere lived in states.

Aristotle refers to the man who lives apart from society, describing the natural outcast—"the 'tribeless, lawless, heartless one' whom Homer denounces"—as "a lover of war." He conceives the state as coming into being subsequent to more primitive forms of social life, each type of community being successively "established with a view to some good, for mankind always act in order to obtain that which they think good." Since he thinks that the state "aims at good in a greater degree than any other, and at the highest good," he praises the man "who first founded the state" as "the greatest of benefactors."

FOR ARISTOTLE, THEN, there seems to be no inconsistency in saying that the state is as natural as the family and also that it is the result of a convention, *i.e.*, a voluntary association of men. Nor does there seem to be any inconsistency between Hobbes' view that the state is produced by a "covenant of every man with every man" and his understanding of the naturalness of the state in terms of the impulses which lead men to enter into this contract. The same double note appears in the account of the state's origin which Locke, Rousseau, and Kant give. The issue raised by the contract theory thus seems to turn on the interpretation of the original convention—whether or not it has legal significance and what obligations or limitations it imposes.

Where Hobbes, for example, interprets the contract as creating, along with the commonwealth, a sovereign person having absolute power, Locke seems to make majority rule the legal consequence of the original compact. God "designed man for a sociable creature," according to Locke, "with an inclination and under a necessity to have fellowship with those of his own kind." Yet even what he calls "the first society . . . between man and wife," Locke says, "is made by a voluntary compact." It makes no difference to Locke's theory whether political societies develop by expansion from the family (which he takes to be the normal course of events) or result from a voluntary association of independent men.

In either case, political as distinguished from domestic society does not begin until "every man, by consenting with others to make one body politic under one government, puts himself under an obligation to every one of that society, to submit to the determination of the majority. . . . This is done by barely agreeing to unite into one political society, which is all the compact that is, or needs be, between the individuals that enter into or make up a commonwealth. And thus that which begins and actually constitutes any political society is nothing but the consent of any number of free men capable of a majority to unite and incorporate into such a society."

If it is "that, and that only, which did or could give beginning to any lawful government in the world," it seems to be equally evident to Locke that "absolute monarchy, which by some men is counted the only government in the world, is indeed inconsistent with civil society, and so can be no form of civil government at all."

Though Rousseau says that the most ancient of all societies, the family, is "the only one that is natural," he qualifies this by adding that it remains natural only so long as the children need the family for their preservation. If the members of the family remain united thereafter, "they continue so no longer naturally, but voluntarily; and the family itself is then maintained only by convention." By the same criterion, civil society would seem to be natural, at least on Rousseau's own supposition that "the obstacles in the way of their preservation in the state of nature" are greater than the power of isolated individuals or families to maintain

themselves, and so "the human race would perish unless it changed its manner of existence."

Rousseau, furthermore, explicitly denies that the transition from a state of nature to a state of civil society can be treated as an historical fact. It is an hypothesis "calculated to explain the nature of things, [rather] than to ascertain their actual origin." The social contract, which Rousseau sometimes calls the "first convention," is, therefore, the legal, not the historical, origin of the state. As he formulates the compact, "each of us puts his person and all his power in common under the supreme direction of the general will, and, in our corporate capacity, we receive each member as an indivisible part of the whole."

Though "all the qualities of the general will" may "reside in the majority," so that the general will can be discovered by a majority vote, unanimity is required to create the sovereign body politic, with the right as well as the power to compel "whoever refuses to obey the general will." Rousseau points out that "the law of majority voting is itself something established by convention, and presupposes unanimity, on one occasion at least." To this extent Rousseau agrees with Locke about the juridical significance of the original convention or the universal consent which establishes a civil society; and just as Locke calls absolute monarchy inconsistent with the very nature of the state, so Rousseau uses the words "republic" and "body politic" interchangeably. "To be legitimate," he writes, "the government must be, not one with the sovereign, but its minister."

But Rousseau identifies government with the executive, rather than primarily with the legislative as Locke does. He therefore denies that the original convention institutes government as well as the body politic itself—"the Sovereign having no force other than the legislative power." In consequence, Rousseau and Locke differ somewhat in their discussion of the dissolution of government as distinguished from the dissolution of society, or the death of the body politic. Rousseau regards no law as irrevocable, "not excluding the social compact itself; for if all the citizens assembled of one accord to break the compact, it is impossible to doubt that it would be very legitimately broken."

According to Kant, "a state is the union of a number of men under juridical laws"—the opposite of the state of nature, "in which there is no distributive justice." It is incumbent on men, says Kant, "to accept the principle that it is necessary to leave the state of nature, in which every one follows his own inclinations, and to form a union of all those who cannot avoid coming into reciprocal communication, and thus subject themselves in common to the external restraint of public compulsory laws."

Kant refers to this principle as the "postulate of public right" which obliges "all men to enter into the relations of a civil state of society." The state thus seems to be both necessary and voluntary; for though he says that "the act by which a people is represented as constituting itself into a state is termed *the original contract*," yet he also adds that "this is properly only an outward mode of representing the idea by which the rightfulness of the process of organizing the constitution may be made conceivable."

AGAINST ALL THESE notions of the original contract, Hegel, criticizing Kant's treatment of marriage under the concept of contract, says that "it is equally far from the truth to ground the nature of the state on the contractual relation, whether the state is supposed to be a contract of all with all, or of all with the monarch and the government." Contract, according to Hegel, belongs to the sphere of "relationships concerning private property generally." Hence "the intrusion of this contractual relation . . . into the relation between the individual and the state has been productive of the greatest confusion in both constitutional law and public life."

A contract, Hegel explains, "springs from a person's arbitrary will, an origin which marriage too has in common with contract. But the case is quite different with the state; it does not lie with an individual's arbitrary will to separate himself from the state, because we are already citizens of the state by birth. The rational end of man is life in the state, and if there is no state there, reason at once demands that one be founded. Permission to enter a state or leave it must be given by the state; this then is not a matter which depends on an individual's ar-

bitrary will and therefore the state does not rest on contract, for contract presupposes arbitrariness. It is false to maintain that the foundation of the state is something at the option of all its members. It is nearer the truth to say that it is absolutely necessary for every individual to be a citizen."

Hegel dismisses all questions concerning historical origins in general or particular as "no concern of the Idea of the state." In the Idea itself, its antecedents are to be found. The family and civil society are the earlier—logical—moments in the development of the Idea of the State. "Civil society," Hegel writes, "is the [state of] difference which intervenes between the family and the state, even if its formation follows later in time than that of the state." The social contract theory applies only to what he calls "civil society," by which he means the modern conception of the state "as a unity which is only a partnership. . . . Many modern constitutional lawyers," Hegel goes on, "have been able to bring within their purview no theory of the state but this. In civil society each member is his own end" and, "except by contract with others, he cannot attain the whole compass of his ends, and therefore these others are means to the end of the particular members."

In another place, Hegel describes civil society as a system of complete interdependence for the attainment of selfish ends, "wherein the livelihood, happiness, and legal status of one man is interwoven with the livelihood, happiness, and rights of all." In still another, he observes that only when the state is confused with civil society, only when "its specific end is laid down as the security and protection of property and personal freedom," does "the interest of the individuals as such become the ultimate end of their association." Whence "it follows that membership in the state is something optional. But the state's relation to the individual is quite different from this. Since the state is mind objectified, it is only as one of its members that the individual himself has objectivity, genuine individuality, and an ethical life."

The unity of the state, unlike that of civil society, is, according to Hegel, "an absolute unmoved end in itself, in which freedom comes into its supreme right. . . . This final end has supreme right against the individual, whose supreme duty is to be a member of the state."

IT DOES NOT SEEM to be an inevitable corollary of the social contract theory that the state be conceived as serving the private interests of individuals. "The welfare of the state," Kant declares, "is its own highest good." It is not to be understood merely as "the individual *well-being* and *happiness* of the citizens of the state; for—as Rousseau asserts—this end may perhaps be more agreeably and more desirably attained in the state of nature." Kant and Locke both affirm a social contract, but where Kant makes the safety of the republic itself the highest law (*salus reipublicae suprema lex*), Locke makes it the security of the people (*salus populi*).

"The reason why men enter into society is the preservation of their property," writes Locke. The property of the individual is insecure in a state of nature; to avoid this insecurity "men unite into societies that they may have the united strength of the whole society to secure and defend their properties." When Locke says that the chief end of civil society is "the preservation of property," he does not refer solely to economic goods, but to all the goods to which he thinks man has a natural right—"his life, liberty, and estate." Men would not quit the state of nature, he writes, "were it not to preserve their lives, liberties and fortunes, and by stated rules of right and property to secure their peace and quiet."

In the light of Locke's conception of "property," his position resembles Hobbes' statement of the end which men seek in forming a commonwealth: "to live peaceably amongst themselves and be protected against other men" and to get "themselves out from that miserable condition of war" in which life is "solitary, poor, nasty, brutish, and short."

It seems to be in a different sense of property that Rousseau holds that "the foundation of the social compact is property; and its first condition, that everyone should be maintained in the peaceful possession of what belongs to him." Restricting "property" to economic possessions, Rousseau asks, "Are not all the advantages of society for the rich and powerful?" Society, he observes, "provides a powerful protection for the immense possessions of the rich,

and hardly leaves the poor man in quiet possession of the cottage he builds with his own hands."

This and Adam Smith's statement that "civil government, so far as it is instituted for the security of property, is in reality instituted for the defence of the rich against the poor, or of those who have some property against those who have none at all," seem to anticipate the Marxist view of the state as the bulwark of property rights and an instrument of class oppression. If the protection of property and the maintenance of economic inequalities is the sole purpose of the state, then the ultimate resolution of the class war in favor of a classless society will, in the opinion of Marx and Engels, be accompanied by what they call "the withering away of the state"—an atrophy from loss of function.

But even in a classless society, the state would not cease to function if its end were to secure not merely the individual's wealth, but his whole well-being. Then, however, we must face another question—whether the happiness of the individual is the end of the state. Plato, for example, seems to answer this question in opposite ways.

In the *Protagoras*, it is said that "the desire for self-preservation gathered men into cities." This is part of the Promethean legend of the origin of civilization. As told by Aeschylus—and in a similar account of early history by Lucretius—the story intimates that men contract to live together for protection against violence and to enjoy a better life—the fruits of civil society or civilization.

But in the *Republic*, Socrates says that, in constructing the ideal state, the aim is "not the disproportionate happiness of any one class, but the greatest happiness of the whole." To the objection of Adeimantus that the citizens may be miserable in such a state, Socrates replies that we must consider whether "we would look to their greatest happiness individually, or whether this principle of happiness does not rather reside in the State as a whole." Later Socrates reminds Glaucon, who wonders whether the members of the guardian (or ruling) class will not be unhappy, that we are "fashioning the State with a view to the greatest happiness, not of any particular class, but of the whole."

Aristotle criticizes Socrates for depriving even the guardians of happiness and for saying that "the legislator ought to make the whole state happy." In his own view, "the whole cannot be happy unless most, or all, or some of its parts enjoy happiness. In this respect, happiness is not like the even principle in numbers, which may exist only in the whole, but in neither of the parts." When Aristotle asserts that "the state exists for the sake of a good life," he seems to have the happiness of individuals in mind, for he excludes slaves and brute animals from membership in the state on the ground that they can have "no share in happiness or in a life of free choice."

But Aristotle also seems to give the state preeminence over the individual. "Even if the end is the same for a single man and for a state," he writes, "that of the state seems at all events something greater and more complete, whether to attain or to preserve." This does not seem to him inconsistent with thinking that that "form of government is best in which every man, whoever he is, can act best and live happily."

Nor is Hegel reluctant to embrace both horns of the dilemma. Civil society rather than the state in its perfect realization seems to be devoted to the "attainment of selfish ends," such as individual happiness. But Hegel also says it is "perfectly true" that "the end of the state is the happiness of the citizens. . . . If all is not well with them, if their subjective aims are not satisfied, if they do not find that the state as such is the means to their satisfaction, then the footing of the state is itself insecure."

THE FOREGOING CONSIDERATIONS of the nature, origin, and end of political society enter into the various conceptions of the ideal state which appear in the tradition of western thought. They also have a bearing on the division of social classes in the state, on the duties of the statesman or prince, and the principles of statecraft—the art or science of the ruler. Finally, they have implications for the relation of states to one another and for the different historic formations of the state.

All the modern writers who make some distinction between the state of nature and the state of civil society seem to agree that independent or sovereign states in their relation to

one another are in a state of nature. Identifying the state of nature with the state of war, Hobbes remarks that "though there had never been any time, wherein particular men were in a condition of war one against another, yet in all times, kings and persons of sovereign authority" are "in the state and posture of gladiators . . . which is the posture of war."

Similarly, to the question, "Where are or ever were there any men in a state of nature?" Locke replies, "all princes and rulers of independent governments all through the world are in a state of nature." Because "bodies politic" remain "in a state of nature among themselves," they experience, according to Rousseau, "all the inconveniences which had obliged individuals to forsake it." With the same intent, Montesquieu observes that "princes who live not among themselves under civil law are not free; they are governed by force; they may continually force or be forced."

In Kant's opinion, "states, viewed as nations in their external relations to one another—like lawless savages—are naturally in a non-juridical condition," and he adds that "this natural condition is a state of war." Similarly, Hegel writes that "since the sovereignty of a state is the principle of its relations to others, states are to that extent in a state of nature in relation to each other."

On any of the theories concerning the origin of the state, it may be asked why political society cannot be enlarged to include all mankind. If, for example, in Aristotle's view, the state is a union of villages, as the village is a union of families, why may not a further expansion of political society be brought about by a union of states?

The question is not simply one of geographical limits or extent of population. The modern national state, though normally larger than the ancient city-state, remains an individual state and in the same external relationship to other states. Even the expansion of a city-state like Rome, at the greatest extent of its imperial domain, does not exemplify the principle of the world-state unless it is proposed that the political unification of mankind be brought about by conquest and maintained by despotism.

Though Aristotle describes the state as formed by a combination of villages, he does not propose a combination of states to form a larger community. His reason may be that the essence of the state lies in its self-sufficiency. Consequently, "the best limit of the population of a state is the largest number which suffices for the purposes of life, and can be taken in at a single view"; and the territory need be no larger than one which enables the population to be "most entirely self-sufficing."

The moderns, in contrast, propose the expansion of the political community by the amalgamation of separate political units. Montesquieu, for example, suggests that by entering into a "confederate republic," a number of small states can obtain the security which none of them has by itself. "If a republic be small," he writes, "it is destroyed by a foreign force; if it be large, it is ruined by an internal imperfection." A confederate republic, he thinks, "has all the internal advantages of a republican, together with the external force of a monarchical, government. . . . This form of government," Montesquieu continues, "is a convention by which several petty states agree to become members of a larger one, which they intend to establish. It is a kind of assemblage of societies, that constitute a new one, capable of increasing by means of further associations, till they arrive at such a degree of power as to be able to provide for the security of the whole body."

It is not security against external aggression, but internal peace, which leads Rousseau to propose an association more extensive than anything Montesquieu seems to have in mind—a confederation of *all* the states of Europe. But he does not see beyond Europe to all the states of the world. He regards "the great city of the world" as something less than a political society with civil laws, for he speaks of it as "the body politic whose general will is always the law of nature."

Nor are the American Federalists, Hamilton, Madison, and Jay, able, at the end of the 18th century, to envisage the unlimited extension of the principle of federal union. They content themselves with arguing for the possibility of so extensive a union as the projected United States of America, against those who quoted "the observations of Montesquieu on the necessity of a contracted territory for a Republican Government."

Before our own day Kant alone seems to contemplate the possibility of a world state *through federal union.* The "cosmopolitical ideal," he says, is "a universal union of states analogous to that by which a nation becomes a state." The postulate of reason which obliges men to quit the state of nature and form a civil union applies to states as well. "The natural state of nations, as well as of individual men," Kant writes, "is a state which it is a duty to pass out of, in order to enter into a legal state." But the ideal is impracticable in Kant's opinion—again because of the supposed limits of government with respect to extended territories and populations.

"With the too great extension of such a union of states over vast regions, any government of it, and consequently the protection of its individual members, must at last become impossible." Kant therefore proposes as an alternative a "permanent congress of nations," but one which, being "a voluntary combination of states . . . would be dissolvable at any time"—a mere league or confederacy, and not such a federal union "as is embodied in the United States of America, founded upon a political constitution, and therefore indissoluble."

The further implications of Kant's proposal, the alternative it replaces, and Hegel's objections to either, are discussed in the chapter on WAR AND PEACE. Here it seems appropriate to conclude with that vision of the world state which appears early in the tradition of the great books. It is conceived not as a world-wide federal union, but as a universal or unlimited community in which all men are citizens together even as they belong to one human brotherhood.

"If our intellectual part is common," argues the philosophical Roman Emperor, Marcus Aurelius, "the reason also, in respect of which we are rational beings, is common; if this is so, common also is the reason which commands us what to do, and what not to do; if this is so, there is a common law also; if this is so, we are fellow-citizens; if this is so, we are members of some political community; if this is so, the world is in a manner a state."

Centuries later Dante, in the first book of his *De Monarchia,* recaptures this ancient vision of the world state. Because "a plurality of authorities is disorder," authority must be single; and therefore, Dante argues, "world government is necessary . . . for the well-being of the world." It must be conceived as governing "mankind on the basis of what all have in common." By that "common law, it leads all toward peace."

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PAGE SECTIONS: When the text is printed in one column, the letters **a** and **b** refer to the upper and lower halves of the page. For example, in **53** JAMES: *Psychology*, **116a-119b**, the passage begins in the upper half of page 116 and ends in the lower half of page 119. When the text is printed in two columns, the letters **a** and **b** refer to the upper and lower halves of the left-hand side of the page, the letters **c** and **d** to the upper and lower halves of the right-hand side of the page. For example, in **7** PLATO: *Symposium*, **163b-164c**, the passage begins in the lower half of the left-hand side of page 163 and ends in the upper half of the right-hand side of page 164.

AUTHOR'S DIVISIONS: One or more of the main divisions of a work (such as PART, BK, CH, SECT) are sometimes included in the reference; line numbers, in brackets, are given in certain cases; *e.g.*, *Iliad*, BK II [265-283] **12d**.

BIBLE REFERENCES: The references are to book, chapter, and verse. When the King James and Douay versions differ in title of books or in the numbering of chapters or verses, the King James version is cited first and the Douay, indicated by a (*D*), follows; *e.g.*, OLD TESTAMENT: *Nehemiah*, 7:45—(*D*) *II Esdras*, 7:46.

SYMBOLS: The abbreviation "esp" calls the reader's attention to one or more especially relevant parts of a whole reference; "passim" signifies that the topic is discussed intermittently rather than continuously in the work or passage cited.

For additional information concerning the style of the references, see the Explanation of Reference Style; for general guidance in the use of *The Great Ideas*, consult the Preface.

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2*a*(1) Comparison of the state and the soul: the conception of the state as a living organism; the body politic

7 PLATO: *Republic*, BK II-IV, 316a-356a; BK V, 363b-364b; BK VIII 401d-416a esp 402b-c / *Laws*, BK III, 669d-670b; BK XII, 794b-796d
9 ARISTOTLE: *Politics*, BK I, CH 5 [1254^{a}24-^{b}4] 447d-448a; CH 13 [1260^{a}4-20] 454c-d; BK III, CH 4 [1277^{a}5-13] 474a; BK IV, CH 4 [1290^{b}21-40] 489d-490a; [1291^{a}24-33] 490c; BK VII, CH 8 [1328^{a}21-^{b}5] 532c-d
14 PLUTARCH: *Coriolanus*, 177a-b / *Agesilaus*, 495c-d / *Phocion*, 605a-b / *Agis*, 648b,d-649b / *Aratus*, 834d
18 AUGUSTINE: *City of God*, BK III, CH 10, 172d
23 HOBBES: *Leviathan*, INTRO, 47a-b; PART II, 107d; 116c-d; 117b; 122b-124b; 126b-d; 148b-153a
25 MONTAIGNE: *Essays*, 504c-505d
27 SHAKESPEARE: *Coriolanus*, ACT I, SC I [67-167] 352a-353a
28 HARVEY: *Motion of the Heart*, 267a-b
32 MILTON: *Areopagitica*, 407b
35 LOCKE: *Civil Government*, CH XIX, SECT 212 74a-b
36 SWIFT: *Gulliver*, PART III, 112a-115b
36 STERNE: *Tristram Shandy*, 215b-216b
38 MONTESQUIEU: *Spirit of Laws*, BK X, 61b,d-62a
38 ROUSSEAU: *Political Economy*, 368d-369a / *Social Contract*, BK III, 407a; 418a-c; 419c-420a
42 KANT: *Judgement*, 547b-c
43 FEDERALIST: NUMBER 30, 101b
46 HEGEL: *Philosophy of Right*, PART III, par 269 84d; par 271 89c; par 278 92c-93a; ADDITIONS, 157 142b-c; 161 143a-b; 168 145c-d / *Philosophy of History*, INTRO, 174d; 188a-b; PART I, 222a-c; PART III, 302d-303c; PART IV, 321a

2a(2) The state as a corporate person

23 HOBBES: *Leviathan*, PART I, 97c-d; PART II, 100c-101a; 101d-102c; 104a-b; 117b-120c; 122b-c; 130b-d; 132a-b
35 LOCKE: *Civil Government*, CH VIII, SECT 95-99 46c-47c
38 ROUSSEAU: *Political Economy*, 368d-369a / *Social Contract*, BK I, 392a; 392c-393b; BK II, 395a-b; 396d-397a; BK III, 406b,d-409a passim, esp 406b,d-407a; 412c; 418a-c; 419c-420a
42 KANT: *Science of Right*, 452b; 454b-c
46 HEGEL: *Philosophy of Right*, PART III 55a-114a,c; ADDITIONS, 191 150a-c

2a(3) The progressive realization of the state as the process of history: the state as the divine idea as it exists on earth; the national spirit

46 HEGEL: *Philosophy of Right*, PART III, par 256-259 79d-82a; par 270 84d-89c; par 340-360 110b-114a,c esp par 349 111d-112a; ADDITIONS, 19-20 119c-120b; 152 141c-d; 164 144c-145a / *Philosophy of History*, INTRO, 170c-178a esp 171b, 176d-177a; 180c-182c; 203b-206a,c; PART I, 230a-231b; 257c-258d; PART II, 266a-267a; 271c-d; PART III, 287a-288b; PART IV, 327d-328a; 333b-c; 351d-354a; 357b-c

2b. The state as a part or the whole of society

7 PLATO: *Republic*, BK V, 364c-365d / *Laws*, BK XI, 776c
9 ARISTOTLE: *Ethics*, BK VIII, CH 9 [1160^{a}8-30] 412b-c / *Politics*, BK VII, CH 8 [1328^{b}2-22] 532d-533a; BK VIII, CH 1 [1337^{a}28-30] 542b
18 AUGUSTINE: *City of God*, BK XIX, CH 17 522b-523a
19 AQUINAS: *Summa Theologica*, PART I-II, Q 21, A 4, REP 3 719d-720a,c
20 AQUINAS: *Summa Theologica*, PART I-II, Q 96, A 4, ANS 233a-d; PART II-II, Q 10, A 10 434c-435c; Q 12, A 2 443b-444b
35 LOCKE: *Toleration*, 2d-3c; 7c; 16a-c / *Civil Government*, CH XI, SECT 138-140 57b-58a
40 GIBBON: *Decline and Fall*, 299b-d
43 MILL: *Liberty*, 271c-d; 272d-273d; 302d-312a; 320c-d
46 HEGEL: *Philosophy of Right*, ADDITIONS, 162 143b-144c / *Philosophy of History*, INTRO, 174a-d; 175d-176c; 177b-178a; 182d-183a; PART IV, 316a-d; 333b-c

2c. The source or principle of the state's sovereignty: the sovereignty of the prince; the sovereignty of the people

OLD TESTAMENT: *Judges*, 8:22-23 / *I Samuel*, 8—(*D*) *I Kings*, 8 / *II Samuel*, 2:4—(*D*) *II Kings*, 2:4
9 ARISTOTLE: *Politics*, BK III, CH 1 [1275^{a}22-^{b}21] 472a-c; CH 3 [1276^{a}40-^{b}1] 473b; BK IV, CH 9 [1294^{b}34-39] 494d
14 PLUTARCH: *Tiberius Gracchus*, 678b-d
15 TACITUS: *Histories*, BK I, 197a-c
20 AQUINAS: *Summa Theologica*, PART I-II, Q 90, A 3 207a-c; Q 96, A 6, ANS 235a-d
23 HOBBES: *Leviathan*, PART I, 71d-73a; 97c-d; PART II, 100c-105c; 109b-c; 117c-d; 130d; 149d-150b
35 LOCKE: *Civil Government*, CH VIII, SECT 95-99 46c-47c; CH IX, SECT 127 54a-b; CH X, SECT 132 55a-b; CH XI, SECT 135 55d-56b; SECT 141 58a-b; CH XIII, SECT 149 59b-d; CH XIV, SECT 163 63a-b; CH XV, SECT 171 65a-b; CH XVI, SECT 179 66d-67a; CH XVII, SECT 198 70d-71a; CH XIX, SECT 243 81d
38 MONTESQUIEU: *Spirit of Laws*, BK I, 3b-c; BK II, 4b; 7c-d; BK XV, 109c
38 ROUSSEAU: *Inequality*, 323d / *Social Contract*, BK I, 392a-393b; BK II, 395a-d; 396d-397a; 399b-400c; BK III, 406b,d-409a; 424a-b
40 GIBBON: *Decline and Fall*, 51c-d; 100d; 241b
41 GIBBON: *Decline and Fall*, 74c-d
42 KANT: *Science of Right*, 436c; 437c-d; 439a-441d; 445a-c; 448b-d; 450a-b; 451c-d
43 DECLARATION OF INDEPENDENCE: [1-25] 1a-b; [43-47] 2a; [109-121] 3a-b
43 CONSTITUTION OF THE U.S.: PREAMBLE 11a,c; AMENDMENTS, IX-X 17d-18a
43 FEDERALIST: NUMBER 22, 84d-85a; NUMBER 33, 108b-c; NUMBER 39, 126b-128b; NUMBER 46, 150b-c; NUMBER 49, 159c; NUMBER 84, 252b-c
43 MILL: *Liberty*, 267d-269c / *Representative Government*, 344d; 355b-d
46 HEGEL: *Philosophy of Right*, PART III, par 275 92a-b; par 279 93a-94d; par 320-321 106c-d; ADDITIONS, 167 145c / *Philosophy of History*, PART II, 272b-273a; PART IV, 355c-d; 365a-366b
51 TOLSTOY: *War and Peace*, EPILOGUE II, 680b-684a passim

2d. The economic aspect of the state: differentiation of states according to their economic systems

6 THUCYDIDES: *Peloponnesian War*, BK I, 350d-351a; 352c-d
7 PLATO: *Republic*, BK II, 316c-319c; BK III, 341c-d; BK V, 364c-365d / *Laws*, BK V, 692d-697a
9 ARISTOTLE: *Politics*, BK I, CH 11 [1259^{a}23-36] 453c-d; BK II, CH 1 [1260^{b}37-1261^{a}8] 455b,d; CH 5 458a-460a; CH 6 [1265^{a}28-^{b}18] 460c-461a; CH 7 461d-463c; CH 8 [1267^{b}30-36] 463c-d; [1268^{a}16-^{b}4] 464a-b; CH 9 [1270^{a}15-^{b}6] 466b-c; BK III, CH 9 [1280^{b}16-32] 478b-c; BK V, CH 9 [1309^{b}14-1310^{a}2] 511d-512b; BK VI, CH 4 522a-523b; CH 8 [1321^{b}12-34] 525b-c; BK VII, CH 8-10 532c-534d
14 PLUTARCH: *Lycurgus* 32a-48d / *Solon* 64b,d-77a,c / *Tiberius Gracchus* 671b,d-681a,c / *Caius Gracchus* 681b,d-689a,c

(2. *The general theory of the state.* 2d. *The economic aspect of the state: differentiation of states according to their economic systems.*)

23 HOBBES: *Leviathan*, PART I, 94d-95a; PART II, 124b-126d; 156c-157a
35 LOCKE: *Toleration*, 16a-c / *Civil Government*, CH V, SECT 38 33b-c; SECT 45 34d-35a; CH VI, SECT 72-73 40d-41a; CH VIII, SECT 117 52b; SECT 120-121 52d-53b; CH XI, SECT 138-140 57b-58a
36 STERNE: *Tristram Shandy*, 215b-216b
38 MONTESQUIEU: *Spirit of Laws*, BK IV, 16a-17b; BK V, 19a-21d; 23a-25c; 27d-28a; 29b-30a; BK VII, 44a-48a; BK XIV, 105a; BK XV, 109a-b; 110d-112d; BK XX, 147a-d; BK XX-XXI, 151b-153d; BK XXII, 174a-b; 183b-184b
38 ROUSSEAU: *Political Economy*, 377b-385a,c / *Social Contract*, BK II, 405c-d; BK III, 415b 417c; 421c-d
39 SMITH: *Wealth of Nations*, BK III 163a-181a,c esp 165a-166b, 176a-181a,c; BK IV 182a-300d esp 182a-b, 188a-190b, 193a, 195a, 225d
40 GIBBON: *Decline and Fall*, 21c-22c
43 FEDERALIST: NUMBER 11-13 53b-60a passim; NUMBER 21, 79b-80c; NUMBER 30, 101b; NUMBER 35 112a-114c; NUMBER 54 170a-172b passim
46 HEGEL: *Philosophy of Right*, PART III, par 299 99c-100b
50 MARX: *Capital*, 163a-c; 171d-176a esp 174c-175c; 275c-278a,c passim
50 MARX-ENGELS: *Communist Manifesto*, 416c-d
54 FREUD: *New Introductory Lectures*, 882c-884c

2e. The political structure of the state: its determination by the form of government

7 PLATO: *Republic*, BK VIII 401d-416a / *Statesman*, 598b-604b
9 ARISTOTLE: *Politics*, BK I, CH 1 445a-b; BK II, CH 1 455b,d; BK III, CH 3 473a-c; CH 6 [1278^{b}6-14] 475d; CH 13 [1283^{b}5-7] 481c; CH 17 486c-487a; BK IV, CH 3-4 488d-491d esp CH 4 [1290^{b}21-1291^{b}13] 489d-490d; CH 11-12 495b-497b; BK V, CH 9 [1309^{b}14-1310^{a}2] 511d-512b; BK VII, CH 8 532c-533a / *Rhetoric*, BK I, CH 4 [1360^{a}17-36] 600c-d; CH 8 608a-c
15 TACITUS: *Annals*, BK IV, 72a-b
23 HOBBES: *Leviathan*, PART II, 101a-b; 104d-105c; 117b-124b; 138b; 151c-152a; PART III, 228a-b
35 LOCKE: *Civil Government*, CH VIII, SECT 95-99 46c-47c; CH X, SECT 132-CH XI, SECT 134 55a-d; CH XIX, SECT 211-212 73d-74b
38 MONTESQUIEU: *Spirit of Laws*, BK I-II, 2d-4a; BK XI, 69d-70a
38 ROUSSEAU: *Inequality*, 359a-d / *Social Contract*, BK III, 406b,d-409a; 423a-424d
42 KANT: *Science of Right*, 436b-c; 441b-c; 450a-452a
43 MILL: *Representative Government*, 327b,d-332d
46 HEGEL: *Philosophy of Right*, PART III, par 273-274 90c-92a; par 276 92b; ADDITIONS, 166 145b-c; 170 145d-146a; 178 147d-148a / *Philosophy of History*, INTRO, 173a-175c; PART IV, 364d-365c

2f. The primacy of the state or the human person: the welfare of the state and the happiness of its members

5 AESCHYLUS: *Seven Against Thebes* 27a-39a,c esp [1011-1084] 38b-39a,c
5 SOPHOCLES: *Antigone* 131a-142d esp [162-210] 132c-d / *Ajax* [1047-1090] 152a-b / *Philoctetes* 182a-195a,c
5 EURIPIDES: *Phoenician Maidens* [834-1018] 385c-387b / *Iphigenia at Aulis* 425a-439d esp [1255-1275] 436c, [1368-1401] 437c-d
6 HERODOTUS: *History*, BK I, 6c-7a
6 THUCYDIDES: *Peloponnesian War*, BK II, 397d-398c; 402b-404a; BK VI, 520a-d
7 PLATO: *Crito* 213a-219a,c esp 216d-219a,c / *Republic*, BK I, 302c-306a; BK IV, 342a-d; 350b-d; BK V, 364c-365d; BK VI, 379d-380b; BK VII, 390b-391b; 401a-b / *Statesman*, 600d-601b / *Laws*, BK III, 672d-676c; BK V, 692c-693a; BK IX, 754a-b; BK XI, 776c; 777d-778b
9 ARISTOTLE: *Ethics*, BK I, CH 2 [1094^{b}8-10] 339c-d; BK V, CH 1 [1129^{b}15-18] 377a / *Politics*, BK I, CH 2 [1253^{a}19-29] 446c; BK II, CH 5 [1264^{b}16-25] 459d-460a; BK III, CH 4 473c-475a; CH 6 475d-476c; CH 12 [1282^{b}15-18] 480c; BK VII, CH 1-3 527a-530a; CH 8 532c-533a; CH 13 536b-537b; BK VIII, CH 1 [1337^{a} 28-30] 542b
12 EPICTETUS: *Discourses*, BK I, CH 19 125b-126c; BK II, CH 10 148c-150a
12 AURELIUS: *Meditations*, BK V, SECT 1 268b,d; SECT 6 269b-d; SECT 16 271c-d; SECT 22 272b; BK VI, SECT 14 274d-275a; SECT 54 279c; BK IX, SECT 23 293c
14 PLUTARCH: *Lycurgus* 32a-48d esp 44d-45c / *Numa Pompilius*, 51c-52b / *Solon*, 71d / *Demosthenes*, 699c-700a
18 AUGUSTINE: *City of God*, BK II, CH 21 161b-162d; BK XIX, CH 17 522b-523a; CH 21 524a-525a
19 AQUINAS: *Summa Theologica*, PART I, Q 60, A 5, ANS 313b-314c; Q 96, A 4 512d-513c; PART I-II, Q 21, A 3 718d-719c; A 4, REP 3 719d-720a,c
20 AQUINAS: *Summa Theologica*, PART I-II, Q 90, A 2 206b-207a; A 3, REP 3 207a-c; Q 92, A 1, ANS and REP 1,3-4 213c-214c; Q 94, A 2, ANS 221d-223a; Q 96, A 3, ANS and REP 3 232b-233a; A 4, ANS 233a-d; Q 98, A 1, ANS 239b-240c; Q 100, A 2, ANS 252b-253a
23 HOBBES: *Leviathan*, PART I, 93d-94a; PART II, 104a-b; 113d-115a
25 MONTAIGNE: *Essays*, 48a-51a passim; 381a-388c; 486b-489b
26 SHAKESPEARE: *Henry V*, ACT I, SC II [183-213] 535d-536a

27 SHAKESPEARE: *Troilus and Cressida*, ACT I, SC III [78–134] 109a-c / *Coriolanus*, ACT I, SC I [67–167] 352a-353a
30 BACON: *Advancement of Learning*, 71a-76a passim
31 SPINOZA: *Ethics*, PART IV, PROP 37, SCHOL 2 435b-436a
32 MILTON: *Samson Agonistes* [843–870] 358a-b
35 LOCKE: *Toleration*, 11b; 15d; 16d-17b / *Civil Government*, CH VIII, SECT 95–99 46c-47c
38 MONTESQUIEU: *Spirit of Laws*, BK IV, 16c; BK V, 18d-19d; BK XI, 69a-c; BK XII, 92b-c; BK XXIII, 199c; BK XXVI, 221c-222a
38 ROUSSEAU: *Political Economy*, 368d-369a; 372a-b; 374a-375b; 376a-b / *Social Contract*, BK I, 391d; 392b-393b; 393d-394d; BK II, 396b-399a; BK III, 421c-423a
42 KANT: *Pure Reason*, 114b-d / *Fund. Prin. Metaphysic of Morals*, 272d-273b / *Science of Right*, 438d-439b
43 DECLARATION OF INDEPENDENCE: [1–15] 1a-b
43 CONSTITUTION OF THE U.S.: PREAMBLE 11a,c; AMENDMENTS, I–X 17a-18a
43 FEDERALIST: NUMBER 43, 143b-c; NUMBER 45, 147c-148a
43 MILL: *Liberty*, 267b,d-274a; 293b-323a,c esp 297a, 322d-323a,c / *Representative Government*, 337b; 338b-c; 392b-396d / *Utilitarianism*, 453a-454a; 460a-461c; 464d-476a,c passim
46 HEGEL: *Philosophy of Right*, PART III, par 185 64b-d; par 187 65a-c; par 236 76a-c; par 258, 80c-d; par 260–261 82a-83d; par 270 84d-89c; par 288–289 97a-d; par 294 98b-d; par 323 107a; par 328 108b-c; par 337 109d-110a; ADDITIONS, 47 124a-b; 116–118 135c-136b; 127 137b; 143 139d-140a; 145 140b; 154–156 142a-b; 158 142d; 162 143b-144c; 177 147d; 189 149d / *Philosophy of History*, INTRO, 164b; 166b; 170c-172b; 192c-193a; PART II, 271c-d; 276a; PART III, 289b-d; 298c-299a; PART IV, 320c-321a; 365b-c; 366c-367a; 367d-368a
50 MARX-ENGELS: *Communist Manifesto*, 429c
51 TOLSTOY: *War and Peace*, BK VI, 238c-243d; 260a-262a; BK XI, 505a-511b; 513d-521c esp 513d-515a; 527b-532a,c esp 527b-528b; BK XII, 537b-538a; BK XIII, 577b-c; EPILOGUE I, 670d-671c
54 FREUD: *War and Death*, 757b-c / *Civilization and Its Discontents*, 799b-d

2g. Church and state: the relation of the city of God to the city of man

OLD TESTAMENT: *Judges*, 8:22-23 / *I Samuel*, 8; 10:18–19,24; 12:12–14,17–19; 13—(*D*) *I Kings*, 8; 10:18–19,24; 12:12–14,17–19; 13 / *II Chronicles*, 19:11—(*D*) *II Paralipomenon*, 19:11 / *Psalms*, 2; 48:1–8; 72:8–11; 87; 127:1-2—(*D*) *Psalms*, 2; 47:1–9; 71:8–11; 86; 126:1-2 / *Isaiah*, 43:15—(*D*) *Isaias*, 43:15 / *Daniel*, 2:44; 4: 17,25,32—(*D*) *Daniel*, 2:44; 4:14,22,29
APOCRYPHA: *Rest of Esther*, 14:3—(*D*) OT, *Esther*, 14:3 / *Wisdom of Solomon*, 6:1–4—(*D*) OT, *Book of Wisdom*, 6:2–5 / *II Maccabees*, 7:30—(*D*) OT, *II Machabees*, 7:30
NEW TESTAMENT: *Matthew*, 17:24–27; 22:15–22—(*D*) *Matthew*, 17:23–26; 22:15–22 / *Mark*, 12:13–17 / *Luke*, 20:21–26 / *John*, 18:33–37 / *Acts*, 5:27–29 / *Romans*, 13:1–8 / *I Corinthians*, 15:24–25 / *Ephesians*, 2:19 / *I Timothy*, 2:1–3 / *Titus*, 3:1 / *Hebrews*, 13:14 / *I Peter*, 2:13–17
7 PLATO: *Laws*, BK X, 757d-761b; 769d-771b
9 ARISTOTLE: *Ethics*, BK VIII, CH 9 [1160^{a}19–29] 412b-c / *Politics*, BK III, CH 14 [1285^{a}3–7] 483a-b; [1285^{b}20–23] 484a; BK V, CH 11 [1314^{b}36–1315^{a}4] 517d; BK VI, CH 7 [1321^{a}35–^{b}1] 525a; CH 8 [1322^{b}19–29] 526c; BK VII, CH 8 [1328^{b}2–22] 532d-533a; CH 9 [1329^{a}26–34] 533d; CH 10 [1330^{a}8–14] 534c; CH 12 [1331^{a}19–28] 535d; [1331^{b}4–7] 536a
12 EPICTETUS: *Discourses*, BK I, CH 30 138a,c; BK II, CH 5, 143d-144a; BK IV, CH 3 224b-d
13 VIRGIL: *Aeneid*, BK XII [175–194] 358b-359a; [829–842] 376a-b
14 PLUTARCH: *Numa Pompilius*, 52d-53a; 57b / *Themistocles*, 92a-c / *Camillus*, 114c-116a / *Fabius*, 142d-143a / *Marcellus*, 247c-248b / *Cleomenes*, 659d-660a
15 TACITUS: *Annals*, BK III, 59d-60c
18 AUGUSTINE: *Confessions*, BK III, par 15 17a-b / *City of God*, BK I, PREF–CH 6 129a-132d; BK IV, CH 33–34 206c-207a,c; BK V, CH 15–16 220d-221b; CH 25 228b-c; BK XI, CH 1 322b,d-323a; BK XV–XVIII 397b,d-507a,c esp BK XV, CH 1–5 397b,d-400c, BK XVII, CH 1–3 449a-451c, BK XVIII, CH 1–2 472b,d-473d; BK XIX, CH 5 513d-514b; CH 11 516d-517b; CH 14 520a-d; CH 17 522b-523a; CH 19–26 523b-529a
20 AQUINAS: *Summa Theologica*, PART I-II, Q 96, A 4 233a-d; Q 100, A 2, ANS 252b-253a; PART II-II, Q 10, AA 10–11 434c-436b; Q 11, A 3 440b-441a; Q 12, A 2 443b-444b
21 DANTE: *Divine Comedy*, HELL, II [10–27] 2d; XXXIV [1–69] 51b-52a; PURGATORY, VI [58–151] 61b-62c; XIII [85–96] 72d; XVI [52–129] 77b-78a; XXXII [100]–XXXIII [78] 103c-105a; PARADISE, VI [1–111] 113c-114d
23 MACHIAVELLI: *Prince*, CH XI 16d-17d
23 HOBBES: *Leviathan*, PART I, 80d-81a; 82b-83a; 83d-84c; PART II, 111b-112c; 151a-c; 155d-156b; 163c-d; PART III, 165a-167c; 171c-172a; 177c-180a; 187c-188a; 191b; 193c-d; 198a-246a,c; PART IV, 248a-249b; 251c-252d; 266a-c; 273c-274a; 275a-278d
25 MONTAIGNE: *Essays*, 306b-d
26 SHAKESPEARE: *1st Henry VI*, ACT I, SC III 5b-6c; ACT III, SC I [1–145] 14b-15d / *King John* 376a-405a,c esp ACT III, SC I 386a-389d, ACT V, SC I [1–24] 399b-c, SC II 400a-401d / *2nd Henry IV*, ACT I, SC I [187–215] 470a-b; ACT IV, SC I [1–96] 487b-488b; SC II [1–42] 489d-490a / *Henry V*, ACT I, SC I 533a-d

(2. *The general theory of the state. 2g. Church and state: the relation of the city of God to the city of man.*)

27 SHAKESPEARE: *Henry VIII* 549a-585a,c esp ACT III, SC II 568b-573d
30 BACON: *Advancement of Learning*, 27c
32 MILTON: *New Forcers of Conscience* 68a-b / *Lord Gen. Cromwell* 69a-b / *Paradise Lost*, BK XII [485-551] 329b-331a / *Areopagitica*, 386b-388a
35 LOCKE: *Toleration*, 2d-21c esp 2d-3a, 7c, 13a-b, 16b, 20d-21c
38 MONTESQUIEU: *Spirit of Laws*, BK II, 7c-8c; BK V, 27d; BK XII, 85c-86a; BK XVIII, 134c-d; BK XIX, 144c-145a; BK XXIII, 196c-197c; BK XXIV-XXV 200a-214a,c; BK XXVI, 214b,d-215a; 218a-219d; BK XXX, 284d-285c; BK XXXI, 298b-308c
38 ROUSSEAU: *Inequality*, 327a-c; 358d-359a / *Social Contract*, BK II, 401c-402a; BK IV, 435a-439c
39 SMITH: *Wealth of Nations*, BK I, 56b-57a; BK IV, 232b; BK V, 343b,d-356d; 357c
40 GIBBON: *Decline and Fall*, 13b-d; 197a-b; 229c-230a; 233d; 289b,d-294a; 299b-304d passim, esp 299b-d, 303c; 328c-330a,c; 349c-351d; 382a-383b; 390c-393d passim, esp 392c; 443d-446b esp 444c-445b; 451d-453a; 457b,d-460b passim; 582c; 611d-612a; 623d-624b; 631d-632a; 642c-643a; 863c [n 68]
41 GIBBON: *Decline and Fall*, 147d-148c; 195a; 199c-202d; 204b-207a esp 205d-206b; 212d-213d; 214c-215c; 252c-d; 352b-353b: 360b-361b; 381d-383c; 417b-418d; 557c-562b esp 560d-561c; 567c-569d; 582c-589d esp 586a-c, 588b-589d
42 KANT: *Science of Right*, 442c-d; 444a-c
43 ARTICLES OF CONFEDERATION: III 5b
43 CONSTITUTION OF THE U.S.: ARTICLE VI [591-599] 16d; AMENDMENTS, I 17a
43 FEDERALIST: NUMBER 52, 165c; NUMBER 57, 177b
43 MILL: *Liberty*, 279a-d; 290c-291a / *Representative Government*, 341a-c; 437d-438b
44 BOSWELL: *Johnson*, 189c-d; 251c; 314c-315b; 445b-c
46 HEGEL: *Philosophy of Right*, PART III, par 270 84d-89c; ADDITIONS, 162 143b-144c / *Philosophy of History*, INTRO, 175c-177b; 192c-d; 205d-206a,c; PART I, 216b-217c; 245d-247b; PART III, 308b-c; 309d-310c; 311b-d; PART IV, 316a-d; 321b-322a; 325d-326b; 331b-d; 333b-c; 336c-337d; 345c-346c; 350b-c; 351b-354a; 365b-c
47 GOETHE: *Faust*, PART II [10,977-11,034] 267a-268b
51 TOLSTOY: *War and Peace*, BK IX, 354b-c; 374d-377b; BK X, 435c-436c; BK XIII, 572d; 574a
52 DOSTOEVSKY: *Brothers Karamazov*, BK II, 28d-32a; BK V, 127b-137c passim

3. The origin, preservation, and dissolution of the state

3*a*. The development of the state from other communities

6 THUCYDIDES: *Peloponnesian War*, BK II, 391c-d
7 PLATO: *Laws*, BK III, 666a-c
9 ARISTOTLE: *Ethics*, BK VIII, CH 12 [1162^{a}16-19] 414c / *Politics*, BK I, CH 2 [1252^{b}9-1253^{a}1] 445d-446b
12 LUCRETIUS: *Nature of Things*, BK V [1011-1027] 74b-c
19 AQUINAS: *Summa Theologica*, PART I, Q 96, A 4 512d-513c
20 AQUINAS: *Summa Theologica*, PART I-II, Q 94, A 2 221d-223a
35 LOCKE: *Civil Government*, CH VIII 46d-53c
36 STERNE: *Tristram Shandy*, 410a-b
38 ROUSSEAU: *Social Contract*, BK III, 411c-d
46 HEGEL: *Philosophy of Right*, PART III, par 181 63c-d; par 258, 80d; par 349 111d-112a / *Philosophy of History*, PART II, 260b-261a; PART III, 287a-d

3*b*. The state as natural or conventional or both

7 PLATO: *Republic*, BK II, 316c-319a / *Laws*, BK III, 663d-666c; BK X, 760a-761d
9 ARISTOTLE: *Politics*, BK I, CH 2 445b-446d; BK III, CH 6 [1278^{b}15-29] 475d-476a
12 AURELIUS: *Meditations*, BK IV, SECT 4 264a; BK VII, SECT 13 280c; BK VIII, SECT 34 288a-b; BK IX, SECT 9 292b-d; BK X, SECT 6 297a-b
20 AQUINAS: *Summa Theologica*, PART I-II, Q 95, A 4, ANS 229b-230c
23 HOBBES: *Leviathan*, INTRO, 47a-b; PART II, 100a-c; 101a-b; 113c
25 MONTAIGNE: *Essays*, 462d-463a
31 SPINOZA: *Ethics*, PART IV, PROP 35-37 433b-436a esp PROP 37, SCHOL 2 435b-436a
33 PASCAL: *Pensées*, 304 227b-228a
35 LOCKE: *Civil Government*, CH II, SECT 14-15 28b-c; CH VII, SECT 87-89 44a-d; CH VIII 46c-53c; CH XIX, SECT 211 73d-74a
38 MONTESQUIEU: *Spirit of Laws*, BK I, 1c-2d
38 ROUSSEAU: *Inequality*, 358b-c / *Political Economy*, 367b / *Social Contract*, BK I, 387b,d-392a; BK II, 399b-c; BK III, 419c-d; 423a-c; 424d
42 KANT: *Science of Right*, 412c-413a; 433c-434c; 435a-436b; 437c-d; 450d-451a
43 MILL: *Liberty*, 302d-303a
46 HEGEL: *Philosophy of Right*, PART I, par 75 31d-32b; PART III, par 203 68a-c; par 280 94d-95a; ADDITIONS, 47 124a-b / *Philosophy of History*, INTRO, 164b-c
54 FREUD: *Civilization and Its Discontents*, 780b-d

3*b*(1) Man as by nature a political animal: the human need for civil society

7 PLATO: *Protagoras*, 44a-45a / *Republic*, BK II, 316c
9 ARISTOTLE: *Ethics*, BK VIII, CH 12 [1162^{a}16-25]

414c; BK IX, CH 9 [1169b18–22] 423b / *Politics*, BK I, CH 2 [1252b27–1253a39] 446a-d; BK III, CH 6 [1278b15–29] 475d-476a

12 EPICTETUS: *Discourses*, BK I, CH 23 128c-d

12 AURELIUS: *Meditations*, BK II, SECT 1 256b,d; BK IV, SECT 4 264a; SECT 29 266a; BK VII, SECT 13 280c; SECT 55 283b-c; BK VIII, SECT 34 288a-b; SECT 56 290c; SECT 59 290d; BK IX, SECT 9 292b-d; SECT 23 293c; BK X, SECT 6 297a-b; BK XI, SECT 8 303a-b; BK XII, SECT 30 310a-b

18 AUGUSTINE: *City of God*, BK XII, CH 27 359c-360a,c; BK XIX, CH 5 513d-514b; CH 17 522b-523a

19 AQUINAS: *Summa Theologica*, PART I, Q 96, A 4 512d-513c

20 AQUINAS: *Summa Theologica*, PART I-II, Q 94, A 2 221d-223a; Q 96, A 4, ANS 233a-d

21 DANTE: *Divine Comedy*, PARADISE, VIII [91-148] 117d-118c

23 HOBBES: *Leviathan*, PART I, 84c-86b; 93d-94a; PART II, 99a-100c; CONCLUSION, 279a-c

28 HARVEY: *On Animal Generation*, 454a

30 BACON: *Advancement of Learning*, 20c-d

31 SPINOZA: *Ethics*, PART IV, PROP 18, SCHOL 429a-d; PROP 35, COROL 1-2 433c-d

35 LOCKE: *Civil Government*, CH II, SECT 13-15 28a-c; CH VII, SECT 77 42b

36 SWIFT: *Gulliver*, PART IV, 159a-163b esp 160a-b

38 MONTESQUIEU: *Spirit of Laws*, BK I, 1d-3a

38 ROUSSEAU: *Inequality*, 330d-331d; 362c-d / *Social Contract*, BK I, 387d-388c; BK II, 397a-b

43 FEDERALIST: NUMBER 6, 39a-b; NUMBER 10, 50b-c; NUMBER 15, 65b-d; NUMBER 17, 69c; NUMBER 34, 110c-d; NUMBER 49, 160a; NUMBER 55, 174c-d

43 MILL: *Utilitarianism*, 460a-461c; 469c-d

46 HEGEL: *Philosophy of Right*, PART III, par 183 64a; par 188-195 65c-67a; ADDITIONS, 47 124a-b / *Philosophy of History*, PART IV, 361c-d

49 DARWIN: *Descent of Man*, 310a-d; 321b

52 DOSTOEVSKY: *Brothers Karamazov*, BK V, 127b-137c passim

54 FREUD: *Group Psychology*, 684d / *Civilization and Its Discontents*, 787a-c; 791b-c

3b(2) Natural law and the formation of the state

23 HOBBES: *Leviathan*, PART I, 86c-87b; 91a-96b; PART II, 99a-d; 131a

31 SPINOZA: *Ethics*, PART IV, PROP 37, SCHOL 2 435b-436a

35 LOCKE: *Civil Government*, CH I-IX 25a-54d passim, esp CH IX 53c-54d; CH XI, SECT 136 56c-d

38 MONTESQUIEU: *Spirit of Laws*, BK I, 1a-2d

38 ROUSSEAU: *Inequality*, 329a-334a,c esp 330a-331c

42 KANT: *Science of Right*, 433c-434c

43 DECLARATION OF INDEPENDENCE: [1-15] 1a-b

43 FEDERALIST: NUMBER 43, 143b-c

46 HEGEL: *Philosophy of History*, PART IV, 361c-d

3c. The condition of man in the state of nature and in the state of civil society: the state of war in relation to the state of nature

7 PLATO: *Protagoras*, 44a-45a / *Laws*, BK I, 641a

9 ARISTOTLE: *Politics*, BK I, CH 2 [1253a30-39] 446d

15 TACITUS: *Annals*, BK III, 51b

18 AUGUSTINE: *City of God*, BK XIX, CH 12, 517d-518c

19 AQUINAS: *Summa Theologica*, PART I, Q 96, A 4 512d-513c

23 HOBBES: *Leviathan*, PART I, 84c-87b; 90b-d; 94b-c; 96a-b; PART II, 99a-b; 131a-c; 138c

25 MONTAIGNE: *Essays*, 93b-94a

30 BACON: *Advancement of Learning*, 20c-d

31 SPINOZA: *Ethics*, PART IV, PROP 37, SCHOL 2 435b-436a

35 LOCKE: *Civil Government*, CH I-IX 25a-54d esp CH II-III 25d-29d, CH IX 53c-54d; CH XI, SECT 136-137 56c-57b; CH XII, SECT 145-146 58d-59a

38 MONTESQUIEU: *Spirit of Laws*, BK I, 2b-3a; BK VIII, 52a

38 ROUSSEAU: *Inequality*, 329a-334a,c; 342c-345c; 354a-b; 355b-c; 362a-366d / *Political Economy*, 374a-b / *Social Contract*, BK I, 389d-390a; 391b; 393b-c; BK II, 398a-b; 399b-c

39 SMITH: *Wealth of Nations*, BK V, 309a-311c

41 GIBBON: *Decline and Fall*, 86d-87b; 237c-d

42 KANT: *Pure Reason*, 222b-c / *Science of Right*, 405d-406c; 408c-409c; 433c-434d; 435c-436b; 450d-451a; 452a-d

43 FEDERALIST: NUMBER 51, 164c-d

44 BOSWELL: *Johnson*, 204d-205b

46 HEGEL: *Philosophy of Right*, PART III, par 187 65a-c; par 194 66c-d; par 333-334 109b-c / *Philosophy of History*, INTRO, 171c-172b; 199b-c; PART IV, 317d-318a

3d. The social contract as the origin of civil society or the state: universal consent as the basis of the constitution or government of the state

7 PLATO: *Crito*, 216d-219a,c / *Republic*, BK II, 311b-c / *Laws*, BK III, 666b-667d / *Seventh Letter*, 807a-b

9 ARISTOTLE: *Politics*, BK II, CH 9 [1270b20-22] 466d; BK IV, CH 9 [1294b34-39] 494d

12 LUCRETIUS: *Nature of Things*, BK V [1011-1027] 74b-c

18 AUGUSTINE: *City of God*, BK IV, CH 4 190d; BK XIX, CH 21 524a-525b; CH 24 528b-c

20 AQUINAS: *Summa Theologica*, PART I-II, Q 90, A 3 207a-c; Q 97, A 3 237b-238b; Q 105, A 2, ANS 309d-316a

23 HOBBES: *Leviathan*, PART I, 97c-d; PART II, 100c-102c; 109b-c; 113c; 133b; PART III, 200a-b

(3. *The origin, preservation, and dissolution of the state.* 3d. *The social contract as the origin of civil society or the state: universal consent as the basis of the constitution or government of the state.*)

31 SPINOZA: *Ethics*, PART IV, PROP 37, SCHOL 2 435b-436a
35 LOCKE: *Civil Government*, CH II, SECT 14–15 28b-c; CH VII, SECT 87–CH VIII, SECT 122 44a-53c; CH X, SECT 132 55a-b; CH XI, SECT 134 55b-d; SECT 141 58a-b; CH XV, SECT 171 65a-b; CH XVI, SECT 175 65d; SECT 192 69c-d; CH XIX 73d-81d passim, esp SECT 211 73d-74a, SECT 243 81d
38 MONTESQUIEU: *Spirit of Laws*, BK IX, 58b,d-60a
38 ROUSSEAU: *Inequality*, 353c-355b; 358b-d / *Political Economy*, 367b; 370b-c / *Social Contract*, BK I 387b,d-394d esp 391b-392a; BK II, 400a-c; BK III, 423a-424d
41 GIBBON: *Decline and Fall*, 403b-c
42 KANT: *Science of Right*, 412c-413a; 434b-c; 435a-436c; 437c-d; 450d-452a
43 DECLARATION OF INDEPENDENCE: [1–15] 1a-b
43 FEDERALIST: NUMBER 1, 29a-b; NUMBER 22, 84d-85a; NUMBER 38, 121b-c; NUMBER 44, 144d-145a
43 MILL: *Liberty*, 302d-303a / *Representative Government*, 327b,d-332d passim
46 HEGEL: *Philosophy of Right*, PART I, par 75 31d-32b; PART III, par 258, 80d-81b; ADDITIONS, 47 124a-b; 116 135c-d

3e. Love and justice as the bond of men in states: friendship and patriotism

5 SOPHOCLES: *Antigone* [332–375] 134a-b
5 EURIPIDES: *Suppliants* [286–364] 260d-261c / *Phoenician Maidens* [528–567] 382c-d; [991–1018] 387a-b
6 HERODOTUS: *History*, BK VII, 225d-226b; 255c-d; BK VIII, 273d
6 THUCYDIDES: *Peloponnesian War*, BK II, 397d-398c; 402b-404a; BK VI, 513d-514b; 534b-c
7 PLATO: *Protagoras*, 44a-45a / *Symposium*, 152b-d; 154a-b / *Republic*, BK I, 308b-309b; BK IV, 346a-356a; BK V, 360d-365d / *Laws*, BK IV, 678d-679a; BK V, 692b-c; 694d; BK VI, 701a / *Seventh Letter*, 814b-c
9 ARISTOTLE: *Ethics*, BK VIII, CH I [1155^{a}22–28] 406d; CH 9–12 411d-414d passim; BK IX, CH 6 420c-421a / *Politics*, BK I, CH 2 [1253^{a}29–39] 446d; BK II, CH 4 [1262^{a}25–^{b}23] 457b-d; CH 5 [1263^{a}23–^{b}27] 458b-d; BK III, CH 9 [1280^{a}32–1281^{a}2] 477d-478c; BK IV, CH 11 [1295^{b}1–34] 495c-496a
12 AURELIUS: *Meditations*, BK III, SECT 11 262a-b
14 PLUTARCH: *Romulus*, 20c-21a / *Lycurgus*, 36a-b; 44d-45c / *Pelopidas*, 238d-239d / *Dion*, 784d-785a
15 TACITUS: *Histories*, BK IV, 284c-285a
18 AUGUSTINE: *City of God*, BK II, CH 21 161b-162d; BK IV, CH 4 190d; BK XIX, CH 21 524a-525a; CH 23–24, 528a-c
21 DANTE: *Divine Comedy*, HELL, XI [13–90] 15b-16a; XXXII–XXXIV 47c-52d; PURGATORY, VI [58–151] 61b-62c; XV 75b-76d
30 BACON: *Advancement of Learning*, 75c
31 SPINOZA: *Ethics*, PART IV, APPENDIX, X–XVII 448a-d
35 LOCKE: *Civil Government*, CH VIII, SECT 107 49b-d / *Human Understanding*, BK I, CH II, SECT 2 104a-b
36 SWIFT: *Gulliver*, PART IV, 165b-166a
38 MONTESQUIEU: *Spirit of Laws*, xxiia-d; BK V, 18d-19d
38 ROUSSEAU: *Inequality*, 323b-d / *Political Economy*, 373c-374a; 376a-b / *Social Contract*, BK III, 421c-422a
40 GIBBON: *Decline and Fall*, 4d
43 FEDERALIST: NUMBER 14, 62a-d; NUMBER 17, 69c-70d; NUMBER 27, 95c-d; NUMBER 29, 100a-b; NUMBER 46, 150c-151a
43 MILL: *Representative Government*, 343a; 424c-425b; 428b c / *Utilitarianism*, 460a-461c; 464d-476a,c passim, esp 469c-d, 473d-474b
46 HEGEL: *Philosophy of Right*, PART III, par 267–269 84b-d; par 289 97b-d; par 325 107d; ADDITIONS, 160–161 142d-143b / *Philosophy of History*, INTRO, 172b-d; PART III, 300c-301a; PART IV, 318a; 320c-321a; 334b-c; 365b-c
49 DARWIN: *Descent of Man*, 310c-d
51 TOLSTOY: *War and Peace*, BK IX, 384c-388a,c; BK XI, 474a-b; 475b-476c
52 DOSTOEVSKY: *Brothers Karamazov*, BK VI, 158b-159a
54 FREUD: *Group Psychology*, 672a-678d esp 674a, 678a-c; 685d-686c / *Ego and Id*, 707c-d / *Civilization and Its Discontents*, 780c; 785d; 791c

3f. Fear and dependence as the cause of social cohesion: protection and security

5 AESCHYLUS: *Eumenides* [681–710] 88b-c
5 SOPHOCLES: *Antigone* [162–210] 132c-d / *Ajax* [1047–1090] 152a-b
6 THUCYDIDES: *Peloponnesian War*, BK II, 402b-404a
7 PLATO: *Protagoras*, 44a-45b / *Republic*, BK II, 311b-c; 316c-319a
9 ARISTOTLE: *Politics*, BK III, CH 6 [1278^{b}15–29] 475d-476a; CH 9 [1280^{a}32–1281^{a}2] 477d-478c; BK V, CH 8 [1308^{a}25–30] 510b-c
12 LUCRETIUS: *Nature of Things*, BK V [1011–1027] 74b-c
18 AUGUSTINE: *City of God*, BK I, CH 30 147b-d
23 MACHIAVELLI: *Prince*, CH IX, 15b-c; CH XVII, 24a-d
23 HOBBES: *Leviathan*, PART I, 77a; 77c; 84c-86b; 86d-87b; 90b-d; PART II, 99a-101a; 109b-c; 116c-d
31 SPINOZA: *Ethics*, PART IV, PROP 37, SCHOL 2 435b-436a

35 LOCKE: *Toleration*, 16a-c / *Civil Government*, CH II, SECT 13-15 28a-c; CH VIII, SECT 95 46c-d; CH IX 53c-54d; CH XI, SECT 136-137 56c-57b
36 STERNE: *Tristram Shandy*, 262a
38 MONTESQUIEU: *Spirit of Laws*, BK I, 2b-d
38 ROUSSEAU: *Inequality*, 354c-355a / *Political Economy*, 370b-c; 374a-375b; 381c-382b / *Social Contract*, BK I, 391b-c; BK II, 398a-d; BK III, 417d
39 SMITH: *Wealth of Nations*, BK V, 309a-311c
40 GIBBON: *Decline and Fall*, 91b
42 KANT: *Science of Right*, 435c-436b
43 FEDERALIST: NUMBER 15, 65b-c; NUMBER 29, 101a; NUMBER 51, 163b-c
43 MILL: *Representative Government*, 422b / *Utilitarianism*, 471a-b
46 HEGEL: *Philosophy of Right*, PART III, par 261, 83d / *Philosophy of History*, PART II, 283b-c; PART III, 285a-b; 287a-288b; 289b-d; 300c-301c; PART IV, 328b-330b; 342b-d; 344a-c
49 DARWIN: *Descent of Man*, 321b-c
52 DOSTOEVSKY: *Brothers Karamazov*, BK V, 127b-137c passim
54 FREUD: *New Introductory Lectures*, 884a

3g. The identity and continuity of a state: the dissolution of the body politic or civil society

9 ARISTOTLE: *Politics*, BK III, CH 3 473a-c
15 TACITUS: *Histories*, BK I, 212b
23 HOBBES: *Leviathan*, PART II, 116c-d; 148c-153a; 154b-c; CONCLUSION, 280c-281a
25 MONTAIGNE: *Essays*, 464c-465c
35 LOCKE: *Civil Government*, CH XVI, SECT 175 65d; CH XIX 73d-81d passim, esp SECT 211 73d-74a
38 MONTESQUIEU: *Spirit of Laws*, BK X, 62d
38 ROUSSEAU: *Political Economy*, 374b / *Social Contract*, BK I, 392d; BK II, 395b; BK III, 407c; 408c; 418a-420a
42 KANT: *Science of Right*, 450d-451b
43 DECLARATION OF INDEPENDENCE: [41-47] 2a
43 ARTICLES OF CONFEDERATION: XII 9b
43 CONSTITUTION OF THE U.S.: ARTICLE VI [578-582] 16d
43 FEDERALIST: NUMBER 43, 142d-143a; NUMBER 84, 254b-c
46 HEGEL: *Philosophy of Right*, PART III, par 269 84d; par 272, 90b-c; par 347 111b-c; ADDITIONS, 161 143a-b
50 MARX: *Capital*, 175c

4. The physical foundations of society: the geographical and biological conditions of the state

4a. The territorial extent of the state: its importance relative to different forms of government

7 PLATO: *Republic*, BK II, 318c-319a; BK IV, 343d-344a / *Laws*, BK V, 691d
9 ARISTOTLE: *Politics*, BK II, CH 6 [1265^{a}10-18] 460b-c; BK III, CH 3 473a-c; BK IV, CH 4 [1291^{a}19-21] 490b-c; CH 15 [1299^{a}32-^{b}10] 500a-b; BK VI, CH 4 [1319^{a}20-^{b}2] 522d-523a; BK VII, CH 5 530d-531b
14 PLUTARCH: *Numa Pompilius*, 58a-b / *Solon*, 72d
15 TACITUS: *Annals*, BK III, 58a-b / *Histories*, BK II, 224d
18 AUGUSTINE: *City of God*, BK III, CH 10 172d-173c
35 LOCKE: *Civil Government*, CH V, SECT 38 33b-c; SECT 45 34d-35a
38 MONTESQUIEU: *Spirit of Laws*, BK IV, 17a-b; BK VIII, 56b-57c; BK IX, 58b,d-59b; BK XI, 83c-d; BK XVII, 124c-d
38 ROUSSEAU: *Inequality*, 323b-c / *Political Economy*, 380a-b / *Social Contract*, BK I, 394b-c; BK II, 403a-404c; BK III, 411a; 412a-b; 413a-d; 417b-c; 422d-423a
40 GIBBON: *Decline and Fall*, 1b-3c; 8b-11d; 33d-34a,c
42 KANT: *Science of Right*, 455c-456a
43 ARTICLES OF CONFEDERATION: IX [262-274] 7d-8a
43 CONSTITUTION OF THE U.S.: ARTICLE IV, SECT 3 16b
43 FEDERALIST: NUMBER 1, 30d-31a; NUMBER 2, 31c-d; NUMBER 7, 41d-42d; NUMBER 9, 47c-48d; NUMBER 10, 51c-53a; NUMBER 13 14 59a-62d passim, esp NUMBER 14, 60b-d; NUMBER 28, 97c-98b; NUMBER 37, 120b-d; NUMBER 43, 140d-141a; NUMBER 51, 164d-165a; NUMBER 63, 192d-193a; NUMBER 84, 253d-254b
43 MILL: *Liberty*, 273b-c / *Representative Government*, 330a-c; 352a-353a; 432b-c
46 HEGEL: *Philosophy of Right*, PART III, par 296 99a-b / *Philosophy of History*, PART I, 243c-d; PART II, 273d-274a; PART IV, 342c-d

4b. The influence of climate and geography on political institutions and political economy

6 HERODOTUS: *History*, BK IX, 314a,c
6 THUCYDIDES: *Peloponnesian War*, BK I, 349b-d; 352c-d; 372c-d
7 PLATO: *Laws*, BK IV, 677a-c; BK V, 696d-697a
9 ARISTOTLE: *Politics*, BK II, CH 10 [1271^{b}30-38] 468a; [1272^{a}40-^{b}2] 468d; [1272^{b}17-20] 469a; BK V, CH 3 [1303^{b}8-18] 505a-b; BK VII, CH 5 [1326^{b}26]-CH 7 [1327^{b}32] 530d-532a; CH 11 [1330^{a}34-^{b}17] 535a-b
10 HIPPOCRATES: *Airs, Waters, Places*, par 16 15d-16a
14 PLUTARCH: *Solon*, 72d / *Themistocles*, 96b-c
36 STERNE: *Tristram Shandy*, 224a-b; 295b-296b
38 MONTESQUIEU: *Spirit of Laws*, BK I, 3c-d; BK VII, 46c-47a; BK XIV 102b,d-108d; BK XV, 111a-c; BK XVI, 116a-120a; BK XVII-XVIII 122a-134d; BK XIX, 138b-c; 140c-d; 143d-144b; BK XXI, 153a-154a

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38 ROUSSEAU: *Inequality*, 325b / *Social Contract*, BK II, 404b-c; 405c-d; BK III, 415b-417c; 422c
39 SMITH: *Wealth of Nations*, BK I, 8b-10b; BK III, 173b-c
40 GIBBON: *Decline and Fall*, 83c-d; 87d-91b esp 90c-91b; 236c-237a; 396b-398a passim; 567a-d; 655d-657c
41 GIBBON: *Decline and Fall*, 220b-225a passim, esp 221b-222d, 224b; 338b-c; 341c-343b passim; 355c-d; 427b-428a
43 FEDERALIST: NUMBER 2, 31c-d; NUMBER 5, 38a; NUMBER 8, 46a-47a; NUMBER 11, 55b-56b; NUMBER 12, 57b-58b; NUMBER 24, 88c-89a; NUMBER 25, 89d-90a; NUMBER 38, 124c-d; NUMBER 41, 133c; 134d-135a
43 MILL: *Representative Government*, 424c-428a passim
46 HEGEL: *Philosophy of Right*, PART III, par 247 78a-b / *Philosophy of History*, INTRO, 190b-201a,c esp 194b-196a; PART I, 243d-244c; 248c-249d; 251c-252d; PART II, 259d-260a; 261a; 263d-264a; PART III, 286b
49 DARWIN: *Descent of Man*, 323a-b
50 MARX: *Capital*, 253b-255a

4c. The size, diversity, and distribution of populations: the causes and effects of their increase or decrease

6 HERODOTUS: *History*, BK I, 22d-23a
6 THUCYDIDES: *Peloponnesian War*, BK I, 349b-d; BK II, 391c-392a; 399b-401b
7 PLATO: *Republic*, BK IV, 343d-344a / *Laws*, BK III, 663d-667a; BK V, 691d; 693a-c
9 ARISTOTLE: *Ethics*, BK IX, CH 10 [1170^{b}29-34] 424c / *Politics*, BK II, CH 6 [1265^{a}10-18] 460b-c; [1265^{a}38-^{b}17] 460d-461a; CH 9 [1270^{a}15-^{b}6] 466b-c; BK III, CH 15 [1286^{b}8-22] 484d-485a; BK IV, CH 6 [1292^{b}41-1293^{a}11] 492c; CH 11 [1296^{a}6-13] 496b; CH 13 [1297^{b}22-28] 498a; BK V, CH 3 [1303^{a}25-^{b}4] 504d-505a; BK VI, CH 6 [1320^{b}39-1321^{a}4] 524c; BK VII, CH 4 530a-d; CH 6 531b-d esp [1327^{a}12-17] 531b
14 PLUTARCH: *Pericles*, 138b-139a
23 HOBBES: *Leviathan*, PART II, 157a
25 MONTAIGNE: *Essays*, 330b-d
35 LOCKE: *Civil Government*, CH XIII, SECT 157-158 61c-62b
38 MONTESQUIEU: *Spirit of Laws*, BK VII, 46c-47a; BK XVIII, 127a-b; BK XXIII 187b,d-200a,c
38 ROUSSEAU: *Inequality*, 365c-366b / *Political Economy*, 367d; 378b / *Social Contract*, BK II, 404a-c; BK III, 407c-408b; 413d; 417b-418a; 420b-c; 422d-423a; BK IV, 428b-c
39 SMITH: *Wealth of Nations*, BK I, 33c-34b; 71a-d; BK III, 163a-165b; BK IV, 243b,d-244a; BK V, 384b-d
40 GIBBON: *Decline and Fall*, 17d-18a; 88a-c; 90c-d; 239a-d; 486c
41 GIBBON: *Decline and Fall*, 108d-109a; 221b-c
42 KANT: *Pure Reason*, 229d-230a
43 DECLARATION OF INDEPENDENCE: [48-51] 2a
43 FEDERALIST: NUMBER 2, 31d; NUMBER 10, 52a-53a; NUMBER 13, 59b-c; NUMBER 54 170a-172b passim; NUMBER 55, 172b-173c; NUMBER 56 174d-176d; NUMBER 58 179c-182a passim
43 MILL: *Liberty*, 319b-d / *Representative Government*, 424c-428a passim
44 BOSWELL: *Johnson*, 172b-c; 373c-374a
46 HEGEL: *Philosophy of Right*, PART III, par 243 77b-c / *Philosophy of History*, PART II, 263b-d; PART III, 286b; PART IV, 318c-319b
49 DARWIN: *Descent of Man*, 275d-277c; 323b-327a; 383b-384d; 391d-394a,c
50 MARX: *Capital*, 172b-c; 249a-250a; 312c-313a; 317c-319a; 348a-350d; 360a-364a
50 MARX-ENGELS: *Communist Manifesto*, 421c-d

5. The social structure or stratification of the state

5a. The political distinction between ruling and subject classes, and between citizens and denizens

5 SOPHOCLES: *Ajax* [1226-1315] 153c-154b
5 ARISTOPHANES: *Frogs* [686-705] 572a-b
6 HERODOTUS: *History*, BK I, 28c-29a
7 PLATO: *Republic*, BK III-IV, 339b-350a / *Laws*, BK VIII, 742c-d; BK XI, 774d-775a
9 ARISTOTLE: *Politics*, BK I, CH 13 [1259^{b}33-1260^{a}20] 454b-d; BK II, CH 5 [1264^{a}11-^{b}25] 459b-460a; CH 6 [1265^{b}18-21] 461a; BK III, CH 1-5 471b,d-475d passim; BK IV, CH 4 489b-491d; BK VII, CH 2 [1324^{a}14-17] 528a; CH 4 [1326^{a}17-24] 530b; CH 6 [1327^{b}7-14] 531d; CH 8-9 532c-533d / *Athenian Constitution*, CH 7 555c-556a
14 PLUTARCH: *Lycurgus*, 46c-47a / *Lycurgus-Numa*, 62b-c
15 TACITUS: *Annals*, BK XI, 106a-107b
20 AQUINAS: *Summa Theologica*, PART I-II, Q 98, A 6, REP 2 244c-245b; Q 104, A 4 306d-307c; Q 105, A 3, REP 2 316a-318b
23 HOBBES: *Leviathan*, PART II, 108d-109a
35 LOCKE: *Civil Government*, CH II, SECT 9 27a-b; CH VIII, SECT 122 53b-c
38 MONTESQUIEU: *Spirit of Laws*, BK XV, 109a-b; 110a; 112c-d; 114c-115b
38 ROUSSEAU: *Social Contract*, BK I, 392b [fn 1]; BK III, 420b-c; BK IV, 426b-c; 427c; 428b-430a
39 SMITH: *Wealth of Nations*, BK IV, 269d-271a
40 GIBBON: *Decline and Fall*, 14a-15c passim; 16c-17d; 147a-b
41 GIBBON: *Decline and Fall*, 81d-82b; 404d
42 KANT: *Science of Right*, 436d-437c
43 ARTICLES OF CONFEDERATION: IV [17-36] 5b-c

43 CONSTITUTION OF THE U.S.: ARTICLE I, SECT 8 [204–206] 13b
43 FEDERALIST: NUMBER 42, 138d-139c; NUMBER 43, 142b-c; NUMBER 54, 171a-b
43 MILL: *Representative Government*, 345c-346a; 366a-370a; 380c-389b passim
46 HEGEL: *Philosophy of History*, PART II, 273c

5b. The family as a member of the state: its autonomy and its subordination

5 AESCHYLUS: *Seven Against Thebes* [1011–1084] 38b-39a,c
5 SOPHOCLES: *Antigone* 131a-142d
5 EURIPIDES: *Iphigenia at Aulis* [1255–1275] 436c; [1368–1401] 437c-d
5 ARISTOPHANES: *Ecclesiazusae* [611–650] 622a-c
6 HERODOTUS: *History*, BK IV, 139a-b; BK VII, 223c-d
6 THUCYDIDES: *Peloponnesian War*, BK II, 398c-d
7 PLATO: *Republic*, BK V, 360d-365d / *Statesman*, 608a-d / *Laws*, BK III, 665d-666c; BK VI, 707b-708c; BK VII, 721d; BK XI, 775d-781c
9 ARISTOTLE: *Ethics*, BK X, CH 9 [1180^{a}25-^{b}13] 435a-b / *Politics*, BK I, CH 2 [1253^{a}19-29] 446c; CH 13 [1260^{b}8-19] 455c; BK II, CH 2-3 455d-457a; CH 9 [1269^{b}13-1270^{b}6] 465d-466c; BK III, CH 9 [1280^{b}30-1281^{a}2] 478c
14 PLUTARCH: *Romulus*, 21a-26b / *Lycurgus*, 39a-41a / *Numa Pompilius*, 58d / *Lycurgus-Numa*, 62d-64a / *Cato the Younger*, 629a-c
15 TACITUS: *Annals*, BK II, 32b-d; BK III, 51a; 51d-52a; BK XV, 162b-c
18 AUGUSTINE: *City of God*, BK XIX, CH 16 521d-522a
20 AQUINAS: *Summa Theologica*, PART I-II, Q 90, A 3, REP 3 207a-c; Q 95, A 1, ANS 226c-227c; Q 104, A 4, ANS 306d-307c; Q 105, A 4 318b-321a
23 HOBBES: *Leviathan*, PART II, 121a; 155b
25 MONTAIGNE: *Essays*, 344a-c
35 LOCKE: *Civil Government*, CH VI 36a-42a; CH VII, SECT 83 43b-c; CH XVI, SECT 180–183 67b-68b; SECT 188-192 69a-d
36 SWIFT: *Gulliver*, PART I, 29b-31a
38 MONTESQUIEU: *Spirit of Laws*, BK IV, 13b; BK V, 22d-23a; BK XIX, 140a-c; BK XXIII, 189b-c; 192d-199b; BK XXVI, 216c
38 ROUSSEAU: *Inequality*, 327c-d; 364d-365b / *Political Economy*, 376b-377a; 377d-378a / *Social Contract*, BK IV, 439b,d [fn 2]
40 GIBBON: *Decline and Fall*, 175c-d
41 GIBBON: *Decline and Fall*, 73c; 82b-83c; 88d-89a; 92c
42 KANT: *Science of Right*, 420b-421c
43 MILL: *Liberty*, 317c-319d
44 BOSWELL: *Johnson*, 280c-281a; 304a-b; 355b-d
46 HEGEL: *Philosophy of Right*, PART III, par 166 59d-60a; par 174 61b; par 180 62c-63c; par 238–239 76c-d; par 255–256 79d-80a; ADDITIONS, 127 137b; 146–147 140b-c / *Philosophy of History*, INTRO, 172b-d; PART I, 246d-247a; PART II, 277c; PART III, 288c-289b
50 MARX: *Capital*, 241a-d
50 MARX-ENGELS: *Communist Manifesto*, 427b-428a
54 FREUD: *Civilization and Its Discontents*, 783d-784a

5c. The classes or sub-groups arising from the division of labor or distinctions of birth: the social hierarchy

6 HERODOTUS: *History*, BK II, 59b-c; 84d-85b
7 PLATO: *Republic*, BK II-IV, 316a-350a esp BK II, 316c-319c; BK V, 358d-360d; BK VIII, 413a-c / *Timaeus*, 442b; 445c / *Critias*, 480a-481b / *Laws*, BK V, 695a-c; BK VII, 722d; BK VIII, 740d-741a; BK XI, 774a-775a
9 ARISTOTLE: *Politics*, BK II, CH 2 [1261^{a}24-^{b}6] 456a-b; CH 5 [1264^{a}1]-CH 6 [1265^{a}9] 459a-460b; CH 8 [1267^{b}30-36] 463c-d; [1268^{a}16-^{b}4] 464a-b; BK III, CH 4-5 473c-475d; BK IV, CH 3 [1289^{b}27-1290^{a}12] 488d-489a; CH 4 [1290^{b}21-1291^{b}29] 489d-491a; CH 12 [1296^{b}20-34] 496d-497a; BK VII, CH 8-10 532c-534d / *Athenian Constitution*, CH 7 555c-556a
14 PLUTARCH: *Theseus*, 9a-d / *Romulus*, 20c-21a / *Numa Pompilius*, 57d-58c
21 DANTE: *Divine Comedy*, PARADISE, XVI 130a-132a
22 CHAUCER: *Prologue* 159a-174a / *Parson's Tale*, par 64–67, 530b-532a
25 MONTAIGNE: *Essays*, 131b-132a; 411a-d
26 SHAKESPEARE: *2nd Henry VI*, ACT IV 56a 64d esp SC II 57d-59d
27 SHAKESPEARE: *Troilus and Cressida*, ACT I, SC III [75–136] 108d-109c
29 CERVANTES: *Don Quixote*, PART II, 221d-222d
36 SWIFT: *Gulliver*, PART I, 30a-31a; PART IV, 154b-155b; 158a-b
37 FIELDING: *Tom Jones*, 134a-b; 297d-298a
38 MONTESQUIEU: *Spirit of Laws*, BK II, 5b-c; BK III, 11c-12a; BK XV, 111a-112a; BK XX, 151b-152a; BK XXII, 184a-b
38 ROUSSEAU: *Inequality*, 365d-366a / *Political Economy*, 381c-382b / *Social Contract*, BK III, 422a; BK IV, 428b-430a
39 SMITH: *Wealth of Nations*, BK I, 6d-8b; 51a-62a passim; 109d-110d; BK III, 169c-170b; BK IV, 269d-271a; BK V, 301a-309a,c passim; 309a-311c; 382a-383b; 391b-392a
40 GIBBON: *Decline and Fall*, 89d; 144a-b; 242a-c; 497a-501d passim
41 GIBBON: *Decline and Fall*, 73b; 81c-d; 317b-318b; 389b-c; 404c-d; 452d-456a,c esp 452d; 571a-572c
42 KANT: *Science of Right*, 436d-437c; 444c-445c / *Judgement*, 586a-c
43 ARTICLES OF CONFEDERATION: VI [82–93] 6a-b
43 CONSTITUTION OF THE U.S.: ARTICLE I, SECT 9 [289–295], SECT 10 [300–303] 14a
43 FEDERALIST: NUMBER 35, 113a-114a; NUMBER 36, 114c-115a; NUMBER 84, 252a

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43 MILL: *Liberty*, 270a-b / *Representative Government*, 385a-d; 392b-399d passim, esp 398a-d
44 BOSWELL: *Johnson*, 124d-126a; 127b-c; 140b-141a; 211b-c; 247c-d; 299a-b; 383b; 470b-c
46 HEGEL: *Philosophy of Right*, PART III, par 201-206 68a-69b; par 255 79d; par 288 97a-b; par 295 98d-99a; par 303 101c-102a; par 305 102b; par 308 102c-103a; par 326 107d-108a; ADDITIONS, 127-130 137b-d; 151 141b-c; 189 149d / *Philosophy of History*, INTRO, 181d-182a; 193b-c; PART I, 222a-223c; 237b-c; 250a-c; PART II, 275b-276a; PART III, 287d-288b, 294c-297b; PART IV, 335a-336c; 356c-357a
49 DARWIN: *Descent of Man*, 324a-c; 578b-c
50 MARX: *Capital*, 95d-96b [fn 2]; 164a-180d esp 165a-b, 165d-166a, 171a-c, 173b, 176b-d, 178c-179c; 218c-219d; 239d-240c; 303d; 317c-321b esp 317c-319b, 319d-321b; 355a-364a passim, esp 364a; 366a-b; 368c-369a
50 MARX-ENGELS: *Communist Manifesto*, 419b [fn 1]; 419d-420b; 422c-424c; 430b-c
51 TOLSTOY: *War and Peace*, BK I, 1a-11b; BK V, 204a-206c; BK VII, 278c; 281a-284a; BK IX, 347d-350d passim; 384c-388a,c; BK X, 403a-405a; BK XI, 503a-505a; EPILOGUE II, 685d-686a
54 FREUD: *New Introductory Lectures*, 882c-d

5*d*. The conflict of classes within the state

5*d*(1) The opposition of social groups: the treatment of national, racial, and religious minorities

7 PLATO: *Laws*, BK I, 641c-642b; BK IV, 678d-679a; BK VIII, 742c-d; BK XI, 774d-775a; BK XII, 790a-d
9 ARISTOTLE: *Politics*, BK III, CH 5 [1277^{b}34-1278^{a}7] 475a-b; BK V, CH 3 [1303^{a}25-^{b}4] 504d-505a; BK VII, CH 10 [1330^{a}25-33] 534d
14 PLUTARCH: *Theseus*, 9c / *Romulus*, 21a-27c / *Numa Pompilius* 49a-61d esp 58c
22 CHAUCER: *Prioress's Tale* [13,418-620] 392a-395b esp [13,418-424] 392a / *Second Nun's Tale* 463b-471b esp [15,826-16,021] 467b-471b
23 HOBBES: *Leviathan*, PART II, 108d-109a
26 SHAKESPEARE: *Merchant of Venice*, ACT I, SC III [106-143] 410c-411a
31 SPINOZA: *Ethics*, PART III, PROP 46 410c
32 MILTON: *Sonnets*, XV 66b
35 LOCKE: *Toleration* 1a-22d
36 SWIFT: *Gulliver*, PART I, 21b-23a
38 MONTESQUIEU: *Spirit of Laws*, BK XXIV, 206c
38 ROUSSEAU: *Social Contract*, BK IV, 428b-c
40 GIBBON: *Decline and Fall*, 12a-b; 13b-14a; 83a-b; 147a-b; 179d-180a; 206b,d-234a,c esp 207b-211a, 229c-232b; 290b-291c; 348d-361a,c esp 348d-349c, 352c-354d, 356b-d; 383a-b; 390c-391d; 607b-608a; 617a-b; 622b-d; 638d-639a; 643c-d
41 GIBBON: *Decline and Fall*, 138d; 285d-288a; 404d; 480d-481a
43 CONSTITUTION OF THE U.S.: ARTICLE I, SECT 9 [260-266] 13d; ARTICLE VI [597-599] 16d; AMENDMENTS, I 17a; XV 19b
43 FEDERALIST: NUMBER 42, 137b-c; NUMBER 52, 165c; NUMBER 54 170a-172b; NUMBER 57, 177b
43 MILL: *Liberty*, 270c-271a; 278a-282a; 307d-312a passim / *Representative Government*, 366c-d; 424c-428a / *Utilitarianism*, 475b-476a
46 HEGEL: *Philosophy of Right*, PART III, par 270, 86d-87b [fn 1] / *Philosophy of History*, INTRO, 172d-173a; PART II, 276d-277a; PART III, 287d-288b
54 FREUD: *War and Death*, 755d-756a / *Civilization and Its Discontents*, 788c

5*d*(2) The clash of economic interests and political factions: the class war

5 EURIPIDES: *Suppliants* [229-245] 260b-c
6 HERODOTUS: *History*, BK VI, 202c-203b; BK VII, 243b-c
6 THUCYDIDES: *Peloponnesian War*, BK III, 423a-c; 434c-438c esp 436d-437d; BK IV, 459a-c; 463a-469b; BK V, 482d-483a; 502d; 504a-b; BK VI, 520a-d; BK VIII 564a-593a,c
7 PLATO: *Republic*, BK IV, 343c-d; BK VIII, 405c-406b / *Laws*, BK V, 695a-c
9 ARISTOTLE: *Politics*, BK II, CH 7 461d-463c passim; BK III, CH 10 [1281^{a}11-29] 478d-479a; BK IV, CH 3-4 488d-491d; CH 11-12 495b-497b; BK V, CH 3-8 503d-511c; CH 9 [1309^{b}14-1310^{a}11] 511d-512b; BK VI, CH 7 [1321^{a}5-27] 524c-525a / *Athenian Constitution*, CH 1-41 553a-572a passim, esp CH 2-6 553a-555c; CH 29-41 566b-572a
14 PLUTARCH: *Solon*, 68d-71c; 75c-76d / *Coriolanus*, 176b-177b; 179c-184c / *Agis* 648b,d-656d / *Cleomenes*, 657a-663c / *Tiberius Gracchus* 671b,d-681a,c / *Caius Gracchus* 681b,d-689a,c / *Cicero*, 708a-713b
15 TACITUS: *Annals*, BK VI, 97b / *Histories*, BK II, 224d-225a
21 DANTE: *Divine Comedy*, HELL, VI [58-75] 9a; X [34-93] 14a-c; XXVIII 41b-43a; PURGATORY, VI [58-151] 61b-62c
23 MACHIAVELLI: *Prince*, CH IX, 14c-d
23 HOBBES: *Leviathan*, PART II, 121b-122b
26 SHAKESPEARE: *2nd Henry VI*, ACT IV 56a-64d
27 SHAKESPEARE: *Coriolanus*, ACT I, SC I 351a-354d / *Pericles*, ACT II, SC I [30-56] 427c-d
36 SWIFT: *Gulliver*, PART I, 21b-23a; PART II, 60a; 80a-b; PART IV, 154b-155b
38 ROUSSEAU: *Political Economy*, 375b-d; 381c-382b / *Social Contract*, BK II, 396b-d; BK IV, 429c-431c

39 SMITH: *Wealth of Nations*, BK I, 28a-d; 109d-110d; BK III, 170c-173b; 175b-179a; BK IV, 269d-271a; BK V, 309a-311c esp 309a-c; 420b-421a
40 GIBBON: *Decline and Fall*, 144a-d
41 GIBBON: *Decline and Fall*, 570d-572d passim; 574b-582c; 588a-589a; 594b-c
43 FEDERALIST: NUMBER 10 49c-53a; NUMBER 51, 164a-165a; NUMBER 60, 185b-186c; NUMBER 85, 256b-c
43 MILL: *Liberty*, 289c-290a; 309b-c / *Representative Government*, 345c-346a; 366a-370a; 376a-c; 387c-d; 392b-399d passim
46 HEGEL: *Philosophy of Right*, PART III, par 236 76a-c; par 304 102a / *Philosophy of History*, PART I, 250a-c; PART II, 263b-d; 275b-276a; 283c-d; PART III, 294c-297b; PART IV, 335a-336c; 356c-357a
50 MARX: *Capital*, 6d-7d; 9a-c; 63b-c; 113c; 127c-146c esp 131a, 134c-d, 141b-c, 144a-146c; 275a-c; 295a; 317b-c; 355d-368b passim, esp 356c-361d, 366a-368b; 377c-378d
50 MARX-ENGELS: *Communist Manifesto* 415a-434d esp 416c-d, 419b,d-420a, 422c, 423b-424d, 425c, 429b-c, 434c-d
51 TOLSTOY: *War and Peace*, BK X, 410c-421c
54 FREUD: *Civilization and Its Discontents*, 787d / *New Introductory Lectures*, 882c-d; 884a

5e. The classless society

50 MARX: *Capital*, 9c
50 MARX-ENGELS: *Communist Manifesto*, 416c-d; 429b-c

6. The ideal or best state: the contrast between the ideal state and the best that is historically real or practicable

6 THUCYDIDES: *Peloponnesian War*, BK II, 395d-399a
7 PLATO: *Republic* 295a-441a,c esp BK V-VI, 368c-383a, BK VII, 401c-d / *Timaeus*, 442b-443b / *Statesman*, 598b-604b / *Laws* 640a-799a,c esp BK V, 692c-693a, 696a-b, BK VII, 722d-723c, BK IX, 754a-b / *Seventh Letter*, 807b
9 ARISTOTLE: *Ethics*, BK V, CH 7 [1135^{a}2-4] 382d / *Politics*, BK II, CH 1 [1260^{b}26]-CH 9 [1269^{a}33] 455b,d-465c; BK IV, CH 1 487a-488b; CH 2 [1289^{a}30-35] 488b; CH 7 [1293^{b}1-21] 493a-b; CH 11 495b-496d esp [1295^{a}25-^{b}1] 495b-c; BK VII-VIII 527a-548a,c esp BK VII, CH 4 [1325^{b}34-39] 530a
12 AURELIUS: *Meditations*, BK IX, SECT 29 294a-b
14 PLUTARCH: *Lycurgus* 32a-48d esp 48b-c / *Numa Pompilius* 49a-61d / *Lycurgus-Numa* 61b,d-64a,c
23 MACHIAVELLI: *Prince*, CH XV, 22b
23 HOBBES: *Leviathan*, PART II, 164a,c
25 MONTAIGNE: *Essays*, 462c-465c
30 BACON: *Advancement of Learning*, 94d-95a / *New Atlantis* 199a-214d
32 MILTON: *Areopagitica*, 393a-b
38 ROUSSEAU: *Inequality*, 323a-b / *Social Contract*, BK II, 402b-403a; 405a-c
39 SMITH: *Wealth of Nations*, BK IV, 201b-c
42 KANT: *Pure Reason*, 114b-d / *Science of Right*, 450b-451d; 455c-458a,c / *Judgement*, 586a-587a
43 FEDERALIST: NUMBER 37-38 117d-125a passim; NUMBER 41, 132b-c; NUMBER 65, 200b-c; NUMBER 85, 257a-c; 258d-259a
43 MILL: *Representative Government*, 327b,d-355b esp 341c-d, 344d-345a, 350b-355b; 368c-d; 380c-381a
46 HEGEL: *Philosophy of Right*, PART III, par 185 64b-d; par 273 90c-92a / *Philosophy of History*, INTRO, 173a-175c; PART I, 251b; PART III, 300c-d
50 MARX-ENGELS: *Communist Manifesto*, 432d-433d

6a. The political institutions of the ideal state

5 ARISTOPHANES: *Ecclesiazusae* 615a-628d
6 THUCYDIDES: *Peloponnesian War*, BK II, 396c-397d
7 PLATO: *Republic*, BK II-IV, 316a-350a / *Statesman*, 598b-604b / *Laws* 640a-799a,c esp BK III, 669d-672b, BK IV, 679c-682c, BK V, 692c-693a, BK VI, 697a-706c, BK VIII, 733b-734a, BK IX, 754a-b, BK XII 784b-799a,c / *Seventh Letter*, 806d-807b
9 ARISTOTLE: *Politics*, BK II, CH 1 [1260^{b}28-36] 455b; CH 2 [1261^{a}24-^{b}15] 456a-c; CH 5 [1264^{b}7-25] 459d-460a; CH 6 [1265^{b}26-1266^{a}30] 461b-d; CH 8 463c-465b; BK IV, CH 11 495b-496d
14 PLUTARCH: *Lycurgus*, 34d-35d; 45c-46a
20 AQUINAS: *Summa Theologica*, PART I-II, Q 105, A 1 307d-309d
27 SHAKESPEARE: *Tempest*, ACT II, SC I [143-184] 532d-533b
37 FIELDING: *Tom Jones*, 268c-269b
38 ROUSSEAU: *Inequality*, 323a-325b / *Social Contract*, BK III, 410d-411c; BK IV, 427d
42 KANT: *Pure Reason*, 114b-d / *Science of Right*, 450b-451d; 455c-456a
43 MILL: *Representative Government*, 338a; 341d-350a; 369b-389b
46 HEGEL: *Philosophy of Right*, PART III, par 185 64b-d / *Philosophy of History*, INTRO, 174a-175c; PART I, 251b; PART III, 300c-d; PART IV, 365c-366a
50 MARX-ENGELS: *Communist Manifesto*, 428d

6b. The social and economic arrangements of the ideal state

5 ARISTOPHANES: *Birds* 542a-563d / *Ecclesiazusae* 615a-628d / *Plutus* 629a-642d
7 PLATO: *Republic*, BK II, 316c-319a; BK III-IV, 339b-344a; BK V, 356b-365d; BK VII, 401c-d / *Timaeus*, 442d / *Critias*, 481a-485c / *Laws* 640a-799a,c esp BK I, 645b-652d, BK II, 655b-663d, BK IV, 677a-678c, BK V, 691b-

(*6. The ideal or best state: the contrast between the ideal state and the best that is historically real or practicable. 6b. The social and economic arrangements of the ideal state.*)

697a, BK VI, 706d-713c, BK VII, 717b-728b, BK VIII 731d-743a, BK XI 771b-784b

9 ARISTOTLE: *Politics*, BK II, CH 1-8 455b,d-465b; BK VII, CH 8-12 532c-536b

14 PLUTARCH: *Lycurgus*, 36a-47a / *Numa Pompilius*, 58a-c

25 MONTAIGNE: *Essays*, 93d-94a

27 SHAKESPEARE: *Tempest*, ACT II, SC I [146-175] 533a-b

46 HEGEL: *Philosophy of Right*, PART III, par 299 99c-100b

50 MARX: *Capital*, 292d; 377c-378d

50 MARX-ENGELS: *Communist Manifesto*, 425b-429c esp 428d-429c; 432b-433d passim

52 DOSTOEVSKY: *Brothers Karamazov*, BK VI, 158b-159a

54 FREUD: *Civilization and Its Discontents*, 787d-788b / *New Introductory Lectures*, 883d-884c

7. Factors affecting the quality of states

7*a*. Wealth and political welfare

5 ARISTOPHANES: *Plutus* 629a-642d esp [415-618] 633d-636d

6 THUCYDIDES: *Peloponnesian War*, BK I, 350b-352c; BK II, 397b-c; BK VIII, 569d

7 PLATO: *Republic*, BK II, 316c-319a esp 318c-319a; BK III-IV, 339b-344a esp 341c-344a; BK V, 364c-365d; BK VIII, 405c-408a / *Crito*, 485b-c / *Laws*, BK III, 665b; BK IV, 677a-c; BK V, 687d-688a; 694a-695c; BK VIII, 733b-d

9 ARISTOTLE: *Politics*, BK II, CH 7 [1267^{a}18-36] 462d-463a; BK VII, CH 4 [1325^{b}33-1326^{a}4] 530a; CH 6 [1327^{a}25-31] 531b-c; CH 8 532c-533a

14 PLUTARCH: *Lycurgus*, 36a-37b; 47d / *Lycurgus-Numa*, 62b-c / *Coriolanus*, 180b-d / *Aristides-Marcus Cato*, 291b-292b / *Agis*, 649b-c

15 TACITUS: *Annals*, BK II, 31a-b; BK III, 57b-58d

18 AUGUSTINE: *City of God*, BK I, CH 30-33 147b-149a

21 DANTE: *Divine Comedy*, HELL, VII [1-60] 9c-10a; XVI [64-78] 23a-b; PURGATORY, XX [34-96] 83c-84a

23 HOBBES: *Leviathan*, PART IV, 267c-268b

36 SWIFT: *Gulliver*, PART II, 73b-76b; PART IV, 154b-155b

38 MONTESQUIEU: *Spirit of Laws*, BK V, 19a-21d; 23a-25c; BK VII, 44a-48a; BK XIII, 96c; BK XX, 146b-147d; BK XXI, 153c-d; 154b

38 ROUSSEAU: *Inequality*, 325d; 327c-328a; 365c-366b / *Political Economy*, 375b-d; 377b-385a,c / *Social Contract*, BK II, 405c-d; BK III, 411a-b; 415b-417c; 421c-d

39 SMITH: *Wealth of Nations*, BK I, 27b-31b; 33c-35c

40 GIBBON: *Decline and Fall*, 22b-23b; 88d-89d; 456d-457a,c; 498a-501d; 642a-c

43 FEDERALIST: NUMBER 21, 79b-80a

44 BOSWELL: *Johnson*, 210d-211b

46 HEGEL: *Philosophy of Right*, ADDITIONS, 143 139d-140a

49 DARWIN: *Descent of Man*, 324a-d

50 MARX: *Capital*, 292d; 319b-321b

7*b*. The importance of the arts and sciences in political life

5 ARISTOPHANES: *Acharnians* [497-508] 460d-461a; [628 658] 462b-d / *Wasps* [1009-1059] 519d-520c / *Birds* [904-1057] 554a-555d / *Frogs* 564a-582a,c esp [1008-1098] 576b-577c, [1411-1533] 581a-582a,c

7 PLATO: *Republic*, BK II-III, 320c-339a; BK IV, 344b-345a; BK VII 388a-401d; BK X 427c-441a,c esp 432d-434c / *Statesman*, 604c-608d / *Laws*, BK II 653a-663d; BK III, 675c-676b; BK VII, 713c-730d

9 ARISTOTLE: *Politics*, BK VIII 542a-548a,c

14 PLUTARCH: *Lycurgus*, 43b-44b

18 AUGUSTINE: *City of God*, BK I, CH 31-33 147d-149a; BK II, CH 8-14 153d-157c; BK IV, CH 26-27 202a-203c / *Christian Doctrine*, BK II, CH 25 649b-d

23 HOBBES: *Leviathan*, PART II, 164c

30 BACON: *New Atlantis* 199a-214d esp 210d-214d

35 HUME: *Human Understanding*, SECT I, DIV 5, 453a-b

36 SWIFT: *Gulliver*, PART III, 104b-107a

38 MONTESQUIEU: *Spirit of Laws*, BK IV, 17b-18d; BK XXIII, 191a-c

38 ROUSSEAU: *Inequality*, 365d-366b

39 SMITH: *Wealth of Nations*, BK I, 5d-6a; BK V, 308c-309a,c; 337d-339c; 347b-d

40 GIBBON: *Decline and Fall*, 23b-24a,c; 88d; 158d-159a; 633b-c

41 GIBBON: *Decline and Fall*, 298a-300c; 326b-328a,c esp 327d-328a,c; 451d; 527d-528a,c

42 KANT: *Fund. Prin. Metaphysic of Morals*, 253c / *Judgement*, 586a-587a

43 CONSTITUTION OF THE U.S.: ARTICLE I, SECT 8 [214-217] 13b

43 FEDERALIST: NUMBER 43, 139d-140a

44 BOSWELL: *Johnson*, 180d-181a

46 HEGEL: *Philosophy of History*, INTRO, 185a-186a; PART I, 217c-218a; PART II, 277d-278a; PART IV, 346c-348a

54 FREUD: *Civilization and Its Discontents*, 778a-779d

7*c*. The state's concern with religion and morals: the cultivation of the virtues

6 HERODOTUS: *History*, BK VII, 232d-233d; BK IX, 294a-c

6 THUCYDIDES: *Peloponnesian War*, BK I, 370a-c; BK II, 396b-d; 399a
7 PLATO: *Apology*, 206a-207b / *Gorgias*, 287c-290b / *Republic*, BK II-IV, 316a-356a / *Timaeus*, 442b-443b / *Critias*, 485b-c / *Statesman*, 605d-608d / *Laws*, BK III, 669b-670c; BK IV, 682c-683d; BK V, 687d-688a; BK VIII, 731d-732c; 735b-738c; BK X 757d-771b; BK XII, 794a-799a,c / *Seventh Letter*, 801b-c; 806b-c
9 ARISTOTLE: *Ethics*, BK V, CH 2 [1130^{b}18-29] 378a-b; BK X, CH 9 [1179^{a}33-1180^{a}13] 434a-d / *Politics*, BK II, CH 5 [1263^{b}36-1264^{a}1] 459a; [1264^{a}26-32] 459c; CH 7 [1266^{b}27-1267^{a}17] 462b-d; [1267^{a}36-^{b}9] 463b; BK V, CH 9 [1310^{a}13-36] 512b-c; BK VII, CH 1-3 527a-530a; CH 8 532c-533a; BK VII, CH 13-BK VIII, CH 7 536b-548a,c
14 PLUTARCH: *Lycurgus* 32a-48d esp 44d-45c / *Numa Pompilius* 49a-61d esp 52d-53a / *Lycurgus-Numa* 61b,d-64a,c / *Solon* 64b,d-77a,c / *Marcellus*, 247c-248b
15 TACITUS: *Annals*, BK III, 60d-61a
18 AUGUSTINE: *City of God*, BK I-V 129a-230a,c; BK XIX, CH 23-24 525c-528c
20 AQUINAS: *Summa Theologica*, PART I-II, Q 92, AA 1-2 213c-215a,c; Q 95, A 1 226c-227c; Q 96, AA 2-3 231c-233a
21 DANTE: *Divine Comedy*, PURGATORY, VI [58-151] 61b-62c; XVI [52-129] 77b-78a; PARADISE, XV [97]-XVI [154] 129b-132a
23 HOBBES: *Leviathan*, PART II, 154b-155c
30 BACON: *Advancement of Learning*, 74b-c
35 LOCKE: *Toleration*, 15d / *Human Understanding*, BK I, CH II, SECT 6 105b-c
35 HUME: *Human Understanding*, SECT XI, DIV 113-114, 502d-503b
38 MONTESQUIEU: *Spirit of Laws*, xxiia-d; BK III, 9b-11d; BK IV-V, 13b,d-19d; BK V, 21b-23b; BK VI, 40a-b; BK XIX, 135d-142a; BK XXIII, 196c-197c; BK XXIV 200a-208a,c
38 ROUSSEAU: *Inequality*, 327a-328a / *Political Economy*, 372a-377b / *Social Contract*, BK IV, 435a-439c
39 SMITH: *Wealth of Nations*, BK V, 337d-338c; 346c-347d
40 GIBBON: *Decline and Fall*, 100c-101b; 291d-292d; 601b-d
42 KANT: *Judgement*, 509d-510a
43 CONSTITUTION OF THE U.S.: AMENDMENTS, XVIII-XXI 19c-20a,c
43 MILL: *Liberty*, 302d-323a,c passim / *Representative Government*, 332d-341d passim
44 BOSWELL: *Johnson*, 178b-c; 182c
46 HEGEL: *Philosophy of History*, INTRO, 175c-177b; PART I, 228d-229b; PART II, 279d-281b; PART IV, 346a-c; 350b-c
49 DARWIN: *Descent of Man*, 325b-327b
52 DOSTOEVSKY: *Brothers Karamazov*, BK II, 28d-32a; BK V, 127b-137c passim; BK VI, 164a-170d passim

7d. The educational task of the state: the trained intelligence of the citizens

5 EURIPIDES: *Suppliants* [399-462] 261d-262b; [857-917] 266a-b
5 ARISTOPHANES: *Frogs* [1008-1098] 576b-577c
6 THUCYDIDES: *Peloponnesian War*, BK I, 370a-c; BK II, 397b-c
7 PLATO: *Protagoras*, 43a-47c / *Crito* 213a-219a,c / *Republic*, BK II-IV, 316a-356a; BK V, 366a-c; BK VI, 380d-381a; BK VI-VII, 383b-401d / *Statesman*, 607b-608d / *Laws*, BK I-II 640a-663d esp BK I, 644b-645c; BK III, 675c-676b; BK VII 713c-731d; BK VIII, 732b-735a
9 ARISTOTLE: *Ethics*, BK I, CH 2 [1094^{a}28-^{b}11] 339c-d; CH 9 [1099^{b}29-32] 345b; BK V, CH 2 [1130^{b}18-29] 378a-b; BK X, CH 9 434a-436a,c esp [1179^{a}33-1180^{a}13] 434a-d / *Politics*, BK II, CH 5 [1263^{b}36-1264^{a}1] 459a; [1264^{a}26-32] 459c; CH 6 [1264^{b}37-39] 460b; CH 7 [1266^{b}27-35] 462b-c; BK III, CH 4 [1277^{a}14-^{b}29] 474a-475a; BK IV, CH 9 [1294^{b}19-24] 494c; BK V, CH 9 [1310^{a}12-35] 512b-c; BK VII, CH 13-BK VIII, CH 7 536b-548a,c / *Athenian Constitution*, CH 42 572b-d
14 PLUTARCH: *Lycurgus*, 33c-34a; 39a-45b / *Lycurgus-Numa* 61b,d-64a,c / *Solon* 64b,d-77a,c passim / *Agesilaus*, 480b,d-481a
21 DANTE: *Divine Comedy*, PARADISE, VIII [115-148] 118b-c
23 HOBBES: *Leviathan*, PART II, 114b-115a; 150c-151a; 153a-155c; PART IV, 273a-c
24 RABELAIS: *Gargantua and Pantagruel*, BK I, 66a; BK II, 81d-83b
25 MONTAIGNE: *Essays*, 60c-62a
30 BACON: *Advancement of Learning*, 23a; 79c-80a
32 MILTON: *Areopagitica*, 384b-385b; 398a-b
35 HUME: *Human Understanding*, SECT I, DIV 5, 453a-b
36 SWIFT: *Gulliver*, PART II, 76b-80b
38 MONTESQUIEU: *Spirit of Laws*, BK IV 13b,d-18d
38 ROUSSEAU: *Inequality*, 365d-366b / *Political Economy*, 372a-377b / *Social Contract*, BK II, 402b-403a
39 SMITH: *Wealth of Nations*, BK V, 303b-305c; 337d-338c; 340c-343d; 347c-d
40 GIBBON: *Decline and Fall*, 6b; 669a-670b
41 GIBBON: *Decline and Fall*, 347a,c
42 KANT: *Judgement*, 586a-587a
43 FEDERALIST: NUMBER 27, 95c-d; NUMBER 84, 253d-254b
43 MILL: *Liberty*, 283a-c; 317d-323a,c / *Representative Government*, 330a-b; 332d-341d passim, esp 339a-340c; 349a-350a; 381b-387d passim; 418b-d; 420b-d; 424b-c
46 HEGEL: *Philosophy of Right*, PART III, par 187 65a-c; par 239 76d; par 315 104c; ADDITIONS, 98 133a; 147 140c; 166 145b-c; 183 148d-149a / *Philosophy of History*, PART II, 271d-272d

(7. *Factors affecting the quality of states. 7d. The educational task of the state: the trained intelligence of the citizens.*)

49 DARWIN: *Descent of Man*, 328c-d
50 MARX: *Capital*, 237d-240d
54 FREUD: *Sexual Enlightenment of Children*, 122c

8. The offices of state: the statesman, king, or prince

8*a*. The duties of public office and the responsibilities of office holders: the relation of the statesman or king to the people he represents or rules

OLD TESTAMENT: *Genesis*, 41:44 / *Deuteronomy*, 17:14-20 / *I Samuel*, 8:11-18—(*D*) *I Kings*, 8:11-18 / *I Kings*, 3:7-9—(*D*) *III Kings*, 3:7-9 / *II Chronicles*, 1:7-12—(*D*) *II Paralipomenon*, 1:7-12 / *Psalms*, 72—(*D*) *Psalms*, 71 / *Proverbs*, 16:12-15; 25:2; 28:15; 29:2,4,12,14 / *Isaiah*, 22:20-22—(*D*) *Isaias*, 22:20 22 / *Jeremiah*, 23:3-6—(*D*) *Jeremias*, 23:3-6
APOCRYPHA: *I Maccabees*, 14—(*D*) OT, *I Machabees*, 14
5 AESCHYLUS: *Suppliant Maidens* [354-523] 5b-7c / *Seven Against Thebes* [1-77] 27a-28a
5 SOPHOCLES: *Oedipus the King* [572-630] 104c-105a / *Antigone* [162-210] 132c-d; [633-765] 136c-137d
5 EURIPIDES: *Suppliants* [286-358] 260d-261c
5 ARISTOPHANES: *Knights* 470a-487a,c
6 THUCYDIDES: *Peloponnesian War*, BK II, 397b-c; 402a-404d; BK III, 427a-c; BK VI, 513a
7 PLATO: *Republic*, BK I, 301b-306b; BK III, 339b-341d; BK VII, 390b-391b; 401a-b / *Statesman*, 604c-608d / *Laws*, BK VI, 697a-705c passim; BK XII, 794a-799a,c / *Seventh Letter*, 806d-807b; 814b-c
9 ARISTOTLE: *Politics*, BK I, CH II [1259^{a}23-36] 453c-d; BK III, CH 4 [1277^{a}14-^{b}33] 474a-475a; CH 6 [1278^{b}30-1279^{a}21] 476a-c; CH 17 486c-487a; BK IV, CH 4 [1291^{a}34-^{b}7] 490c-d; BK VI, CH 4 [1318^{b}39-1319^{a}4] 522c; CH 8 525b-526d; BK VII, CH 2 528a-529a; CH 4 [1326^{b}13-15] 530d; CH 9 [1329^{a}3-39] 533b-d; CH 14 [1332^{b}13-1333^{a}17] 537b-538a
14 PLUTARCH: *Numa Pompilius*, 51c-52c / *Marcus Cato* 276b,d-290d / *Crassus-Nicias*, 455d-456d / *Agesilaus*, 486d-487b / *Cato the Younger* 620a-648a,c esp 626d-627b, 632b-c / *Agis*, 648b,d-649b / *Tiberius Gracchus*, 678b-d / *Demosthenes*, 699c-700a
15 TACITUS: *Annals*, BK III, 57b-58d; 61c-62a; BK XII, 112a-c
18 AUGUSTINE: *City of God*, BK XIX, CH 6 514b-515a; CH 15-16 521a-522a
20 AQUINAS: *Summa Theologica*, PART I-II, Q 90, A 3, ANS 207a-c
21 DANTE: *Divine Comedy*, PURGATORY, XVI [52-129] 77b-78a
23 MACHIAVELLI: *Prince*, CH XIV-XIX 21b-30a
23 HOBBES: *Leviathan*, PART II, 153a-159c
25 MONTAIGNE: *Essays*, 7a-d; 24a-25c; 315c-d; 327d-329d; 381a-388c passim; 436c-438b
26 SHAKESPEARE: *2nd Henry IV*, ACT IV, SC V 494b-496d / *Henry V*, ACT I, SC I 533a-d; ACT IV, SC I [87-215] 552c-553d
27 SHAKESPEARE: *King Lear*, ACT III, SC IV [26-36] 264c / *Coriolanus*, ACT II, SC III 366a-369a
29 CERVANTES: *Don Quixote*, PART II, 340b-348c; 352b-356d; 360d-364a
30 BACON: *Advancement of Learning*, 74d-75a / *New Atlantis*, 208a-c
32 MILTON: *Sr Henry Vane* 69b / *Paradise Lost*, BK II [430-456] 120b-121a
35 LOCKE: *Toleration*, 3a / *Civil Government*, CH VII, SECT 90-94 44d-46c; CH VIII, SECT 105-112 48c-51b; CH XIV 62b-64c; CH XIX, SECT 221-222 75d-76c
36 SWIFT: *Gulliver*, PART IV, 157b-158a
38 MONTESQUIEU: *Spirit of Laws*, BK VI, 40a-b; 43c-d; BK XII, 93d-94a; 94c-95b
38 ROUSSEAU: *Political Economy*, 367a-368c; 372c-373c / *Social Contract*, BK I, 388a; BK III, 412c-414d; BK IV, 427b; 427d
39 SMITH: *Wealth of Nations*, BK IV, 194b-c; 199c-d; 284d
40 GIBBON: *Decline and Fall*, 26d-27a; 50a; 243a-245b; 288b-289a; 338d-339c; 342a-c, 343b-c; 437b-438a; 577a-578c; 639d-644a passim
41 GIBBON: *Decline and Fall*, 95a-c; 102d-103a; 320d-321b; 505a; 563d-564b; 586c-587b
42 KANT: *Science of Right*, 434a; 444c-445a
43 DECLARATION OF INDEPENDENCE: [25-98] 1b-3a
43 CONSTITUTION OF THE U.S.: ARTICLE I-III 11a-16a passim; ARTICLE IV, SECT 3 16b; ARTICLE V 16c; AMENDMENTS, XVII 19b-c
43 FEDERALIST: NUMBER 19, 74a-c; NUMBER 20, 76b-d; NUMBER 22, 83b-d; NUMBER 35, 113a-114c; NUMBER 53, 168b-169d passim; NUMBER 56-57 174d-179b; NUMBER 64, 196d; NUMBER 70, 212c-214a; NUMBER 71, 214d-215a
43 MILL: *Liberty*, 298d-299a; 302b-c / *Representative Government*, 341d-344d; 353b; 398d-399d; 401a-406a passim; 410d-411b
44 BOSWELL: *Johnson*, 86a-b
46 HEGEL: *Philosophy of Right*, PART III, par 295 98d-99a; par 297 99b; par 303 101c-102a; par 305-311 102b-104a; ADDITIONS, 175 147b-c; 181 148b-c / *Philosophy of History*, INTRO, 173a-c; PART IV, 361d-362a
51 TOLSTOY: *War and Peace*, BK I, 9c-10d; BK X, 465c-467a; BK XI, 507a; BK XIV, 611a-c

8*b*. The qualities or virtues necessary for the good statesman or king

OLD TESTAMENT: *Genesis*, 41:33,39-40 / *Exodus*, 18:21-26 / *Leviticus*, 19:15 / *Deuteronomy*, 1:13; 16:18; 17:14-20 / *I Samuel*, 15:10-35—(*D*) *I Kings*, 15:10-35 / *II Samuel*, 23:3—

(*D*) *II Kings*, 23:3 / *I Kings*, 3:5-28; 4:29-34—(*D*) *III Kings*, 3:5-28; 4:29-34 / *II Chronicles*, 1:7-12—(*D*) *II Paralipomenon*, 1:7-12 / *Psalms*, 72—(*D*) *Psalms*, 71 / *Proverbs*, 8:15-16; 16:10,12-13; 17:7; 20:26-28; 24:5-6; 25:2-5; 28:15-16; 29:2,4,12,14; 31:4-5 / *Ecclesiastes*, 10:16-17 / *Isaiah*, 16:5; 32:1—(*D*) *Isaias*, 16:5; 32:1 / *Jeremiah*, 23:3-6—(*D*) *Jeremias*, 23:3-6 / *Ezekiel*, 45:9—(*D*) *Ezechiel*, 45:9

APOCRYPHA: *Wisdom of Solomon*, 1:1; 6; 9—(*D*) OT, *Book of Wisdom*, 1:1; 6; 9 / *Ecclesiasticus*, 10:1-3; 41:17-18—(*D*) OT, *Ecclesiasticus*, 10:1-3; 41:21-22 / *I Maccabees*, 14—(*D*) OT, *I Machabees*, 14

5 AESCHYLUS: *Persians* [623-680] 21c-22a; [852-908] 24b-d

5 SOPHOCLES: *Antigone* [162-210] 132c-d; [633-765] 136c-137d

5 ARISTOPHANES: *Knights* 470a-487a,c esp [147-222] 471d-472c / *Peace* [601-692] 532d-534a / *Ecclesiazusae* [173-247] 617a-d; [441-459] 619d-620a

6 HERODOTUS: *History*, BK V, 164d-165a

6 THUCYDIDES: *Peloponnesian War*, BK I, 383d-384a; BK II, 404a-d; BK III, 425a-c; BK VI, 513a-514b

7 PLATO: *Gorgias*, 285a-292a / *Republic*, BK II, 319c-320c; BK III, 339b-340b; BK V-VI, 368c-383c / *Timaeus*, 442b-d / *Statesman*, 604c-608d / *Laws*, BK IV, 679c-682c; BK XII, 796b-d / *Seventh Letter*, 801b-802c; 804b-805a; 806b-c; 807a-b

9 ARISTOTLE: *Ethics*, BK VI, CH 5 [1140^{b}4-11] 389b; CH 8 [1141^{b}23-1142^{a}11] 390d-391a / *Politics*, BK I, CH 1 [1252^{a}7-17] 445a-b; CH 13 454a 455a,c esp [1259^{b}33-1260^{a}20] 454b-d; BK II, CH 5 [1264^{b}7-25] 459d-460a; CH 9 [1270^{b}7-1271^{a}18] 466d-467b; CH 11 [1273^{a}21-^{b}16] 469d-470b; BK III, CH 4 473c-475a; CH 12-13 480c-483a; CH 17 486c-487a; BK IV, CH 4 [1291^{a}34-^{b}7] 490c-d; BK V, CH 9 [1309^{a}33-^{b}14] 511c-d; BK VII, CH 2 528a-529a; CH 9 [1329^{a}3-17] 533b-c; CH 14 [1332^{b}13-1333^{a}17] 537b-538a

12 AURELIUS: *Meditations*, BK I 253a-256d; BK III, SECT 5 261a; BK VI, SECT 30 276d-277a

14 PLUTARCH: *Lycurgus*, 45c-46a / *Numa Pompilius* 49a-61d esp 60a-b / *Pericles* 121a 141a,c / *Coriolanus*, 180d-181b / *Alcibiades-Coriolanus* 193a-195a,c / *Aristides* 262b,d-276a,c esp 263d-267a, 273d-275c / *Marcus Cato* 276b,d-290d esp 279c, 282a / *Aristides-Marcus Cato* 290b,d-292d / *Lysander-Sulla*, 387d-388a / *Lucullus*, 419a-b / *Nicias*, 423d-430d / *Crassus-Nicias* 455b,d-457d / *Phocion* 604b,d-619d / *Cato the Younger* 620a-648a,c / *Cleomenes*, 661a-d / *Cicero*, 706c; 717a-b / *Dion* 781b,d-802a,c / *Aratus*, 829b-d

15 TACITUS: *Histories*, BK II, 215c

18 AUGUSTINE: *City of God*, BK XIV, CH 28 397a-d; BK XIX, CH 16 521d-522a

21 DANTE: *Divine Comedy*, HELL, XII [100-139] 17b-d; XXVII [55-132] 40a-41a; PURGATORY, VI [58-151] 61b-62c; VII [61-136] 63a-64a; VIII [109-139] 65c-d; X [70 93] 68a-b; XVI [85-129] 77d-78a; XX [34-96] 83c-84a; PARADISE, XIII [91-108] 126b-c; XVIII [70]-XX [78] 134b-137c

23 MACHIAVELLI: *Prince*, CH XV-XVIII 22b-26a

24 RABELAIS: *Gargantua and Pantagruel*, BK III, 132a-133b

25 MONTAIGNE: *Essays*, 381a-388c; 436c-438b; 451d-453b

26 SHAKESPEARE: *Richard II*, ACT II, SC I 327c-331a; ACT III, SC IV [29-66] 340c-d / *1st Henry IV*, ACT III, SC II [39-161] 453b-454c / *2nd Henry IV*, ACT IV, SC V 494b 496d / *Henry V*, ACT I, SC I 533a-d

27 SHAKESPEARE: *Measure for Measure*, ACT I, SC I-III 174a-177d; ACT III, SC II [275-296] 192b / *Macbeth*, ACT IV, SC III 303b-306b / *Coriolanus* 351a-392a,c esp ACT III, SC II [1-92] 373c-374c, ACT IV, SC VII [28-57] 384c-d

29 CERVANTES: *Don Quixote*, PART II, 331a-336a

30 BACON: *Advancement of Learning*, 1b-2c; 4c-7c; 20d-25c; 94b-95b

32 MILTON: *Lord Gen. Cromwell* 69a-b / *Sr Hemy Vane* 69b / *Paradise Lost*, BK II [430-456] 120b-121a

35 LOCKE: *Civil Government*, CH VIII, SECT 105-112 48c-51b

36 SWIFT: *Gulliver*, PART I, 28b-29b; PART III, 112a-113b

38 MONTESQUIEU: *Spirit of Laws*, BK V, 22a-b; BK VI, 40a-b; BK XXI, 170a; BK XXVIII, 259b; BK XXIX, 262a-b

38 ROUSSEAU: *Inequality*, 327a / *Social Contract*, BK III, 414c-d

40 GIBBON: *Decline and Fall*, 31d-32c; 61d-64c passim; 74a-b; 142b-c; 255b,d-257a passim; 284a-b; 338d-344a,c esp 338d-339c, 343c-344a; 430a-d; 448c-449c; 534c; 577a-d

41 GIBBON: *Decline and Fall*, 67d-68b; 103d-104c; 504c-505a; 577d-579a

42 KANT: *Judgement*, 504a-b

43 CONSTITUTION OF THE U.S.: ARTICLE I, SECT 2 [11-16] 11b; SECT 3 [67-72] 12a; ARTICLE II, SECT 1 [375-382] 14d

43 FEDERALIST: NUMBER 2, 32b-33b; NUMBER 52, 165c; NUMBER 57, 176d-177a; NUMBER 62, 188d-189a; NUMBER 68, 206b-c; NUMBER 72, 217d; NUMBER 75, 223c-d

43 MILL: *Representative Government*, 336c-338c passim; 341d-344d; 353b-354b; 363b-366a; 398d-399d; 406d; 407d-408d

44 BOSWELL: *Johnson*, 178a-b; 374a c

46 HEGEL: *Philosophy of Right*, PART III, par 292 98a / *Philosophy of History*, PART II, 275d-276d; 281c-282d; PART IV, 360b-c; 361d-362a; 366b; 368b

51 TOLSTOY: *War and Peace*, BK I, 9c-10d; BK X, 465c-467a; BK XIV, 611a-c; EPILOGUE I, 645a-646c

(8. The offices of state: the statesman, king, or prince.)

8c. The education or training of the statesman or prince

7 PLATO: *Republic*, BK II-III, 320c-341d; BK V, 366a-c; BK VI-VII, 383b-401d / *Timaeus*, 442c-d / *Laws*, BK III, 672d-676b; BK XII, 794a-799a,c / *Seventh Letter*, 801c-802d
9 ARISTOTLE: *Ethics*, BK X, CH 9 [1180b29-1181b25] 435d-436a,c / *Politics*, BK III, CH 4 [1277a14-b33] 474a-475a; CH 18 [1288a34-b3] 487a,c; BK VII, CH 14 [1332b13-1333a17] 537b-538a; BK VIII, CH 4 [1338b25-38] 544a-b
12 AURELIUS: *Meditations*, BK I 253a-256d
14 PLUTARCH: *Pericles*, 122d-123c / *Alcibiades*, 156c-158b / *Agesilaus*, 480b,d-481a / *Alexander*, 542d-544a / *Cato the Younger*, 625b-626a / *Dion*, 781b,d-788b
15 TACITUS: *Annals*, BK II, 34c-d; BK XII, 111d; BK XIII, 125d-126a; BK XIV, 153d-155a / *Histories*, BK IV, 267c
23 MACHIAVELLI: *Prince* 1a-37d esp CH XIV-XIX 21b-30a
23 HOBBES: *Leviathan*, INTRO, 47b-d; PART II, 164a,c
24 RABELAIS: *Gargantua and Pantagruel*, BK I, 18b-19d; 26d-30c
25 MONTAIGNE: *Essays*, 437b-c
26 SHAKESPEARE: *1st Henry IV*, ACT I, SC II [119-240] 436c-437d; ACT III, SC II [93-161] 453d-454c / *Henry V*, ACT I, SC I [22-68] 533b-c
29 CERVANTES: *Don Quixote*, PART II, 332c-336a; 362a-c
30 BACON: *Advancement of Learning*, 4c-7c; 23a-b
36 SWIFT: *Gulliver*, PART II, 73a-76b
38 ROUSSEAU: *Social Contract*, BK III, 414b
40 GIBBON: *Decline and Fall*, 32a; 62a-c; 86c; 245b-c; 260a-b; 275c-276a; 284a-c; 430a; 534a-c; 669b
41 GIBBON: *Decline and Fall*, 15b-c; 508c-509d
43 FEDERALIST: NUMBER 27, 95c-d; NUMBER 35, 114b-c; NUMBER 53, 168b-169d passim; NUMBER 56, 175d-176d; NUMBER 62, 190b-d
43 MILL: *Representative Government*, 356b-359a; 407d-408d; 415a-417c passim
46 HEGEL: *Philosophy of Right*, PART III, par 296 99a-b; ADDITIONS, 169 145d; 171 146b-c / *Philosophy of History*, INTRO, 155b-d; PART I, 212d-213d; 243b-c; PART II, 281d; PART IV, 368b

8d. Statecraft: the art or science of governing; political prudence

5 AESCHYLUS: *Persians* [623-680] 21c-22a; [852-908] 24b-d
5 ARISTOPHANES: *Knights* 470a-487a,c esp [147-222] 471d-472c / *Lysistrata* 583a-599a,c esp [486-590] 589a-590d / *Ecclesiazusae* 615a-628d esp [173-247] 617a-d
7 PLATO: *Euthydemus*, 75c-76b / *Meno*, 188b-190a,c / *Republic*, BK VI-VII, 383b-401d / *Statesman* 580a-608d esp 585c-d, 604c-608d / *Laws*, BK IV, 679a-c
9 ARISTOTLE: *Ethics*, BK I, CH 1-2 339a-d; BK VI, CH 7 [1141a20-33] 390a-b; CH 8 [1141b23-28] 390d / *Politics*, BK II, CH 12 470b-471d; BK III, CH 11 [1281a39-1282a41] 479b-480b; BK IV, CH 1 487a-488b
12 AURELIUS: *Meditations*, BK I, SECT 14 254b-c
14 PLUTARCH: *Romulus-Theseus*, 30c-d / *Poplicola*, 80d-82a / *Poplicola-Solon*, 87b-d / *Camillus*, 102b,d / *Pericles* 121a-141a,c esp 137b-138b / *Fabius*, 143b-d; 145d-146a / *Alcibiades* 155b,d-174d passim, esp 167c-168a / *Aristides* 262b,d-276a,c esp 263d-267a, 273d-275c / *Agesilaus*, 482a-c / *Phocion*, 604b,d-605d / *Cato the Younger*, 625b-627b / *Agis*, 648b,d-649b / *Caius and Tiberius Gracchus-Agis and Cleomenes* 689b,d-691a,c
15 TACITUS: *Annals*, BK IV, 72a-b
18 AUGUSTINE: *City of God*, BK V, CH 12, 217d-218a
20 AQUINAS: *Summa Theologica*, PART I-II, Q 104, A 4, ANS 306d-307c
23 MACHIAVELLI: *Prince* 1a-37d
23 HOBBES: *Leviathan*, PART II, 112d; 128d-129b; 158c-d; 164c
26 SHAKESPEARE: *Richard II*, ACT III, SC IV [29-66] 340c-d
30 BACON: *Advancement of Learning*, 4c-7c; 81d-95b passim
35 LOCKE: *Toleration*, 9b
36 SWIFT: *Gulliver*, PART II, 78a-b; PART III, 112a-115b; PART IV, 157a-158a
38 MONTESQUIEU: *Spirit of Laws*, BK VI, 40a-b; 43c-d; BK XII, 93c-95b; BK XIX, 137c-139c; BK XXIX, 262a-b
38 ROUSSEAU: *Social Contract*, BK III, 413a
40 GIBBON: *Decline and Fall*, 48a; 142c-144a; 155a-d; 157c; 284a-c; 288b-289a
41 GIBBON: *Decline and Fall*, 176c-177c
43 MILL: *Representative Government*, 331b-c; 356b-359a
46 HEGEL: *Philosophy of History*, PART II, 275d-276a; PART IV, 361d-362a
51 TOLSTOY: *War and Peace*, BK II, 65d-66d; BK VI, 238c-243d; 260a-262a
53 JAMES: *Psychology*, 201a

8d(1) The employment of the military arts

5 AESCHYLUS: *Persians* [652-680] 21d-22a; [852-1076] 24b-26d / *Seven Against Thebes* [1-77] 27a-28a
5 EURIPIDES: *Suppliants* [723-730] 264d
6 HERODOTUS: *History*, BK I, 6a-b; 41c-42b; 46a-48a; BK IV, 141b-c; BK VII, 225a-226b; 244a-245a; 257d-258d; BK VIII 260a 287d passim
6 THUCYDIDES: *Peloponnesian War*, BK I, 369a-370d; 371b-372d; 384d-386b; BK II, 389d-391b; BK VI, 514d-516a; 517d-520d; 528b-c; BK VIII 564a-593a,c passim

7 PLATO: *Republic*, BK II, 319a-c; BK V, 367b-368c / *Statesman*, 605a-d
9 ARISTOTLE: *Ethics*, BK X, CH 7 [1177b2-25] 432a-c / *Politics*, BK II, CH 9 [1271a38-41] 467c; BK IV, CH 4 [1291a7-33] 490b-c; BK V, CH 9 [1309a33-b8] 511c-d; BK VII, CH 2 [1324a 24-1325a15] 528b-529a; CH 5 [1326b38-1327a7] 531a; CH 9 [1329a3-39] 533b-d; CH 14 [1333a 29-1334a11] 538a-d
14 PLUTARCH: *Themistocles* 88a-102a,c / *Pericles*, 130d-141a,c / *Fabius* 141a-154a,c / *Aemilius Paulus*, 214d / *Caius Marius* 332b,d-354a,c / *Cimon* 389b,d-399d / *Lucullus* 400a-421a,c / *Pompey* 499a-538a,c / *Alexander* 540b,d-576d / *Caesar* 577a-604d / *Phocion*, 607b-d / *Antony* 748a-779d
23 MACHIAVELLI: *Prince*, CH III-VIII 3c-14c passim; CH X 16a-d; CH XII-XIV 17d-22a; CH XX 30a-31c; CH XXVI, 37a-c
23 HOBBES: *Leviathan*, PART II, 159a-c
25 MONTAIGNE: *Essays*, 327d-329d
36 SWIFT: *Gulliver*, PART II, 77a-78b
38 MONTESQUIEU: *Spirit of Laws*, BK V, 31d-32b; BK X, 65d-68a; BK XI, 74b-d; BK XIII, 100d-101a
38 ROUSSEAU: *Political Economy*, 380a-d
39 SMITH: *Wealth of Nations*, BK V, 305c-309a,c
40 GIBBON: *Decline and Fall*, 4b-5c; 42b,d-43b; 47c-d; 50b-c; 56a; 63a-64b; 86a-d; 118d-119a; 168b-171b esp 170c-d; 245d-248d; 284a-c; 365b-378d esp 373c-374a; 563a-567a; 639a
41 GIBBON: *Decline and Fall*, 126d-131d esp 128a; 311d-312a; 321b-323a; 509a-d
42 KANT: *Science of Right*, 453d-454c / *Judgement*, 504a-b
43 CONSTITUTION OF THE U.S.: ARTICLE II, SECT 2 [409-413] 15a
43 FEDERALIST: NUMBER 20, 76b-d; NUMBER 29, 99b-100a; NUMBER 74, 221c-d
46 HEGEL: *Philosophy of History*, PART II, 281d-282d; PART IV, 359a-b; 366b
51 TOLSTOY: *War and Peace*, BK II, 81c-93d; BK III, 138d; 144c; 146d; 153d-155a; BK V, 209a-c; BK IX, 342a-355c; BK X, 389a-391c; 404a-b; 430b-432c; 444a-450a; BK XII, 533a-537b esp 535d-537b; BK XIII, 563a-575a; BK XIV, 610d-611a; BK XV, 626d-630a

8d(2) The occasions and uses of rhetoric

4 HOMER: *Iliad*, BK II [278-393] 12d-13d
5 EURIPIDES: *Suppliants* [399-425] 261d-262a / *Orestes* [852-956] 402d-403d
5 ARISTOPHANES: *Peace* [601-656] 532d-533c
6 HERODOTUS: *History*, BK V, 180c-d; BK VIII, 264a-c
6 THUCYDIDES: *Peloponnesian War*, BK I, 384c-386c; BK II, 395d-399a; 402b-404a; BK III, 425a-d; 427a-c; BK VI, 511b-516a; 517d-520d; BK VII, 559d-560b
7 PLATO: *Phaedrus*, 129d-130c / *Gorgias*, 288b-292b / *Statesman*, 604d-605a / *Laws*, BK IV, 684c-686b; BK X, 760a-761a
9 ARISTOTLE: *Ethics*, BK X, CH 9 [1180b28-1181a 18] 435d-436a / *Politics*, BK IV, CH 4 [1292a4-38] 491b-d passim; BK V, CH 5 [1305a7-15] 506d / *Rhetoric*, BK I, CH 1 [1354b23-34] 593d-594a; CH 3-8 598b-608c; BK II, CH 1 [1377b14-1378a19] 622b,d-623a; BK III, CH 16 [1417b13-17] 671d; CH 17 [1417b35-1418b23] 672b-673b
14 PLUTARCH: *Pericles*, 129b-130b / *Alcibiades*, 159a-b / *Phocion*, 605a-d / *Cato the Younger*, 621c / *Demosthenes* 691b,d-704a,c / *Cicero* 704a-723d / *Demosthenes-Cicero* 724a-725d
15 TACITUS: *Annals*, BK I, 10d-11b; 12c-13d; BK XIII, 126a-b / *Histories*, BK IV, 290a-d
23 HOBBES: *Leviathan*, PART II, 106a-b; 127d-128b; 128d; 129b-d; 157c-d; 158d-159a
25 MONTAIGNE: *Essays*, 147b-148a
26 SHAKESPEARE: *Julius Caesar*, ACT III, SC I [226-253] 582d-583a; SC II 583c-586c
27 SHAKESPEARE: *Coriolanus*, ACT III, SC II [51-92] 374a-c
30 BACON: *Advancement of Learning*, 1d-2b; 23a-26a
32 MILTON: *Areopagitica*, 383a
36 STERNE: *Tristram Shandy*, 290a-b
38 MONTESQUIEU: *Spirit of Laws*, BK XII, 89c-90c; BK XXIX, 266b-c
40 GIBBON: *Decline and Fall*, 64a-c; 284b; 343a-b; 384d-385b
43 FEDERALIST: NUMBER 1, 29d-30c; NUMBER 26, 93d-94a; NUMBER 58, 181b-c
43 MILL: *Representative Government*, 361b-362c
44 BOSWELL: *Johnson*, 374a-d
46 HEGEL: *Philosophy of History*, INTRO, 153d-154a; PART II, 273d-274a

8d(3) The role or function of experts in the service of the state

7 PLATO: *Protagoras*, 43b-d / *Gorgias*, 287d-288a / *Republic*, BK II, 316c-319c; BK V, 369c-370a; BK VI, 373c-375b; BK VII, 390b-391b / *Statesman*, 598b-608d
9 ARISTOTLE: *Politics*, BK III, CH 11 [1281a39-1282a41] 479b-480b; BK V, CH 9 [1309a33-b8] 511c-d
43 FEDERALIST: NUMBER 36, 115a-c
43 MILL: *Liberty*, 320c-323a,c / *Representative Government*, 355b-362c; 363b-366a; 408a-417c passim
46 HEGEL: *Philosophy of Right*, PART III, par 289-297 97b-99b passim; par 301 100b-101a; ADDITIONS, 135 138c / *Philosophy of History*, PART I, 213b-214d

8e. The advantages and disadvantages of participation in political life

6 HERODOTUS: *History*, BK I, 23b-d
7 PLATO: *Apology*, 207b-208a / *Republic*, BK I, 305d-306b; BK VI, 379d-380b; BK VII, 390b-391b

(8. The offices of state: the statesman, king, or prince. 8e. The advantages and disadvantages of participation in political life.)

9 ARISTOTLE: *Ethics*, BK X, CH 7 431d-432c / *Politics*, BK I, CH 2 [1252^{b}27-1253^{a}39] 446a-d; BK III, CH 6 [1278^{b}15-29] 475d-476a; BK VII, CH 1-3 527a-530a
12 LUCRETIUS: *Nature of Things*, BK III [59-86] 30d-31b; [995-1002] 42d-43a; BK V [1117-1135] 75d
12 EPICTETUS: *Discourses*, BK I, CH 19 125b-126c; BK III, CH 22 195a-201a
12 AURELIUS: *Meditations*, BK V, SECT 22 272b; BK XI, SECT 21 305d-306a
14 PLUTARCH: *Numa Pompilius*, 50a-52c
21 DANTE: *Divine Comedy*, PARADISE, VIII [91-148] 117d-118c
23 HOBBES: *Leviathan*, PART I, 77a; 84c-86b; 86d-87b; PART II, 104b-d; 112b-c; PART IV, 267c-d
25 MONTAIGNE: *Essays*, 46d; 107a-112d; 354a-b; 381a-388c; 480b-482b; 486b-497b esp 486b-489b
26 SHAKESPEARE: *As You Like It*, ACT II, SC I 603c-604b
27 SHAKESPEARE: *Timon of Athens*, ACT IV 409c-416d esp SC I 409c-d
31 SPINOZA: *Ethics*, PART IV, PROP 73 446c-447a
33 PASCAL: *Pensées*, 6 173a
35 LOCKE: *Civil Government*, CH II, SECT 15 28c; CH VII, SECT 90-94 44d-46c; CH IX 53c-54d passim; CH XV, SECT 171 65a-b
38 ROUSSEAU: *Inequality*, 359a-366d / *Political Economy*, 381c-382b / *Social Contract*, BK I, 391b-394d esp 393b-c; BK II, 398a-b
39 SMITH: *Wealth of Nations*, BK V, 309a-c
40 GIBBON: *Decline and Fall*, 521d
43 DECLARATION OF INDEPENDENCE: [7-23] 1a-b
43 FEDERALIST: NUMBER 37, 119a; NUMBER 51, 164c-d
43 MILL: *Utilitarianism*, 460a-461c
44 BOSWELL: *Johnson*, 261c-d
48 MELVILLE: *Moby Dick*, 237a
51 TOLSTOY: *War and Peace*, BK V, 206d-207b; 216a; BK VI, 238c-243d; 260a-262a
54 FREUD: *Civilization and Its Discontents*, 780b-781d; 788d-789b / *New Introductory Lectures*, 853a-b

9. The relation of states to one another

9a. Commerce and trade between states: commercial rivalries and trade agreements; free trade and tariffs

5 ARISTOPHANES: *Acharnians* [719-999] 463c-466d
6 HERODOTUS: *History*, BK IV, 158b-c
6 THUCYDIDES: *Peloponnesian War*, BK I, 350d-351a; 365b; 384b
7 PLATO: *Republic*, BK II, 316c-318a / *Laws*, BK XII, 788d-789a
9 ARISTOTLE: *Politics*, BK I, CH 9 [1257^{a}17-40] 451a-b; BK III, CH 9 [1280^{a}36-^{b}3] 478a; BK VII, CH 6 531b-d / *Rhetoric*, BK I, CH 4 [1360^{a}12-18] 600b-c
23 HOBBES: *Leviathan*, PART II, 119d-120b; 124c-d
38 MONTESQUIEU: *Spirit of Laws*, BK XIII, 98b-99b; BK XIX, 143c-144c; BK XX, 146a-150b; BK XX-XXI, 152a-173d; BK XXII, 177b-181a
38 ROUSSEAU: *Social Contract*, BK II, 404a-b
39 SMITH: *Wealth of Nations*, BK III, 173b-175b; BK IV, 182b-192c; 197b-200a; 201b,d-204c; 209a-213d; 231d-232b; 233d-236a; 256a-266d; BK V, 319b-c
40 GIBBON: *Decline and Fall*, 21c-23b; 151d; 656a-658b
41 GIBBON: *Decline and Fall*, 314c-315b; 342c-343a; 355c-d; 427c-d
42 KANT: *Judgement*, 504a-b
43 ARTICLES OF CONFEDERATION: IV [24-36] 5b-c; VI [100-106] 6b; IX [173-185] 7a; [275-285] 8a
43 CONSTITUTION OF THE U.S.: ARTICLE I, SECT 8 [201-203] 13b; SECT 9 [276-282] 13d; SECT 10 [304-313] 14a
43 FEDERALIST: NUMBER 4, 35c-36a; NUMBER 5, 38b-c; NUMBER 7, 42d-43c; NUMBER 11 53b-56b passim; NUMBER 22, 80d-81c; NUMBER 35, 112a-113a; NUMBER 41, 135b-c; NUMBER 42, 137d-138c; NUMBER 44, 145b-c
44 BOSWELL: *Johnson*, 281b-c
46 HEGEL: *Philosophy of Right*, PART III, par 246-247 78a-b; par 339 110b / *Philosophy of History*, PART I, 243d-244c; PART IV, 368c
50 MARX: *Capital*, 66c-68a,c; 218d-219a; 221d-223a; 372c-375c passim
50 MARX-ENGELS: *Communist Manifesto*, 420a-b; 421a-c; 428a-b

9b. Social and cultural barriers between states: the antagonism of diverse customs and ideas

5 AESCHYLUS: *Suppliant Maidens* [911-965] 12c-13b
5 EURIPIDES: *Suppliants* [399-597] 261d-263c / *Iphigenia at Aulis* [1399-1401] 437d
6 HERODOTUS: *History*, BK I, 2a; 12d-13b; BK II, 57d-58a; BK IV, 137a-138c; 140d-141a; BK V, 163d-164a; BK VII, 216b-d; 232d-233d; 253b-254a; BK VIII, 264c; 287a-d; BK IX, 291c-292a; 298a-302c; 305d-306a; 308d-310c
6 THUCYDIDES: *Peloponnesian War*, BK I, 350b-d; 366b-c; 370a-c; BK VIII, 589d-590a
7 PLATO: *Cratylus*, 106b-c / *Republic*, BK V, 357d-358a; 367b-368c / *Statesman*, 582d-583b
9 ARISTOTLE: *Politics*, BK I, CH 2 [1252^{b}5-9] 445d; CH 6 [1255^{a}28-37] 448d-449a; BK III, CH 14 [1285^{a}17-29] 483b-c; BK VII, CH 7 [1327^{b}19-38] 531d-532a
10 HIPPOCRATES: *Airs, Waters, Places*, par 16 15d-16a; par 23 18a-c

14 PLUTARCH: *Lycurgus*, 46b-c / *Themistocles*, 99a-c / *Marcellus*, 254c-256b / *Marcus Cato*, 287d-288c / *Flamininus*, 303a-310d
15 TACITUS: *Annals*, BK II, 23d-24a
18 AUGUSTINE: *City of God*, BK XIX, CH 7 515a-c / *Christian Doctrine*, BK III, CH 14 663c-d
22 CHAUCER: *Tale of Man of Law* [4638-4644] 238a
25 MONTAIGNE: *Essays*, 44b-c; 46b-47a; 91d-98b; 477d-478a
36 SWIFT: *Gulliver*, PART IV, 149b-150b
38 MONTESQUIEU: *Spirit of Laws*, BK XV, 110a-c; BK XIX, 139c-140a; BK XXIV, 207a
38 ROUSSEAU: *Inequality*, 355b-c
41 GIBBON: *Decline and Fall*, 224b; 423d-424a
43 FEDERALIST: NUMBER 11, 55d-56b
43 MILL: *Liberty*, 300a-302c passim / *Representative Government*, 424c-428a passim; 436b-439c
46 HEGEL: *Philosophy of Right*, PART III, par 351 112a-b / *Philosophy of History*, PART II, 277d-279b
49 DARWIN: *Descent of Man*, 317c-d
50 MARX-ENGELS: *Communist Manifesto*, 428a-b
51 TOLSTOY: *War and Peace*, BK III, 150d-151b; BK IV, 170d-171c; BK IX, 362a-363a
52 DOSTOEVSKY: *Brothers Karamazov*, BK V, 115a-116b
54 FREUD: *War and Death*, 755c-757a; 761a-c; 766c / *Civilization and Its Discontents*, 788b-c

9c. Honor and justice among states

OLD TESTAMENT: *II Samuel*, 10—(*D*) *II Kings*, 10 / *I Chronicles*, 19—(*D*) *I Paralipomenon*, 19
5 AESCHYLUS: *Suppliant Maidens* [911-965] 12c-13b
6 HERODOTUS: *History*, BK I, 1a-2b; BK V, 177d-180a; BK VI, 201c-d; BK VII, 237d-239a; 242c-d; BK VIII, 287a-d; BK IX, 289a-c
6 THUCYDIDES: *Peloponnesian War*, BK I, 355b-c; 358b-360c; 368a-d; 378c-380a; 386b-c; BK II, 396b-399a passim; 403c-404a; BK III, 426b-428d; 429b-434c; BK IV, 461d-462a; 468a-469b; BK V, 504c-508a; BK VII, 542b-c
7 PLATO: *Republic*, BK V, 367b-368c / *Laws*, BK XII, 788d-789a
9 ARISTOTLE: *Ethics*, BK VIII, CH 4 [1157^{a}25-30] 409a; BK X, CH 7 [1177^{b}4-25] 432a-c / *Politics*, BK III, CH 9 [1280^{a}34-^{b}12] 477d-478b; CH 13 [1284^{a}38-^{b}3] 482c; BK VII, CH 2 [1324^{b}2-1325^{a}15] 528c-529a
15 TACITUS: *Annals*, BK II, 44d / *Histories*, BK IV, 290a-d
20 AQUINAS: *Summa Theologica*, PART I-II, Q 95, A 4 229b-230c
23 HOBBES: *Leviathan*, PART II, 159c
24 RABELAIS: *Gargantua and Pantagruel*, BK I, 54a-56b
25 MONTAIGNE: *Essays*, 95d-97a; 381a-b; 387c-388c
27 SHAKESPEARE: *Troilus and Cressida*, ACT II, SC II [113-213] 114d-115d
35 LOCKE: *Human Understanding*, BK I, CH II, SECT 10 106d
36 SWIFT: *Gulliver*, PART II, 76b-78b
38 MONTESQUIEU: *Spirit of Laws*, BK X, 61b,d-65c
38 ROUSSEAU: *Inequality*, 355b-c / *Political Economy*, 369a-b
40 GIBBON: *Decline and Fall*, 48a; 404a-b; 535d-536b
41 GIBBON: *Decline and Fall*, 532d-533a
42 KANT: *Science of Right*, 452c-455c
43 CONSTITUTION OF THE U.S.: ARTICLE I, SECT 8 [220-222] 13b; ARTICLE III, SECT 2 [469-492] 15c-d
43 FEDERALIST: NUMBER 3, 34d-35a; NUMBER 7, 44a-b; NUMBER 15, 63b-d; NUMBER 22, 84b; NUMBER 30, 102c-d; NUMBER 43, 142d-143a; 143d-144a; NUMBER 62, 190d-191a; NUMBER 80, 235b-c; NUMBER 81, 240b-c; NUMBER 83, 248b-c
43 MILL: *Representative Government*, 434c-435c passim
44 BOSWELL: *Johnson*, 86c-d
46 HEGEL: *Philosophy of Right*, PART III, par 336 109d; par 338 110a-b
48 MELVILLE: *Moby Dick*, 292a-295a
51 TOLSTOY: *War and Peace*, BK V, 228c-d; 230b; 232a-233b
54 FREUD: *War and Death*, 756c-757c

9d. The sovereignty of independent states: the distinction between the sovereignty of the state at home and abroad; internal and external sovereignty

23 HOBBES: *Leviathan*, PART I, 86a; PART II, 114b-c; 121b-c; 159c
27 SHAKESPEARE: *Cymbeline*, ACT III, SC I 463c-464c; SC V [1-27] 468d-469b
35 LOCKE: *Civil Government*, CH II, SECT 14 28b-c; CH XII, SECT 145-148 58d-59b
38 MONTESQUIEU: *Spirit of Laws*, BK XXVI, 223c-224a
38 ROUSSEAU: *Inequality*, 355b-c / *Political Economy*, 368c-d; 369a-b / *Social Contract*, BK I, 392a-393d; BK III, 406b,d-409a
41 GIBBON: *Decline and Fall*, 427b-c
42 KANT: *Science of Right*, 435a-b; 452a-458a,c passim
43 DECLARATION OF INDEPENDENCE: [1-6] 1a; [109-119] 3a-b
43 ARTICLES OF CONFEDERATION: II 5a-b
43 FEDERALIST: NUMBER 32 105c-107b; NUMBER 39, 126b-128b; NUMBER 75, 223b-c; NUMBER 81, 240d-241a
43 MILL: *Representative Government*, 344d; 355b-d; 428b-433b
46 HEGEL: *Philosophy of Right*, PART III, par 275-279 92a-94d; par 321-322 106c-107a; par 329-331 108c-109a; ADDITIONS, 153 141d; 191 150a-c; 194 150c-d / *Philosophy of History*, PART IV, 364d-365a

9e. War and peace between states

9e(1) The military problem of the state: preparation for conquest or defense

5 AESCHYLUS: *Seven Against Thebes* [1–77] 27a-28a

6 HERODOTUS: *History*, BK I, 41c-d; 46a-48a; BK IV, 132a-b; 144b-148d; 158d-159d; BK VI, 206d-208d; BK VII-IX 214a-314a,c passim

6 THUCYDIDES: *Peloponnesian War*, BK I 349a-386d passim; BK II, 389a-c; 396d-397a; 402b-404d; BK IV, 469d-471a; BK VI, 518a-520d; 529b-534d

7 PLATO: *Republic*, BK II, 318c-319c; BK IV, 343b-d; BK V, 357d-358b; 366a-368d / *Laws*, BK I, 640d-641a; BK IV, 677d-678c; BK VI, 701b-702a; BK VIII, 732b-735a; BK XII, 784d-786b

9 ARISTOTLE: *Ethics*, BK X, CH 7 [1177^{b}4-25] 432a-c / *Politics*, BK II, CH 6 [1265^{a}19-27] 460c; CH 7 [1267^{a}17-36] 462d-463a; BK IV, CH 4 [1291^{a}7-33] 490b-c; BK VI, CH 7 [1321^{n}5-27] 524c-525a; BK VII, CH 2 [1324^{b}2-1325^{a}15] 528c-529a; CH 4 [1326^{a}23-24] 530b; CH 5 [1326^{b}38]-CH 6 [1327^{b}17] 531a-d; CH 11 535a-d / *Rhetoric*, BK I, CH 4 [1359^{b}33-1360^{a}12] 600a-b

14 PLUTARCH: *Lycurgus* 32a-48d esp 41a-45c / *Numa Pompilius*, 59d-60b / *Themistocles* 88a-102a,c

15 TACITUS: *Annals*, BK I, 16b-21b; BK II, 23d-29d; BK III, 49d-50a; 52d-53d; 54b-56c; 62d-63b; BK IV, 64d-65a; 69d-70c; 76a-77c; 82d-83b; BK VI, 94d-96b; 97a-98a; BK XI, 102b-103a; 104a-105c; BK XII, 112a-125c passim; BK XIII, 134a-136c; 139c-141a; BK XIV, 147b-148b; 148d-151b; BK XV, 157d-162a; 163c-165a / *Histories*, BK III, 253c-254c; BK IV, 269b-278c; 283b-292b; BK V, 294c-d; 297a-302a

23 MACHIAVELLI: *Prince*, CH XII-XIV 17d-22a; CH XX 30a-31c; CH XXI, 32a-d; CH XXIV 34c-35a

23 HOBBES: *Leviathan*, PART I, 76d; 86a; PART II, 103b-c; 114b-c; 159c

24 RABELAIS: *Gargantua and Pantagruel*, BK III, 127b,d-130a

25 MONTAIGNE: *Essays*, 299d-300c; 330b-331a

26 SHAKESPEARE: *Henry V* 532a-567a,c esp ACT I, SC II [234-310] 536b-537b, ACT II, SC IV 541d-543b, ACT III, SC III 545d-546b, ACT IV 551a-561d

35 LOCKE: *Civil Government*, CH XII, SECT 145-148 58d-59b

36 SWIFT: *Gulliver*, PART II, 77b-78b

38 MONTESQUIEU: *Spirit of Laws*, BK VIII, 52d-53a; BK IX-X, 58b,d-62b; BK XIII, 100d-101a

38 ROUSSEAU: *Inequality*, 324c; 355c / *Political Economy*, 380a-d / *Social Contract*, BK I, 389d-390d; BK II, 403c-404a

39 SMITH: *Wealth of Nations*, BK IV, 187c-190b; BK V, 301a-309a,c; 342c-343c

40 GIBBON: *Decline and Fall*, 4b-8b esp 4b; 42b,d; 86b-d; 245d-248b; 495a-497a; 558a-560d; 633b-c

41 GIBBON: *Decline and Fall*, 212c; 321b-325a; 509a-d

42 KANT: *Science of Right*, 452b-458a,c passim / *Judgement*, 586c-d

43 DECLARATION OF INDEPENDENCE: [109–121] 3a-b

43 ARTICLES OF CONFEDERATION: III 5b; VI-IX 6a-9a

43 CONSTITUTION OF THE U.S.: PREAMBLE 11a,c; ARTICLE I, SECT 8 [192–196] 13a; [220–253] 13b-c; SECT 10 14a-b; AMENDMENTS, II-III 17b; V 17b-c

43 FEDERALIST: NUMBER 2, 31d-32a; NUMBER 4, 35d-37a; NUMBER 8 44c-47a; NUMBER 11 53b-56b passim; NUMBER 22, 81c-d; NUMBER 23-29 85a-101a; NUMBER 30, 102d-103a; NUMBER 31, 104b; NUMBER 34, 110a-111b; NUMBER 41 132a-136b passim; NUMBER 43, 141d; NUMBER 44, 144a-b

43 MILL: *Representative Government*, 330b; 425c-426b; 428b-431a passim; 435b-d

46 HEGEL: *Philosophy of Right*, PART III, par 326 107d-108a; par 334 109c; par 338 110a-b; ADDITIONS, 163 144c / *Philosophy of History*, PART I, 242d-243b; PART III, 297a-300a; PART IV, 325a-b; 343d-344a; 355d-356a

51 TOLSTOY: *War and Peace*, BK I, 33d-34c; BK VIII, 308b-309c; BK IX, 344b-355c; BK XIV, 588a-589c; BK XV, 629b-630a

9e(2) Treaties between states: alliances, leagues, confederacies, or hegemonies

OLD TESTAMENT: *Joshua*, 9—(*D*) *Josue*, 9

APOCRYPHA: *I Maccabees*, 8 esp 8:17-32—(*D*) OT, *I Machabees*, 8 esp 8:17-32

5 ARISTOPHANES: *Acharnians* [61–173] 455d-457b / *Lysistrata* [980–1321] 595c-599a,c

6 HERODOTUS: *History*, BK I, 6a-b; 15d-16a; BK IV, 144b-146a; BK V, 175b-c; 180c-d; BK VI, 193b; BK VII, 239a-242d; 243c-245b; 247a-c; BK VIII, 286b-287d; BK IX, 289a-290b; 310d-311a

6 THUCYDIDES: *Peloponnesian War*, BK I, 353a-b; 353d; 356d-360d; 366d-371a; 373b-374a; BK II, 394c-395a; BK III, 418d-420c; 430c; 432c-d; BK IV, 461b-462d; 468a-469b; 476a-477a; BK V, 486d-496d; 502d-504b; BK VI, 529a-534c; BK VIII, 568a-c; 572c-d; 578b-579a

7 PLATO: *Critias*, 485a-b / *Laws*, BK III, 667c-668d

9 ARISTOTLE: *Politics*, BK III, CH 9 [1280^{a}34-^{b}12] 478a-b; CH 13 [1284^{a}38-^{b}3] 482c

14 PLUTARCH: *Romulus*, 21a-24d / *Pericles*, 130d-131a / *Nicias*, 427b-428c / *Aratus*, 834d

23 MACHIAVELLI: *Prince*, CH XXI, 32a-d

23 HOBBES: *Leviathan*, PART II, 121b-c

24 RABELAIS: *Gargantua and Pantagruel*, BK I, 36d-38a

26 SHAKESPEARE: *2nd Henry VI*, ACT I, SC I [1–103] 33b,d-34d / *Henry V*, ACT V, SC II 563b-567a,c
35 LOCKE: *Civil Government*, CH V, SECT 45 34d-35a; CH XII, SECT 145–146 58d-59a
38 MONTESQUIEU: *Spirit of Laws*, BK IX, 58b,d-60a; BK X, 63d-64a; BK XXVI, 223c-d
38 ROUSSEAU: *Inequality*, 325c-d
40 GIBBON: *Decline and Fall*, 103c-d; 119a-c; 150d-152c esp 151d-152c; 378b-381a; 491d-492b
41 GIBBON: *Decline and Fall*, 48d-49c; 428a-d; 503a-c
42 KANT: *Science of Right*, 452c-d; 454d-455b
43 ARTICLES OF CONFEDERATION: 5a-9d esp III 5b
43 CONSTITUTION OF THE U.S.: ARTICLE I, SECT 10 [296–297] 14a; ARTICLE II, SECT 2 [421–425] 15b
43 FEDERALIST: NUMBER 5, 38b-d; NUMBER 6, 41c; NUMBER 7, 44b-c; NUMBER 15, 64c-65a; NUMBER 16 66c-68d passim; NUMBER 18–20 71a-78b passim; NUMBER 43, 143b-d; NUMBER 44, 144a-b; NUMBER 64 195b-198a; NUMBER 75, 223b-c
43 MILL: *Representative Government*, 428b-431a
46 HEGEL: *Philosophy of Right*, PART III, par 332–333 109a-c; par 336–337 109d-110a; ADDITIONS, 153 141d; 188 149b-c / *Philosophy of History*, PART II, 278c-279b; PART IV, 357c-358b; 359c-360a
51 TOLSTOY: *War and Peace*, BK II, 85c-86a; BK V, 208d-209a; 230b; 234a,c; BK VIII, 309b; BK IX, 346a-355c

9f. Colonization and imperialism: the economic and political factors in empire

5 AESCHYLUS: *Persians* [852–908] 24b-d
5 ARISTOPHANES: *Wasps* [655–724] 515c-516d / *Peace* [601–656] 532d-533c / *Lysistrata* [572–586] 590c-d
6 HERODOTUS: *History*, BK I, 22d-23a; BK III, 114b-c; BK IV, 150b-152c; BK VI, 189d; 193b-194c; BK VII, 215c-216d
6 THUCYDIDES: *Peloponnesian War*, BK I, 355d-356a; 358a; 359b-360a; 363a-b; 368a-d; BK II, 403b-c; BK III 417a-446a,c passim; BK V, 504c-508a; BK VI, 511c-516b; 529b-d; 530d-531b
7 PLATO: *Republic*, BK II, 318c-319a / *Laws*, BK IV 677a-686c esp 678c-679a; BK V, 693c
9 ARISTOTLE: *Politics*, BK II, CH 10 [1271^{b}20–38] 468a; [1272^{b}17–20] 469a; BK III, CH 13 [1284^{a}38–^{b}3] 482c; BK VII, CH 2 [1324^{b}2–1325^{a}15] 528c-529a; CH 7 [1327^{b}19–32] 531d-532a
13 VIRGIL: *Aeneid*, BK VI [847–853] 233b-234a
15 TACITUS: *Histories*, BK I, 191d-192a; BK IV, 290a-d
18 AUGUSTINE: *City of God*, BK III, CH 10 172d-173c; CH 14 175b-176d; BK V, CH 12, 216d-218a; BK XIX, CH 7 515a-c; CH 21, 524c-d
23 MACHIAVELLI: *Prince*, CH III–V 3c-8c; CH VIII, 14b-c
23 HOBBES: *Leviathan*, PART II, 119a-c; 126d-127a
24 RABELAIS: *Gargantua and Pantagruel*, BK III, 131b,d-133b
25 MONTAIGNE: *Essays*, 330b-331a; 440b-443d
35 LOCKE: *Civil Government*, CH XVI 65d-70c passim
36 SWIFT: *Gulliver*, PART I, 23a-25b; PART II, 75a-b
38 MONTESQUIEU: *Spirit of Laws*, BK X, 61b,d-68d; BK XI, 83c-84c; BK XV, 110a-d; BK XIX, 143c-144c; BK XXI, 170b-173d
38 ROUSSEAU: *Inequality*, 324a / *Political Economy*, 380a-b / *Social Contract*, BK I, 389d-390d; 394a-b; BK II, 403c-404a; BK IV, 435a-436a
39 SMITH: *Wealth of Nations*, BK IV, 239a-279b; 288b-c
40 GIBBON: *Decline and Fall*, 14d-15c; 18a; 20b-23d passim; 134d-135b; 420b-d; 522c-523a,c; 632d
41 GIBBON: *Decline and Fall*, 216c-d
42 KANT: *Science of Right*, 413d; 456c-457a
43 DECLARATION OF INDEPENDENCE: 1a-3b
43 FEDERALIST: NUMBER 4, 35b-36a
43 MILL: *Representative Government*, 353c; 431d-432b; 433b-442d
46 HEGEL: *Philosophy of Right*, PART III, par 248 78b-c; ADDITIONS, 150 141a-b / *Philosophy of History*, PART I, 242d-243d; PART II, 261b-d; 263b-d; PART III, 297a-300a
50 MARX: *Capital*, 77a-b; 221d-222b; 372c-374a; 379a-383d
51 TOLSTOY: *War and Peace*, BK VIII, 308b-c

10. Historic formations of the state: the rise and decline of different types of states

10a. The city-state

6 HERODOTUS: *History*, BK I, 11d-15c
6 THUCYDIDES: *Peloponnesian War*, BK I, 349b-353d; BK II, 391c-392a; 395d-399a; BK VI, 509a-510c
7 PLATO: *Laws*, BK III 663d-677a passim
9 ARISTOTLE: *Politics*, BK II, CH 9–12 465b-471d / *Athenian Constitution*, CH 1–41 553a-572a
14 PLUTARCH: *Theseus*, 9a-d; 13a-14c / *Lycurgus* 32a-48d / *Solon* 64b,d-77a,c / *Flamininus*, 303a-308a
15 TACITUS: *Histories*, BK V, 294c-295c
21 DANTE: *Divine Comedy*, HELL, XVI [64–78] 23a-b; PURGATORY, XIV [16–126] 73d-75a; PARADISE, XV [97]-XVI [154] 129b-132a
38 MONTESQUIEU: *Spirit of Laws*, BK III, 10b-c
38 ROUSSEAU: *Social Contract*, BK III, 418c-d [fn 2]
40 GIBBON: *Decline and Fall*, 13d-15c passim; 64d-68a,c passim; 567a-d; 630b,d-631b
41 GIBBON: *Decline and Fall*, 427b-428a; 562b-565a; 570d-571a
43 FEDERALIST: NUMBER 18 71a-73c
43 MILL: *Representative Government*, 330a-b

(10. ***Historic formations of the state: the rise and decline of different types of states.*** 10*a*. ***The city-state.***)

46 HEGEL: *Philosophy of History*, PART I, 240a-d; PART II, 273d-274a; 275b-281b; 282d-284a,c

10*b*. The imperial state

5 AESCHYLUS: *Persians* 15a-26d
6 HERODOTUS: *History*, BK I, 16c-20b; 30b-31a; BK III, 109b-111b
6 THUCYDIDES: *Peloponnesian War*, BK I, 371b-373c; BK II, 403b-c
9 ARISTOTLE: *Politics*, BK III, CH 13 [1284ª38 ᵇ3] 482c
13 VIRGIL: *Aeneid*, BK I [254-296] 110a-111a; BK VI [845-853] 233b 234a; BK VIII [608-731] 275a-278b
14 PLUTARCH: *Pericles* 121a-141a,c / *Alcibiades* 155b,d-174d / *Lysander*, 359c-360d / *Nicias* 423a-438d / *Agesilaus* 480b,d-499a,c / *Pompey* 499a-538a,c / *Alexander* 540b,d-576d / *Caesar* 577a-604d / *Antony* 748a-779d / *Galba* 859a-869d
15 TACITUS: *Annals*, BK I, 1a-2a; BK XI, 106b d
18 AUGUSTINE: *City of God*, BK IV 188b,d-207a,c; BK V, CH 12-26 216d-230a,c
21 DANTE: *Divine Comedy*, HELL., II [10-27] 2d; PARADISE, VI [1-111] 113c-114d
27 SHAKESPEARE: *Antony and Cleopatra* 311a-350d
38 MONTESQUIEU: *Spirit of Laws*, BK X, 65d-68a
39 SMITH: *Wealth of Nations*, BK V, 305d-308a
40 GIBBON: *Decline and Fall* esp 1a-34a,c, 79b-d, 523a-524a, 571a,c, 630a-633a
41 GIBBON: *Decline and Fall* esp 35b-40a, 161a-163d, 209d-220a,c, 305b-310d, 312b-313c, 367b,d-377c, 479b,d-510a,c
43 FEDERALIST: NUMBER 19, 73c-75c
43 MILL: *Representative Government*, 433b-442d
46 HEGEL: *Philosophy of History*, PART I, 242b-258d; PART II, 281b-282d; PART III, 285a-303c; 311d-314a,c; PART IV, 321d-326c

10*c*. The feudal state

38 MONTESQUIEU: *Spirit of Laws*, BK XXX-XXXI 269a-315d passim
39 SMITH: *Wealth of Nations*, BK III, 165b-173a
40 GIBBON: *Decline and Fall*, 83b-d; 619b-624c passim, esp 619c-d
41 GIBBON: *Decline and Fall*, 217d-220a,c esp 218c-219a; 403b-404d; 452d-453a,c; 570d-571a
43 FEDERALIST: NUMBER 17, 70a-d; NUMBER 19, 73d-74a; NUMBER 45, 148c-d
43 MILL: *Representative Government*, 351d-352b
46 HEGEL: *Philosophy of Right*, PART III, par 273, 91c-d; ADDITIONS, 174, 147a / *Philosophy of History*, PART IV, 316c-d; 324b-326c; 327c-330a; 334d-335a
50 MARX-ENGELS: *Communist Manifesto*, 419d-420d

10*d*. The national state

39 SMITH: *Wealth of Nations*, BK III, 170c-173a
40 GIBBON: *Decline and Fall*, 103c-d
42 KANT: *Science of Right*, 435a-b
43 FEDERALIST: NUMBER 37-40 117d-132a passim
43 MILL: *Representative Government*, 351d-352b; 424c-428b
46 HEGEL: *Philosophy of Right*, PART I, par 35 21a-b; PART III, par 181 63c-d; par 322 106d-107a; par 331 108d-109a; par 344-360 111a-114a,c / *Philosophy of History*, INTRO, 177d-178a; PART IV, 342a-345c
50 MARX-ENGELS: *Communist Manifesto*, 421c-d
54 FREUD: *War and Death*, 755b-757c

10*e*. The federal state: confederacies and federal unions

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Other discussions of confederacies and federal unions, *see* GOVERNMENT 5d; ONE AND MANY 5d–5e; REVOLUTION 6b; and for discussions bearing on the possibility of a world state, *see* CITIZEN 8; LOVE 4c; WAR AND PEACE 11d.

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I. Works by authors represented in this collection.
II. Works by authors not represented in this collection.

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Chapter 91: TEMPERANCE

INTRODUCTION

MOST outstanding figures in history, most heroes of legend or fiction, are men of strong passions, of ambition, and of pride. They are driven by desires which tend to be limitless. Few exemplify moderation. Few stop short of excess in anger or love, or in their striving for power and pleasure. They may curb their appetites in one direction, only to indulge them without rein in another. They do not follow in all things the counsels of temperance, expressed by the ancient maxim "Nothing overmuch."

Achilles is not temperate in his wrath, nor does Odysseus, for all his craft and cunning, exhibit self-control when his vanity or curiosity is at stake. The tragedies of Euripides, more perhaps than those of Sophocles and Aeschylus, embody the hubris, or pride, which is common to all tragic figures in some particular form of intemperance, such as the boundless hate of Medea or the abstemiousness of Hippolytus. One play especially, *Bacchantes*, takes intemperance for its central theme and sets the disciples of the dionysiac spirit in mortal conflict with the puritans and their prohibitions. Comedy as well as tragedy flows from intemperance, as when we smile at the exaggerated sentimentality of the romantic lovers described by Cervantes and Fielding, Chaucer and Shakespeare, or find merriment in the indulgences of Sir John Falstaff, Pantagruel and Panurge, or Tristram Shandy.

The great books of history add their evidence. They make fiction seem pale by comparison with the excesses of cruelty and sensuality which, if they were not presented as fact, might be dismissed as unimaginable. Page after page of Tacitus and Gibbon often describe, in an unrelieved sequence, human debauchery, brutalities and revelries ingeniously designed to reach some new extreme in order to procure, through novelty, satisfaction for appetites already over-indulged and weary of familiar pleasures.

Nor is the historian's panorama of intemperance limited to the uncontrolled indulgences of the few—the oriental despots described by Herodotus, or the Caesars and their retinues in the imperial court of Rome. Armies in the field and the mob-formations of civilian life are depicted in wanton and riotous behavior. Whole peoples are described as being given to luxurious living or as wanting in standards of public decency. The few exceptions in antiquity, such as Spartan rigor or the chastity, if not the sobriety, of the primitive Germans, only accentuate by contrast the immoderate tenor of life in most ancient societies.

DARWIN SEEMS TO think that a much greater degree of self-control characterizes modern life, both public and private, though his opinion on this score may give undue weight to the conventions so much insisted upon in England under Queen Victoria. Temperance, according to him, is a virtue peculiar to civilized life. "The greatest intemperance," he writes, "is no reproach with savages."

Darwin places temperance along with prudence among the "so-called self-regarding virtues, which do not obviously, though they may really, affect the welfare of the tribe" and which "have never been esteemed by savages, though now highly appreciated by civilized nations." That Darwin has modern society in mind when he speaks of "civilized nations," may be inferred from his remarks about the sensuality of the Greeks and Romans. This seems to be confirmed by his statement that "the hatred of indecency . . . which is so valuable an aid to chastity, is a modern virtue, appertaining exclusively . . . to civilized life."

What may be noted here and questioned—

in addition to the validity of Darwin's comparison of modern and ancient culture—is the tendency to identify temperance with chastity, or at least with restraint, if not abstinence, in the sphere of the sexual impulses. In our day, the general notion of virtue is often restricted to the virtue of chastity, as when we use the words "virtuous woman" to signify one who is chaste, or "woman of easy virtue" to signify one who is not. But spectacles of gluttony and drunkenness, of avarice or greed, are ever present to remind us that man can be intemperate in more ways than one. Darwin's implication of progress from licentious to moderate living may have less justification when we consider all the forms which intemperance can take.

Darwin, furthermore, seems to distinguish between courage and temperance in relation to the level or degree of civilization. Unlike temperance, courage, he thinks, is demanded by primitive as well as civilized life because it concerns the welfare of society as much as the well-being of the individual. Since "no man can be useful or faithful to his tribe without courage, this quality," he says, "has universally been placed in the highest rank." On the point of this comparison between the two virtues, Freud appears to disagree. Though he too considers temperance or self-control largely in the sphere of the sexual instincts, he seems to think that any form of organized social life, whether regarded as primitive or civilized, exacts certain restraints from the individual for the sake of the common good. Temperance no less than courage serves the tribe or the state.

"Civilization has been built up," Freud writes, "under the pressure of the struggle for existence, by sacrifices in gratification of the primitive impulses, and that is to a great extent forever being re-created as each individual, successively joining the community, repeats the sacrifice of his instinctive pleasures for the common good. The sexual are amongst the most important of the instinctive forces thus utilized; they are in this way sublimated, that is to say, their energy is turned aside from its sexual goal and diverted towards other ends, no longer sexual, and socially more valuable."

Society may depend on the temperance of its members without being able to exact temperance from them. Writers like J. S. Mill, for example, question the right of society to enforce temperance upon its members by the enactment of sumptuary laws, especially with regard to food and drink. The supposition seems to be that the intemperate man injures only himself—to do which is the prerogative of his personal liberty—whereas the unjust man injures others. We shall return to the consideration of this issue later, after we have examined the nature of temperance and its relation to other virtues, such as justice, courage, and wisdom or prudence.

IF THE POETS AND the historians describe the prevalence and the range of man's intemperance, the moralists tend to be unanimous in recommending self-control or moderation. There is hardly any variety of moral theory—whether developed in terms of law and duty or in terms of happiness and virtue, whether appealing to *a priori* principles or to criteria of utility empirically applied—which does not recommend the discipline of desire by reason and which does not condemn sensuality, self-indulgence, unchecked appetites, or passions run wild.

The word "temperance" itself is not always used, nor is the technical notion of virtue always implied, by those who advocate what Milton calls "the rule of not too much, by temperance taught." For some writers, on the other hand, temperance and virtue are almost identical. They think the essence of temperance is moderation and the virtuous life is the reasonable one. It is one in which reason moderates the passions and limits the pursuit of pleasure.

For example, Freud's theory of the reality-principle seems to reflect traditional notions of temperance. A person dominated by the pleasure-principle is infantile in character. "The transition from the pleasure-principle to the reality-principle," he points out, "is one of the most important advances in the development of the ego." When "the ego learns that it must inevitably go without immediate satisfaction, postpone gratification, learn to endure a degree of pain, and altogether renounce certain sources of pleasure," it "becomes 'reasonable,' is no longer controlled by the pleasure-principle, but follows the reality-principle," which seeks "a delayed and diminished pleasure, one which is assured by its realization of fact, its relation to reality."

So, too, Spinoza's doctrine that human bondage consists in being subject to the tyranny of the passions, whereas human freedom stems from the rule of reason, can be read as an apostrophe to temperance. Descartes' maxim, "to try always to conquer myself rather than fortune, and to alter my desires rather than change the order of the world," is still another expression of the insight that peace of mind comes from self-control. Though Kant does not think temperance deserves "to be called good without qualification," he does affirm that "moderation in the affections and passions, self-control and calm deliberation, are not only good in many respects, but even seem to constitute part of the intrinsic worth of the person."

IT IS MONTAIGNE WHO magnifies temperance beyond virtue, and makes it the measure of the sound pursuit of every sort of good, even virtue itself. Without temperance, he writes in his essay "Of Moderation," we can "corrupt things that in themselves are laudable and good; we may grasp virtue so that it becomes vicious, if we embrace it too stringently and with too violent a desire." Montaigne opposes "those who say there is never any excess in virtue." On the contrary, he thinks that "a man may both be too much in love with virtue, and be excessive in a just action . . . I love temperate and moderate natures. An immoderate zeal, even to that which is good, though it does not offend, astonishes me, and puts me to study what name to give it."

As with virtue, so with wisdom or philosophy. He quotes Holy Writ to the effect that we should be soberly wise, not try to be wiser than befits our natures. We should not "dive into philosophy beyond the limits of profit; taken moderately, it is pleasant and useful." There is, in short, "no pleasure so just and lawful, where intemperance and excess are not to be condemned."

Montaigne sees temperance as augmenting the pleasure of life rather than diminishing it. He subscribes to Plato's statement in the *Laws* that "the temperate life is in all things gentle, having gentle pains and gentle pleasures; whereas the intemperate life . . . has violent pains and pleasures, and vehement and stinging desires, and loves utterly insane; and in the temperate life the pleasures exceed the pains, but in the intemperate life the pains exceed the pleasures in greatness and number and frequency." To overlook this, Montaigne elsewhere suggests, is to suppose that "the regimen which stops the toper before he has drunk himself drunk, the glutton before he has eaten to a surfeit, and the lecher before he has got the pox, is an enemy to pleasure." Yet, in his love of "temperate and moderate natures," Montaigne repeatedly counsels us to avoid being overzealous even about temperance itself. The maxim "Nothing overmuch" applies to virtue as well as to the pleasure-seeking that virtue tries to control.

CONSIDERED IN TERMS of Aristotle's theory that all the moral virtues consist in a mean between excess and defect, Montaigne seems to be identifying moderation with the observance of the mean, so that moderation becomes an aspect of every virtue, including temperance itself as one virtue among others. Thus the courageous man is one who fears neither too much nor too little, but is moderate with respect to peril and pain. Accordingly, a man cannot be too courageous, but only too fearless, and so rash or foolhardy.

But it may be supposed that if moderation enters into all the virtues, such virtues as temperance and courage are not distinct. Holding them to be distinct in regard to the objects with which they deal, Aquinas admits that each of the major virtues can be "taken to denote certain general conditions of virtue," so that in a sense "they overflow into one another." He defines temperance as "a disposition of the soul, moderating any passions or acts, so as to keep them within bounds," and fortitude as "a disposition whereby the soul is strengthened for that which is in accord with reason, against any assaults of the passions or the toil involved in any work to be done." So conceived, Aquinas thinks it is possible to see how temperance and fortitude are in some sense one.

The man who can curb his desires for the pleasures of touch is more able to check his daring in the face of danger, "and in this sense fortitude is said to be temperate." The man who is able to stand firm against the dangers of death is more able to remain firm against the onslaught of pleasures, and so "temperance can be

said to be brave." Thus temperance enters into other virtues, insofar as it leads men to "observe the mean in all things," just as fortitude enters into temperance because it strengthens men against "the enticements of pleasure" as well as against the fear of pain.

The general theory of virtue, in terms of which the several virtues are distinguished and their connections traced, is discussed in the chapter on VIRTUE AND VICE; and the special virtues to which temperance is related are considered in the chapters on COURAGE, JUSTICE, and PRUDENCE. Here we must be concerned to observe how the general conception of virtue is exemplified in the definitions of temperance given by those who, like Plato, Aristotle, and Aquinas, consider it to be, not the whole of virtue, but one of the major virtues and distinct from the others.

THOUGH PLATO AND Aristotle do not conceive virtue in the same way, and though they diverge in analyzing particular virtues, such as justice or wisdom, and in describing how particular virtues are related to one another, they nevertheless seem to concur on a number of points in their treatment of temperance.

In the *Gorgias*, Callicles asserts that only those who are unable to satisfy their desire for pleasures praise temperance, and call intemperance base. But, he asks, "what could be more truly base or evil than temperance to a man . . . who might freely be enjoying every good and has no one to stand in his way?" And he concludes by saying that "luxury and intemperance and license, if they be provided with means, are virtue and happiness."

In reply, Socrates tries to persuade Callicles that "instead of the intemperate and insatiate life," one should "choose that which is orderly and sufficient and has a due provision for daily needs." He compares the intemperate man "to a vessel full of holes, because it can never be satisfied." By analogy with the sound and the leaky vessel, Socrates describes the temperate man as able to satisfy his limited desires, whereas the intemperate man, of boundless desire, can never pause in his search for pleasure. "If he pauses for a moment, he is in an agony of pain. Such are their respective lives," he adds, "and now would you say that the life of the intemperate is happier than that of the temperate?"

Callicles claims to be unconvinced, but later Socrates gets him to admit that in all things—in a house or a ship, in the body or the soul—order is good, and disorder evil. He then proceeds to point out that order is the principle of health in the body and of temperance in the soul. It is in these terms that Socrates defines temperance in the *Republic* as "the ordering or controlling of certain pleasures and desires." In the human soul, he explains, "there is a better and also a worse principle; and when the better has the worse under control, then a man is said to be master of himself."

The words "temperance" and "self-mastery" are almost interchangeable; both signify "the rule of the better part over the worse." Just as the courageous man is one "whose spirit retains in pleasure and in pain the commands of reason about what he ought or ought not to fear," so the temperate man is one in whom the "ruling principle of reason and the two subject ones of spirit and desire are equally agreed that reason ought to rule."

In somewhat similar terms, Aristotle defines temperance and courage by reference to pleasure and pain. "The man who abstains from bodily pleasures and delights in this very fact is temperate, while the man who is annoyed at it is self-indulgent; and he who stands his ground against things that are terrible and delights in this or at least is not pained is brave, while the man who is pained is a coward." Like Plato, Aristotle makes the rational principle the source of these virtues. It is reason, or more precisely one of reason's virtues, prudence, which determines the mean between excess and defect with regard to pleasure and pain, or fear, anger, and the other passions.

Like Freud, Aristotle regards self-indulgence as infantile or childish. Children "live at the beck and call of appetite, and it is in them that the desire for what is pleasant is strongest." When such desire is not regulated by reason, "it will go to great lengths; for in an irrational being the desire for pleasure is insatiable even if it tries every source of gratification." Where Freud speaks of the pleasure-principle submitting to the reality-principle, Aristotle says, "as the child should live according to the direction of his tutor, so the appetitive element

should live according to the rational principle. The appetitive element in a temperate man should harmonize with the rational principle."

According to Aristotle, temperance is concerned not with all pleasures, but "with the kind of pleasures that other animals share in, which therefore appear slavish and brutish; these are touch and taste." Self-indulgence is a matter of reproach "because it attaches to us not as men but as animals. To delight in such things and to love them above all others is brutish."

The endurance of pain, which is central to the nature of courage, enters into temperance incidentally. The self-indulgent man "is pained more than he ought at not getting pleasant things," whereas the temperate man "is not pained at the absence of what is pleasant or at his abstinence from it." But total abstinence is not temperance, any more than over-indulgence is. "The temperate man occupies a middle position" between those who have an insatiable craving for pleasure and those "who fall short with regard to pleasures and delight in them less than they should." Such insensibility, Aristotle declares, is not human either.

When reason curbs the desire for bodily pleasures, "it is not to lessen sensual pleasure," in the opinion of Aquinas, "but to prevent the force of concupiscence from cleaving to it immoderately. By *immoderately*," he explains, "I mean going beyond the bounds of reason, as a sober person does not take less pleasure in food eaten in moderation than the glutton, but his concupiscence lingers less in such pleasures." Though Aquinas agrees with Aristotle in defining temperance strictly as moderation with respect to the pleasures of taste and touch, "such as the pleasures of the table or of sex," he associates with temperance those virtues which involve moderation with respect to other pleasures.

For example, there is liberality with respect to money as an object of love or pleasure. Neither the spendthrift nor the miser is temperate. Friendliness or affability and gentleness represent temperance in the relation of a man to the pleasures of fellowship; and the virtue which Aristotle calls *eutrapelia* is similarly classified by Aquinas, as being a moderate indulgence in the pleasures of recreation, of sport and games, the opposites of which, in excess and defect, can be called "buffoonery" and "boorishness." Even the pleasures of learning can be pursued intemperately, so that an undue craving for knowledge—beyond the proper limits and for the wrong reasons—is, according to Aquinas, the vice of curiosity.

THE NOTIONS OF ABSTINENCE and continence seem to be closely related to the idea of temperance. The words are often used interchangeably. But as we have seen, according to the theory of virtue as a mean between extremes of excess and defect, temperance calls for a moderate indulgence in pleasures, not abstinence from them entirely. This raises the question whether the asceticism of the religious life violates the rule of reason by a kind of immoderate withdrawal from ordinary pleasures. What to the psychoanalyst may look like pathological self-denial, or to the philosopher like a violation of nature, takes, in the eyes of the Christian theologian, the form of heroic temperance, a supernatural perfection of the virtue.

When in the religious life a man does "his utmost to strive onward to divine things," then, according to Aquinas, in those who are "tending towards the divine similitude," temperance is a *perfecting* virtue. "So far as nature allows," it "neglects the needs of the body." In those "who have already attained to the divine likeness, the *perfect* virtue of temperance" is one which "knows no earthly desires."

Since "use of sexual union hinders the mind from giving itself wholly to the service of God," and since "the use of venery withdraws the mind from that perfect intentness on tending to God," the perpetual continence of the celibate life, as well as the voluntary poverty of the monastic life, seem to Aquinas "requisite for religious perfection."

Augustine, in his *Confessions*, tells of the time when "I thought I should be impossibly miserable if I had to forego the embraces of a woman; and I did not think of Your mercy as a healing medicine for that weakness, because I had never tried it. I thought that continency was a matter of our own strength, and I knew that I had not the strength; for in my utter foolishness I did not know the word of Your Scripture that none can be continent unless you give it."

Though he separated from his mistress in order to prepare for marriage, he discovered that "it was not really marriage that I wanted. I was simply a slave to lust." He recounts the struggles which finally enabled him to turn in the other direction and to "see the austere beauty of Continence, serene and indeed joyous"; and with her, he adds, "I saw such hosts of young men and women . . . gray widows and women grown old in virginity, and in them all Continence herself, not barren but the fruitful mother of children, her joys, by You, Lord, her Spouse."

But there is another meaning of continence according to which it is condemned by the philosopher who conceives temperance as a natural virtue. The reason for Aristotle's condemnation of continence differs from the reason he gives for his disapproval of abstinence. Abstinence—at least on the natural plane—is an immoderate denial of pleasure. Continence is opposed to temperance because it merely represents reason's inhibition of the act prompted by a licentious desire for pleasure. It is not an habitual moderation of desire itself. Aristotle's emphasis on habit, therefore, leads him to insist upon the distinction between temperance and continence.

"We group together the incontinent and the self-indulgent, the continent and the temperate man," Aristotle writes, "because they are concerned somehow with the same pleasures and pain; but though they are concerned with the same objects, they are not similarly related to them." The difference lies in the fact that a man acts continently in a particular situation when his reason is able to overcome an immoderate desire for pleasure, and incontinently when the force of his desire brushes reason aside; whereas a man not only acts temperately, but is temperate in character, when his desires are themselves habitually moderated to be in accord with reason.

The temperate man, therefore, has no need for continence. Nor is the incontinent man to be confused with the intemperate, for the latter is not convinced that his desires are inordinate. The continent man is one who, when acting against reason, knows that he is doing so. Though both the continent and the temperate man do nothing contrary to the rule of reason for the sake of bodily pleasures, the one, according to Aristotle, has bad appetites, the other is free from them.

THE CONTINENT MAN is not the only one who gives the appearance of temperance without being really temperate in character. Some men, says Aristotle, are moderate by nature—"from the very moment of birth fitted for self-control." What appears to be temperance in them, therefore, is not, in his opinion, a virtuous habit acquired by good acts, but simply a natural capacity to control their desires or a temperamental constitution which happens not to be ridden by very strong desires. They do not deserve to be praised for their apparent self-control; neither do those who manage to be moderate about certain pleasures but give themselves free rein with respect to other desires. The miser who limits his bodily comforts in order to amass a pile of gold is hardly temperate.

Gibbon writes of the Emperor Julian that he "seldom recollected the fundamental maxim of Aristotle, that true virtue is placed at an equal distance between the opposite vices." Julian's lack of temperance appears, however, not merely in the opposite extreme to which he went to express his contempt for luxury, sleeping on the ground and renouncing the decencies of dress and cleanliness. Though genuinely moderate in some things, such as his diet, he went to excess in others, overdoing his preoccupation with affairs of state and working incessantly for long hours day after day. He "considered every moment as lost that was not devoted to the advantage of the public or the improvement of his own mind. By this avarice of time," Gibbon observes, "he seemed to protract the short duration of his reign."

Temperance in a particular respect is sometimes praised as a virtue relative to a specific and limited goal. Considering the wealth of nations, Adam Smith looks upon prodigality as a major vice, and regards parsimony as an indispensable virtue. "Capitals are increased by parsimony," he writes, "and diminished by prodigality and misconduct . . . Parsimony, and not industry, is the immediate cause of the increase of capital . . . By what a frugal man annually saves, he not only affords maintenance to an additional number of productive hands, for that

or the ensuing year, but, like the founder of a public workhouse, he establishes as it were a perpetual fund for the maintenance of an equal number in all times to come."

Capital funds are perverted by the prodigal. "By not confining his expenses within his income," Smith declares, "he encroaches upon his capital . . . By diminishing the funds designed for the employment of productive labor, he necessarily diminishes . . . the quantity of that labor which adds a value to the subject upon which it is bestowed, and, consequently, the value of the annual produce of the land and labour of the whole country. . . . If the prodigality of some was not compensated by the frugality of others, the conduct of every prodigal, by feeding the idle with the bread of the industrious, tends not only to beggar himself, but to impoverish his country."

From the point of view of augmenting wealth, Smith may be right in calling every prodigal "a public enemy and every frugal man a public benefactor." Marx, however, raises the question whether thrift or parsimony represents moral virtue in the capitalist himself. He mocks the classical, or what he calls the "vulgar," economic theory which tends to identify capital with abstinence, and, taking Adam Smith's statement that "industry furnishes the material which saving accumulates," he interprets *saving* to mean the *reconversion of the greatest possible portion of surplus-value or surplus-product into capital.*

For Marx the question is, in addition to being economic, a moral and psychological one. He describes the capitalist as suffering from "a Faustian conflict between the passion for accumulation and the desire for enjoyment." His parsimony, or abstinence from certain pleasures, hardly signifies genuine temperance; for, according to Marx, the capitalist is like the hoarder who "makes a sacrifice of the lusts of the flesh to his gold fetish." Elsewhere he says that the "boundless greed after riches . . . . is common to the capitalist and the miser; but while the miser is merely a capitalist gone mad, the capitalist is a rational miser."

In Marx's opinion the capitalist cannot even boast of personal thrift to any great extent. "The capitalist gets rich, not like the miser, in proportion to his personal labor and restricted consumption, but at the same rate as he squeezes out the labor-power of others, and enforces on the laborer abstinence from all life's enjoyments."

THESE CONSIDERATIONS OF political economy lead us naturally back to the issue raised earlier, concerning the significance of temperance for society, or the effect of private intemperance on the public welfare.

What is the relation between temperance and justice? Aristotle answers this question in terms of his conception of general justice as including the social aspect of all the other moral virtues. To the extent that his courage or temperance can affect others or the common good, a man is required by justice to be temperate and brave. It is proper for the law, he says, to bid us do "both the acts of a brave man (*e.g.*, not to desert our post nor take flight nor throw away our arms) and those of a temperate man (*e.g.*, not to commit adultery nor to gratify one's lust)."

Though he accepts Aristotle's notion of general justice, Aquinas puts a limitation on the extent to which the positive law of the state can regulate or enforce the acts of a virtue like temperance. Because it is "framed for a multitude of human beings, the majority of whom are not perfect in virtue . . . human laws do not forbid all vices, from which the virtuous abstain, but only the more grievous vices, from which it is possible for the majority to abstain; and chiefly those that are injurious to others, without the prohibition of which human society could not be maintained." The point is not that some acts of temperance cannot be prescribed by law, but rather that the human law does not command every act of temperance, but only those "which are ordainable to the common good."

The principle being clear, the problem remains extremely difficult when the question is one of regulating certain types of behavior, such as insobriety, extravagance, or adultery.

Montesquieu discusses the difficulties of administering, under the Julian law, the "punishments decreed by the Roman emperors against the incontinence of women." He considers the advantages and disadvantages, relative to different forms of government, of sumptuary laws directed at maintaining frugality and avoiding

luxury; as, for example, in Venice, where the rich were "compelled by laws to moderation" and were thus so "habituated to parsimony that none but courtesans could make them part with their money." As for sobriety, he seems to think that the problem varies with the climate, the Mohammedan law against the drinking of wine being "improper for cold countries where the climate seems to force them to a kind of national intemperance, very different from personal inebriety. . . . A German drinks through custom, and a Spaniard by choice."

The reasons which have been offered against the legal prohibition of intoxicants are many and various. To those who hold that temperance consists in moderation, not abstinence, "temperance laws" are misguided as well as misnamed. To others, like William James, "drunkenness . . . as teetotalers use the word, is one of the deepest functions of human nature. Half of both the poetry and tragedy of human life would vanish if alcohol were taken away." To still others, like Mill, such sumptuary laws are wrong in principle because consumption, which they try to regulate, is a private matter.

If an individual's intemperance injures only himself, he may be morally reprobated, but, Mill holds, he ought not to be prosecuted by law. A man who, "through intemperance or extravagance, becomes unable to pay his debts," or becomes incapable of supporting his family, "might be justly punished; but it is for the breach of duty to his family or creditors, not for the extravagance." Again Mill writes: "No person ought to be punished simply for being drunk; but a soldier or a policeman should be punished for being drunk on duty. Whenever, in short, there is a definite damage, or a definite risk of damage, either to another individual or to the public, the case is taken out of the province of liberty, and placed in that of morality or law."

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REFERENCES

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PAGE SECTIONS: When the text is printed in one column, the letters **a** and **b** refer to the upper and lower halves of the page. For example, in **53** JAMES: *Psychology*, **116a-119b**, the passage begins in the upper half of page 116 and ends in the lower half of page 119. When the text is printed in two columns, the letters **a** and **b** refer to the upper and lower halves of the left-hand side of the page, the letters **c** and **d** to the upper and lower halves of the right-hand side of the page. For example, in **7** PLATO: *Symposium*, **163b-164c**, the passage begins in the lower half of the left-hand side of page 163 and ends in the upper half of the right-hand side of page 164.

AUTHOR'S DIVISIONS: One or more of the main divisions of a work (such as PART, BK, CH, SECT) are sometimes included in the reference; line numbers, in brackets, are given in certain cases; *e.g.*, *Iliad*, BK II [265–283] **12d**.

BIBLE REFERENCES: The references are to book, chapter, and verse. When the King James and Douay versions differ in title of books or in the numbering of chapters or verses, the King James version is cited first and the Douay, indicated by a (*D*), follows; *e.g.*, OLD TESTAMENT: *Nehemiah*, 7:45—(*D*) *II Esdras*, 7:46.

SYMBOLS: The abbreviation "esp" calls the reader's attention to one or more especially relevant parts of a whole reference; "passim" signifies that the topic is discussed intermittently rather than continuously in the work or passage cited.

For additional information concerning the style of the references, see the Explanation of Reference Style; for general guidance in the use of *The Great Ideas*, consult the Preface.

1. The nature of temperance

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22 CHAUCER: *Parson's Tale*, par 72–73 **535b**

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32 MILTON: *Paradise Lost*, BK XI [527–551] **310b-311a** / *Areopagitica*, **390b-391a**

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44 BOSWELL: *Johnson*, **92c**

49 DARWIN: *Descent of Man*, **313d-314b**

1*a*. The relation of temperance to virtue generally, and to the virtues of courage and justice

5 EURIPIDES: *Suppliants* [838–917] **265d-266b** / *Iphigenia at Aulis* [543–589] **429d-430a**

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1b. The relation of temperance to knowledge and prudence: the determination of the mean of temperance

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1c. Temperance and continence: the counterfeits of temperance

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APOCRYPHA: *Ecclesiasticus*, 14:5–10; 19:2; 26:8; 31:25–31—(*D*) OT, *Ecclesiasticus*, 14:5–10; 19:2–3; 26:11; 31:30–42

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6 HERODOTUS: *History*, BK I, 2d-3d; 46c-d; 47c; BK III, 95a-98a; BK VII, 222c-d; BK IX, 311b-312d

6 THUCYDIDES: *Peloponnesian War*, BK III, 436c-438b; BK VI, 513b

7 PLATO: *Phaedrus*, 120b-c / *Symposium*, 153b-155c / *Gorgias*, 276b-277b / *Republic*, BK III, 326c-328a; 334a-c / *Timaeus*, 474b-d / *Laws*, BK IX, 751b-d / *Seventh Letter*, 801b-c; 806a

9 ARISTOTLE: *Ethics*, BK II, CH 7–8 352d-354d; BK III, CH 10–12 364b-366a,c; BK V, CH 1 [1129^b12–24] 377a; BK VII, CH 4 398a-399a; CH 5 [1149^a5–22] 399c-d; CH 7 [1150^a9–23] 400d-401a; CH 8 401c-402a / *Politics*, BK I, CH 9 [1257^b40–1258^a14] 452a-b

12 LUCRETIUS: *Nature of Things*, BK III [1003–1010] 43a; [1076–1084] 44a; BK IV [1058–1120] 57d-58d

12 EPICTETUS: *Discourses*, BK II, CH 10, 149d; CH 18 161a-162b; BK IV, CH 5 228a-230b

12 AURELIUS: *Meditations*, BK II, SECT 10 257d-258a

14 PLUTARCH: *Lucullus*, 419b-420b / *Dion*, 783c-784a

15 TACITUS: *Annals*, BK III, 57b-58d; BK VI, 86a-b; BK XV, 166b-c / *Histories*, BK II, 230d-231a; BK III, 264b-265d

18 AUGUSTINE: *Confessions*, BK III, par 16 17c-d; BK V, par 4 27d-28a; BK VI, par 18–26 40d-43a; BK VIII, par 26–27 60b-c; BK X, par 40–60 81c-86d / *Christian Doctrine*, BK III, CH 18–22 664d-666c esp CH 21 665d-666b

19 AQUINAS: *Summa Theologica*, PART I, Q 98, A 2, REP 3 517d-519a

20 AQUINAS: *Summa Theologica*, PART I-II, Q 72, A 9 118d-119b; Q 73, A 5, REP 1–3 123a-d; Q 76, A 4, REP 2,4 143d-144d; Q 77, A 5 149a-150a; Q 88, A 5 196d-198a; Q 100, A 4, ANS 253d-255a; PART II-II, Q 46 603c-605a,c

21 DANTE: *Divine Comedy*, HELL, V–VII 7a-10d; XI [70–90] 15d-16a; PURGATORY, XVII [82–139] 79b-d; XIX–XXVII 81c-96a

22 CHAUCER: *Troilus and Cressida*, BK IV, STANZA 32–49 92b-95a / *Pardoner's Tale* 374a-382b esp [12,397–593] 374a-377b, [12,829–839] 381b / *Tale of Melibeus*, par 4–7 401b-402b / *Parson's Tale*, par 27 512a-514b; par 70–71 534b-535a

23 HOBBES: *Leviathan*, PART I, 62d-63a passim; 95c

24 RABELAIS: *Gargantua and Pantagruel*, BK III, 186d-193c; 195c-196b

25 MONTAIGNE: *Essays*, 89b-91b; 162c-167a; 238c-d; 244d-246a; 270b-271a; 350d-354b; 503b-d; 517b-519a; 534a-c; 538a-d; 541d-543a,c

26 SHAKESPEARE: *Titus Andronicus*, ACT II, SC III [89–191] 178d-179d / *Romeo and Juliet*, ACT II, SC VI [1–15] 300c / *King John*, ACT II, SC I [561–598] 385c-386a / *1st Henry IV*, ACT I, SC II [1–116] 435c-436c; ACT II, SC IV [438–527] 448b-449b; ACT III, SC III [172–190] 456b-c

27 SHAKESPEARE: *Hamlet*, ACT I, SC V [42–91] 37b-d / *Measure for Measure*, ACT I, SC II [128–134] 176c / *Othello*, ACT V, SC II 238d-243a,c / *Macbeth*, ACT IV, SC III [66–100] 304a-c / *Antony and Cleopatra* 311a-350d esp ACT II, SC II [175–245] 320c-321b / *Pericles*, ACT I, SC I [64–142] 422c-423b

29 CERVANTES: *Don Quixote*, PART I, 120b-137d

32 MILTON: *Paradise Lost*, BK II [629–870] 125a-130a; BK V [443–450] 185a; BK VIII [500–617] 243a-245b; BK IX [990–1133] 269a-272a

36 STERNE: *Tristram Shandy*, 521a-b

38 MONTESQUIEU: *Spirit of Laws*, BK XVI, 117c-d; 119a-b

39 SMITH: *Wealth of Nations*, BK IV, 189d-190a; BK V, 346c-347d

40 GIBBON: *Decline and Fall*, 38a-b; 70c-71a; 90a-c; 138d-139b; 256c-257a; 340b-c; 389b-c

41 GIBBON: *Decline and Fall*, 67c-d; 166a-167c passim; 169a-b

42 KANT: *Pref. Metaphysical Elements of Ethics*, 368d-369a / *Judgement*, 586d-587a

43 MILL: *Liberty*, 303d-307a passim

46 HEGEL: *Philosophy of History*, INTRO, 198b-199b; PART I, 233b-c; PART IV, 323a-c

47 GOETHE: *Faust*, PART I [2073–2336] 49a-56a; [2605–4612] 63b-114b; PART II [10,039–11,383] 245a-276b

49 DARWIN: *Descent of Man*, 315c-316a

50 MARX: *Capital*, 62b; 72c; 293c-294a

51 TOLSTOY: *War and Peace*, BK I, 15b-16a; BK V, 201a-c; BK VI, 248b-250a; BK VII, 284a-285a; BK VIII, 321d-322d; BK IX, 349d-350d; EPILOGUE I, 655c-656b

52 DOSTOEVSKY: *Brothers Karamazov*, BK I, 4a-d; BK II, 38d-39a; BK III, 50c-62a; 69c-70a; BK V, 122d-125c; BK VIII 191b,d-235d; BK XII, 370b-d; 372c-373a

53 JAMES: *Psychology*, 800a-805b esp 802b-805b

3. Temperance in relation to duty or happiness

OLD TESTAMENT: *Proverbs*, 5; 6:23-35; 7; 12:11; 20:1; 21:17; 23:20-21,27-35 / *Jeremiah*, 35—(*D*) *Jeremias*, 35

APOCRYPHA: *Ecclesiasticus*, 18:30-32; 19:1-3; 31:12-31; 37:26-31—(*D*) OT, *Ecclesiasticus*, 18:30-32; 19:1-3; 31:12-42; 37:29-34

NEW TESTAMENT: *I Corinthians*, 6:9-10 / *I Timothy*, 3:1-13 / *Titus*, 1:5-9; 2 passim / *Hebrews*, 13:4 / *James*, 1:12-15; 4:1-10 / *I Peter*, 1:13-14; 2:11; 5:8-9 / *II Peter*, 2:9-22 / *I John*, 2:15-17

5 EURIPIDES: *Hippolytus* 225a-236d esp [373-430] 228b-d / *Bacchantes* [370-433] 343a-b / *Iphigenia at Aulis* [543-589] 429d-430a

7 PLATO: *Charmides*, 7b-c / *Symposium*, 156d-157a / *Gorgias*, 275b-284d / *Republic*, BK IX 416a-427b passim / *Laws*, BK V, 689c-690c / *Seventh Letter*, 806a; 807a

9 ARISTOTLE: *Ethics*, BK X, CH 7 [1177^{a}23-^{b}4] 431d-432a; CH 8 432d-434a passim / *Politics*, BK II, CH 6 [1265^{a}28-37] 460c-d

12 LUCRETIUS: *Nature of Things*, BK II [1-61] 15a-d; BK V [1113-1135] 75c-d; [1412-1435] 79b-d

18 AUGUSTINE: *Confessions*, BK III, par 16 17c-d; BK V, par 4 27d-28a; BK VI, par 18-20 40d-41c; BK VIII, par 26-27 60b-c; BK X, par 40-60 81c-86d / *City of God*, BK III, CH 10, 172d; BK XIX, CH 4, 511d-513c

19 AQUINAS: *Summa Theologica*, PART I, Q 98, A 2, REP 3 517d-519a

20 AQUINAS: *Summa Theologica*, PART I-II, Q 63, A 4, ANS and REP 2 65d-66c; Q 77, A 5 149a-150a; Q 100, A 4, ANS 253d-255a; PART II-II, Q 46, A 2 604b-d

21 DANTE: *Divine Comedy*, PURGATORY, XVII [82-139] 79b-d

23 HOBBES: *Leviathan*, PART II, 163d-164a

25 MONTAIGNE: *Essays*, 71a-72a; 165c-167a; 353c-354b; 382b-383d; 540b-543a,c

30 BACON: *Advancement of Learning*, 73c-d

32 MILTON: *Paradise Lost*, BK XI [523-543] 310b-311a; BK XII [583-587] 332a / *Areopagitica*, 390a-b

38 MONTESQUIEU: *Spirit of Laws*, BK V, 18d-19c

40 GIBBON: *Decline and Fall*, 192b

42 KANT: *Fund. Prin. Metaphysic of Morals*, 256a-b / *Practical Reason*, 327a-d / *Pref. Metaphysical Elements of Ethics*, 366d-367a / *Judgement*, 586d-587a

43 MILL: *Liberty*, 302d-312a passim

51 TOLSTOY: *War and Peace*, BK XIII, 577d-578a; BK XIV, 605b-d

52 DOSTOEVSKY: *Brothers Karamazov*, BK VI, 164b-d; BK XII, 370b-d

54 FREUD: *Origin and Development of Psycho-Analysis*, 20c-d / *General Introduction*, 587d; 599b-d / *Civilization and Its Discontents*, 772c-773d; 793a-794a; 800c-801a

4. The cultivation of temperance: the training of a temperate character

OLD TESTAMENT: *Job*, 31:1 / *Proverbs*, 6:23-26; 23:20,31; 25:16

APOCRYPHA: *Wisdom of Solomon*, 8:5-7—(*D*) OT, *Book of Wisdom*, 8:5-7 / *Ecclesiasticus* passim, esp 9:3-9, 18:30-32, 19:5, 23:5-6, 25:21, 31:12-31, 37:29-31—(*D*) OT, *Ecclesiasticus* passim, esp 9:3-13, 18:30-32, 19:5, 23:5-6, 25:28, 31:12-42, 37:32-34

NEW TESTAMENT: *Luke*, 21:34 / *Romans*, 6:12-13; 13:13-14 / *I Corinthians*, 5:9-13; 6:18; 7:1-9; 9:24-27 / *Galatians*, 15:13,16,22-23 / *Ephesians*, 5:18 / *Colossians*, 3:2-8 / *I Thessalonians*, 4:3-5; 5:5-8 / *I Timothy*, 6:8-11 / *II Timothy*, 2:22 / *Titus*, 2 esp 2:11-15; 3:3-6 / *James*, 4:5-10 / *I Peter*, 1:13-14; 2:11; 4:7; 5:8-9 / *I John*, 2:15-17

5 EURIPIDES: *Iphigenia at Aulis* [543-589] 429d-430a

5 ARISTOPHANES: *Frogs* [1008-1098] 576b-577c

7 PLATO: *Republic*, BK III, 326c-339a passim / *Statesman*, 605d-608d / *Laws*, BK I-II, 645d-663d passim; BK III, 672d-674d; BK VI, 712b; BK VII, 715b-716a; BK VIII, 737c-738c

9 ARISTOTLE: *History of Animals*, BK VII, CH I [581^{b}11-22] 107b / *Ethics*, BK II, CH I-4 348b,d-351b; BK III, CH 12 [1119^{a}35-^{b}19] 366a,c; BK V, CH I [1129^{b}12-24] 377a; BK X, CH 9 [1179^{b}4-1180^{a}33] 434b-435a / *Politics*, BK II, CH 9 [1269^{b}13-1270^{a}14] 465d-466b; BK VII, CH 17 [1336^{a}23-^{b}24] 541b-d; BK VIII, CH 5 [1340^{a}14-^{b}19] 545c-546a

12 EPICTETUS: *Discourses*, BK II, CH 18 161a-162b; BK III, CH 1 175a-177c; CH 3 178d-180a; CH 12 187b-188b; CH 24-25, 208b-210d

12 AURELIUS: *Meditations*, BK I, SECT 16 254d-255d

14 PLUTARCH: *Lycurgus*, 38a-45c / *Lycurgus-Numa*, 61b,d-62c / *Coriolanus*, 174b,d-175a

18 AUGUSTINE: *Confessions*, BK VI, par 20 41b-c; BK VIII, par 26-27 60b-c

20 AQUINAS: *Summa Theologica*, PART I-II, Q 95, A 1 226c-227c

21 DANTE: *Divine Comedy*, PURGATORY, XVI [52-114] 77b-78a

22 CHAUCER: *Parson's Tale*, par 72-73 535b

25 MONTAIGNE: *Essays*, 69d-75a passim; 534a-d

26 SHAKESPEARE: *Henry V*, ACT I, SC I [22-37] 533b

30 BACON: *Advancement of Learning*, 69d-70a; 78a-d; 79c-80a

(4. *The cultivation of temperance: the training of a temperate character.*)

32 MILTON: *Paradise Lost*, BK XI [527–551] 310b-311a / *Areopagitica*, 385a-b
39 SMITH: *Wealth of Nations*, BK V, 346c-347d
40 GIBBON: *Decline and Fall*, 32a-b; 338d-339c; 449a-c
42 KANT: *Practical Reason*, 356a-360d / *Pref. Metaphysical Elements of Ethics*, 365b-d / *Judgement*, 586d-587a
43 MILL: *Liberty*, 305b-307a
51 TOLSTOY: *War and Peace*, BK V, 201a-c; BK VI, 248b-250a; BK XIII, 577a-578b
54 FREUD: *Origin and Development of Psycho-Analysis*, 16c / *Narcissism*, 407b-c / *General Introduction*, 573c-d; 592b-593b / *New Introductory Lectures*, 870a-b

5. The social aspects of temperance

5a. The temperance of rulers and citizens: intemperate conduct as inimical to the common good

OLD TESTAMENT: *Leviticus*, 10:8–11 / *Deuteronomy*, 17:15-17; 21:18-21 / *Proverbs*, 31:4-5 / *Ecclesiastes*, 10:16-17 / *Isaiah*, 5:22-23; 28:1-9; 56:9-12—(*D*) *Isaias*, 5:22-23; 28:1-9; 56:9-12 / *Amos*, 6
APOCRYPHA: *Ecclesiasticus*, 47:19-21—(*D*) OT, *Ecclesiasticus*, 47:21-23
NEW TESTAMENT: *I Timothy*, 3:1-13 / *James*, 4:1-3
5 SOPHOCLES: *Ajax* [1052–1070] 152a-b
5 EURIPIDES: *Suppliants* [838-917] 265d-266b / *Phoenician Maidens* [452–593] 382a-383a / *Iphigenia at Aulis* [543–589] 429d-430a
5 ARISTOPHANES: *Clouds* [882–1104] 499b-502a / *Frogs* [1008–1098] 576b-577c / *Lysistrata* [387–425] 588a-b
6 HERODOTUS: *History*, BK I, 2d-3d; BK III, 95a-98a; BK VII, 222c-d; BK IX, 311b-312d
6 THUCYDIDES: *Peloponnesian War*, BK VI, 513a-d; 516c
7 PLATO: *Republic*, BK II, 318a-319a; BK III, 326c-339a; BK IV, 346a-355a; BK VIII, 407a-408a; 409d-411d; BK IX, 416a-418c / *Critias*, 481a; 485b-c / *Statesman*, 605d-608d / *Laws*, BK III, 669b-671a; 672d-676c; BK IV, 679c-d; BK VIII, 733b-d; BK IX, 751b-d / *Seventh Letter*, 801b-c; 806d-807a
9 ARISTOTLE: *Ethics*, BK IX, CH 8 [1168^{b}23-1169^{a}11] 422b-d / *Politics*, BK I, CH 13 454a-455a,c; BK II, CH 5 [1263^{b}7-14] 458d; CH 6 [1265^{a}28-37] 460c-d; CH 9 [1269^{b}13-1270^{a}14] 465d-466b; BK III, CH 4 [1277^{b}16-29] 474d-475a; BK VII, CH 5 [1326^{b}26-37] 530d-531a; CH 15 [1334^{a}11-36] 539a-b / *Rhetoric*, BK I, CH 9 [1366^{a}33-^{b}15] 608d-609a
12 EPICTETUS: *Discourses*, BK II, CH 10, 149c-d; BK III, CH 7, 184a
12 AURELIUS: *Meditations*, BK I, SECT 16 254d-255d
14 PLUTARCH: *Lycurgus* 32a-48d esp 48b-c / *Lysander*, 361b-d / *Agesilaus*, 489d-490b / *Alexander*, 549d-551c / *Cato the Younger*, 621c-622b / *Cleomenes*, 661a-d / *Demosthenes*, 699c-700a
15 TACITUS: *Annals*, BK III, 57b-58d; BK VI, 86a-b; BK XV, 166b-c / *Histories*, BK II, 230d-231a
21 DANTE: *Divine Comedy*, HELL, XIX 26d-28b; PURGATORY, XIX–XX 81c-85a
24 RABELAIS: *Gargantua and Pantagruel*, BK III, 133b-140b
25 MONTAIGNE: *Essays*, 436c-438b
26 SHAKESPEARE: *Richard III*, ACT III, SC VII [1–80] 129d-130c / *1st Henry IV*, ACT I, SC III [1–21] 437d-438a; ACT III, SC II [11–161] 453a-454c / *2nd Henry IV*, ACT IV, SC V [97–184] 495b-496b; ACT V, SC II [122–145] 499b / *Henry V*, ACT I, SC I [24–69] 533b-c
27 SHAKESPEARE: *Troilus and Cressida*, ACT V, SC I 133b-134c; SC II [190–197] 136d-137a / *Measure for Measure*, ACT I, SC IV [31–54] 178b-c; ACT II, SC II [162–187] 183d-184a; SC IV [1–17] 184c-d; [111–187] 185d-186c; ACT III, SC II [275–296] 192b / *Macbeth*, ACT IV, SC III [1–139] 303b-304d / *Pericles*, ACT I, SC I–II 421d-425a
38 MONTESQUIEU: *Spirit of Laws*, BK II, 8d-9a,c; BK III, 10a; 10c-11a; BK V, 18d-19d; 23a-b; BK VI, 37d-38b; BK VIII, 51a-53a; BK XII, 94d-95b; BK XXIX, 262a-b
39 SMITH: *Wealth of Nations*, BK II, 146a-148c; 149d-150a; BK V, 346c-347d
40 GIBBON: *Decline and Fall*, 35a-39c passim; 55c-56a; 138d-140c passim; 256c-257a; 338d-340c; 448c-449b
43 FEDERALIST: NUMBER 1, 29d-30c; NUMBER 37, 118a; NUMBER 62, 190b; NUMBER 63, 192c-d
43 MILL: *Liberty*, 302d-312a passim
44 BOSWELL: *Johnson*, 393a-c
46 HEGEL: *Philosophy of Right*, PART III, par 185 64b-d
49 DARWIN: *Descent of Man*, 315c-316a; 325b-327a passim
54 FREUD: *General Introduction*, 452c-d; 573c

5b. The temperance of a people: luxurious indulgences; the intemperance of the mob

OLD TESTAMENT: *Exodus*, 16:1-3 / *Numbers*, 11 / *Isaiah*, 3:16-26—(*D*) *Isaias*, 3:16-26 / *Ezekiel*, 7:17-27—(*D*) *Ezechiel*, 7:17-27 / *Amos*, 6
5 EURIPIDES: *Orestes* [682–716] 400d-401a; [866–956] 402d-403d
6 HERODOTUS: *History*, BK I, 46c-d; 47c; BK IX, 305d-306a; 314a,c
6 THUCYDIDES: *Peloponnesian War*, BK I, 370a-c; BK II, 400c-401a; BK III, 436c-438b
7 PLATO: *Republic*, BK II, 318a-319a; BK III, 326c-328b; BK IV, 342a-d; BK VIII, 408b-411d
9 ARISTOTLE: *Politics*, BK II, CH 9 [1269^{b}13-1270^{a}14] 465d-466b

14 PLUTARCH: *Lycurgus* 32a-48d esp 36b-37b / *Lycurgus-Numa* 61b,d-64a,c esp 62a-b / *Agis*, 648b,d-649b
15 TACITUS: *Annals*, BK III, 57b-58d / *Histories*, BK I, 197d-199b; 204b-d; 206b; 210d-212b; 213d-214b; BK II, 222b-c; 232d-233a; 238d-239c; BK III, 264b-265d; BK IV, 277c-d
18 AUGUSTINE: *City of God*, BK I, CH 30-33 147b-149a
25 MONTAIGNE: *Essays*, 54b-d
26 SHAKESPEARE: *2nd Henry VI*, ACT IV 56a-64d / *2nd Henry IV*, ACT I, SC III [85-110] 473d-474a
27 SHAKESPEARE: *Coriolanus*, ACT I, SC I [1-225] 351a-353d
38 MONTESQUIEU: *Spirit of Laws*, BK III, 10a; BK V, 18d-19d; BK VII, 44a-47a; BK VIII, 51a-52c; BK XVI, 118a-b
39 SMITH: *Wealth of Nations*, BK V, 346c-347d
40 GIBBON: *Decline and Fall*, 90a-c; 92c-d; 216a-c; 509b-510d
41 GIBBON: *Decline and Fall*, 94d; 397c-398a; 551b-552d
43 MILL: *Representative Government*, 329c
44 BOSWELL: *Johnson*, 210d-211b
46 HEGEL: *Philosophy of History*, INTRO, 198b-199b; PART IV, 316c-d
52 DOSTOEVSKY: *Brothers Karamazov*, BK VI, 164b-165c
53 JAMES: *Psychology*, 719a-720a
54 FREUD: *Group Psychology*, 666a-668c passim; 670d-671c / *Civilization and Its Discontents*, 787b

5c. Laws concerning temperance: the extent to which the sphere of temperance can be regulated by law

OLD TESTAMENT: *Exodus*, 20:14,17 / *Leviticus*, 10:8-11; 18:22-23 / *Deuteronomy*, 5:18,21; 21:18-21; 23:17
NEW TESTAMENT: *Matthew*, 5:27-28
5 EURIPIDES: *Bacchantes* [215-369] 341d-343a
7 PLATO: *Gorgias*, 283a-285a / *Republic*, BK IV, 348a-d / *Laws*, BK I-II, 643a-663d esp BK II, 663b-d; BK III, 675c-676b; BK VI, 708c-709a; 712b; BK VII, 713c-716b esp 713c; 718c-720d; BK VIII, 731d-738c
9 ARISTOTLE: *Ethics*, BK II, CH 1 348b,d-349b passim, esp [1103^b2-6] 349a; BK V, CH 1 [1129^b12-24] 377a; BK X, CH 9 [1179^b4-1180^a33] 434b-435a / *Politics*, BK II, CH 9 [1269^b13-1270^a14] 465d-466b; BK VII, CH 17 [1336^a23-$^b24$] 541b-d
14 PLUTARCH: *Lycurgus* 32a-48d esp 36b-37b / *Lycurgus-Numa*, 61b,d-62c / *Lysander*, 361c-d
15 TACITUS: *Annals*, BK II, 31a-b; BK III, 57b-58d
20 AQUINAS: *Summa Theologica*, PART I-II, Q 96, AA 2-3 231c-233a; Q 100, AA 2-7 252b-259c; A 11, ANS and REP 3 263c-264d; Q 108, A 3, REP 1 334a-336b
21 DANTE: *Divine Comedy*, PURGATORY, XVI [85-114] 77d-78a
25 MONTAIGNE: *Essays*, 131b-132a
27 SHAKESPEARE: *Measure for Measure*, ACT II, SC I [225-270] 181a-c; ACT III, SC II [91-128] 190c-d
30 BACON: *Advancement of Learning*, 54a-b
32 MILTON: *Areopagitica*, 390a-b; 393a-395b
38 MONTESQUIEU: *Spirit of Laws*, BK V, 18b,d-19d; BK VII, 44d-48a; 49a-50c; BK XII, 86b; 87c-88a; BK XIV, 105c-106b; BK XVI, 119d
38 ROUSSEAU: *Social Contract*, BK IV, 434b-435a
39 SMITH: *Wealth of Nations*, BK II, 150a; BK IV, 211a-b; BK V, 346c-347d
40 GIBBON: *Decline and Fall*, 100c-101b
41 GIBBON: *Decline and Fall*, 93d-94a
42 KANT: *Intro. Metaphysic of Morals*, 383a-b; 389a-b
43 CONSTITUTION OF THE U.S.: AMENDMENTS, XVIII 19c-d; XXI 20c
43 FEDERALIST: NUMBER 12, 58b-c
43 MILL: *Liberty*, 292b-293b; 302d-312a passim, esp 309d-310c; 314a-316b
44 BOSWELL: *Johnson*, 301c-d
54 FREUD: *Group Psychology*, 690b-c

6. The extremes of temperance and intemperance

6a. Asceticism: heroic temperance

OLD TESTAMENT: *Genesis*, 39:7-21 / *Exodus*, 24:18; 34:28 / *Numbers*, 6:1-21 / *Judges*, 13:1-7 / *I Kings*, 19:4-8—(*D*) *III Kings*, 19:4-8
NEW TESTAMENT: *Matthew*, 4:1-11; 19:12 / *Mark*, 1:12-13 / *Luke*, 1:5-17 esp 1:15; 4:1-13 / *I Corinthians*, 7:36-38; 9:24-27 / *I Timothy*, 4:1-10
5 EURIPIDES: *Hippolytus* 225a-236d
7 PLATO: *Laws*, BK VIII, 737c-738c
12 EPICTETUS: *Discourses*, BK III, CH 15 190a-191a
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(6. The extremes of temperance and intemperance. 6a. Asceticism: heroic temperance.)

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39 SMITH: *Wealth of Nations*, BK V, 347a-d
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42 KANT: *Practical Reason*, 327a-d
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6b. The dionysiac spirit: the cult of pleasure

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4 HOMER: *Odyssey*, BK X [210-465] 238b-240d
5 EURIPIDES: *Alcestis* [782-802] 244a / *Bacchantes* 340a-352a,c / *Cyclops* [139-174] 441c-d; [495-589] 444d-445d
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6 HERODOTUS: *History*, BK II, 77a-b
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14 PLUTARCH: *Alcibiades*, 161d-162b / *Lucullus*, 419b-420b / *Alexander*, 572b-d / *Demetrius*, 732d-733a; 747b / *Antony* 748a-779d esp 751b-c, 755d-756c, 757c-758c / *Antony-Demetrius*, 780c-d / *Dion*, 783c-784a
15 TACITUS: *Annals*, BK III, 57b-58d; BK VI, 86a-b; BK XI, 103b-c; 107b-c; 108b-c; BK XIV, 145a-d; BK XV, 166b-c
19 AQUINAS: *Summa Theologica*, PART I, Q 18, A 2, REP 2 105c-106b
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40 GIBBON: *Decline and Fall*, 38a-b; 60a-c; 649d-650b
41 GIBBON: *Decline and Fall*, 174c-175c
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43 MILL: *Utilitarianism*, 447b-449c
46 HEGEL: *Philosophy of History*, PART I, 228b-c
47 GOETHE: *Faust*, PART I [3835-4222] 93b-103a
51 TOLSTOY: *War and Peace*, BK VIII, 321d-322d; 334d-335a
52 DOSTOEVSKY: *Brothers Karamazov*, BK I, 4a-d; BK III 46a-82a,c passim

CROSS-REFERENCES

For: The general theory of virtue in its bearing on temperance, and for discussions bearing on the nature of temperance, *see* DESIRE 6a; EMOTION 4b(1); MIND 9b-9c; PLEASURE AND PAIN 8a; VIRTUE AND VICE 1, 1c, 5a-5c.

Temperance in relation to knowledge and to other virtues, *see* COURAGE 4; PRUDENCE 3b, 3d; VIRTUE AND VICE 1b-1c, 2a(1), 3a-3b.

Other discussions of continence, *see* PRUDENCE 3d; VIRTUE AND VICE 1e.

The consideration of extreme forms of intemperance, *see* DESIRE 7a-7a(3); INFINITY 6a; SIN 4c; WEALTH 10e(3).

Other discussions which show the relation of temperance to duty and happiness, *see* HAPPINESS 2b(3); VIRTUE AND VICE 1d, 6a.

The problems involved in training a temperate character, *see* EDUCATION 4a-4d; PUNISHMENT 3a; VIRTUE AND VICE 4a-4d(4); and for the extent to which temperance can be regulated by law, *see* LAW 6d; PLEASURE AND PAIN 9; VIRTUE AND VICE 4d(3).

The issue concerning asceticism and self-denial, *see* DESIRE 6b; PLEASURE AND PAIN 7b; RELIGION 3d; VIRTUE AND VICE 8f-8g; WEALTH 10e(2).

Another consideration of the dionysiac or bacchic spirit, *see* PLEASURE AND PAIN 4d, 7b.

ADDITIONAL READINGS

Listed below are works not included in *Great Books of the Western World*, but relevant to the idea and topics with which this chapter deals. These works are divided into two groups:

I. Works by authors represented in this collection.
II. Works by authors not represented in this collection.

For the date, place, and other facts concerning the publication of the works cited, consult the Bibliography of Additional Readings which follows the last chapter of *The Great Ideas.*

I.

PLUTARCH. "Of Curiosity, or an Over-Busy Inquisitiveness into Things Impertinent," in *Moralia*
AUGUSTINE. *Of Continence*
AQUINAS. *Summa Theologica*, PART II–II, QQ 141–170
A. SMITH. *The Theory of Moral Sentiments*, PART VI, SECT III

II.

CICERO. *De Officiis* (*On Duties*)
HORACE. *Satires*, BK II (2)
BERNARD OF CLAIRVAUX. *On Consideration*
CALVIN. *Institutes of the Christian Religion*, BK III, CH 10
SPENSER. *The Faerie Queene*, BK II
H. MORE. *An Account of Virtue* (*Enchiridion Ethicum*), BK II, CH 7, 9; BK III, CH 8
BOSSUET. *Traité de la concupiscence*
MANDEVILLE. *The Fable of the Bees*
J. BUTLER. *Fifteen Sermons upon Human Nature*
FRANKLIN. *Poor Richard's Almanack*
SCHOPENHAUER. *The World as Will and Idea*, VOL I, BK IV
T. H. GREEN. *Prolegomena to Ethics*, BK III, CH 5
NIETZSCHE. *Thus Spake Zarathustra*
——. *The Genealogy of Morals*, III
WEBER. *The Protestant Ethic and the Spirit of Capitalism*, CH 4–5
HILDEBRAND. *In Defense of Purity*
MERSCH. *Love, Marriage and Chastity*
VANN. *On Being Human*
HUIZINGA. *In the Shadow of Tomorrow*

Chapter 92: THEOLOGY

INTRODUCTION

IT has seldom been disputed that the questions with which theology deals are of critical significance for all the rest of human knowledge. Even those who deny that theology is or can be a science might be willing to concede that, if it were, it would deserve its traditional title, "queen of the sciences."

It has been said that the great questions of theology are unanswerable. It has been said that theological dispute or controversy is futile because the issues are not resolvable by argument. But it has rarely been asserted, or even implied, that our outlook would be unaltered and our actions unaffected if we could know, in any degree, the answers to questions concerning the existence of the supernatural and its relation to the visible world of nature. To Plato it is of such importance that he asks: "Who can be calm when he is called upon to prove the existence of the gods?"

The main controversy, not in, but about, theology turns on the use of such words as "knowledge" and "science" for a discipline which, both in method and conclusion, seems compelled to go beyond experience and to push reason to (or even beyond) the limit of its powers. In the minds of many, especially in our day, theology is associated with religion and is opposed to science or, if not opposed, at least it is set apart from science as entirely different. Those who conceive science as limited by its empirical methods to the investigation of observable phenomena might not quarrel with the allocation of theology to philosophy, but whether or not they did would in turn depend on their conception of philosophy.

As the chapters on SCIENCE and PHILOSOPHY indicate, these two terms are identified through a large part of the western tradition. The various sciences are regarded as branches of philosophy. But we also find a distinction being made in the 18th century between the empirical and rational or philosophical sciences; and in our day those who regard philosophy as mere speculation or opinion contrast it to the experimental disciplines which are thought to be the *only* established bodies of knowledge, that is, sciences.

The question whether theology is a science may, therefore, embrace a number of alternatives. That it is an empirical or experimental science has seldom been proposed. It may be treated as a science, however, by those who consider it as a part of philosophy; or it may be denied that honor precisely because it belongs to philosophy. A third alternative remains—that theology is separate from philosophy, that it is a science as distinct in character from the philosophical sciences as they are from the experimental disciplines. In this third alternative, the association of theology with religion or religious faith seems to determine the character of theology.

It is this third alternative which Hume seems to have in mind at the conclusion of his *Enquiry*. "Divinity or Theology, as it proves the existence of a Deity and the immortality of souls . . . has," he writes, "a foundation in *reason*, so far as it is supported by experience. But its best and most solid foundation is *faith* or divine revelation." To the extent that its principles come from religious faith, theology does not seem to fit perfectly into Hume's twofold division of the sciences into those which involve "abstract reasoning concerning quantity or number" and those which involve "experimental reasoning concerning matter of fact and existence."

When he says that he would commit to the flames "any volume of divinity or school metaphysics which does not contain either of these two kinds of reasoning"—for then "it can contain nothing but sophistry and illusion"—he can hardly be condemning the theology he has

himself described as resting primarily on faith or divine revelation, though it may also have some foundation in reasoning from experience.

THE DISCUSSION OF THE nature and scope of theology, its principles and methods, may refer either to the theology which is a part of philosophy or to the theology which is sometimes called "dogmatic" because it expounds and explains the dogmas of a religious faith. Furthermore, those who make the distinction between the two kinds of theology raise questions concerning their relation to one another. In so doing they enter into the larger problem of the relation of faith and reason, and the limited part which reason can play in the development of a theology which rests on faith.

The distinction itself is made by many writers and in diverse ways. The theology which is entirely philosophical and independent of any religious faith is usually called "natural theology." The name "sacred theology" is given to a body of doctrine which finds its fundamental principles in the articles of a religious faith. The ultimate source of these articles of faith in Jewish, Christian, and Mohammedan theology is the truth revealed in a sacred scripture—the Old and New Testament or the Koran—from which, by interpretation, the articles of faith are drawn.

Bacon, for example, defines "divine philosophy or natural theology" as "that knowledge or rudiment of knowledge concerning God, which may be obtained by the contemplation of his creatures; which knowledge may be truly termed divine in respect of the object, and natural in respect of the light. The bounds of this knowledge are that it suffices to convince atheism, but not to inform religion." In contrast, "inspired theology" or "sacred theology (which in our idiom we call divinity) is grounded only upon the word and oracle of God, and not upon the light of nature."

Kant makes a similar distinction when he says that theology is based either "on reason alone (*theologia rationalis*) or upon revelation (*theologia revelata*)." But for Kant "natural theology" designates only one kind of rational theology. Another kind is "transcendental theology," which differs from the first in the method which reason employs. He also differentiates between speculative and moral theology. Though both fall within the sphere of reason, one is the work of the pure theoretic reason, the other of the pure practical reason.

In the opening question of the *Summa Theologica*, Aquinas tries to explain why, in addition to the "philosophical science built up by reason, there should be a sacred science learned through revelation." To an objection which claims that "there is no need of any further knowledge," because philosophical science can attain to knowledge even of God Himself, he replies that "there is no reason why those things which may be learnt from philosophical science, so far as they can be known by natural reason, may not also be taught us by another science so far as they fall within revelation." Though they may deal with the same object, "sciences are differentiated according to the various means through which knowledge is obtained. . . . Hence the theology included in sacred doctrine differs in kind from that theology which is part of philosophy."

In another place, Aquinas refers to the theological conclusions which the philosopher thinks he can demonstrate—"the existence of God and other like truths about God which can be known by natural reason." Of these he says that they "are not articles of faith, but are preambles to the articles. . . . Nevertheless," he adds, "there is nothing to prevent a man, who cannot grasp a proof, accepting as a matter of faith, something which in itself is capable of being scientifically known and demonstrated." But such propositions, which belong to both reason and faith, are only part of sacred doctrine. In addition, there are the propositions which belong to faith alone.

"It is impossible," Aquinas writes, "to attain to the knowledge of the Trinity by natural reason." The triune nature of the Godhead cannot be demonstrated philosophically; nor can the dogma be fully comprehended by human understanding. In Purgatory, Dante learns that "Mad is he who hopes that our reason can traverse the infinite way which One Substance in Three Persons holds."

Though it is not a theological mystery in the same sense, another example of a dogma not demonstrable by reason is the proposition that the world began to be. "That the world did not

always exist," Aquinas declares, "we hold by faith alone; it cannot be proved demonstratively; which is what was said above of the mystery of the Trinity." We find in Sacred Scripture the words *In the beginning God created heaven and earth*, "in which words the newness of the world is stated" and so "the newness of the world is known only by revelation."

With respect to such matters as belong to faith alone, a theologian like Aquinas cautions against the misuse of reason. "When anyone in the endeavor to prove what belongs to faith, brings forward arguments which are not cogent, he falls under the ridicule of the unbelievers; since they suppose that we base ourselves upon such arguments, and that we believe on their account. Therefore, we must not attempt to establish what is of faith, except by authority alone" and only "to those who accept the authority." For those who do not accept the authority of Scripture, the most that reason can do concerning propositions peculiar to faith is "to prove that what faith teaches is not impossible." Elsewhere Aquinas points out that "although the argument from authority based on human reason is the weakest, yet the argument from authority based on divine revelation is the strongest."

THE FOREGOING THROWS some light on Montaigne's defense of a book by Raimond de Sebonde, bearing the title *La theologie naturelle*. Though he calls his work "natural theology," de Sebonde, according to Montaigne, "undertakes by human and natural reasons to establish and make good against the atheists all the articles of the Christian religion." What his opponents "reprehend in his work is that Christians are to blame to repose upon human reasons their belief, which is only conceived by faith and the particular inspiration of divine grace."

Montaigne agrees that it is "faith alone that vividly and certainly comprehends the deep mysteries of our religion." But he also thinks that it is "a brave and very laudable attempt to accommodate the natural and human capabilities that God has endowed us with to the service of our faith. It is not to be doubted," he says, "that it is the most noble use we can put them to, and that there is no design or occupation more worthy of a Christian man than to make it the aim and end of all of his thoughts and studies to embellish, extend, and amplify the truth of his belief."

The conception of natural theology which Montaigne appears to entertain in his "Apology for Raimond de Sebonde" does not seem to differentiate it from sacred theology, insofar as all its principles are articles of faith. Quite apart from de Sebonde, Montaigne himself does not think that the existence of God or the immortality of the soul can be demonstrated by reason. Montaigne observes "how short the most constant and firm maintainers of this just and clear persuasion of the immortality of the soul fall, and how weak their arguments are, when they go about to prove it by human reason. . . . Let us ingenuously confess that God alone has dictated it to us, and faith; 'tis no lesson of nature and our own reason."

Though the denial of God's existence is, according to Montaigne, "a proposition unnatural and monstrous, difficult also and hard to establish in the human understanding," he thinks the affirmation to be no less beyond reason's power to establish with certitude, for "all things produced by our own reasoning and understanding, whether true or false, are subject to incertitude and controversy."

In this, Montaigne differs not only from a theologian like Aquinas, who assigns certain truths to natural theology as capable of being demonstrated by reason without the aid of faith, but also from such philosophers as Descartes, Spinoza, and Locke, who hold that we can know God by reason with more certainty, and even (according to Spinoza) more adequately, than we can know most other things. "I have always considered," Descartes writes, "that the two questions respecting God and the Soul were the chief of those that ought to be demonstrated by philosophical rather than theological argument. For although it is quite enough for us faithful ones to accept by means of faith the fact that the human soul does not perish with the body, and that God exists, it certainly does not seem possible ever to persuade infidels of any religion . . . unless, to begin with, we prove these two facts by means of the natural reason."

Descartes, it appears, reserves the use of the

word "theology" for sacred doctrine. What others, like Bacon, call "natural theology," he treats simply as philosophy, or that branch of it which he calls "metaphysics." Dedicating his *Meditations* to "the dean and doctors of the sacred faculty of theology in Paris," he says: "I have noticed that you, along with all the theologians, did not only affirm that the existence of God may be proved by the natural reason, but also that it may be inferred from the Holy Scriptures, that knowledge of Him is much clearer than that which we have of many created things, and, as a matter of fact, is so easy to acquire that those who have it not are culpable in their ignorance."

But Descartes wishes to confess the limitations of the mere philosopher's knowledge of God. When he came to inquire "how God may be more easily and certainly known than the things of this world," no matter how much "certainty and evidence I find in my reasons," he could not persuade himself, he says, that "all the world is capable of understanding them. . . . There are not so many in the world who are fitted for metaphysical speculations as there are for those of geometry."

Answering a critic who quotes Aquinas against him, he later writes: "I admit along with all theologians that God cannot be comprehended by the human mind, and also that He cannot be distinctly known by those who try mentally to grasp Him at once in His entirety. . . . Wherever I have said that God can be clearly and distinctly known, I have understood this to apply only to this finite cognition of ours, which is proportionate to the diminutive capacity of our minds."

SO FAR WE HAVE considered the distinction between natural and sacred theology—or between philosophy and theology—as it is made in the Christian tradition by writers conscious of the difference between faith and reason, or revelation and demonstration. In pagan antiquity, there seems to be no equivalent of sacred theology. "The various modes of worship, which prevailed in the Roman world," Gibbon tells us, "were all considered by the people as equally true; by the philosopher as equally false; and by the magistrate as equally useful. . . . The superstition of the people was not embittered by theological rancour; nor was it confined by the chains of any speculative system." It was "the elegant mythology of Homer," he says, not reasoning, which "gave a beautiful, and almost a regular form to the polytheism of the ancient world."

Of the Greek philosophers, Gibbon remarks that "they meditated on the Divine Nature as a very curious and important speculation," but only the Stoics and the Platonists "endeavored to reconcile the jarring interests of reason and piety." Plato's criticism of the poets in the *Republic* for their impiety, and his rational defense of piety in the *Laws*, accompanied by a demonstration of the existence of the gods, may be taken as examples of ancient theological discourse within a religious context. Another example, and from quite another point of view, is Cicero's *De Natura Deorum*, which Gibbon praises as the best guide to the opinions of the philosophers concerning the tenets of polytheism.

But neither Cicero nor Plato treats theology as a science. The ancient philosopher who does and who, moreover, regards theology as the highest of the speculative sciences, seems to proceed without reference to or benefit of prevailing religious beliefs. Aristotle dismisses "the school of Hesiod and all the theologians [who] thought only of what was plausible to themselves." He refers to the legends of the gods which "our forefathers in the most remote ages have handed down to their posterity . . . in the form of a myth . . . with a view to the persuasion of the multitude and to its legal and utilitarian expediency." But the highest science, which Aristotle sometimes calls "first philosophy," he also calls "theology." It deals with the immaterial and the insensible, the immovable and eternal. We may call it "theology," he writes, "since it is obvious that if the divine is present anywhere, it is present in things of this sort." In another place he says, "there are three kinds of theoretical sciences—physics, mathematics, theology . . . and of these the last named is best, for it deals with the highest of existing things."

At the beginning of the *Metaphysics*, Aristotle gives another reason for thinking that theology is a divine science: not that it is divinely inspired, but that, having the divine for

its object, it is the science "most meet for God to have. . . . Such a science either God alone can have, or God above all others." The title given the book in which Aristotle attempts to develop this science comes in the later tradition to be the name given to speculation concerning immaterial and insensible substances. What Aristotle calls "theology," Descartes, as we have seen, calls "metaphysics" in order to distinguish it from the theology based on revelation.

Whether the theology of a pagan philosopher is commensurable with the theology of Jewish or Christian thinkers, even when the latter attempt to be purely philosophical or natural theologians, is a question which deeply probes the relation of reason to faith. For even when reason tries to proceed independently of faith, the religious faith of a community may tinge the concepts the philosopher uses and define the problems he undertakes to solve. It may be one thing to prove the existence of a Prime Mover, and another to know by reason the nature and existence of the God who in the beginning created heaven and earth—the God of Abraham, Isaac and Jacob, the God of the Christians, whom Pascal distinguishes from the God of the philosophers.

Augustine explains his attitude as a theologian toward the theories of the philosophers touching divine matters. "I have not undertaken," he says, "to refute all the vain theological opinions of all the philosophers, but only of such of them as, agreeing in the belief that there is a divine nature, and that this divine nature is concerned about human affairs, do nevertheless deny that the worship of the one unchangeable God is sufficient for the obtaining of a blessed life after death, as well as at the present time." Since "Plato defined the wise man as one who imitates, knows, and loves this God, and who is rendered blessed through fellowship with Him in His own blessedness, why discuss with the other philosophers? It is evident that none come nearer to us than the Platonists."

Plato, according to Augustine, "is justly preferred to all the other philosophers of the Gentiles"; those among his followers who show "the greatest acuteness in understanding him . . . entertain such an idea of God as to admit that in Him are to be found the cause of existence, the ultimate reason for the understanding, and the end in reference to which the whole life is to be regulated." So amazing, to his mind, are the parallels between certain insights expressed by Plato and the wisdom of Sacred Scripture, that Augustine is almost inclined to believe that "Plato was not ignorant of those writings." But he does not think it necessary to determine whether Plato had acquaintance with the writings of Moses and the prophets, because certain basic truths, which were revealed to the Hebrews, were made known to the gentiles through the light of nature and reason. "That which is known of God," the apostle had said, "has been manifested among them, for God hath manifested it to them."

Therefore Augustine feels justified in taking any truth from Plato which is consistent with Christian faith. Aquinas, borrowing much from Aristotle, explains that "sacred doctrine makes use of the authority of philosophers in those questions in which they were able to know the truth by natural reason." Sacred theology uses the doctrines of the philosophers, he adds, "not as though it stood in need of them, but only in order to make its teaching clearer." It is in this sense that Aquinas calls philosophy the handmaiden of theology.

Others seem to take a different view of this relationship. Montaigne wonders whether it would not be better if "the divine doctrine, as queen and regent of the rest," kept herself apart, and he quotes St. Chrysostom to the effect that philosophy has "long been banished from the holy schools as a handmaid altogether useless." Hobbes goes further. He describes the traditional theology as a mingling of Aristotle's metaphysics with Scripture, and claims that the "bringing of the philosophy and doctrine of Aristotle into religion by the Schoolmen" caused the "many contradictions and absurdities" which "brought the clergy into a reputation both of ignorance and of fraudulent intention, and inclined people to revolt from them."

Hegel, however, dismisses the criticism that is often made concerning the dependence of Christian theology, at least in its formative period, on pagan philosophy. "The Fathers of the Church and the Councils," he writes, "constituted the dogma; but a chief element in this constitution was supplied by the previous de-

velopment of *philosophy*." That certain dogmas were introduced into the Christian religion through "the instrumentality of philosophy . . . is not sufficient ground for asserting that they were foreign to Christianity and had nothing to do with it. It is a matter of perfect indifference where a thing originated; the only question," Hegel insists, "is, 'Is it true in and for itself?' Many think that by pronouncing the doctrine to be Neo-Platonic, they have *ipso facto* banished it from Christianity. Whether a Christian doctrine stands exactly thus and thus in the Bible . . . is not the only question. The Letter kills, the Spirit makes alive."

COMPARED WITH SACRED theology, the subject matter of natural theology and the scope of its problems seem to be extremely narrow. At most, it is only a part of philosophy, and some writers treat it as no more than one part of metaphysics.

Kant, for example, divides metaphysics into three parts—theology, cosmology, and psychology—according to his conception of metaphysics as having "for the proper object of its inquiries only three grand ideas: God, Freedom, and Immortality." As a branch of transcendental speculation, theology is concerned primarily with the problem of God's existence. Similarly, Aristotle's metaphysical inquiries include more than his theology. His theology begins only after he has discussed the nature and being of sensible substances. It is stated mainly in Book XII of the *Metaphysics* where he considers the existence and character of immaterial substances, and of the one purely actual being which is God.

Descartes' conception seems to be broader, for he regards the immortality of the soul as well as the existence and nature of God as being characteristically theological problems even when they are treated in metaphysics and by the methods of the philosopher. Because these two problems concern spiritual beings, Adam Smith also groups them together under the name "pneumatics" or "pneumatology," which he identifies with metaphysics—that part of philosophy most emphasized "in the universities of Europe where philosophy was taught only as subservient to theology." Bacon alone seems to separate natural theology entirely from metaphysics, which, along with physics, is for him a part of natural rather than divine philosophy. But though he would limit natural theology to that knowledge of God which can be drawn from nature, and excludes attempts to induce from nature "any verity or persuasion concerning the points of faith," he grants that natural as well as divine theology may treat of "the nature of angels and spirits," as "neither inscrutable nor interdicted."

The subject matter of sacred theology, or what he calls "divinity," is, according to Bacon's account, much more extensive. He first divides it into "matter of belief" and "matter of service and adoration"; and from these two derives the "four main branches of divinity: faith, manners, liturgy, and government." The matter of faith contains "the doctrine of the nature of God, of the attributes of God, and of the works of God." Under manners, Bacon lists the consideration of divine law and the breach of it by sin: liturgy concerns the sacraments and rituals of religion; government, the organization, offices, and jurisdictions of the church.

As its title indicates, the *Summa Theologica* of Aquinas endeavors to set forth the sum of theological knowledge. In addition to the topics and problems peculiar to sacred doctrine, the subject matters treated in the *Summa* seem to represent the whole range of human inquiry—almost co-extensive with the scope of the natural sciences and philosophy, both speculative and moral.

Aquinas explains the encyclopedic character of the *Summa* by pointing out that to have God as the subject matter of theology means that sacred doctrine treats "all things under the aspect of God, either because they are God Himself, or because they refer to God as their beginning and end." The unity of theology in covering so wide a diversity of matters consists in the single formality under which they are considered—the formality of being divinely revealed. That is why "objects which are the subject matter of different philosophical sciences can yet be treated by this one single sacred science under one aspect, namely, insofar as they can be included in revelation."

Thus, for example, in the preamble to his Treatise on Man, Aquinas writes: "The theologian considers the nature of man in relation to

the soul; but not in relation to the body, except insofar as the body has relation to the soul." This emphasis is dictated by the articles of Christian faith which concern man, in both body and soul. Similarly, with respect to moral matters, Aquinas explains that the theologian "considers human acts inasmuch as man is thereby directed to happiness," and he takes account of the circumstances of human acts because they may excuse from sin, "the consideration of which belongs to the theologian." It belongs to the theologian only when sin is conceived "as an offense against God," but to the moral philosophers when it is conceived "as something contrary to reason."

IT APPEARS FROM THE foregoing that sacred theology is both speculative and practical (or moral). It deals with the nature of divine things and with human acts, but with the latter only so far as they have God for their rule or end. "Although among the philosophical sciences," Aquinas writes, "some are speculative and others practical, sacred doctrine includes both."

Even though it is made on the level of the philosophical sciences, Kant's distinction between speculative and moral theology seems to be based on a different principle. For Aquinas the speculative and the practical parts of theology deal with different problems, such as God, the Trinity, creation, and the angels on the one hand, and beatitude, the virtues, divine law, sin, grace, and sacraments on the other. But for Kant both speculative and moral theology deal with the problem of God's existence. They differ only according to the manner in which the theoretic and the practical reason undertake to solve this problem.

"All attempts of reason to establish a theology by the aid of speculation alone are fruitless," writes Kant. Consequently, "a rational theology can have no existence unless it is founded upon the laws of morality." The postulates of pure practical reason—of immortality, free will, and the existence of God—"all proceed from the principle of morality, which is not a postulate but a law by which reason determines the will directly." The moral law involves, as a necessary condition, "the existence of the *summum bonum*," and that in turn involves "the supposition of the supreme independent good, that is, the existence of God."

According to Kant, a Supreme Being is "for the speculative reason, a mere ideal, though a faultless one—a conception which perfects and crowns the system of human cognition, but the objective reality of which can neither be proved nor disproved by pure reason." It is this defect which moral theology remedies. "We must assume," he says, "a moral world-cause, that is, an Author of the world, if we are to set before ourselves a final end in conformity to the moral law." But, he adds, "this moral argument is not intended to supply an objectively valid proof of the existence of God. It is not meant to demonstrate to the skeptic that there is a God, but that he *must adopt* the assumption of this proposition as a maxim of his practical reason, if he wishes to think in a manner consistent with morality."

THE PROBLEM OF THE proof of God's existence, though central in theology, is more fully discussed in the chapter on GOD. Here we are concerned with the nature of theology itself as a branch of learning or inquiry. Since the chapter on METAPHYSICS necessarily touches on theology as a philosophical discipline, it seems advisable to devote attention here to some of the things which are peculiarly the concern of sacred theology.

Heresy is one of these. A scientist or philosopher may be criticized for his errors, but only a theologian, only the man who tries to explain some article of faith, can be called a heretic in the strict sense of that word. According to his view of the relation between church and state, Hobbes defines heresy in political terms. "Heresy," he writes, "is nothing else but a private opinion, obstinately maintained, contrary to the opinion which the Public Person" —*i.e.*, the Sovereign—"has commanded to be taught." But, according to Pascal, "none but God was able to instruct the Church in the faith," and so "it is heresy to resist the decisions of the faith, because this amounts to an opposing of our own spirit to the Spirit of God." But, he adds, "it is no heresy, though it may be an act of presumption, to disbelieve certain particular facts, because this is no more than opposing reason—it may be enlightened reason—

to an authority which is great indeed, but in this matter is not infallible."

The aspect of choice, of obstinately preferring one's own opinion against a superior authority, is emphasized by Aquinas, but he adds the specification that heresy is a corruption of Christian faith, a species of unbelief in which the heretic defies the authority of the Church, choosing "not what Christ really taught, but the suggestions of his own mind." He quotes a statement by Augustine that we should not accuse of heresy "those who, however false and perverse their opinion may be, defend it without obstinate fervor" and are "ready to mend their opinion when they have found the truth because they do not make a choice in contradiction to the doctrine of the Church." It is not the falsity of the opinion which makes it heresy, for until the point of faith has been defined by the authority of the Church, theologians may differ, and even be in error, without being heretical.

The inference may be drawn that progress is made in the refinement and precision of theological doctrine as the dogmas of a religion are more fully stated and the line between orthodoxy and heresy becomes more clearly defined. Augustine, who is one of the great formative theologians for the Protestant as well as the Catholic tradition, devotes a large part of his writing to the criticism of heresies—the great Arian heresy concerning the Trinity, the Nestorian or Monophysite heresy concerning the Incarnation, the Manichean heresy concerning the existence of evil, and the Pelagian heresy concerning grace and good works.

"While the hot restlessness of heretics," Augustine writes, "stirs questions about many articles of the catholic faith, the necessity of defending them forces us . . . to investigate them more accurately, to understand them more clearly, and to proclaim them more earnestly"; and the question mooted by an adversary becomes the occasion of instruction. According to Aquinas, "the profit that ensues from heresy is beside the intention of heretics, for it consists in the constancy of the faithful being put to the test and makes us shake off our sluggishness and search the Scriptures more carefully."

To Augustine and Aquinas, theological argument and controversy seem to be serviceable in the propagation and defense of the faith. Aquinas, for example, distinguishes the various types of dispute in which a Christian theologian can engage—with heretics, with Jews, with infidels. "We can argue with heretics from texts in Holy Scripture," he writes, "and against those who deny one article of faith we can argue from another. If our opponent believes nothing of divine revelation, there is no longer any means of proving the articles of faith by argument, but only of answering his objections—if he has any—against faith."

But it is necessary to add the qualification that the reasons employed "to prove things that are of faith are not demonstrations; they are either persuasive arguments showing that what is proposed by faith is not impossible; or else they are proofs drawn from the principles of faith, *i.e.*, from the authority of Holy Writ. . . . Whatever is based on these principles is as well-proved in the eyes of the faithful, as a conclusion drawn from self-evident principles is in the eyes of all."

Furthermore, Aquinas points out, "since faith rests upon infallible truth, and since the contrary of a truth can never be demonstrated, it is clear that the proofs brought against faith are not demonstrations, but arguments that can be answered." Descartes seems to hold a similar view. Defending his opinions in a letter to Father Dinet, he declares: "As to theology, as one truth can never be contrary to another, it would be a kind of impiety to fear that the truths discovered in philosophy were contrary to those of the true Faith."

A SOMEWHAT CONTRARY view of the relation of faith and reason seems to be taken by Locke. "Whatever God hath revealed," he says, "is certainly true; no doubt can be made of it. This is the proper object of faith; but whether it be a divine revelation, or no, reason must judge." Reason, not faith, is the ultimate test of truth, in theology as in philosophy. "Reason must be our last judge and guide in everything." If reason finds something "to be revealed from God, reason then declares for it, as much as for any other truth, and makes it one of her dictates."

In many of the great books we find a less

favorable view of the merit or profit in theological controversy. Its excesses and mumbo-jumbo are travestied and caricatured by Rabelais and Sterne; its futility and folly are the subject of bitter complaint by Hobbes and Bacon; its intolerance is condemned by Locke and Mill. Gibbon, who reports the disputes which raged through ten centuries of Christendom, seldom speaks kindly of the disputants. He refers to "the exquisite rancor of theological hatred"; and in describing the fury of the conflict between the Arians and the defenders of the Nicene creed, he says that, "in the midsts of their fierce contentions, they easily forgot the doubt which is recommended by philosophy, and the submission which is enjoined by religion."

In the Middle Ages, mystical theologians, like Peter Damiani or Bernard of Clairvaux, attack as impious or irreligious the kind of theology which borrows from the philosophers and makes use of the liberal arts, especially the techniques of the dialectician. In similar vein Protestant reformers, like Luther, later attack theology itself as detrimental to the purity of Christian faith and the spirit of religion. It is in this vein also that Bacon deplores the "unprofitable subtility or curiosity" and the "fruitless speculation or controversy" in divinity, and speaks of the "extreme prejudice which both religion and philosophy have received and may receive by being commixed together."

When the Student in *Faust* says, "I'm now almost inclined to try Theology," Mephistopheles replies:

> I would not wish to lead you so astray.
> In what this science touches, it would be
> So hard to shun the false, misleading way;
> So much of hidden poison lies therein,
> You scarce can tell it from its medicine.

That, however, is the voice of the devil; and from the point of view of those who see no conflict between faith and reason or between piety and inquiry, the attempt to separate religion from theology often looks diabolical.

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To find the passages cited, use the numbers in heavy type, which are the volume and page numbers of the passages referred to. For example, in **4** HOMER: *Iliad*, BK II [265-283] **12d**, the number **4** is the number of the volume in the set; the number **12d** indicates that the passage is in section d of page 12.

PAGE SECTIONS: When the text is printed in one column, the letters **a** and **b** refer to the upper and lower halves of the page. For example, in **53** JAMES: *Psychology*, **116a-119b**, the passage begins in the upper half of page 116 and ends in the lower half of page 119. When the text is printed in two columns, the letters **a** and **b** refer to the upper and lower halves of the left-hand side of the page, the letters **c** and **d** to the upper and lower halves of the right-hand side of the page. For example, in **7** PLATO: *Symposium*, **163b-164c**, the passage begins in the lower half of the left-hand side of page 163 and ends in the upper half of the right-hand side of page 164.

AUTHOR'S DIVISIONS: One or more of the main divisions of a work (such as PART, BK, CH, SECT) are sometimes included in the reference; line numbers, in brackets, are given in certain cases; *e.g.*, *Iliad*, BK II [265-283] **12d**.

BIBLE REFERENCES: The references are to book, chapter, and verse. When the King James and Douay versions differ in title of books or in the numbering of chapters or verses, the King James version is cited first and the Douay, indicated by a *(D)*, follows; *e.g.*, OLD TESTAMENT: *Nehemiah*, 7:45—*(D) II Esdras*, 7:46.

SYMBOLS: The abbreviation "esp" calls the reader's attention to one or more especially relevant parts of a whole reference; "passim" signifies that the topic is discussed intermittently rather than continuously in the work or passage cited.

For additional information concerning the style of the references, see the Explanation of Reference Style; for general guidance in the use of *The Great Ideas*, consult the Preface.

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19 AQUINAS: *Summa Theologica*, PART I, Q 28, A 1, CONTRARY 157c-158d; A 3, CONTRARY 160a-c; Q 31, A 2, ANS 172b-173c; Q 32, A 4 180b-d

(4. *Sacred theology: faith seeking understanding.* 4e. *The nature and forms of theological heresy.*)

20 AQUINAS: *Summa Theologica*, PART I–II, Q 64, A 4, REP 3 69b-70a; Q 81, A 1, ANS 163a-164d; PART II–II, Q 10, AA 5–6 429c-431b; Q 11 438a-442b
21 DANTE: *Divine Comedy*, HELL, IX [106]–XI [9] 13b-15b; PARADISE, XIII [112–142] 126c-d
23 HOBBES: *Leviathan*, PART I, 78a-b; PART III, 213d-214b; 238b-239b; PART IV, 248c-d
25 MONTAIGNE: *Essays*, 154c-d
30 BACON: *Advancement of Learning*, 101a-b
33 PASCAL: *Provincial Letters*, 128b-137b; 141a-166b / *Pensées*, 862–865 342b-343b
35 LOCKE: *Toleration*, 1d-2a; 21c-22d
38 ROUSSEAU: *Social Contract*, BK IV, 438d-439c
40 GIBBON: *Decline and Fall*, 182d-184b; 308a-b; 310b-313d passim, esp 312b-313b
41 GIBBON: *Decline and Fall*, 134a-138a; 143c-145d; 149b-152c passim; 198a-c; 422a-d
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5. Criticisms of theology: the dogmatic, sophistical, or over-dialectical character of theological controversy

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24 RABELAIS: *Gargantua and Pantagruel*, BK I, 9b; 21c-24a; BK II, 78b-80d; 101b-106a; BK III, 172d-173c; 186d-188c
35 HUME: *Human Understanding*, SECT VIII, DIV 62, 478c; SECT XI, DIV 107 499c-500b
36 SWIFT: *Gulliver*, PART I, 22b-23a
36 STERNE: *Tristram Shandy*, 222a-224a; 366a-376a; 421b-422b
39 SMITH: *Wealth of Nations*, BK V, 336b-337a
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41 GIBBON: *Decline and Fall*, 134a; 143c-145d esp 145b-c; 148a-b; 149c-d; 156a; 328a-b; 422a-d; 476b-477a
46 HEGEL: *Philosophy of History*, PART III, 313b-c; PART IV, 360c-d
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Other discussions of the relation of reason and faith, or of the relation of theology to religion, *see* KNOWLEDGE 6c(5); LOGIC 4f; OPINION 4a; PHILOSOPHY 6c; RELIGION 1a, 1b(1), 6b, 6g; TRUTH 4a; WISDOM 1c.

The relation of philosophy to theology, and for the conception of natural theology as a part of philosophy, *see* METAPHYSICS 3a; PHILOSOPHY 1a; RELIGION 6f–6g.

Discussions bearing on sacred theology as a science, and on its principles and methods, *see* LOGIC 4f; REASONING 6a; RELIGION 6b, 6c(1); SCIENCE 2a.

Discussions bearing on the nature and extent of revealed truth and on the articles of religious faith, *see* ANGEL 3–4; EVOLUTION 7a; GOD 2a, 7–9f; IMMORTALITY 3b; MAN 9b(1)–9b(3), 11a–11c; PROPHECY 4a–4d; SIN 3–3e; SOUL 4d(3); VIRTUE AND VICE 8e; WORLD 4e(3).

The problems of interpreting the Word of God or Sacred Scripture, *see* LANGUAGE 12; SIGN AND SYMBOL 5e.

Considerations relevant to the relation of theology to jurisprudence, *see* LAW 3a–3b(2).

Various attacks on theological doctrines, and for criticisms directed against the kind of speculation which is theological, *see* DIALECTIC 3c; GOD 10–13; IMMORTALITY 2; KNOWLEDGE 5c; METAPHYSICS 2d, 4a; OPINION 4b; PHILOSOPHY 6b; RELIGION 6f–6g; SOUL 3d; WILL 5c; WORLD 4a.

ADDITIONAL READINGS

Listed below are works not included in *Great Books of the Western World*, but relevant to the idea and topics with which this chapter deals. These works are divided into two groups:

I. Works by authors represented in this collection.
II. Works by authors not represented in this collection.

For the date, place, and other facts concerning the publication of the works cited, consult the Bibliography of Additional Readings which follows the last chapter of *The Great Ideas.*

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——. *Summa Contra Gentiles*, BK 1, CH 1–9
——. *Compendium of Theology*
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II.

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Chapter 93: TIME

INTRODUCTION

DEVOURING Time," "wasteful Time," "this bloody tyrant, Time"—Time is the predatory villain with whom not only the lover, but all men must contend. The sonnets of Shakespeare make war upon Time's tyranny—to stay "Time's scythe," to preserve whatever of value can be kept from "the wastes of time," and to prove that "Love's not Time's fool" entirely.

Yet, viewing the almost universal depredations of Time, the poet fears that love may not escape Time's ruin.

When I have seen by Time's fell hand defaced
The rich-proud cost of outworn buried age;
When sometime lofty towers I see down-razed,
And brass eternal slave to mortal rage;
When I have seen the hungry ocean gain
Advantage on the kingdom of the shore,
And the firm soil win of the watery main,
Increasing store with loss and loss with store;
When I have seen such interchange of state,
Or state itself confounded to decay;
Ruin hath taught me thus to ruminate,
That Time will come and take my love away.
  This thought is as a death, which cannot choose
  But weep to have that which it fears to lose.

The lover knows that he cannot save his love from change and her beauty from decay. Time is too much for him. But when the lover is also a poet he may hope to defeat Time, not by making his love last forever, but by making the memory of it immortal. "Do thy worst, old Time," he can say, "despite thy wrong, My love shall in my verse ever live young." Or again:

Since brass, nor stone, nor earth, nor boundless sea,
But sad mortality o'er-sways their power,
How with this rage shall beauty hold a plea,
Whose action is no stronger than a flower?
O, how shall summer's honey breath hold out
Against the wreckful siege of battering days,
When rocks impregnable are not so stout,
Nor gates of steel so strong, but Time decays?
O fearful meditation! where, alack,
Shall Time's best jewel from Time's chest lie hid?
Or what strong hand can hold his swift foot back?
Or who his spoil of beauty can forbid?
  O, none, unless this miracle have might,
  That in black ink my love may still shine bright.

But the poet may have the cast of a theologian rather than a lover. He may, as Milton does, stand not in awe or fear but in contempt of Time, willing to wait while Time runs out its race. Milton bids Time

. . . glut thyself with what thy womb devours,
Which is no more than what is false and vain,
And merely mortal dross;
So little is our loss,
So little is thy gain.
For when as each thing bad thou hast entomb'd,
And last of all thy greedy self consum'd,
Then long Eternity shall greet our bliss
With an individual kiss . . .
Then all this Earthly grossness quit,
Attir'd with Stars, we shall forever sit,
  Triumphing over Death, and Chance, and thee
    O Time.

A philosopher like Marcus Aurelius neither defies nor despises time. He enjoins himself to accept the mutability of all things as fitting and "suitable to universal nature. . . . Dost thou not see," he asks himself, "that for thyself also to change is just the same, and equally necessary for the universal nature?" To him it seems "no evil for things to undergo change"; nor is he oppressed by the image of Time as "a river made up of the events which happen, and a violent stream; for as soon as a thing has been seen, it is carried away, and another comes in its place, and this will be carried away too."

For man to resign himself to time's passage, Pascal thinks, requires no special effort. "Our nature consists in motion," he says; "complete rest is death." Time fits our nature, not only because it "heals griefs and quarrels," but because time's perpetual flow washes away the

desperate ennui men suffer when they feel themselves imprisoned in the present.

Just as we seek and multiply diversions as means to escape from ourselves, so, according to Pascal, when we are dissatisfied with the present, "we anticipate the future as too slow in coming . . . or we recall the past, to stop its too rapid flight. . . . For the present is generally painful to us. . . . Let each one examine his thoughts, and he will find them all occupied with the past and the future. . . . The past and present are our means; the future alone is our end. So we never live, but we hope to live; and, as we are always preparing to be happy, it is inevitable we should never be so."

THESE ARE ONLY SOME of the conflicting attitudes toward time and mutability which express man's desire for permanence, for the eternity of a now that stands still, or his restless weariness, his avidity for the novelties time holds in store. Wherever in the great books of poetry, philosophy, or history men reflect upon their loves and aspirations, their knowledge and their institutions, they face man's temporality. It is not that man alone of earthly things has a time-ridden existence, but that his memory and imagination enable him to encompass time, and so save him from being merely rooted in it. Man not only reaches out to the past and future, but he also sometimes lifts himself above the whole of time by conceiving the eternal and the immutable.

Man's apprehension of the past and future is discussed in the chapter on MEMORY AND IMAGINATION. The bent of his mind or his striving toward the unchanging, the everlasting, the eternal, is considered in the chapter on CHANGE. Here we are concerned with his examination of time itself.

Though the idea of time is traditionally linked with that of space, it seems to be much more difficult to grasp. In addition to provoking opposite emotions from the poets, it seems to engage the philosophers in a dispute about its intelligibility. This goes deeper than conflicting definitions or analyses, such as occur in the discussion of both space and time. Whereas time seems no less clear than space to some thinkers, to others it is irremediably obscure. Struggling to say what it is and how it exists, they are exasperated by its evanescence as an object of thought.

Aristotle indicates some initial difficulties in the consideration of time. It is not itself a movement, yet "neither does time exist without change. . . . Time is neither movement nor independent of movement." Furthermore, according to Aristotle, time is a continuous quantity. "Time, past, present, and future, forms a continuous whole." But the very nature of a continuous quantity is to be divisible. The present moment, however—the 'now' which is "the link of time" and the dividing line between past and future—seems to be an indivisible instant.

If the present had an extended duration, Aristotle points out, it would have to include parts, some of which would be past and some future. Hence though the present seems to be a part of time, it is, unlike the rest of time, indivisible; and though it separates past and future, yet it must also somehow belong to both, for otherwise time would not be continuous. "The 'now' is an end and a beginning of time, not of the same time however, but the end of that which is past and the beginning of that which is to come."

"If we conceive of some point of time which cannot be divided into even the minutest parts of moments," Augustine writes, "that is the only point that can be called the present; and that point flees at such lightning speed from being future to being past, that it has no extent of duration at all." Only past time and future time can be called long or short. Only they have duration. "But in what sense," Augustine asks, "can that which does not exist be long or short? The past no longer is; the future is not yet."

The past and future, it seems, have duration, or at least extent, but no existence. The present exists but does not endure. "What then *is* time? If no one asks me," Augustine says, "I know; if I want to explain it to a questioner, I do not know." All the words with which we speak of time and times "are the plainest and commonest of words, yet again they are profoundly obscure and their meaning remains to be discovered."

Augustine returns again and again to the point that "we measure time *in its passing*." But, he says, "if you ask me how I know this, my answer is that I know it because we measure

time, and we cannot measure what does not exist, and the past and future do not exist. But how do we measure time present, since it has no extent"; and "where does time come from, and by what way does it pass, and where does it go to, while we are measuring it? Where is it from?—obviously from the future. By what way does it pass?—by the present. Where does it go?—into the past. In other words, it passes from that which does not exist, by way of that which lacks extension, into that which is no longer."

The more he reflects on time and its measurement, the more Augustine is perplexed, the more he is forced to say, "I still do not know what time is." He realizes that he has been "talking of time for a long time, and this long time would not be a long time unless time has passed. But how do I know this, since I do not know what time is?" It seems to him true that we measure time, and yet he must say, "I do not know what I am measuring." It seems to him that "time is certainly extendedness—but," he must add, "I do not know what it is extendedness of."

Berkeley suggests that the difficulties in understanding time may be of our own making. "Bid your servant meet you at such a *time* in such a place, and he shall never stay to deliberate on the meaning of those words. . . . But if *time* be taken exclusive of all those particular actions and ideas that diversify the day, merely for the continuation of existence or duration in the abstract, then it will perhaps gravel even a philosopher to comprehend it.

"For my own part," Berkeley goes on to say, "whenever I attempt to frame a simple idea of *time*, abstracted from the succession of ideas in my own mind, which flows uniformly and is participated by all beings, I am lost and embrangled in inextricable difficulties. I have no notion of it at all."

TO THOSE WHO conceive time as a mathematical magnitude or as a physical dimension, there seems to be no difficulty about its definition or a precise statement of its properties. So considered, time appears to be no less intelligible than space, for when it is so considered it is being treated exactly like space—not as a property of things, not as relative to bodies or their motions, but as an extensive manifold capable of being occupied by things, and in which they exist and move.

As in what Einstein calls "the four-dimensional space-time continuum" (which comprises three space coordinates and one time coordinate) time is merely one dimension among others, so in Newton's theory time and space are also given parallel treatment. "Times and spaces," Newton writes, "are as it were, the places as well of themselves as of all other things. All things are placed in time as to order of succession; and in space as to order of situation." Einstein criticizes Newtonian mechanics for its "habit of treating time as an independent continuum," yet Newton no less than Einstein appears to conceive time and space alike as dimensions, even if he conceives them in separation from one another.

But if time and space are something to be occupied or filled, they can also be thought of as unoccupied or empty. The opposition, discussed in the chapter on SPACE, between those who think of space in itself as empty, and those who deny a void or vacuum, seems to be paralleled here by the issue concerning empty time—time apart from all change or motion, time in itself. Waiving for the moment the question whether such time exists or is only a mathematical abstraction, we can see that this time may be more susceptible to analysis than the time of ordinary experience, the time which, according to Lucretius, no one feels "by itself abstracted from the motion and calm rest of things."

Newton explains that he does not define time, space, place, and motion, because they are "well known to all." But he observes that men commonly "conceive these quantities under no other notions but from the relation they bear to sensible objects." He finds it necessary, therefore, to distinguish each of them "into absolute and relative, true and apparent, mathematical and common."

By "absolute, true, and mathematical time," Newton means that which "of itself, and from its own nature, flows equably without relation to anything external, and by another name is called duration." In contrast, "relative, apparent, and common time, is some sensible and external (whether accurate or unequable) measure of duration by the means of motion, which

is commonly used instead of true time, such as an hour, a day, a month, a year." In astronomy, Newton points out, absolute time "is distinguished from relative, by the equation or correction of the apparent time. For the natural days are truly unequal, though they are commonly considered as equal, and used for measures of time; astronomers correct this inequality that they may measure the celestial motions by a more accurate time."

Newton seems to be saying that time measures motion and also that it is measured by it. If his distinction between absolute and relative time is ignored, his theory of time does not appear to be very different from that of Aristotle, who says, "not only do we measure the movement by the time, but also the time by the movement." Insofar as movement or change involves a sequence in which one part comes after another, time measures it by numbering the *befores* and *afters*. But we also judge the length of the time according to the duration of the movement, and in this sense the movement measures time.

As both Aristotle and Augustine point out, time measures rest as well as motion, for, in Aristotle's words, "all rest is in time. . . . Time is not motion, but the 'number of motion' and what is at rest can be in the number of motion. Not everything that is not in motion can be said to be 'at rest'—but only that which can be moved, though it actually is not moved."

But where Aristotle, in defining time as the measure of motion or rest, makes time an attribute of movement, Newton regards absolute time as the perfect measure of motion precisely because its nature is independent of all physical change. Only relative time depends on motion, and that is the time which is measured by motion, not the measure of it. Those "who confound real quantities with their relations and sensible measures," Newton declares, "defile the purity of mathematical and philosophical truths."

Distinguishing between duration and time, Locke expresses in another way the difference between Newton and Aristotle. Time for Locke is that portion of duration which consists of definite periods and is measured by the motion of bodies. "We must, therefore, carefully distinguish betwixt duration itself, and the measures we make use of to judge its length. Duration in itself is to be considered as going on in one constant, equal uniform course; but none of the measures which we make use of, can be known to do so." It seems wrong to Locke to define time as the measure of motion when, on the contrary, it is motion—"the motion of the great and visible bodies of the world"—which measures time.

What Locke calls "duration" seems to be the same as Newton's absolute time. It is in no way relative to the existence of bodies or motion. Just as space or, as he calls it, "expansion," is not limited by matter, so duration is not limited by motion. As place is that portion of infinite space "which is possessed by and comprehended within the material world, and is thereby distinguished from the rest of expansion," so time is "so much of infinite duration, as is measured by, and coexistent with, the existence and motions of the great bodies of the universe."

MANY ISSUES ARE RAISED by absolute time or infinite duration conceived as independent of all bodily motions. Einstein, for example, challenges the classical notion of simultaneity, according to which two events taking place a great distance from one another are said to occur *at the same time*, that is, at the same moment in the absolute flow of time.

"Before the advent of the theory of relativity," he writes, "it had always been tacitly assumed in physics that the statement of time had an absolute significance, *i.e.*, that it is independent of the state of motion of the body of reference." But if the world of physical events is a four-dimensional manifold in which the time coordinate is always associated with the space coordinates for any reference-body under observation, then "every reference-body (coordinate system) has its own particular time"; and, Einstein adds, "unless we are told the reference-body to which the statement of time refers, there is no meaning in a statement of the time of an event."

There is also the issue of the emptiness of that part of absolute time or infinite duration which comes before or after the existence of the world, comparable to the issue concerning the void or empty space beyond the borders of the material universe. Those who regard time as

relative to and inseparable from motion deny the possibility of such empty time.

For Plato, as for Christian theologians like Augustine and Aquinas, time itself is created with the creation of the heavenly bodies and their motions. As the story of the world's becoming is told in the *Timaeus*, the maker "resolved to have a moving image of eternity, and when he set in order the heaven, he made this image eternal but moving according to number, while eternity itself rests in unity; and this image we call time. . . . Time, then, and the heaven came into being at the same instant."

Augustine undertakes to answer "those who agree that God is the Creator of the world, but have difficulties about the time of its creation." He asserts that "there is no time before the world. For if eternity and time are rightly distinguished by this, that time does not exist without some movement and transition, while in eternity there is no change, who does not see that there could have been no time had not some creature been made, which by some motion could give birth to change. . . . I do not see," Augustine continues, "how God can be said to have created the world after spaces of time had elapsed, unless it be said that prior to the world there was some creature by whose movement time could pass." But the existence of a creature prior to creation is impossible. Hence Augustine concludes that "if in the world's creation change and motion were created," then "the world and time were simultaneously created."

Though the existence of a creature prior to creation is impossible, it is not impossible, according to Aquinas, for the created world to be coeval with its Creator. While he rejects the opinion of those who assert that the world now exists without any dependence on God, and who deny that it was ever made by God, he entertains, as possible, the view that "the world has a beginning, not of time, but of creation." Those who hold this view, he explains, mean that "it was always made. . . . For just as, if a foot were always in the dust from eternity, there would always be a footprint which without doubt was caused by him who trod on it, so also the world always was, because its Maker always existed."

It does not necessarily follow, Aquinas admits, that "if God is the active cause of the world, He must be prior to the world in duration, because creation, by which He produced the world, is not a successive change." But Aquinas does not think that the question whether the world and time began with creation or has always co-existed with its Creator, can be resolved by reason. "The newness of the world," he says, "is known only by revelation. . . . That the world did not always exist we hold by faith alone; it cannot be proved demonstratively." In saying this, he is not unmindful of the fact that Aristotle advances arguments to show that there can be no beginning to either time or motion. "Since time cannot exist and is unthinkable apart from the moment, and the moment is a kind of middle point, uniting as it does in itself both . . . a beginning of future time and an end of past time, it follows that there must always be time. . . . But if this is true of time, it is evident that it must also be true of motion, time being an attribute of motion."

With one exception, all his predecessors, according to Aristotle, are in agreement that time is uncreated. "In fact," he says, "it is just this that enables Democritus to show that all things cannot have had a becoming. . . . Plato alone asserts the creation of time, saying that it had a becoming together with the universe." But Aristotle's own arguments for the eternity of time and motion do not seem to Aquinas to be "absolutely demonstrative, but only relatively so—*viz.*, as against the arguments of some of the ancients who asserted that the world began to be in some actually impossible ways." As for the present moment, or the *now* of time, always requiring something which comes *before* as well as *after*, Aquinas admits that "time cannot be made except according to some *now*," yet "not because there is time in the first *now*, but because from it time begins."

The position of Aquinas, that arguments for the initiation or the endlessness of time are only dialectical, seems to be confirmed by Kant. In the Transcendental Dialectic of the *Critique of Pure Reason*, Kant sets forth as one of the cosmological antinomies the opposed arguments for the beginning of the world and for a world without beginning. The reasoning on either side being equal in its *appearance* of cogency, nei-

ther conclusion, according to Kant, is genuinely demonstrated.

But those who, like Newton and Locke, separate absolute time or infinite duration from the existence of a world in motion, seem to be unaffected by arguments which concern only the time of the material world, the time that is relative to motion. For them, absolute or infinite time is eternity. It may be empty of motion, but it is filled with God's everlasting being. "Though we make duration boundless, as certainly it is," Locke writes, "we cannot yet extend it beyond all being. God, every one easily allows, fills eternity." God is not eternity, says Newton, but He is eternal. "His duration reaches from eternity to eternity. . . . He endures forever, and is everywhere present; and, by existing always and everywhere, He constitutes duration and space."

The issue is again brought into focus by the denial that God's eternity can be identified with infinite or absolute time. "Even supposing that the world always was," Aquinas writes, it would not be eternal in the sense in which God is, "for the divine being is all being simultaneously without succession." He distinguishes "the *now* that stands still" as the eternal present from the continually shifting *now* in the flow of time's passing moments. For him God's everlasting being does not endure through endless time, but rather exists unchanging in the eternal present. "As eternity is the proper measure of being, so time is the proper measure of movement; and hence," Aquinas writes, "according as any being recedes from permanence in being, and is subject to change, it recedes from eternity and is subject to time."

THE TWO MEANINGS OF eternity—infinite time and utter timelessness—are discussed in the chapter on ETERNITY. The distinction between time and eternity, which is considered both there and here, seems to be understood differently by those who contrast timelessness with temporality and by those who equate eternity with endless time. For the latter, the point of difference between eternity and time seems to be only one of infinite as opposed to limited duration. Yet, as we have just observed, writers like Newton and Locke also distinguish absolute or infinite time (which they tend to identify with eternity) from definite periods or limited spans of time, by making the one independent of, the other relative to and measured by, motion.

The question remains whether absolute time is real time or only a mathematical abstraction, whether it exists apart from perceived time—the experienced duration of observable motions or the elapsed time of events in succession.

Considering this question, Kant says that "those who maintain the absolute reality of time and space, whether as essentially subsisting, or only inhering, as modifications in things, must find themselves at utter variance with the principles of experience itself. For, if they decide for the first view, and make space and time into substances, this being the side taken by mathematical natural philosophers, they must admit two self-subsisting nonentities, infinite and eternal, which exist (yet without their being anything real) for the purpose of containing in themselves everything that is real. If they adopt the second view of inherence, which is preferred by some metaphysical natural philosophers, and regard space and time as relations . . . abstracted from experience . . . they find themselves in that case necessitated to deny the validity of mathematical doctrine *a priori* in reference to real things."

On Kant's own view, the synthetic judgments of mathematics can have the apodictic certainty of *a priori* propositions only if space and time are themselves *a priori* forms of intuition. As the *a priori* form of space makes possible the pure science of geometry, according to Kant, so the *a priori* form of time makes possible the pure science of numbers, *i.e.*, arithmetic. But whereas "space, as the pure form of external intuition is limited . . . to external phenomena alone," time, as "the form of the internal sense," is for Kant "the formal condition *a priori* of all phenomena whatsoever."

Without sharing Kant's theory of *a priori* forms of intuition, or of the foundations of pure mathematics, other writers appear to agree to some extent with his denial of independent reality to time. Aristotle raises the question "whether if soul did not exist, time would exist or not." He thinks the question may be fairly asked because "if there cannot be someone to count, there cannot be anything that can be

counted, so that evidently there cannot be number"—for number is the counted or the countable. "But if nothing but soul, or in soul reason, is qualified to count, there would not be time unless there were soul." Yet Aristotle qualifies this somewhat by adding that "if *movement* can exist without soul, and the before and after are attributes of movement," time may exist as "these *qua* numerable."

Augustine takes a less qualified position. Asking what it is that time is the "extendedness of," he answers: "Probably of the mind itself." Insisting that neither future nor past time can be measured because neither exists, Augustine concludes that it is only passing time we can measure, and that we can measure it only in the mind. "It is in you, O my mind," he says, "that I measure time. . . . What I measure is the impress produced in you by things as they pass and abiding in you when they have passed . . . I do not measure the things themselves whose passage produced the impress; it is the impress that I measure when I measure time."

Yet William James, while giving a similar analysis of our experience of time, insists that time is objective as well as subjective. Time and space relations, he writes, "*are* impressed from without." The time and space in which the objects of our thought exist, exist as independently of the mind as do those objects themselves. "*The time- and space-relations between things do stamp copies within*"; as, for example, when "things sequent in time impress their sequence on our memory."

WILLIAM JAMES PROPOSES a solution of the mystery of how time exists—at least how it exists in experience. So far as our experience goes, past and future can exist only in the present. But how can these extended parts of time exist in the present if the present is but a fleeting moment, without any extent of duration, "gone," as James says, "in the instant of becoming"? His answer is in terms of something he calls "the specious present."

Unlike the real present, the specious present is "no knife-edge but a saddle-back, with a certain breadth of its own on which we sit perched, and from which we look in two directions into time. The unit of composition of our perception of time is a *duration*, with a bow and a stern, as it were—a rearward- and a forward-looking end. It is only as parts of this *duration-block* that the relation of *succession* of one end to the other is perceived."

On the basis of some experimental evidence, James estimates that the specious present may vary in length "from a few seconds to probably not more than a minute." It has "a vaguely vanishing backward and forward fringe; but its nucleus is probably the dozen seconds or less that have just elapsed."

The irreversible flow of time—the succession of moments which constitute the motion of the future through the present into the past—occurs in the specious present, though not, according to James, without the accompaniment of observed or experienced change. "Awareness of *change* is . . . the condition on which our perception of time's flow depends." But that awareness must take place in the specious present "with its content perceived as having one part earlier and the other part later." In consequence, James considers the specious present to be, not only "the original intuition of time," but also "*the original paragon prototype of all conceived times.*"

THE PROBLEMS OF TIME, its own process and being as well as its relation to all other existence and change, its character as an aspect of experience and as an object of thought, seem to belong to many subject matters—to psychology and to experimental or mathematical physics, to the philosophy of nature, metaphysics, and theology.

For some thinkers—in our own time notably Bergson, Whitehead, and Dewey—the concept of time, of the burgeoning future, of the continuum of events, seems to determine a whole philosophical outlook. If it is not equally decisive throughout the tradition of the great books, it is at least of critical significance in speculations about the origin and end of the world, in the contrast between physical and spiritual modes of being, in the consideration of the processes of life, thought, and feeling, and in the analysis of more inclusive concepts, such as that of order.

The temporal relationships of succession and simultaneity, for example, may be the source from which we derive the notions of prior, pos-

terior, and simultaneous, but they are traditionally viewed as exemplifying rather than exhausting these types of order. When Augustine deals with the perplexing theological question of the priority of eternity to time, he finds it necessary to distinguish "priority in eternity, priority in time, priority in choice, priority in origin."

When Aristotle deals with metaphysical questions concerning the order of cause and effect, of potentiality and actuality, of essence and accident, he differentiates between temporal and logical priority, and between priority in thought and priority in nature. When Harvey tries to solve the familiar biological riddle (which came first, the chicken or the egg?), he also finds his solution in a distinction. "The fowl is prior by nature," he writes, "but the egg is prior in time."

Space and spatial relationships, no less than time and the temporal, figure in the general analysis of order or relatedness and have a bearing on other problems in physics and philosophy. But in addition to time's having more significance than space for the theologian, time also has peculiar importance for one subject matter in which space is of much less concern, namely, history and the philosophy of history.

Besides the general view which the historian takes of time as the locus of history, or the medium in which the pattern of history unfolds, the writer of history usually employs certain conventional time divisions to mark the major phases or epochs of the story he has to tell. Clocks and calendars record or represent the passage of time in conventional units, but these conventions have some natural basis in astronomical time, solar or sidereal. In contrast, the distinction between historic and prehistoric time, or the division of history into such periods as ancient, mediaeval, and modern, seems to be purely a matter of social or cultural convention.

With Hegel, however, the division of the whole of history into three epochs, and of each epoch again into three periods, follows from the dialectical triad of thesis, antithesis, and synthesis which is the indwelling form of history's development. The division of each of the three phases of world-history—the Oriental, the Graeco-Roman, and the German worlds—into a first, second, and third period produces in each case the same pattern of origin, conflict, and resolution. For the most part, Hegel does not identify these three periods with ancient, mediaeval, and modern times; yet in one case, that of the German world, he does refer to the second period as "the middle ages" and the third as "the modern time."

Such words as "ancient" and "modern" have conventional significance for most historians. Furthermore, the meanings of modernity and antiquity are themselves subject to historical relativity. In the tradition of the great books, this appears most plainly in the references made to ancients and moderns by writers whom we today classify as ancient and mediaeval.

Thucydides, for example, begins his history with a description of what is for him the antiquity of Greece. Nicomachus opens his *Introduction to Arithmetic* with a remark about "the ancients, who under the leadership of Pythagoras first made science systematic, defined philosophy as the love of wisdom." Mathematics, Aristotle says, "has come to be identical with philosophy for modern thinkers."

In another place, Aristotle contrasts "the thinkers of the present day" with "the thinkers of old"; and in still another he speaks of "ancient and truly traditional theories." Like Aristotle in the sphere of thought, so Tacitus in the sphere of politics frequently compares ancient and modern institutions or practices.

In the Middle Ages, Aquinas speaks of the "teachings of the early philosophers" and, as frequently as Aristotle, he refers to ancient and modern doctrines. In the Renaissance, Kepler treats as ancient a scientist who, in point of time, comes much later than those whom Aristotle and Aquinas call modern. Classifying three schools of astronomical thought, he distinguishes an ancient one, which had "Ptolemy as its coryphaeus," from two modern ones, respectively headed by Copernicus and Tycho Brahe.

Such references, which have occurred in all three periods of the western tradition, suggest the probability that at some future date the whole tradition with which we are now acquainted will be referred to as the thought and culture of ancient times.

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REFERENCES

To find the passages cited, use the numbers in heavy type, which are the volume and page numbers of the passages referred to. For example, in **4** HOMER: *Iliad*, BK II [265-283] **12d**, the number **4** is the number of the volume in the set; the number **12d** indicates that the passage is in section d of page 12.

PAGE SECTIONS: When the text is printed in one column, the letters **a** and **b** refer to the upper and lower halves of the page. For example, in **53** JAMES: *Psychology*, **116a-119b**, the passage begins in the upper half of page 116 and ends in the lower half of page 119. When the text is printed in two columns, the letters **a** and **b** refer to the upper and lower halves of the left-hand side of the page, the letters **c** and **d** to the upper and lower halves of the right-hand side of the page. For example, in **7** PLATO: *Symposium*, **163b-164c**, the passage begins in the lower half of the left-hand side of page 163 and ends in the upper half of the right-hand side of page 164.

AUTHOR'S DIVISIONS: One or more of the main divisions of a work (such as PART, BK, CH, SECT) are sometimes included in the reference; line numbers, in brackets, are given in certain cases; *e.g.*, *Iliad*, BK II [265-283] **12d**.

BIBLE REFERENCES: The references are to book, chapter, and verse. When the King James and Douay versions differ in title of books or in the numbering of chapters or verses, the King James version is cited first and the Douay, indicated by a (*D*), follows; *e.g.*, OLD TESTAMENT: *Nehemiah*, 7:45—(*D*) *II Esdras*, 7:46.

SYMBOLS: The abbreviation "esp" calls the reader's attention to one or more especially relevant parts of a whole reference; "passim" signifies that the topic is discussed intermittently rather than continuously in the work or passage cited.

For additional information concerning the style of the references, see the Explanation of Reference Style; for general guidance in the use of *The Great Ideas*, consult the Preface.

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7 PLATO: *Timaeus*, 450c-451d

8 ARISTOTLE: *Categories*, CH 6 [$5^{a}6$-14] 9b-c / *Physics*, BK IV, CH 10-14 297c-304a,c; BK VI 312b,d-325d passim / *Generation and Corruption*, BK II, CH 10 [$337^{a}22$-34] 439b-c / *Metaphysics*, BK V, CH 13 [$1020^{a}25$-33] 541c; BK XII, CH 6 [$1071^{b}6$-12] 601b

17 PLOTINUS: *Third Ennead*, TR VII, CH 8-13 123b-129a / *Sixth Ennead*, TR I, CH 5, 254c-d; CH 16 260d-261c

18 AUGUSTINE: *Confessions*, BK XI, par 17-40 93b-99a; BK XII, par 8, 101b / *City of God*, BK XI, CH 6 325c-d; BK XII, CH 15 351b-352d

19 AQUINAS: *Summa Theologica*, PART I, Q 7, A 3, REP 4 32c-33c; Q 10, A 1, ANS 40d-41d; A 4 43b-44b; A 6, ANS 45c-46d; Q 53, A 3 283b-284d; Q 57, A 3, REP 2 297b-298a; Q 63, A 5, ANS 329a-330c; A 6, REP 4 330c-331c; Q 66, A 4, REP 4 348d-349d; PART I-II, Q 31, A 2, ANS and REP 1 753c-754a

20 AQUINAS: *Summa Theologica*, PART I-II, Q 113, A 7, REP 5 366a-367c; PART III SUPPL, Q 84, A 3 985d-989b

28 GALILEO: *Two New Sciences*, THIRD DAY, 201a-202a

31 DESCARTES: *Objections and Replies*, 213b-c

31 SPINOZA: *Ethics*, PART I, DEF 8 355c; PROP 21 364a-c; PART II, DEF 5 373b-c; PROP 45, SCHOL 390b; PART III, PROP 8 399b; PART V, PROP 23 458b-d

33 PASCAL: *Geometrical Demonstration*, 432b-435b

34 NEWTON: *Principles*, DEFINITIONS, SCHOL, 8b; 9b-10a; 12a-b; BK I, LEMMA II, SCHOL, 31b-32a

35 LOCKE: *Human Understanding*, BK II, CH XIV 155b-162a esp SECT 21-22, 159b-d; CH XV 162b-165c passim

35 BERKELEY: *Human Knowledge*, SECT 97-98 431d-432a

35 HUME: *Human Understanding*, SECT XII, DIV 124-125 506a-507a esp DIV 125, 506d

36 STERNE: *Tristram Shandy*, 292a-293a

42 KANT: *Pure Reason*, 26b-33d esp 26d, 28a-b; 74b-76c

46 HEGEL: *Philosophy of History*, INTRO, 188c-189b; 206c

53 JAMES: *Psychology*, 399a-b; 407a

2. The distinction between time and eternity: the eternity of endless time distinguished from the eternity of timelessness and immutability

APOCRYPHA: *Ecclesiasticus*, 1:2; 18:10—(*D*) OT, *Ecclesiasticus*, 1:2; 18:8

7 PLATO: *Timaeus*, 450b-451d

8 ARISTOTLE: *Physics*, BK IV, CH 12 [221^{a}19]–CH 13 [222^{b}29] 301a-302c; BK VI, CH 2 [233^{a}13–^{b}16] 315a-c; CH 7 [237^{b}23–238^{a}19] 321a-c; CH 10 [241^{b}11–20] 325d; BK VIII, CH 1–2 334a-337b; CH 6 344b-346b; CH 8 348b-352a / *Heavens*, BK I, CH 12 372d-375d esp [282^{a}22–283^{a}2] 373d-374c, [283^{b}7–22] 375c-d; BK II, CH 3 [286^{a}8–13] 377c / *Generation and Corruption*, BK II, CH 9 [335^{a}33–^{b}2] 436d-437a / *Metaphysics*, BK V, CH 5 [1015^{b}9–16] 536a; BK IX, CH 8 [1050^{b}6–27] 576b-d; BK XI, CH 10 [1067^{a}33–38] 596a; BK XII, CH 6 [1071^{b}2–11] 601b; CH 7 [1072^{a}18–23] 602a-b; [1073^{a}3–11] 603a-b; BK XIV, CH 2 [1088^{b}14–28] 620d-621a

12 AURELIUS: *Meditations*, BK VI, SECT 15 275a-b; SECT 36 277c

16 KEPLER: *Harmonies of the World*, 1071b

17 PLOTINUS: *First Ennead*, TR V, CH 7 20a-c / *Third Ennead*, TR VII 119b-129a / *Fourth Ennead*, TR IV, CH 7–8 161d-162d; CH 15–16 165c-166b

18 AUGUSTINE: *Confessions*, BK VII, par 21 49d-50a; BK XI 89b-99b esp par 8–17 91b-93c, par 39–41 98c-99b; BK XII, par 13–20 102a-103d; par 40 109b-110a; BK XIII, par 44 122d / *City of God*, BK XI, CH 5–6 324d-325d; CH 21 333a-d; BK XII, CH 12–19 349b-355a

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32 MILTON: *On Time* 12a-b / *Paradise Lost*, BK VII [70–98] 218b-219a; BK XII [553–556] 331a

33 PASCAL: *Pensées*, 121 195a; 205-206 211a

34 NEWTON: *Principles*, DEFINITIONS, SCHOL, 8b

35 LOCKE: *Human Understanding*, BK II, CH XIV, SECT 26–27 160c-161a; SECT 30–31 161c-162a; CH XV, SECT 3–8 162d-164b; SECT 11–12 165a-c; CH XVII 167d-174a passim, esp SECT 5 168d-169a, SECT 10 170b-c, SECT 16 172a-b; CH XXIX, SECT 15 237a

42 KANT: *Pure Reason*, 26d; 130b-133c; 135a-137a,c; 152c; 160b-161d; 185a-b

46 HEGEL: *Philosophy of History*, INTRO, 190a-b; 206c

51 TOLSTOY: *War and Peace*, BK VII, 295b-c

2a. Aeviternity as intermediate between time and eternity

18 AUGUSTINE: *Confessions*, BK XII, par 9 101b-c; par 12–15 101d-102c; par 18–22 103b-104b / *City of God*, BK XII, CH 15 351b-352d

19 AQUINAS: *Summa Theologica*, PART I, Q 10, A 2, REP 1–2 41d-42c; A 3, ANS 42c-43b; AA 5–6 44b-46d

2b. Arguments concerning the infinity of time and the eternity of motion or the world

OLD TESTAMENT: *Genesis*, 1:1–2 / *Nehemiah*, 9:6—(*D*) *II Esdras*, 9:6 / *Job*, 38:1–13 / *Psalms*, 90:2; 95:4–5; 102:25–26; 104:5–6; 119:90–91; 136:5–9; 148:1–6—(*D*) *Psalms*, 89:2; 94:4–5; 101:26–27; 103:5–6; 118:90–91; 135:5–9; 148:1–6 / *Proverbs*, 3:19; 8:22–29 / *Isaiah*, 45:12,18; 48:13; 65:17–25—(*D*) *Isaias*, 45:12,18; 48:13; 65:17–25 / *Jeremiah*, 51:15—(*D*) *Jeremias*, 51:15

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NEW TESTAMENT: *Matthew*, 13:24–30,36–43,49–50; 24:3–35 / *Mark*, 13:3–33 / *Luke*, 21:5–33 / *John*, 1:1–3 / *Colossians*, 1:16–17 / *Hebrews*, 1:10–12 / *II Peter*, 3:3–13 / *Revelation*, 10:5–6—(*D*) *Apocalypse*, 10:5–6

7 PLATO: *Phaedrus*, 124b-c / *Timaeus*, 447b-c; 450c-451a; 460c-d

8 ARISTOTLE: *Topics*, BK I, CH 11 [104^{b}13–18] 148a-b / *Physics*, BK IV, CH 13 [222^{a}29–^{b}8] 302b; BK VI, CH 10 [241^{a}27–^{b}20] 325b-d; BK VIII, CH 1–2 334a-337b; CH 6 344b-346b; CH 8 348b-352a / *Heavens*, BK I, CH 2 [269^{b}2–10] 360c-d; CH 3 [270^{b}1–26] 361c-362a; CH 9 [279^{a}12]–CH 12 [283^{b}23] 370b-375d; BK II, CH 6 [288^{a}23–25] 379d / *Generation and Corruption*, BK II, CH 10–11 437d-441a,c / *Meteorology*, BK I, CH 14 [352^{a}16–353^{a}27] 458b-459a,c; BK II, CH 3 [356^{b}2–357^{a}4] 462b-d / *Metaphysics*, BK IX, CH 8 [1050^{b}20–28] 576c-d; BK XI, CH 6 [1063^{a}13–16] 591b; CH 10 [1067^{a}33–38] 596a; BK XII, CH 6–8 601b-605a esp CH 7 [1072^{a}19–^{b}14] 602a-d, [1073^{a}5–11] 603b

9 ARISTOTLE: *Motion of Animals*, CH 4 [699^{b}15–700^{a}6] 234d-235a; CH 6 [700^{b}29–701^{a}7] 236a-b

12 LUCRETIUS: *Nature of Things*, BK I [146–264] 2d-4b; [483–634] 7a-8d; [951–1051] 12d-14a esp [988–1007] 13b; BK II [89–141] 16a-d; [294–307] 18d-19a; [569–580] 22b; [1048–1063] 28b-c; [1105–1174] 29a-30a,c; BK V [1–431] 61a-66d esp [55–70] 61d-62a, [235–246] 64a-b, [351–379] 65d-66a; BK VI [535–607] 87c-88b
12 AURELIUS: *Meditations*, BK V, SECT 13 271b; SECT 23 272b; BK VI, SECT 15 275a-b; BK IX, SECT 28 293d-294a; BK X, SECT 7 297b-c; SECT 27 299d
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17 PLOTINUS: *Second Ennead*, TR I 35a-39d esp CH 1–5 35a-37c; TR IX, CH 7–8 69c-70d
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23 HOBBES: *Leviathan*, PART I, 50a; PART II, 162b
28 GALILEO: *Two New Sciences*, THIRD DAY, 224d
30 BACON: *Novum Organum*, BK II, APH 35, 163a; APH 48, 186b-d
31 DESCARTES: *Objections and Replies*, 228a-c
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34 NEWTON: *Principles*, DEFINITIONS, SCHOL, 8b; LAW I 14a / *Optics*, BK III, 540a-541b
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53 JAMES: *Psychology*, 882a

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APOCRYPHA: *Wisdom of Solomon*, 7:17–18—(*D*) OT, *Book of Wisdom*, 7:17–18
7 PLATO: *Timaeus*, 450c-451a
17 PLOTINUS: *Third Ennead*, TR VII, CH 1 119b-c; CH 6, 122c-d; CH 11, 126a; CH 13, 128c / *Fourth Ennead*, TR IV, CH 15–16 165c-166b
18 AUGUSTINE: *Confessions*, BK VII, par 21 49d-50a; BK XI, par 12–16 92b-93a; par 40 98d-99a; BK XII, par 40 109b-110a / *City of God*, BK XI, CH 4–6 324a-325d; BK XII, CH 12 349b-350a; CH 15–17 351b-354a; BK XXII, CH 30, 618a-d
19 AQUINAS: *Summa Theologica*, PART I, Q 22, A 1, REP 2 127d-128d; Q 46 250a-255d; Q 61, A 2 315c-316a; Q 66, A 3, REP 1 347b-348d; A 4 348d-349d
20 AQUINAS: *Summa Theologica*, PART III SUPPL, Q 84, A 3, REP 5 985d-989b; Q 91, A 2 1017c-1020c
21 DANTE: *Divine Comedy*, PARADISE, XXIX [10–45] 150b-c
32 MILTON: *Paradise Lost*, BK V [577–594] 187b-188a; BK VII [70–108] 218b-219b

3. The mode of existence of time

7 PLATO: *Timaeus*, 450c-451a
8 ARISTOTLE: *Categories*, CH 4 [1^b25–26] 5d; CH 6 [5^a6–7] 9b / *Physics*, BK IV, CH 10 [217^b29–218^a8] 297c-d; CH 14 [223^a21–29] 303a
12 LUCRETIUS: *Nature of Things*, BK I [449–482] 6c-7a
17 PLOTINUS: *Third Ennead*, TR VII, CH 11–13 126a-129a
18 AUGUSTINE: *Confessions*, BK XI, par 12–40 92b-99a / *City of God*, BK XI, CH 6 325c-d
19 AQUINAS: *Summa Theologica*, PART I, Q 10, A 1, REP 5 40d-41d; AA 4–5 43b-45c
25 MONTAIGNE: *Essays*, 293d-294a
34 NEWTON: *Principles*, DEFINITIONS, SCHOL, 8b
35 LOCKE: *Human Understanding*, BK II, CH XIV, SECT 1–5 155b-156b
35 BERKELEY: *Human Knowledge*, SECT 98 432a
42 KANT: *Pure Reason*, 26b-33d esp 28a-b
46 HEGEL: *Philosophy of Right*, ADDITIONS, 25 121a / *Philosophy of History*, INTRO, 186d-190b
53 JAMES: *Psychology*, 398a-399b

3a. The parts of time: its division into past, present, and future

7 PLATO: *Timaeus*, 450c-451a / *Parmenides*, 494c-495b; 502a
8 ARISTOTLE: *Categories*, CH 6 [5^a26–29] 9c / *Physics*, BK IV, CH 11 [219^a10–$^b2$] 298d-299b; CH 12 [220^b5–8] 300b; [221^a14–19] 300d-301a; CH 14 [222^b30–223^a15] 302d-303a
12 AURELIUS: *Meditations*, BK II, SECT 14 258d
17 PLOTINUS: *Sixth Ennead*, TR I, CH 13 259d-260b
18 AUGUSTINE: *Confessions*, BK XI, par 17–38 93b-98c
19 AQUINAS: *Summa Theologica*, PART I, Q 10, A 2, REP 4 41d-42c; A 4, ANS and REP 2 43b-44b; A 5, ANS 44b-45c
31 DESCARTES: *Meditations*, III, 87c-d / *Objections and Replies*, AXIOM II 131d; 213b-c
35 LOCKE: *Human Understanding*, BK II, CH XV, SECT 9 164b-d
42 KANT: *Pure Reason*, 26b-d; 131a
46 HEGEL: *Philosophy of History*, INTRO, 153a-156d
53 JAMES: *Psychology*, 398a-399a passim; 413a

(3. *The mode of existence of time.*)

)*b*. The reality of the past and the future in relation to the existence of the present

8 ARISTOTLE: *Physics*, BK IV, CH 10 [217^{b}29-218^{a}8] 297c-d; CH 12 [221^{b}33-222^{a}3] 301d; CH 14 [223^{a}21-29] 303a
9 ARISTOTLE: *Ethics*, BK VI, CH 2 [1139^{b}10-11] 388b
12 AURELIUS: *Meditations*, BK II, SECT 14 258d
18 AUGUSTINE: *Confessions*, BK XI, par 17-38 93b-98c
19 AQUINAS: *Summa Theologica*, PART I, Q 10, A 4, ANS 43b-44b; A 5, ANS and REP 3 44b-45c; Q 25, A 4 147a-d
23 HOBBES: *Leviathan*, PART I, 53c
25 MONTAIGNE: *Essays*, 293d-294a
46 HEGEL: *Philosophy of History*, INTRO, 190a-b
53 JAMES: *Psychology*, 219b; 398a-b; 413a; 421a

)*c*. The extent of the present moment: instantaneity

7 PLATO: *Parmenides*, 505a-c
8 ARISTOTLE: *Physics*, BK IV, CH 10 [218^{a}4-29] 297d-298a; CH 11 [219^{b}9-220^{a}24] 299b-300a; CH 13 [222^{a}10-23] 301d-302a; [222^{b}1-14] 302b-c; BK VI, CH 3 [233^{b}33-234^{a}23] 315d-316b; BK VIII, CH 1 [251^{b}16-28] 335b; CH 8 [263^{b}26-264^{a}6] 350c-d / *Metaphysics*, BK III, CH 5 [1002^{b}5-8] 521b
18 AUGUSTINE: *Confessions*, BK XI, par 17 93b-c; par 19-20 93d-94b
19 AQUINAS: *Summa Theologica*, PART I, Q 8, A 2, REP 2 35c-36b; Q 10, A 1, REP 5 40d-41d; Q 42, A 2, REP 4 225d 227a
25 MONTAIGNE: *Essays*, 293d-294a
35 LOCKE: *Human Understanding*, BK II, CH XIV, SECT 10 157a; CH XV, SECT 9 164b-d
53 JAMES: *Psychology*, 398a-399a; 420a-b

ɨ. The measurement of time: sun, stars, and clocks

OLD TESTAMENT: *Genesis*, 1:3-5,14-18 / *Psalms*, 104:19-20; 136:8-9—(*D*) *Psalms*, 103:19 20; 135:8-9
APOCRYPHA: *Ecclesiasticus*, 43:1-10 esp 43:6-8—(*D*) OT, *Ecclesiasticus*, 43:1-11 esp 43:6-9
5 AESCHYLUS: *Prometheus Bound* [454-461] 44c-d
5 ARISTOPHANES: *Clouds* [606-626] 496a-b
6 HERODOTUS: *History*, BK II, 49d-50a; 70c; 79c
6 THUCYDIDES: *Peloponnesian War*, BK V, 487d
7 PLATO: *Republic*, BK VII, 394d-396b / *Timaeus*, 450c-451d
8 ARISTOTLE: *Physics*, BK IV, CH 12 [220^{b}15-31] 300c-d; CH 14 [223^{b}12-224^{a}1] 303c-d / *Metaphysics*, BK X, CH 1 [1052^{b}34-1053^{a}12] 579b-c
9 ARISTOTLE: *Generation of Animals*, BK IV, CH 10 [777^{b}16-24] 319d-320a
14 PLUTARCH: *Numa Pompilius*, 58d-59a / *Solon*, 74a / *Caesar*, 599d-600a
16 PTOLEMY: *Almagest*, BK II, 34b-38a; BK III, 77a-86b; 104b-107a
16 COPERNICUS: *Revolutions of the Heavenly Spheres*, BK I, 510b; BK II, 568a-576a; BK III, 646a-652b; 672a-674b
17 PLOTINUS: *Third Ennead*, TR VII, CH 7-8 122d-124c; CH 11-13 126a-129a
18 AUGUSTINE: *Confessions*, BK XI, par 18-21 93c-94b; par 27-38 95b-98c / *City of God*, BK XI, CH 6 325c-d; BK XII, CH 15, 351d-352a
19 AQUINAS: *Summa Theologica*, PART I, Q 10, A 6, ANS and REP 3-4 45c-46d; Q 67, A 4 352a-354a; Q 70, A 2, ANS and REP 3,5 364b-365a
20 AQUINAS: *Summa Theologica*, PART III SUPPL, Q 91, A 2, REP 3 1017c-1020c
21 DANTE: *Divine Comedy*, HELL, I [37-45] 1b-c; PURGATORY, II [1-9] 54c; XV [1-15] 75b-c; XXV [1-9] 91b c; XXVII [1-6] 94c; PARADISE, X [28-33] 120c; XXVII [106-120] 148b-c
23 HOBBES: *Leviathan*, PART IV, 267a-b
24 RABELAIS: *Gargantua and Pantagruel*, BK II, 69b,d-70a
25 MONTAIGNE: *Essays*, 497b-c
28 GALILEO: *Two New Sciences*, FIRST DAY, 148b-149c; 167a-168a; THIRD DAY, 208b-c
30 BACON: *Novum Organum*, BK II, APH 46 177c-179a
32 MILTON: *Song on May Morning* 15b / *Comus* [111-118] 35b-36a / *Paradise Lost*, BK III [555-587] 147b-148a; [726-732] 151a; BK V [166-170] 179a; BK VIII [66-69] 233b
34 NEWTON: *Principles*, DEFINITIONS, SCHOL, 8b; 9b-10a; 12a-b; BK III, PROP 20 291b-294b
34 HUYGENS: *Light*, CH I, 554b-557b
35 LOCKE: *Human Understanding*, BK II, CH XIV, SECT 17-31 158a-162a passim; CH XV, SECT 5-10 163b-165a passim; CH XXVI, SECT 3 217d-218a
35 BERKELEY: *Human Knowledge*, SECT 98 432a
36 SWIFT: *Gulliver*, PART IV, 169a
36 STERNE: *Tristram Shandy*, 229a
41 GIBBON: *Decline and Fall*, 376a-b
46 HEGEL: *Philosophy of History*, PART I, 219a-b; 251a-b
53 JAMES: *Psychology*, 400a; 407a-408a

5. Temporal relationships: time as a means of ordering

5*a*. Simultaneity or coexistence: the simultaneity of cause and effect, action and passion, knowledge and object known

7 PLATO: *Theaetetus*, 519d-520b; 533b-c
8 ARISTOTLE: *Categories*, CH 7 [7^{b}15-8^{a}12] 12b-13a; CH 13 20b-d / *Posterior Analytics*, BK II, CH 12 [95^{a}10-23] 129d-130a; CH 16 [98^{a}35-^{b}24] 134b-c / *Physics*, BK IV, CH 10 [218^{a}8-29] 297d-298a / *Metaphysics*, BK V, CH 2 [1014^{a}20-25] 534b-c; BK IX, CH 9 [1051^{a}4-13] 577a; BK XII, CH 3 [1070^{a}21-24] 599c
19 AQUINAS: *Summa Theologica*, PART I, Q 12, A 10 59a-d; Q 46, A 2, REP 1 253a-255a

34 NEWTON: *Optics*, BK I, 379a
42 KANT: *Pure Reason*, 26b-d; 32a-b; 83b-84d / *Practical Reason*, 312a-c; 339a-b
53 JAMES: *Psychology*, 862b-863b [fn 2]

5b. Succession or priority and posteriority: the temporal order of cause and effect, potentiality and actuality

8 ARISTOTLE: *Categories*, CH 7 [$7^{b}15$-$8^{a}12$] 12b-13a; CH 12 19d-20b / *Posterior Analytics*, BK II, CH 12 129d-131b; CH 16 [$98^{b}16$-24] 134c / *Physics*, BK II, CH 6 [$198^{a}5$-13] 275a; BK IV, CH 14 [$223^{a}4$-14] 302d-303a / *Metaphysics*, BK V, CH 2 [$1014^{a}20$-25] 534b-c; CH 11 [$1018^{b}15$-19] 539c; BK VII, CH 3 [$1029^{a}5$-6] 551c; BK IX, CH 8 [$1049^{b}18$-$1050^{a}3$] 575b-d; [$1050^{b}2$-6] 576b; CH 9 577a-c; BK XII, CH 3 [$1070^{a}21$-24] 599c; BK XIII, CH 2 [$1077^{a}14$-19] 608b-c; [$1077^{a}24$-30] 608c
9 ARISTOTLE: *Parts of Animals*, BK II, CH 1 [$646^{a}25$-$^{b}10$] 170b-c / *Generation of Animals*, BK II, CH 6 [$742^{a}16$-$^{b}17$] 283b-d
19 AQUINAS: *Summa Theologica*, PART I, Q 3, A 1, ANS 14b-15b; Q 46, A 2, REP 1 253a-255a; Q 85, A 3 455b-457a
20 AQUINAS: *Summa Theologica*, PART I-II, Q 50, A 2, REP 3 7c-8a
28 GALILEO: *Two New Sciences*, FIRST DAY, 135c-136b
28 HARVEY: *On Animal Generation*, 390c; 445c; 447a-b
31 DESCARTES: *Meditations*, III, 87c-d / *Objections and Replies*, 159c-d
34 NEWTON: *Optics*, BK I, 379a
35 HUME: *Human Understanding*, SECT VII 470d-478a esp DIV 60 477a-c
42 KANT: *Pure Reason*, 26b-d; 32a-b; 63b; 67d-68b [fn 1]; 76c-83b; 95a-d; 214b,d [fn 1] / *Practical Reason*, 311d-314d; 331c-333a; 339a-b
53 JAMES: *Psychology*, 399a

5c. Succession and simultaneity in relation to the association of ideas

31 SPINOZA: *Ethics*, PART II, PROP 18, SCHOL 382a-b
35 LOCKE: *Human Understanding*, BK II, CH IX, SECT 9-10 139d-140b
35 HUME: *Human Understanding*, SECT III, DIV 19, 457d
53 JAMES: *Psychology*, 361b-364a esp 362b-363b; 367a-370b esp 367a, 369a-b; 559a-560a; 559b-561b [fn 2]; 852b-853a; 860b-861a
54 FREUD: *Hysteria*, 74a-b / *Interpretation of Dreams*, 352b-c

5d. Comparison of temporal with non-temporal simultaneity and succession: the prior in thought, by nature, or in origin

8 ARISTOTLE: *Categories*, CH 12-13 19d-20d / *Interpretation*, CH 13 [$23^{a}18$-26] 35b-c / *Posterior Analytics*, BK I, CH 2 [$71^{b}33$-$72^{a}5$] 98b-c; CH 27 119b / *Topics*, BK IV, CH 2 [$123^{a}13$-19] 171c; BK VI, CH 4 194c-196a / *Metaphysics*, BK III, CH 3 [$999^{a}6$-14] 517d; BK V, CH 11 539c-540a; BK IX, CH 8 575b-577a; BK XIII, CH 2 [$1077^{a}14$-$^{b}14$] 608b-609a
9 ARISTOTLE: *Parts of Animals*, BK II, CH 1 [$646^{a}25$-$^{b}10$] 170b-c / *Generation of Animals*, BK II, CH 6 [$742^{a}16$-$^{b}18$] 283b-d / *Politics*, BK III, CH 1 [$1275^{a}35$-$^{b}2$] 472b
11 NICOMACHUS: *Arithmetic*, BK I, 813a-d
18 AUGUSTINE: *Confessions*, BK XI, par 8 91b-c; par 11-12 92a-b; par 14 92c-d; BK XII, par 20 103c-d; par 40 109b-110a / *City of God*, BK X, CH 31 319b-d
19 AQUINAS: *Summa Theologica*, PART I, Q 3, A 1, ANS 14b-15b; A 6, ANS and REP 2 18c-19a; Q 16, A 4 97a-c; Q 45, A 3, REP 3 244a-d; Q 46, A 2, REP 1 253a-255a; Q 66, A 4, REP 4 348d-349d; Q 85, A 3, REP 1 455b-457a; Q 94, A 3, ANS 504a-505a
20 AQUINAS: *Summa Theologica*, PART I-II, Q 50, A 2, REP 3 7c-8a; Q 110, A 4, REP 4 350d-351d
28 GALILEO: *Two New Sciences*, FIRST DAY, 135c-136b
28 HARVEY: *On Animal Generation*, 390c; 445c; 447a-b
31 DESCARTES: *Objections and Replies*, 228a-b
31 SPINOZA: *Ethics*, PART I, PROP 1 355d
46 HEGEL: *Philosophy of Right*, INTRO, par 32-33 20a-d

6. The knowledge of time and the experience of duration

6a. The perception of time by the interior senses: the difference between the experience and memory of time intervals

8 ARISTOTLE: *Physics*, BK IV, CH 11 [$219^{a}4$-9] 298d; [$219^{b}23$-31] 299c-d / *Sense and the Sensible*, CH 7 [$448^{a}20$-$^{b}16$] 687a-d / *Memory and Reminiscence*, CH 2 [$452^{b}7$-$453^{a}4$] 694b-695a
12 LUCRETIUS: *Nature of Things*, BK I [459-463] 6d
17 PLOTINUS: *Fourth Ennead*, TR IV, CH 8 161d-162d
18 AUGUSTINE: *Confessions*, BK XI, par 12-40 92b-99a
19 AQUINAS: *Summa Theologica*, PART I, Q 10, A 2, REP 1 41d-42c; Q 79, A 6, ANS and REP 2 419b-420d
31 SPINOZA: *Ethics*, PART IV, PROP 62, SCHOL 443c-d
35 LOCKE: *Human Understanding*, BK II, CH VII, SECT 9 133a; CH XIV, SECT 1-16 155b-158a
35 BERKELEY: *Human Knowledge*, SECT 97-98 431d-432a
36 STERNE: *Tristram Shandy*, 292a-293a
42 KANT: *Pure Reason*, 26b-29d; 74b-76c
53 JAMES: *Psychology*, 130a-b; 131b; 396a-420b esp 396a, 399a-400b, 405b-407a, 409a-b, 411b-418a, 420a-b
54 FREUD: *Beyond the Pleasure Principle*, 648a-b / *New Introductory Lectures*, 837c; 838b

(*6. The knowledge of time and the experience of duration.*)

6b. **Factors influencing the estimate of time elapsed: empty and filled time; illusions of time perception; the variability of experienced durations**

6 HERODOTUS: *History*, BK II, 77a-b
8 ARISTOTLE: *Physics*, BK IV, CH 11 [218^{b}21-219^{a}1] 298c-d
18 AUGUSTINE: *Confessions*, BK XI, par 36, 98a
21 DANTE: *Divine Comedy*, PURGATORY, IV [1-18] 57c
26 SHAKESPEARE: *Richard II*, ACT I, SC III [258-261] 326b / *As You Like It*, ACT III, SC II [319-351] 612c-d
35 LOCKE: *Human Understanding*, BK II, CH XIV, SECT 4 155d-156a; SECT 7-12 156c-157c
36 STERNE: *Tristram Shandy*, 292a-293a
53 JAMES: *Psychology*, 264b-268a esp 268b-269b [fn 2]; 400a-411a esp 408a-411a; 417a-420a esp 418a-420a
54 FREUD: *Interpretation of Dreams*, 147d-148a; 164c; 335b-336d

6c. **Time as a transcendental form of intuition: the *a priori* foundations of arithmetic; the issue concerning innate and acquired time perception**

35 LOCKE: *Human Understanding*, BK II, CH XIV, SECT 2-4 155b-156a; SECT 31 161d-162a
42 KANT: *Pure Reason*, 26b-29d; 61a-62d; 68a-69c esp 68c-69a; 94b-95d; 100d-101b; 213d-215a / *Practical Reason*, 307d-308b; 313a-d
53 JAMES: *Psychology*, 420a-b; 852b-853a; 860b-861a
54 FREUD: *Beyond the Pleasure Principle*, 648a-b / *New Introductory Lectures*, 837c

6d. **The signifying of time: the distinction between noun and verb; the tenses of the verb**

7 PLATO: *Timaeus*, 450c-451a / *Parmenides*, 495a / *Sophist*, 575d-576b
8 ARISTOTLE: *Interpretation*, CH 2 [16^{a}19-20] 25b; CH 3 [16^{b}6-19] 25d
19 AQUINAS: *Summa Theologica*, PART I, Q 13, A 11, ANS 73c-74b; Q 14, A 15, REP 3 89b-90b
25 MONTAIGNE: *Essays*, 293d-294a

6e. **Knowledge of the past: the storehouse of memory; the evidences of the past in physical traces or remnants**

6 HERODOTUS: *History*, BK I, 1a-2b
6 THUCYDIDES: *Peloponnesian War*, BK I, 349a-355a passim
7 PLATO: *Laches*, 36c / *Critias*, 479d / *Theaetetus*, 538d-544a
8 ARISTOTLE: *Memory and Reminiscence* 690a-695d esp CH 1 [449^{b}3-29] 690a-c
9 ARISTOTLE: *Rhetoric*, BK II, CH 19 [1392^{b}14-34] 640b-c
12 LUCRETIUS: *Nature of Things*, BK I [449-482] 6c-7a
15 TACITUS: *Annals*, BK II, 38d-39a
17 PLOTINUS: *Fourth Ennead*, TR VI, CH 3 190b-191c
18 AUGUSTINE: *Confessions*, BK X, par 12-36 74b-80d esp par 23-25 77a-d
19 AQUINAS: *Summa Theologica*, PART I, Q 78, A 4, ANS 411d-413d; Q 79, A 6, ANS and REP 2 419b-420d
20 AQUINAS: *Summa Theologica*, PART III, Q 12, A 1, REP 3 776c-777b
23 HOBBES: *Leviathan*, PART I, 53c; 54a; 65b-c
25 MONTAIGNE: *Essays*, 41c-d; 439c-440a; 483b-484b
30 BACON: *Advancement of Learning*, 32d; 61d-62c
31 SPINOZA: *Ethics*, PART IV, DEF 6 424b; PART V, PROP 21 458a
35 LOCKE: *Human Understanding*, BK II, CH XV, SECT 12 165b-c; BK IV, CH XI, SECT 11 357b-c
36 SWIFT: *Gulliver*, PART II, 79a-80a
38 ROUSSEAU: *Social Contract*, BK IV, 428a
40 GIBBON: *Decline and Fall*, 88a-d; 96b,d; 413b-d
41 GIBBON: *Decline and Fall*, 337c
42 KANT: *Judgement*, 579d-580a; 583d-584c
44 BOSWELL: *Johnson*, 151c
46 HEGEL: *Philosophy of History*, INTRO, 153a-156d; 181b-182c; 190a-b; PART I, 237a-b; 239c-241a; 247b-c
47 GOETHE: *Faust*, PART I [570-585] 16a
49 DARWIN: *Origin of Species*, 13c-14a; 42a; 152a-180d passim, esp 153a-156a, 160d-162a, 165d-166a,c, 179b-180d; 217b-229a,c passim, esp 229c; 231d-233b; 238b-239a; 242c-243a / *Descent of Man*, 255a-265d esp 255a-b, 265a-d; 332b-335a esp 332b-c, 335a; 336c-337a; 348d-349d
50 MARX: *Capital*, 86c
53 JAMES: *Psychology*, 145a; 396a-397a; 421a-427a esp 424b-425b
54 FREUD: *Origin and Development of Psycho-Analysis*, 4a-b / *General Introduction*, 526c-527c; 599a-b / *War and Death*, 760a-b / *Civilization and Its Discontents*, 769a-770c

6f. **Knowledge of the future: the truth of propositions about future contingents; the probability of predictions**

5 SOPHOCLES: *Oedipus the King* [463-512] 103c-d
5 EURIPIDES: *Medea* [1415-1419] 224c / *Alcestis* [1159-1163] 247c / *Helen* [1688-1692] 314c / *Andromache* [1284-1288] 326c / *Bacchantes* [1388-1392] 352a,c
6 THUCYDIDES: *Peloponnesian War*, BK I, 354c
7 PLATO: *Laches*, 36c / *Theaetetus*, 531a-532a
8 ARISTOTLE: *Interpretation*, CH 9 28a-29d

9 ARISTOTLE: *Rhetoric*, BK II, CH 19 [1393a1–8] 640c
10 HIPPOCRATES: *Prognostics*, par 1 19a-b / *Epidemics*, BK III, SECT III, par 16 59b-c
16 COPERNICUS: *Revolutions of the Heavenly Spheres*, 505a-506a
18 AUGUSTINE: *Confessions*, BK XI, par 23–25 94c-95a / *Christian Doctrine*, BK II, CH 30 651c-d
19 AQUINAS: *Summa Theologica*, PART I, Q 14, A 13 86d-88c; Q 57, A 3 297b-298a; Q 86, A 4 463d-464d; Q 89, A 3, REP 3 475d-476c; A 7, REP 3 478d-479c
20 AQUINAS: *Summa Theologica*, PART III, Q 12, A 1, REP 3 776c-777b
21 DANTE: *Divine Comedy*, PARADISE, XVII [13–45] 132b-c
23 HOBBES: *Leviathan*, PART I, 53c-d; 65b-c
31 SPINOZA: *Ethics*, PART II, PROP 30–31 385a-c; PART IV, DEF 6 424b; PROP 62, SCHOL 443c-d; PROP 66, DEMONST 444c
34 NEWTON: *Principles*, 1a-2a; BK III, RULE IV 271b; GENERAL SCHOL, 371b-372a
34 HUYGENS: *Light*, PREF, 551b-552a
35 LOCKE: *Human Understanding*, BK II, CH XV, SECT 12 165b-c
35 BERKELEY: *Human Knowledge*, SECT 44 420d-421a; SECT 105 433b-c
35 HUME: *Human Understanding*, SECT IV–VII 458a-478a passim, esp SECT IV, DIV 21 458b-c, SECT VI 469d-470d
44 BOSWELL: *Johnson*, 277c
45 FOURIER: *Theory of Heat*, 177a-b; 184a
47 GOETHE: *Faust*, PART II [8591–8603] 209b
48 MELVILLE: *Moby Dick*, 366b
49 DARWIN: *Origin of Species*, 59d-60a; 243b-c
51 TOLSTOY: *War and Peace*, BK XIII, 584d-585b; EPILOGUE II, 685a
53 JAMES: *Psychology*, 852b; 883a-884b
54 FREUD: *Interpretation of Dreams*, 387a,c

7. The temporal course of the passions: emotional attitudes toward time and mutability

5 SOPHOCLES: *Oedipus at Colonus* [607–623] 120a; [1211–1248] 125b-c
5 EURIPIDES: *Trojan Women* [643–683] 275c-d
6 HERODOTUS: *History*, BK I, 7b-8a; BK VII, 224d-225a
7 PLATO: *Symposium*, 154d-155a; 165b-166a / *Republic*, BK I, 295d-296c / *Theaetetus*, 528c-529a / *Laws*, BK VII, 717d-718d
8 ARISTOTLE: *Topics*, BK III, CH 2 [117a26–34] 164a
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Discussions relevant to the distinction between time and eternity, and to the problem of the infinity of time and the eternity of the world, *see* ASTRONOMY 8c(1); CHANGE 13; ETERNITY 1–2; INFINITY 3e; WORLD 4a, 8.

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Another treatment of the relations of succession and simultaneity, *see* RELATION 5a; and for the temporal aspects of such relations as that between cause and effect, potentiality and actuality, and the various acts of the mind, *see* BEING 7c(1); CAUSE 1b; EDUCATION 5d; IDEA 5d–5e; RELATION 4f.

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Other treatments of the problem of time and free will in relation to God's foreknowledge and forcordination, *see* GOD 7b, 7f; HISTORY 5a; LIBERTY 5a–5b; WILL 7c.

Other discussions of historical time and the antiquity of man, *see* EVOLUTION 7c; HISTORY 4a(3), 4c; MAN 9c.

ADDITIONAL READINGS

Listed below are works not included in *Great Books of the Western World*, but relevant to the idea and topics with which this chapter deals. These works are divided into two groups:

I. Works by authors represented in this collection.
II. Works by authors not represented in this collection.

For the date, place, and other facts concerning the publication of the works cited, consult the Bibliography of Additional Readings which follows the last chapter of *The Great Ideas.*

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Chapter 94: TRUTH

INTRODUCTION

NOT everyone knows Josiah Royce's definition of a liar as a man who willfully misplaces his ontological predicates, but everyone who has ever told a lie will recognize its accuracy. To restate the definition less elegantly, lying consists in saying the contrary of what one thinks or believes. To speak truthfully we must make our speech conform to our thought, we must say that something is the case if we think it is, or that it is not, if we think it is not. If we deliberately say "is" when we think *is not*, or say "is not" when we think *is*, we lie.

Of course, the man who speaks truthfully may in fact say what is false, just as the man whose intent is to falsify may inadvertently speak the truth. The intention to speak one's mind does not guarantee that one's mind is free from error or in possession of the truth. Herein lies the traditional distinction between truth as a social and as an intellectual matter. What Dr. Johnson calls *moral* truth consists in the obligation to say what we mean. In contrast what he calls *physical* truth depends not on the veracity of what we say but on the validity of what we mean.

The theory of truth in the tradition of the great books deals largely with the latter kind of truth. The great issues concern whether we can know the truth and how we can ever tell whether something is true or false. Though the philosophers and scientists, from Plato to Freud, seem to stand together against the extreme sophistry or skepticism which denies the distinction between true and false or puts truth utterly beyond the reach of man, they do not all agree on the extent to which truth is attainable by men, on its immutability or variability, on the signs by which men tell whether they have the truth or not, or on the causes of error and the means for avoiding falsity.

Much that Plato thinks is true Freud rejects as false. Freud searches for truth in other quarters and by other methods. But the ancient controversy in which Socrates engages with the sophists of his day, who were willing to regard as true whatever anyone wished to think, seems to differ not at all from Freud's quarrel with those whom he calls "intellectual nihilists." They are the persons who say there is no such thing as truth or that it is only the product of our own needs and desires. They make it "absolutely immaterial," Freud writes, "what views we accept. All of them are equally true and false. And no one has a right to accuse anyone else of error."

Across the centuries the arguments against the skeptic seem to be the same. If the skeptic does not mind contradicting himself when he tries to defend the truth of the proposition that all propositions are equally true or false, he can perhaps be challenged by the fact that he does not act according to his view. If all opinions are equally true or false, then why, Aristotle asks, does not the denier of truth walk "into a well or over a precipice" instead of avoiding such things. "If it were really a matter of indifference what we believed," Freud similarly argues, "then we might just as well build our bridges of cardboard as of stone, or inject a tenth of a gramme of morphia into a patient instead of a hundredth, or take tear-gas as a narcotic instead of ether. But," he adds, "the intellectual anarchists themselves would strongly repudiate such practical applications of their theory."

Whether the skeptic can be refuted or merely silenced may depend on a further step in the argument, in which the skeptic substitutes probability for truth, both as a basis for action and as the quality of all our opinions about the real world. The argument takes different forms according to the different ways in which probability is distinguished from truth or according

to the distinction between a complete and limited skepticism. Montaigne, for example, seems to think that the complete skeptic cannot even acknowledge degrees of probability to be objectively ascertainable without admitting the criterion of truth, whereas Hume, defending a mitigated skepticism, offers criteria for measuring the probability of judgments about matters of fact.

THE POSITION OF THE skeptic, in its bearing on truth and probability, is discussed in the chapters on KNOWLEDGE and OPINION. Here we shall proceed to other controversial questions concerning truth. But we must first observe that there is one major question which does not seem to cause much dispute. Not only do the great authors (with the possible exception of Montaigne and Hume) seem to be unanimous in their conviction that men can attain and share the truth—at least some truths—but they also appear to give the same answer to the question, What is truth?

The apparently unanimous agreement on the nature of truth may seem remarkable in the context of the manifold disagreements in the great books concerning what is true. As already indicated, some of these disagreements occur in the theory of truth itself—in divergent analyses of the sources of error, or in conflicting formulations of the signs of truth. But even these differences do not affect the agreement on the nature of truth. Just as everyone knows what a liar is, but not as readily whether someone is telling a lie, so the great philosophers seem able to agree on what truth is, but not as readily on what is true. That the definitions—of lying and of truth—are intimately connected will be seen from Plato's conception of the nature of truth as a correspondence between thought and reality. If truthfulness, viewed socially, requires a man's words to be a faithful representation of his mind, truth in the mind itself (or in the statements which express thought) depends on their conformity to reality.

A false proposition, according to Plato, is "one which asserts the non-existence of things which are, and the existence of things which are not." Since "false opinion is that form of opinion which thinks the opposite of the truth," it necessarily follows, as Aristotle points out, that "to say of what is that it is, and of what is not that it is not, is true," just as it is false "to say of what is that it is not, or of what is not that it is."

In one sense, the relation between a true statement and the fact it states is reciprocal. "If a man is," Aristotle declares, then "the proposition in which we allege that he is, is true; and conversely, if the proposition wherein we allege that he is, is true, then he is." But the true proposition "is in no way the cause of the being of the man," whereas "the fact of the man's being does seem somehow to be the cause of the truth of the proposition, for the truth or falsity of the proposition depends on the fact of the man's being or not being."

THIS SIMPLE STATEMENT about the nature of truth is repeated again and again in the subsequent tradition of western thought. What variation there is from writer to writer seems to be in phrasing alone, though the common insight concerning truth as an agreement or correspondence between the mind and reality may occur in the context of widely varying conceptions concerning the nature of the mind and of reality or being.

Plotinus may be an exception, insofar as his theory of knowledge involves a relation of identity rather than of mere correspondence. "The object known," he writes, "must be identical with the knowing act . . . If this identity does not exist, neither does truth . . . Truth cannot apply to something conflicting with itself; what it affirms it must also be."

But others, like Augustine, Aquinas, Descartes, and Spinoza, adopt the conception of truth as an agreement between the mind and reality. Falsehood occurs, says Augustine, when "something is thought to be which is not." According to Aquinas, "any intellect which understands a thing to be otherwise than it is, is false." Truth in the human intellect consists "in the conformity of the intellect with the thing." The same point is implied, at least, in Descartes' remark that if we do not relate our ideas "to anything beyond themselves, they cannot properly speaking be false." Error or, for that matter, truth can only arise in "my judging that the ideas which are in me are similar or conformable to the things which are out-

side me." Spinoza states it as an axiom rather than a definition that "a true idea must agree with that of which it is the idea."

Making a distinction between verbal and real truth, Locke writes: "Though our words signify nothing but our ideas, yet being designed by them to signify things, the truth they contain, when put into propositions, will be only verbal, when they stand for ideas in the mind that have not an agreement with the reality of things." Precisely because he considers truth to consist "in the accordance of a cognition with its object," Kant holds that, so far as the content (as opposed to the form) of a cognition is concerned, it is impossible to discover a universal criterion of truth.

We shall return to Kant's point in a subsequent discussion of the signs of truth, as also we shall have occasion to return to Locke's distinction between real and verbal truth. Neither affects the insight that truth consists in the agreement of our propositions or judgments with the facts they attempt to state, unless it is the qualification that truth so defined is real, not verbal.

In his Preface to *The Meaning of Truth*, James comments on the excitement caused by his earlier lectures on pragmatism, in which, offering the pragmatist's conception of truth, he had spoken of an idea's "working successfully" as the sign of its truth. He warns his critics that this is not a new definition of the nature of truth, but only a new interpretation of what it means to say that the truth of our ideas consists in "their agreement, as falsity means their disagreement, with reality. Pragmatists and intellectualists," he adds, "both accept this definition as a matter of course.

"To agree in the widest sense with reality," James then explains, "can only mean to be guided either straight up to it or into its surroundings, or to be put into such working touch with it as to handle either it or something connected with it better than if we disagreed. Better either intellectually or practically ... Any idea that helps us to deal, whether practically or intellectually, with either the reality or its belongings ... that *fits*, in fact, and adapts our life to the reality's whole setting, will agree sufficiently to meet the requirement. It will be true of that reality."

Without enlarging on its meaning as James does, Freud affirms that the ordinary man's conception of truth is that of the scientist also. Science, he says, aims "to arrive at correspondence with reality, that is to say with what exists outside of us and independently of us. ... This correspondence with the real external world we call truth. It is the aim of scientific work, even when the practical value of that work does not interest us."

THE DEFINITION OF TRUTH as the agreement of the mind with reality leaves many problems to be solved and further explanations to be given by those who accept it. As James indicates, the theory of truth begins rather than ends with its definition. How do we know when our ideas—our statements or judgments—correspond with reality? By what signs or criteria shall we discover their truth or falsity? To this question the great books give various answers which we shall presently consider. There are other problems about the nature of truth which deserve attention first.

For example, one consequence of the definition seems to be that truth is a property of ideas rather than of things. Aristotle says that "it is not as if the good were true and the bad were in itself false"; hence "falsity and truth are not in things ... but in thought." Yet he also applies the word "false" to non-existent things or to things whose appearance somehow belies their nature. Aquinas goes further. He distinguishes between the sense in which truth and falsity are primarily in the intellect and secondarily in things.

The equation between intellect and thing, he points out, can be looked at in two ways, depending on whether the intellect is the cause of the thing's nature, or the nature of the thing is the cause of knowledge in the intellect. When "things are the measure and rule of the intellect, truth consists in the equation of the intellect to the thing. ... But when the intellect is the rule or measure of things, truth consists in the equation of things to the intellect" —as the product of human art may be said to be true when it accords with the artist's plan or intention. Thus "a house is said to be true that fulfills the likeness of the form in the architect's mind."

But, according to Aquinas, not only artificial things, but natural things as well, can have truth when they are viewed in relation to the intellect on which they depend. The divine intellect which is the creative cause of natural things measures their truth, as the human intellect measures the truth of artificial things. "Natural things are said to be true," Aquinas writes, "in so far as they express the likeness of the ideas that are in the divine mind; for a stone is called true, which possesses the nature proper to a stone, according to the preconception in the divine intellect."

Aquinas' conclusion—that "truth resides primarily in the intellect and secondarily in things according as they are related to the intellect as their source"—at once suggests the profound difference between truth in the divine and in the human intellect. The difference is more than that between infinite and finite truth. The distinction between uncreated and created truth affects the definition of truth itself.

The definition of truth as an equation of thought to thing, or thing to thought, does not seem to hold for the divine intellect. The notion of "conformity with its source," Aquinas acknowledges, "cannot be said, properly speaking, of divine truth." Divine truth has no source. It is not truth by correspondence with anything else. Rather it is, in the language of the theologian, the "primal truth." "God Himself, Who is the primal truth . . . is the rule of all truth," and "the principle and source of all truth."

IN THE HUMAN SPHERE, the definition of truth seems to be differently interpreted according as truth is made a property of words or of ideas. "To form a clear notion of truth," Locke writes, "it is very necessary to consider truth of thought and truth of words distinctly from one another." The truth of signs, or what is sometimes called "truth of signification," is "nothing but the joining or separating of words in propositions as the ideas they stand for agree or disagree in men's minds." In contrast to such verbal truth, what Locke calls mental truth consists in the joining or separating of our ideas themselves in a manner to accord with the realities they represent.

For Locke, verbal truth is "chimerical" or "barely nominal" because it can exist without any regard to "whether our ideas are such as really have, or are capable of having, an existence in nature." The signs we use may truly represent our thought even though what we think or state in words is false in fact. Hobbes takes a somewhat contrary view. "*True* and *false*," he writes, "are attributes of speech, not of things. And where speech is not, there is neither truth nor falsehood."

What is the cause of truth in speech? Hobbes replies that, since it consists "in the right ordering of names in our affirmations," a man needs only "to remember what every name he uses stands for." If men begin with definitions or "the settling of significations," and then abide by their definitions in subsequent discourse, their discourse will have truth. From want of definitions or from wrong definitions arise "all false and senseless tenets."

Agreement with reality would seem to be the measure of truth for Hobbes only to the extent that definitions can be right or wrong by reference to the objects defined. If definitions themselves are merely nominal and have rightness so far as they may be free from contradiction, then truth tends to become, more than a property of speech, almost purely logistical—a matter of playing the game of words according to the rules. Reasoning is reckoning with words. It begins with definitions and if it proceeds rightly, it produces "general, eternal and immutable truth. . . . For he that reasoneth aright in words he understandeth, can never conclude in error."

Hobbes' position seems to have a bearing not only on the issue concerning verbal and real truth, but also on the question whether the logical validity of reasoning makes the conclusion it reaches true as a matter of fact. Some writers, like Kant, distinguish between the truth which a proposition has when it conforms to the rules of thought and the truth it has when it represents nature. Valid reasoning alone cannot guarantee that a conclusion is true in fact. That depends on the truth of the premises—upon their being true of the nature of things. Aristotle criticizes those who, accepting certain principles as true, "are ready to accept any consequence of their application.

As though some principles," he continues, "did not require to be judged from their results, and particularly from their final issue. And that issue . . . in the knowledge of nature is the unimpeachable evidence of the senses as to each fact."

BUT NOT ALL TRUTH may require or admit of such certification. The truths of mathematics may be different from those of physics or metaphysics, and those of philosophy or religion from those of the empirical natural sciences. It is sometimes supposed, for example, that the truths of mathematics are purely formal or without reference to real existence. That seems to be the position of Hobbes and Hume, both of whom take geometry as the model of truth. For them statements of fact about real existence are at best probable opinions. For others, like James, there can be truth in the natural sciences, but such empirical truth is distinct in type from what he calls the "necessary" or "*a priori*" truths of mathematics and logic.

Does the definition of truth as agreement with reality apply to all kinds of truth, or only to truths about the realm of nature? The question has in mind more than the distinction between mathematics and physics. It is concerned with the difference between the study of nature and the moral sciences, or between the theoretic and the practical disciplines. "As regards nature," writes Kant, "experience presents us with rules and is the source of truth," but not so in ethical matters or morality. A theoretic proposition asserts that something exists or has a certain property, and so its truth depends on the existence of the thing or its real possession of an attribute; but a practical or moral judgment states, not what is, but what should occur or ought to be. Such a judgment cannot be true by correspondence with the way things are. Its truth, according to Aristotle, must consist rather "in agreement with right desire."

On this theory, all that remains common to speculative and practical truth is the conformity of the intellect to something outside itself—to an existing thing or to desire, will, or appetite. Stressing the difference, Aquinas declares that "truth is not the same for the practical as for the speculative intellect." The "conformity with right appetite" upon which practical truth depends, he goes on to say, "has no place in necessary matters, which are not effected by the human will, but only in contingent matters which can be effected by us, whether they be matters of interior action or the products of external work." In consequence, "in matters of action, truth or practical rectitude is not the same for all as to what is particular, but only as to the common principles"; whereas in speculative matters, concerned chiefly with necessary things, "truth is the same for all men, both as to principles and as to conclusions."

THE PROBLEM OF THE criteria or signs of truth does not seem to be of equal concern to all who discuss the nature of truth. For the ancients, at one extreme, it seems to be hardly a problem at all. For William James, at the other extreme, it seems to be the central problem. In the controversy over the pragmatic theory of truth, in which James engages with Bradley and Russell, some confusion tends to result from the fact that James seldom discusses what truth is except in terms of how we know what is true, while his opponents often ignore the signs of truth in discussing its nature. The important point for James is not that truth consists in agreement with reality, but that "true ideas are those we can assimilate, validate, corroborate, and verify." Whether we can assimilate or validate or verify an idea in turn depends upon its consequences, either for thought or action, or what James calls "truth's cash-value in experiential terms."

In his *Psychology*, James suggests another aspect of his theory of the expediency of a true idea, which he later developed in *Pragmatism*. Not only must our conceptions or theories be "able to account satisfactorily for our sensible experience," but they are also to be weighed for their appeal "to our aesthetic, emotional, and active needs." Apart from this added criterion, which became the subject of much dispute, the pragmatic theory of truth represents one of the traditional solutions of the problem of how to tell whether something is true or false. It looks mainly to extrinsic signs—not to some feature of the idea or thought itself, but to its consequences.

"The test of real and vigorous thinking,"

writes J. S. Mill, "the thinking which ascertains truths instead of dreaming, is successful application to practice." In similar vein, Bacon says that "of all the signs there is none more certain or worthy than that of the fruits produced, for the fruits and effects are the sureties and vouchers, as it were, for the truth of philosophy." The man who supposes that the end of learning lies in contemplation of the truth will "propose to himself as the test of truth, the satisfaction of his mind and understanding, as to the causes of things long since known." Only those who recognize that "the real and legitimate goal of the sciences is the endowment of human life with new inventions and riches," will submit truth to the test of its leading "to some new earnest of effects." To take effects as "pledges of truth" is, for Bacon, equivalent to declaring that truth and utility are "perfectly identical."

Verification by appeal to observation or sensible evidences may be regarded as one way of testing the truth of thought in terms of its consequences, but it also involves the principle of contradiction as a criterion of truth. When Aristotle recommends, for example, that we should accept theories as true "only if what they affirm agrees with the observed facts," he is saying that when the truth of a particular perception is indisputable, because the observed fact is evident, the general or theoretical statement which it contradicts must be false.

But the principle of contradiction as a criterion of truth goes further than testing theories by their consistency with observation. One of two contradictory statements must be false and the other must be true "if that which it is true to affirm is nothing other than that which it is false to deny." Even a single statement may show itself false by being self-contradictory, and in consequence its opposite can be seen to be true. What Aristotle calls axioms, or self-evident and indisputable truths, are those propositions immediately known to be true, and necessarily true, because their contradictories, being self-contradicatory, are impossible statements, or necessarily false. The truth of any proposition which is neither a self-evident axiom nor the statement of an evident, perceived fact, is tested, according to the principle of contradiction, by its consistency with axioms or perceptions.

As opposed to consequences or effects, contradiction or consistency as a sign of truth seems to be an intrinsic criterion. But this criterion is not universally accepted. "Contradiction," writes Pascal, "is not a sign of falsity, nor the want of contradiction a sign of truth." Nor, even when accepted, is it always judged adequate to solve the problem. It is, for Kant, a "merely logical criterion of truth . . . the *conditio sine qua non*, or negative condition of all truth. Farther than this logic cannot go, and the error which depends not on the form, but on the content of the cognition, it has no test to discover."

Some thinkers seem to rely upon an intrinsic mark by which each idea reveals its own truth or falsity. Augustine, for example, considers by what criterion he would know whether what Moses said was true. "And if I did know it," he asks, "would it be from him that I knew it? No," he replies, "but within me, in the inner retreat of my mind, the Truth, which is neither Hebrew nor Greek, nor Latin nor Barbarian, would tell me, without lips or tongue or sounded syllables: 'He speaks truth.' "

For Augustine, God is the warranty of the inner voice which plainly signifies the truth. For Spinoza, the truth of an idea depends upon its relation to God. Because "a true idea in us is that which in God is adequate, in so far as He is manifested by the nature of the human mind," it follows, according to Spinoza, that "he who has a true idea knows at the same time that he has a true idea, nor can he doubt the truth of the thing"; for "he who knows a thing truly must at the same time have an adequate idea or a true knowledge of his knowledge, that is to say (as is self-evident) he must be certain."

It is impossible, Spinoza maintains, to have a true idea without at the same time knowing that it is true. To the question, "How can a man know that he has an idea which agrees with that of which it is the idea?" he replies that "he knows it simply because he has an idea which agrees with that of which it is the idea, that is to say, because truth is its own standard." For what can be clearer, Spinoza asks, "or more certain than a true idea as the standard of truth? Just as light reveals both itself and the darkness, so truth is the standard of itself and of the false."

Spinoza defines an adequate idea as one which, "in so far as it is considered in itself, without reference to the object, has all the properties or internal signs of a true idea." He explains, moreover, that by "internal" he means to exclude even "the agreement of the idea with its object." This, he thinks, meets the objection that "if a true idea is distinguished from a false idea only in so far as it is said to agree with that of which it is the idea, the true idea [would have] no reality or perfection above the false idea (since they are distinguished by an external sign alone), and consequently the man who has true ideas will have no greater reality or perfection than he who has false ideas only."

Although Descartes and Locke also employ an intrinsic criterion of truth—not the adequacy, but the clarity and distinctness, of ideas—they do not seem to mean, as Spinoza does, that a single idea, in and of itself, can be true or false. Like Aristotle before them or Kant later, they regard a simple idea or concept as, strictly speaking, incapable of being either true or false.

"Truth and falsity," writes Locke, "belong ... only to propositions"—to affirmations or denials which involve at least two ideas; or, as Kant says, "truth and error ... are only to be found in a judgement," which explains why "the senses do not err, not because they always judge correctly, but because *they do not judge at all.*"

Nevertheless, for Locke the clarity and distinctness of the ideas which enter into the formation of propositions enable the mind to judge intuitively and certainly of their truth. When ideas are clear and distinct, "the mind perceives the agreement or disagreement of two ideas immediately by themselves. ... Such kind of truths the mind perceives at the first sight of the ideas together by bare intuition ... and this kind of knowledge is the clearest and most certain that human frailty is capable of."

THE PROBLEM OF the criterion of truth is sometimes closely connected with the problem of the causes of error. Descartes seems to pass by natural steps from one to the other. Having decided that "the things which we conceive very clearly and distinctly are all true," he reminds himself that there may be "some difficulty in ascertaining which are those that we distinctly conceive." The mystery of error looms large for Descartes because it seems to him that the human intellect, being created by God, must have a kind of natural infallibility, the infallibility of an instrument designed by God for knowing the truth, not for ignorance or error.

"If we did not know," Descartes reflects, "that all that is in us of reality and truth proceeds from a perfect and infinite being, however clear and distinct were our ideas, we should not have any reason to assure ourselves that they had the perfection of being true." But once we have "recognized that there is a God ... and also recognized that all things depend upon Him, and that He is not a deceiver," we can infer that whatever we "perceive clearly and distinctly cannot fail to be true."

What, then, is the source of our errors? "I answer," writes Descartes, "that they depend on a combination of two causes, to wit, on the faculty of knowledge that rests in me, and on the power of choice or free will." Each perfect in its own sphere, neither the will nor the understanding by itself causes us to fall into error. "Since I understand nothing but by the power which God has given me for understanding, there is no doubt," Descartes declares, "that all that I understand, I understand as I ought, and it is not possible that I err in this."

The trouble lies in the relation of the will to the intellect. "Since the will is much wider in its range and compass than the understanding, I do not restrain it within the same bounds, but extend it also to things which I do not understand." It is not God's fault, says Descartes, if, in the exercise of my freedom, I do not "withold my assent from certain things as to which He has not placed a clear and distinct knowledge in my understanding." But as long as "I so restrain my will within the limits of knowledge that it forms no judgment except on matters which are clearly and distinctly represented to it by the understanding, I can never be deceived."

There are other accounts of error, less elaborate than Descartes', which are similar to the extent that they place the cause in some combination of human faculties rather than in their simple and separate operation. Socrates explains to Theaetetus that false opinions arise when the

senses and the mind do not cooperate properly. Aristotle suggests that it is the imagination which frequently misleads the mind. Looking at the problem from the point of view of the theologian, Aquinas holds that Adam, in his state of innocence before the fall, could not be deceived. "While the soul remained subject to God," he writes, "the lower powers in man were subject to the higher, and were no impediment to their action." But man born in sin can be deceived, not because the intellect itself ever fails, but as a result of the wayward influence "of some lower power, such as the imagination or the like."

Lucretius, for whom sense, not mind, is infallible, attributes error to the fault of reason, which misinterprets the veridical impressions of the senses. "What surer test can we have than the senses," he asks, "whereby to note truth and falsehood?" He explains that the mind, not the senses, is responsible for illusions and hallucinations. "Do not then fasten upon the eyes this frailty of the mind."

Other writers, like Descartes, take the opposite view, that the senses are much less trustworthy than the intellect. Still others, like Montaigne, seem to find that error and fallacy, rather than any sort of infallibility, are quite natural to all human faculties, and beset sense and reason alike. "Man," says Pascal, is "full of error, natural and ineffaceable, without grace. Nothing shows him the truth. Everything deceives him. Those two sources of truth, reason and the senses, besides being both wanting in sincerity, deceive each other in turn."

Considering the extremes to which men have gone in their appraisal of human prowess or frailty, Locke's moderate statement of the matter is worth pondering. "Notwithstanding the great noise made in the world about errors and opinions," he writes, "I must do mankind that right, as to say, there are not so many men in errors and wrong opinions as is commonly supposed. Not that I think they embrace the truth; but, indeed, because concerning these doctrines they keep such a stir about, they have no thought, no opinion at all. . . . And though one cannot say that there are fewer improbable or erroneous opinions in the world than there are, yet this is certain, there are fewer that actually assent to them, and mistake them for truths, than is imagined."

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To find the passages cited, use the numbers in heavy type, which are the volume and page numbers of the passages referred to. For example, in **4** HOMER: *Iliad*, BK II [265-283] **12d**, the number **4** is the number of the volume in the set; the number **12d** indicates that the passage is in section d of page 12.

PAGE SECTIONS: When the text is printed in one column, the letters **a** and **b** refer to the upper and lower halves of the page. For example, in **53** JAMES: *Psychology*, **116a-119b**, the passage begins in the upper half of page 116 and ends in the lower half of page 119. When the text is printed in two columns, the letters **a** and **b** refer to the upper and lower halves of the left-hand side of the page, the letters **c** and **d** to the upper and lower halves of the right-hand side of the page. For example, in **7** PLATO: *Symposium*, **163b-164c**, the passage begins in the lower half of the left-hand side of page 163 and ends in the upper half of the right-hand side of page 164.

AUTHOR'S DIVISIONS: One or more of the main divisions of a work (such as PART, BK, CH, SECT) are sometimes included in the reference; line numbers, in brackets, are given in certain cases; *e.g.*, *Iliad*, BK II [265-283] **12d**.

BIBLE REFERENCES: The references are to book, chapter, and verse. When the King James and Douay versions differ in title of books or in the numbering of chapters or verses, the King James version is cited first and the Douay, indicated by a (*D*), follows; *e.g.*, OLD TESTAMENT: *Nehemiah*, 7:45—(*D*) *II Esdras*, 7:46.

SYMBOLS: The abbreviation "esp" calls the reader's attention to one or more especially relevant parts of a whole reference; "passim" signifies that the topic is discussed intermittently rather than continuously in the work or passage cited.

For additional information concerning the style of the references, see the Explanation of Reference Style; for general guidance in the use of *The Great Ideas*, consult the Preface.

1. The nature of truth

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31 DESCARTES: *Meditations*, III, **83a**; IV **89a-93a** passim / *Objections and Replies*, **229c-d**
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1*a*. The signs or criteria of truth: methods of verification

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54 FREUD: *New Introductory Lectures*, 819d-820a; 879c

1b. The relation between truth and being or reality

7 PLATO: *Euthydemus*, 71c-74a / *Cratylus*, 85a-89b / *Phaedrus*, 124c-126c / *Republic*, BK V, 368c-373c; BK VI, 383d-388a esp 387a; BK IX, 423b-424a / *Timaeus*, 447a-d / *Parmenides*, 507c-509a / *Theaetetus*, 534d-536a; 537a-c / *Sophist*, 561d-577b / *Philebus*, 625a
8 ARISTOTLE: *Categories*, CH 12 [14^b10-21] 20b / *Interpretation*, CH 3 [16^b19-26] 25d-26a; CH 9 [18^b1-4] 28b-c / *Prior Analytics*, BK I, CH 36 [48^a40-$^b9$] 66d; BK II, CH 2 [53^b11-26] 72d-73a / *Metaphysics*, BK II, CH 1 [993^b19-31] 512a-b; BK V, CH 7 [1017^a31-34] 538a; BK VI, CH 4 550a,c; BK IX, CH 10 577c-578a,c
17 PLOTINUS: *Fifth Ennead*, TR III, CH 5, 218b
18 AUGUSTINE: *Confessions*, BK III, par 10 15b-d; BK V, par 5 28b-c; BK VII, par 16-23 48c-50c / *City of God*, BK XI, CH 10, 328c-d / *Christian Doctrine*, BK I, CH 34 634b-c
19 AQUINAS: *Summa Theologica*, PART I, Q 1, A 1, REP 2 3b-4a; Q 3, A 4, REP 2 16d-17c; Q 14, A 8, REP 3 82c-83b; Q 16, A 1, REP 3 94b-95c; A 3 96b-d; A 8, REP 2 99d-100d; Q 18, A 4, REP 3 107d-108c; Q 44, A 1, ANS 238b-239a; Q 87, A 3, REP 1 467b-468a; Q 119, A 1, ANS 604c-607b; PART I-II, Q 2, A 3, ANS 617b-618a; Q 3, A 7, ANS 628a-d; Q 22, A 2, ANS 721c-722c; Q 29, A 5, ANS 747c-748b
21 DANTE: *Divine Comedy*, PARADISE, IV [124-126] 112a; XXXIII [49-54] 156d
23 HOBBES: *Leviathan*, PART I, 56b
31 DESCARTES: *Meditations*, I, 76c / *Objections and Replies*, 226d-227a; 229c-d; 261a
31 SPINOZA: *Ethics*, PART I, AXIOM 6 355d; PART II, DEF 4 373b; PROP 7 375a-c; PROP 10, SCHOL 376d-377a; PROP 24-34 383c-385d; PROP 43, SCHOL 388d-389b; PROP 44, DEMONST 389b-c; COROL 2, DEMONST 390a
35 LOCKE: *Human Understanding*, BK IV, CH V, SECT 7-8 330b-d
42 KANT: *Pure Reason*, 36a-37b esp 36b-c; 91d-93b; 102c-103a; 114d-115a
46 HEGEL: *Philosophy of Right*, PART III, par 360 113d-114a,c / *Philosophy of History*, INTRO, 156d-157b; PART I, 237d-238a; PART IV, 349b-350b
51 TOLSTOY: *War and Peace*, BK V, 217c
53 JAMES: *Psychology*, 636a; 638a-643a esp 641a-643a; 852a; 880b-882a

1c. The relation of truth, goodness, and beauty

7 PLATO: *Phaedrus*, 124c-129d / *Symposium*, 167a-d / *Republic*, BK VI, 383d-388a / *Theaetetus*, 525c-526a / *Sophist*, 556c-559a; 561b-d / *Philebus*, 630d-631d; 637c-638a / *Laws*, BK II, 654a-662a
8 ARISTOTLE: *Metaphysics*, BK V, CH 1 [1013^a20-24] 533b; BK XII, CH 7 [1072^a25-$^b4$] 602b-c /

(1. *The nature of truth.* 1c. *The relation of truth, goodness, and beauty.*)

Soul, BK III, CH 7 663c-664b esp [431[a]13-19] 663d

12 EPICTETUS: *Discourses*, BK II, CH 2, 141a; BK IV, CH II, 241a-b

12 AURELIUS: *Meditations*, BK IV, SECT 20 265a-b

17 PLOTINUS: *First Ennead*, TR III, CH 1-2 10a-d; TR VI, CH 3-9 22b-26a esp CH 4, 23a / *Sixth Ennead*, TR VII, CH 31-33 336d-338b

18 AUGUSTINE: *Confessions*, BK VII, par 23 50b-c

19 AQUINAS: *Summa Theologica*, PART I, Q 5, A 4, REP 1 25d-26c; Q 16, A 1, ANS 94b-95c; A 3, ANS 96b-d; A 4 97a-c; Q 17, A 4, RFP 2 103c-104b; Q 54, A 2, ANS 285d-286c; Q 79, A 11, REP 2 424d-425b; Q 82, A 3, REP 1 433c-434c; A 4, REP 1 434c-435c; PART I-II, Q 3, A 5, REP 2 626b-627a; Q 9, A 1, ANS and REP 2-3 657d-658d; Q 19, A 1 703b-d; A 3, REP 1 704c-705a; Q 22, A 2, ANS 721c-722c; Q 27, A 1, REP 3 737b-d; A 2, ANS 737d-738c; Q 29, A 5 747c-748b

20 AQUINAS: *Summa Theologica*, PART II-II, Q 180, A 2, REP 3 608c-609c

30 BACON: *Advancement of Learning*, 26c-27a

35 LOCKE: *Human Understanding*, BK IV, CH III, SECT 20 319b-c

46 HEGEL: *Philosophy of Right*, PART II, par 132, 46b / *Philosophy of History*, PART II, 278a-c; PART IV, 346d-347a

52 DOSTOEVSKY: *Brothers Karamazov*, BK VI, 153b-d

54 FREUD: *New Introductory Lectures*, 880b

2. The modes of truth and falsity

2*a*. The distinction between truth and falsity in the mind and in things: logical and ontological truth

8 ARISTOTLE: *Metaphysics*, BK V, CH 29 [1024[b] 18-26] 546c-d

19 AQUINAS: *Summa Theologica*, PART I, Q 16, A 1 94b-95c; A 7, REP 4 99a-d; Q 17, A 1 100d-101d; Q 21, A 2, ANS 125c-d

31 DESCARTES: *Objections and Replies*, 126b-127c

35 LOCKE: *Human Understanding*, BK II, CH XXXII, SECT 2 243d; BK IV, CH V, SECT 11 331b

2*b*. The distinction between truth of statement and truth of signification: the distinction between real and verbal truth

8 ARISTOTLE: *Metaphysics*, BK IV, CH 4 [1006[a]12-29] 525b-c; BK XI, CH 5 [1062[a]5-19] 590b-c

19 AQUINAS: *Summa Theologica*, PART I, Q 16, A 8, REP 3 99d-100d

23 HOBBES: *Leviathan*, PART I, 56b

31 SPINOZA: *Ethics*, PART II, PROP 47, SCHOL 390c-391a

35 LOCKE: *Human Understanding*, BK II, CH XXXII, SECT 4-25 244a-248a passim, esp SECT 5 244a-b; BK IV, CH IV, SECT 1-12 323d-326d passim, esp SECT 1 323d-324a; SECT 18 328d-329a; CH V, SECT 6-8, 330b-d

53 JAMES: *Psychology*, 880b-882a

2*c*. The distinction between theoretical and practical truth: conformity to existence and conformity to right desire

8 ARISTOTLE: *Metaphysics*, BK II, CH 1 [993[b]19-31] 512a-b

9 ARISTOTLE: *Ethics*, BK I, CH 3 339d-340b; CH 7 [1098[a]25-35] 343d; BK II, CH 2 [1103[b]26-1104[a]9] 349b-c; BK VI, CH 2 387d-388b; BK X, CH 1 [1172[a]34-[b]8] 426b-c

19 AQUINAS: *Summa Theologica*, PART I, Q 85, A 6, REP 1 458d-459c

20 AQUINAS: *Summa Theologica*, PART I-II, Q 57, A 5, REP 3 39a-40a; Q 94, A 4, ANS 223d-224d

23 HOBBES: *Leviathan*, PART I, 78b-c

31 DESCARTES: *Objections and Replies*, 126a-b; 206c-207a; 237b-c

35 LOCKE: *Human Understanding*, BK IV, CH V, SECT 11 331b

42 KANT: *Pure Reason*, 114d-115a; 190c-191a / *Fund. Prin. Metaphysic of Morals*, 253b-c; 264b-d; 271a-c; 283d-287d esp 283d-284d / *Practical Reason*, 291a-297c; 310a-b; 319c-321b; 329a-337a,c esp 329b-d / *Intro. Metaphysic of Morals*, 388a-d / *Judgement*, 596c-598b

43 MILL: *Utilitarianism*, 461c-d

46 HEGEL: *Philosophy of Right*, PREF, 2d-3b / *Philosophy of History*, PART IV, 360d-361a

53 JAMES: *Psychology*, 643a-645b; 655a-659a; 865b; 886a-888a

2*d*. The comparison of human and divine truth: finite truths and the infinite truth

OLD TESTAMENT: *Exodus*, 34:6 / *Numbers*, 23:19 / *Psalms*, 31:5; 86:15; 96:13; 100:5; 117:2; 119:142,160; 146:6—(*D*) *Psalms*, 30:6; 85:15; 95:13; 99:5; 116:2; 118:142,160; 145:6-7 / *Proverbs*, 30:5-6

NEW TESTAMENT: *John*, 3:33; 7:14-18; 8:12-59; 14:6,16-17; 15:26; 16:13-14; 17:17; 18:37-38 / *Romans*, 1:18-25; 2:2,8-9,20 / *I Corinthians*, 1:17-2:16 / *II Corinthians*, 13:8 / *Ephesians*, 4:21-24 / *II Thessalonians*, 2:10-14 / *I Timothy*, 2:3-4; 3:15 / *II Timothy*, 2:25-26 / *Hebrews*, 6:18; 10:26 / *James*, 5:19-20 / *I John*, 1:5-10; 2:4,21-22; 3:18-19; 5:5-12 esp 5:6 / *II John*, 2-4 / *III John*, 3-4,8

18 AUGUSTINE: *Confessions*, BK III, par 10 15b-d; BK V, par 5 28b-c; BK XI, par 5 90b-c / *City of God*, BK XI, CH 10, 328c-d / *Christian Doctrine*, BK I, CH 9-10 627a-b; CH 34 634b-c

19 AQUINAS: *Summa Theologica*, PART I, Q 2, A 1, REP 3 10d-11d; Q 16, AA 5-8 97c-100d; Q 21, A 2, ANS 125c-d; Q 106, A 1, REP 3 545d-546d; Q 107, AA 2-3 550b-551c; PART I-II, Q 3, A 7, ANS 628a-d

20 AQUINAS: *Summa Theologica*, PART I-II, Q 93, A 2, ANS 216c-217b

21 DANTE: *Divine Comedy*, PARADISE, II [19-148] 108a-109b passim; IV [115]-V [12] 111d-112b; XIX [22-66] 135b-d; XXI [73-105] 139a-b

25 MONTAIGNE: *Essays*, 80b-82b; 208d-209c; 213c-d; 267c-268a; 272d-273b

31 SPINOZA: *Ethics*, PART II, PROP 32–34 385c-d
32 MILTON: *Paradise Lost*, BK VII [109–130] 219b-220a
46 HEGEL: *Philosophy of History*, PART III, 308a-b; PART IV, 349b-350a
51 TOLSTOY: *War and Peace*, BK V, 216d-218b esp 217c-d
53 JAMES: *Psychology*, 671b [fn 1]

2e. The distinction between truth and probability: its relation to the distinction between knowledge and opinion

7 PLATO: *Republic*, BK V, 370d-373c esp 373b-c; BK VI, 386d-388a / *Timaeus*, 447b-d / *Theaetetus*, 517b-d; 527b-d; 531b-532a / *Philebus*, 633a-635b
8 ARISTOTLE: *Interpretation*, CH 9 28a-29d / *Posterior Analytics*, BK I, CH 2 97d-99a; CH 6 102b-103c; CH 8 104a-b; CH 30 119d; CH 33 121b-122a,c / *Topics*, BK I, CH 1 [100^{a}25-^{b}26] 143a-b / *Metaphysics*, BK IV, CH 4–6 525a-531c; BK VII, CH 15 [1039^{b}31-1040^{a}8] 563d-564a; BK IX, CH 10 [1051^{b}13–18] 577d; BK XI, CH 6 590d-592b
9 ARISTOTLE: *Ethics*, BK I, CH 3 [1094^{b}11–28] 339d-340a; CH 7 [1098^{a}25-35] 343d; BK II, CH 2 [1104^{a}1-9] 349b-c; BK VI, CH 9 [1142^{b}5-15] 391d / *Rhetoric*, BK I, CH 1 [1355^{a}4-18] 594b; CH 2 [1357^{a}23-^{b}21] 596d-597c; BK II, CH 25 [1402^{b}13-1403^{a}17] 652b-653a
16 COPERNICUS: *Revolutions of the Heavenly Spheres*, 505a-506a
19 AQUINAS: *Summa Theologica*, PART I, Q 12, A 7, ANS 56a-57b; Q 16, A 8 99d-100d; Q 32, A 1, REP 2 175d-178a; Q 79, A 9, REP 3-4 422b-423d
20 AQUINAS: *Summa Theologica*, PART I-II, Q 57, A 2, REP 3 36a-37b; Q 94, A 4, ANS 223d-224d
23 HOBBES: *Leviathan*, PART I, 60c-61a
25 MONTAIGNE: *Essays*, 271b-273b
31 DESCARTES: *Rules*, II 2a-3b; III, 3d-4a / *Discourse*, PART I, 43d; 44a-b; PART IV, 51b-d / *Meditations*, I-II, 75a-78b; V, 95b-96a / *Objections and Replies*, 124b-125b
31 SPINOZA: *Ethics*, PART II, PROP 35, DEMONST 385d-386a; PROP 40, SCHOL 2 388a-b; PROP 41-44 388c-390a; PROP 49, SCHOL, 391d-392a
32 MILTON: *Areopagitica*, 406a-b
33 PASCAL: *Pensées*, 184–241 205a-217b passim, esp 233–241 213b-217b
35 LOCKE: *Human Understanding*, BK IV, CH III, SECT 14 316b-d; SECT 29 322c-323a; CH IV, SECT 6-8 325a-c; SECT 18 328d-329a; CH VI 331b-336d esp SECT 13 335c-d, SECT 16 336d; CH XV 365a-366c; CH XVII, SECT 2 371d-372b; SECT 14-17 378c-379c; CH XIX, SECT 1 384c-d
42 KANT: *Pure Reason*, 1a-4a,c; 108a; 228c-d; 240b-243c / *Judgement*, 600d-604b esp 601d, 603a-b, 603d-604b
43 MILL: *Liberty*, 274b-293b passim
45 FARADAY: *Researches in Electricity*, 391b-c
46 HEGEL: *Philosophy of Right*, PART II, par 132, 46b-c; par 140 49b-54a; PART III, par 268 84c-d; ADDITIONS, 91 131a-d
54 FREUD: *Beyond the Pleasure Principle*, 661c-662a

3. Truth and error in relation to human knowing and learning

3a. Truth in the apprehensions of the sensitive faculty

3a(1) The truth of sensations: judgments of perception

7 PLATO: *Phaedo*, 224a-b / *Republic*, BK VI, 386d-388a; BK VII, 392b-393b; BK X, 431b-c / *Theaetetus*, 538d-541a / *Sophist*, 575d-577b esp 577a-b / *Philebus*, 622d-626a
8 ARISTOTLE: *Metaphysics*, BK IV, CH 5 [1010^{b}1-29] 530a-c; BK XI, CH 6 [1062^{b}33–1063^{a}9] 591a-b / *Soul*, BK II, CH 6 [418^{a}6–18] 648d-649a; BK III, CH 3 [427^{b}6–15] 659d-660a; [428^{a}11–18] 660b; CH 6 [430^{b}26–30] 663b-c / *Sense and the Sensible*, CH 4 [442^{b}4–9] 680a-b
9 ARISTOTLE: *Parts of Animals*, BK II, CH 2 [648^{b}15–20] 173a
12 LUCRETIUS: *Nature of Things*, BK I [693-700] 9c; BK IV [379–521] 49a-51a
18 AUGUSTINE: *City of God*, BK XIX, CH 18 523a-b
19 AQUINAS: *Summa Theologica*, PART I, Q 17, A 2 102a-d; Q 85, A 6, ANS 458d-459c
25 MONTAIGNE: *Essays*, 285c-286a
28 HARVEY: *Circulation of the Blood*, 320b / *On Animal Generation*, 333c
30 BACON: *Advancement of Learning*, 51c-d; 58b / *Novum Organum*, BK I, APH 16 108a; APH 41 109c-d; APH 50 111b / *New Atlantis*, 213d
31 DESCARTES: *Rules*, VIII, 13a-b; XII, 18c; 22c-23a / *Discourse*, PART IV, 53b / *Meditations*, I 75a-77c; III, 83d-84a; VI, 101d-103d / *Objections and Replies*, 124d; POSTULATE I 130d; 206c-207a; 229d-230d
31 SPINOZA: *Ethics*, PART II, PROP 24-28 383c-384c; PROP 40, SCHOL 2–PROP 41 388a-c
33 PASCAL: *Pensées*, 9 173b
35 LOCKE: *Human Understanding*, BK II, CH XXX, SECT 2 238b-c; CH XXXI, SECT 2 239b-d; CH XXXII, SECT 14-16 245c-246b; BK IV, CH IV, SECT 4 324c; CH XI, SECT 3 355a-b; SECT 11 357b-c
35 BERKELEY: *Human Knowledge*, INTRO, SECT 1 405a-b; SECT 14-15 415c-416a; SECT 40 420b; SECT 86-88 429c-430b
35 HUME: *Human Understanding*, SECT XII, DIV 117-123 504a-506a
42 KANT: *Pure Reason*, 108a-109c esp 108a-d
43 MILL: *Utilitarianism*, 461c-d
53 JAMES: *Psychology*, 460a-471a esp 468b-469a; 475a-478b; 508a-520a esp 508a, 519b; 521a-522a; 565a-b; 593a-626a esp 593a-595a, 601a-602a, 606b-625a; 648b [fn 1]; 780a-785a; 851b-852a
54 FREUD: *Interpretation of Dreams*, 148d-149a; 337a-c / *Unconscious*, 430b-c

(*3a. Truth in the apprehensions of the sensitive faculty.*)

3a(2) Truth in the memory and imagination

7 PLATO: *Theaetetus*, 538d-541a / *Philebus*, 623d-624c
8 ARISTOTLE: *Metaphysics*, BK IV, CH 5 [1010b1-12] 530a-b; BK V, CH 29 [1024b17-27] 546c-d / *Soul*, BK III, CH 3 [428a11-18] 660b / *Memory and Reminiscence*, CH 1 [451a8-12] 692a
19 AQUINAS: *Summa Theologica*, PART I, Q 17, A 2, REP 2 102a-d; Q 54, A 5, ANS 288a-d
29 CERVANTES: *Don Quixote* esp PART I, 1d-2b, 4b-c, 18d-22a, 44b, 50b-52d
31 DESCARTES: *Rules*, XII, 22c-23a / *Discourse*, PART IV, 53b / *Meditations*, I, 75c-77c
31 SPINOZA: *Ethics*, PART II, PROP 17, SCHOL 381b-d; PROP 35, SCHOL 386a-b; PROP 40, SCHOL 1-PROP 41 387b-388c; PROP 44, COROL 1 and SCHOL 389c-390a
33 PASCAL: *Pensées*, 82-88 186b-189b
35 LOCKE: *Human Understanding*, BK IV, CH XI, SECT 11 357b-c
35 HUME: *Human Understanding*, SECT II, DIV II, 455b-c
40 GIBBON: *Decline and Fall*, 88c-d
42 KANT: *Pure Reason*, 173b-174a
51 TOLSTOY: *War and Peace*, BK VII, 294b-295a
53 JAMES: *Psychology*, 240a-241b; 480a-484a esp 483b; 498a-499a; 527a-538b; 662a-663a [fn 1]
54 FREUD: *Interpretation of Dreams*, 341b-343c esp 342d-343b / *General Introduction*, 597b-599b / *Ego and Id*, 700c; 701d

3b. Truth in the acts of the mind

7 PLATO: *Republic*, BK VI, 386d-388a / *Theaetetus*, 536c-544a
8 ARISTOTLE: *Soul*, BK III, CH 6 662d-663c; CH 10 [433a21-28] 665d-666a
9 ARISTOTLE: *Ethics*, BK VI, CH 2 [1139a27-30] 387d-388a; CH 3 [1139b14-18] 388b
18 AUGUSTINE: *Confessions*, BK X, par 19 76a-b / *City of God*, BK VIII, CH 6, 269b-c / *Christian Doctrine*, BK I, CH 9 627a
19 AQUINAS: *Summa Theologica*, PART I, Q 16, AA 1-2 94b-96b; Q 17, A 3 102d-103c; Q 58, A 5 303c-304c; Q 85, A 6 458d-459c; Q 94, A 4 505a-506a; Q 106, A 1, ANS 545d-546d; Q 107, A 2, ANS 550b-551a; PART I-II, Q 17, A 6, ANS 690b-d
31 DESCARTES: *Rules*, VIII, 13a-b; XII, 18c; 22c-23c / *Meditations*, III, 82a-86d esp 85c; IV 89a-93a esp 90b-91b / *Objections and Replies*, 123d-125b; 141a; 229d-230d
31 SPINOZA: *Ethics*, PART II, PROP 44, DEMONST 389b-c; COROL 2, DEMONST 390a; PROP 48 391a-c; PROP 49, SCHOL 391d-394d
42 KANT: *Pure Reason*, 36b-37d; 108a-109c; 110d-112d; 115d-119a esp 118a-c; 174b-d; 193a-b; 233d-234b
53 JAMES: *Psychology*, 867a-868b

3b(1) The truth of ideas: concepts and definitions

7 PLATO: *Cratylus* 85a-114a,c passim, esp 85a-89a, 104b-114a,c / *Republic*, BK II, 323c-324c; BK VI, 386d-388a / *Seventh Letter*, 809c-810d
8 ARISTOTLE: *Categories*, CH 4 [2a4-10] 6a / *Interpretation*, CH 1 [16a9-18] 25a-b / *Topics*, BK VI, CH 1 [139a24-b2] 192a-b; BK VI, CH 4-BK VII, CH 5 194c-211a,c passim / *Metaphysics*, BK V, CH 29 [1024b27-38] 546d-547a; BK VI, CH 4 [1027b27-28] 550a; BK IX, CH 10 [1051b18-33] 577d-578a / *Soul*, BK III, CH 6 [430a26-b5] 662d-663a; [430b26-30] 663b-c
18 AUGUSTINE: *Confessions*, BK X, par 19 76a-b / *Christian Doctrine*, BK II, CH 35 653b-c
19 AQUINAS: *Summa Theologica*, PART I, Q 2, A 1, REP 2 10d-11d; Q 16, A 2 95c-96b; Q 17, A 3 102d-103c; Q 58, A 5 303c-304c; Q 85, A 1, REP 1 451c-453c; A 6 458d-459c; Q 94, A 4, ANS 505a-506a
23 HOBBES: *Leviathan*, PART I, 56b-d
28 GALILEO: *Two New Sciences*, THIRD DAY, 200a-b
28 HARVEY: *On Animal Generation*, 333b-d
30 BACON: *Advancement of Learning*, 57d-58b
31 DESCARTES: *Rules*, XII, 21d-22a / *Meditations*, III, 82a-86d esp 83a, 85c; IV, 90b-c / *Objections and Replies*, DEF III 130b; AXIOM IV-V 131d-132a; 156d-158a
31 SPINOZA: *Ethics*, PART I, AXIOM 6 355d; PROP 8, SCHOL 2, 357b-d; PART II, DEF 4 373b; PROP 32-43 385c-389b
33 PASCAL: *Vacuum*, 373a-b / *Geometrical Demonstration*, 430b-431b
35 LOCKE: *Human Understanding*, BK II, CH XXX-XXXII 238a-248b passim, esp CH XXXII 243c-248b; BK III, CH VI, SECT 43-47 280c-282b passim
36 STERNE: *Tristram Shandy*, 234b-236b
42 KANT: *Pure Reason*, 36b-c; 77b-d; 85b-87c esp 86b-87c; 91d-93b; 179d-182b; 193a-c; 215d-217a; 233d-234b / *Pref. Metaphysical Elements of Ethics*, 367d-368a / *Judgement*, 570b-572d
46 HEGEL: *Philosophy of Right*, INTRO, par 1-2 9a-10a
53 JAMES: *Psychology*, 299a-302a esp 299b, 302b [fn 1]; 305a-312a esp 307a-308a; 669a-671a esp 671b [fn 1]

3b(2) The truth of propositions: the special problem of judgments about future contingencies

7 PLATO: *Euthydemus*, 71c-74a / *Cratylus*, 85a-86b; 109a-b / *Sophist*, 561d-577b esp 575a-577b
8 ARISTOTLE: *Categories*, CH 4 [2a4-10] 6a; CH 5 [4a10-b19] 8b-9a / *Interpretation*, CH 1 [16a9-18] 25a-b; CH 4-14 26a-36d passim, esp CH 4 [17a1-4] 26b, CH 7 26d-27d, CH 9 28a-29d, CH 14 35c-36d / *Metaphysics*, BK IV, CH 7 [1011b25-29] 531c; [1012a1-17] 531d-

532a; CH 8 [1012a29–b22] 532b-d; BK VI, CH 4 550a,c; BK IX, CH 10 [1051a34–b18] 577c-d / *Soul*, BK III, CH 3 [427b16–25] 660a; CH 6 [430a26–b5] 662d-663a; [430b26–31] 663b-c

9 ARISTOTLE: *Ethics*, BK II, CH 7 [1107a27–32] 352d-353a; BK VI, CH 2 [1139a21–31] 387d-388a

19 AQUINAS: *Summa Theologica*, PART I, Q 3, A 4, REP 2 16d-17c; Q 13, A 12, ANS and REP 3 74c-75b; Q 14, A 13 esp REP 3 86d-88c; A 15, REP 3 89b-90b; Q 16, A 2 95c-96b; AA 7-8 99a-100d; Q 17, AA 3-4 102d-104b; Q 57, A 3 297b-298a; Q 58, A 4, REP 2 302d-303c; Q 85, A 1, REP 1 451c-453c; A 5, REP 3 457d-458d; A 6 458d-459c; Q 86, A 4 463d-464d; Q 94, A 4, ANS and REP 5 505a-506a

20 AQUINAS: *Summa Theologica*, PART I-II, Q 57, A 5, REP 3 39a-40a

22 CHAUCER: *Troilus and Cressida*, BK IV, STANZA 147–154 107b-108b

23 HOBBES: *Leviathan*, PART I, 56b; 57c

30 BACON: *Advancement of Learning*, 54c-55a; 57d-58b

31 DESCARTES: *Rules*, XII, 22c-23b / *Discourse*, PART IV, 52a / *Meditations*, III, 83a; 85c; IV, 90b-91b / *Objections and Replies*, 123d-125c; DEF IX 130d; 156d-157c; 215d-216c; 229d-230d

31 SPINOZA: *Ethics*, PART II, PROP 49, SCHOL, 392a-394a

35 LOCKE: *Human Understanding*, BK II, CH XXXII, SECT 1–3 243c-244a; SECT 19–26 247a-248b; BK III, CH VII, SECT 1 283a-b; BK IV, CH V 329a-331b; CH VI, SECT 3 331c-d; SECT 16 336d

35 HUME: *Human Understanding*, SECT IV, DIV 21 458b-c

42 KANT: *Pure Reason*, 99a-100a; 108a-d; 193a-c

53 JAMES: *Psychology*, 638b; 640b; 671a-672a; 884b-885a; 889b-890a

3b(3) Truth in reasoning: the truth of premises in relation to the truth of conclusions; logical validity and truth about reality

7 PLATO: *Euthydemus* 65a-84a,c esp 67b-68d, 71b-72c / *Phaedo*, 236c-238a

8 ARISTOTLE: *Prior Analytics*, BK II, CH 2–4 72d-77a / *Posterior Analytics*, BK I, CH 2 [71b16–26] 98a-b; [72a6–9] 98c; [72a14–19] 98c-d; CH 10 104d-105d; CH 12 [77b16–34] 106d-107a / *Physics*, BK I, CH 2 [185a5–12] 259d; CH 3 [186a4–9] 260d-261a; BK VIII, CH 1 [252a19–b7] 335d-336b

9 ARISTOTLE: *Ethics*, BK I, CH 3 [1094b11–28] 339d-340a; CH 8 [1098b9–12] 344a; BK VI, CH 9 [1142b8–15] 391d; [1142b22–26] 392a; BK VII, CH 2 [1146a23–30] 396b / *Poetics*, CH 24 [1460a19–25] 696b-c

10 GALEN: *Natural Faculties*, BK I, CH 14, 178c-d

12 EPICTETUS: *Discourses*, BK I, CH 7 112b-113d

18 AUGUSTINE: *Christian Doctrine*, BK II, CH 31–34 651d-653b

19 AQUINAS: *Summa Theologica*, PART I, Q 84, A 3, REP 3 443d-444d; Q 85, A 6, ANS 458d-459c

23 HOBBES: *Leviathan*, PART I, 56b-d; 58d-59a; 65c-d; PART IV, 267b-c

30 BACON: *Advancement of Learning*, 57b-58a; 59c-60b / *Novum Organum*, BK I, APH 14 107d-108a

31 DESCARTES: *Rules*, III, 4a-d; X, 16d-17a; XII, 23b / *Objections and Replies*, 126b-127c

31 SPINOZA: *Ethics*, PART II, PROP 40, DEMONST 387a

35 LOCKE: *Human Understanding*, BK II, CH XI, SECT 13 146b-c

42 KANT: *Pure Reason*, 36a-37d; 64d-65c; 109b-c; 110d-111c; 180c-182b; 193a-b; 211c-218d

44 BOSWELL: *Johnson*, 134c-d

51 TOLSTOY: *War and Peace*, EPILOGUE II, 683d-684a

53 JAMES: *Psychology*, 295a-b; 526b [fn 1]; 867a-882a esp 869a-870a, 871b-872b, 878b-880b

3c. The principle of contradiction as the foundation of truth in judgment and in reasoning

7 PLATO: *Protagoras*, 53a / *Euthydemus*, 72d-73b / *Republic*, BK IV, 350d-351b / *Theaetetus*, 527a-528a / *Sophist*, 558b-d

8 ARISTOTLE: *Categories*, CH 10 [13b1–35] 19a-c / *Prior Analytics*, BK II, CH 17 86b-87a / *Posterior Analytics*, BK I, CH 11 105d-106b / *Metaphysics*, BK III, CH 2 [996b26–30] 515b; BK IV, CH 3-6 524b-531c; CH 8 [1012a29–b22] 532b-d; BK XI, CH 5-6 590a-592b

19 AQUINAS: *Summa Theologica*, PART I, Q 58, A 4, REP 2 302d-303c

20 AQUINAS: *Summa Theologica*, PART I-II, Q 94, A 2, ANS 221d-223a

30 BACON: *Advancement of Learning*, 59c-60a

31 DESCARTES: *Meditations*, III, 82b-d

31 SPINOZA: *Ethics*, PART II, PROP 49, SCHOL, 393c-d

35 LOCKE: *Human Understanding*, BK I, CH I, SECT 16 99b-c; SECT 19-20 100b-d; CH III, SECT 3 113a-b; BK IV, CH II, SECT 1 309b-d; CH VII, SECT 4 337b-338b; SECT 8-11 338d-342d passim

42 KANT: *Pure Reason*, 17d-18d; 36b-37b; 64d-65c; 97a-b; 174b-d

53 JAMES: *Psychology*, 639a-641a

3d. The nature and causes of error

3d(1) The infallibility of the senses and the mind: the respects in which they are incapable of error

7 PLATO: *Phaedo*, 224a-c / *Theaetetus*, 539a-540a

8 ARISTOTLE: *Metaphysics*, BK IV, CH 5 [1010b 15-29] 530b-c; BK IX, CH 10 [1051b25-33]

(*3d. The nature and causes of error.* 3*d*(1) *The infallibility of the senses and the mind: the respects in which they are incapable of error.*)

578a / *Soul*, BK II, CH 6 [418ª6–18] 648d-649a; BK III, CH 3 [427ᵇ6–15] 659d-660a; [428ª5–429ª2] 660b-661a; CH 6 [430ª26–ᵇ5] 662d-663a; [430ᵇ26–30] 663b-c; CH 10 [433ª21–28] 665d-666a / *Sense and the Sensible*, CH 4 [442ᵇ4–9] 680a-b

12 LUCRETIUS: *Nature of Things*, BK I [693–700] 9c; BK IV [379–521] 49a-51a

18 AUGUSTINE: *City of God*, BK XIX, CH 18 523a-b

19 AQUINAS: *Summa Theologica*, PART I, Q 17, AA 2–3 102a-103c; Q 85, A 1, REP 1 451c-453c; A 6 458d-459c; Q 94, A 4 505a-506a

20 AQUINAS: *Summa Theologica*, PART I-II, Q 94, A 4, ANS 223d-224d

23 HOBBES: *Leviathan*, PART I, 56d

30 BACON: *Novum Organum*, BK I, APH 16 108a

31 DESCARTES: *Rules*, XII, 22c-23b / *Meditations*, II, 77d-78b; III, 83a; IV 89a-93a / *Objections and Replies*, 124b-d; 215b-216c; 229d-230d

31 SPINOZA: *Ethics*, PART II, PROP 43–47 388c-391a; PROP 49, SCHOL 391d-394d passim

33 PASCAL: *Pensées*, 9 173b

35 LOCKE: *Human Understanding*, BK II, CH XI, SECT 3 144c-d; CH XXX, SECT 2 238b-c; CH XXXI, SECT 2 239b-d; CH XXXII, SECT 14–17 245c-246c

35 BERKELEY: *Human Knowledge*, SECT 40 420b; SECT 88 430a-b

35 HUME: *Human Understanding*, SECT VII, DIV 52, 473a

42 KANT: *Pure Reason*, 108a-d; 193a-b; 233d-234b

53 JAMES: *Psychology*, 125a-126a; 361a-b

3*d*(2) The nature and sources of error in human perception and thought: the distinction between error and ignorance

7 PLATO: *Meno*, 180b-182a esp 181d-182a / *Phaedo*, 224a-225a / *Republic*, BK II, 323c-324c; BK III, 339b-340a / *Theaetetus*, 520c-522b; 536c-544a / *Sophist*, 557b-558d; 575d-577b / *Philebus*, 622d-626a

8 ARISTOTLE: *Prior Analytics*, BK I, CH 34–35 66b-d; BK II, CH 16–21 85c-89b / *Posterior Analytics*, BK I, CH 5 101b-102b; CH 12 [77ᵇ16–34] 106d-107a; CH 16–18 109b-111c / *Topics*, BK I, CH 1 [101ª5–17] 143c-d; BK V, CH 3 [131ᵇ19–36] 182b-c; BK VI, CH 9 [148ª2–9] 202a; BK VIII, CH 12–13 220c-221d / *Sophistical Refutations* 227a-253d / *Physics*, BK I, CH 2 [185ª5–12] 259d / *Heavens*, BK I, CH 5 [271ᵇ1–18] 362c d / *Metaphysics*, BK IV, CH 5 [1009ª15–1010ª14] 528c-529d; CH 6 [1011ª3–13] 530d; CH 7 [1012ª18–22] 532a; BK IX, CH 10 [1051ᵇ18–1052ª4] 577d-578a,c; BK XI, CH 6 [1062ᵇ12–24] 590d-591a / *Soul*, BK III, CH 1 [425ª30–ᵇ4] 657c; CH 3 [427ª16–ᵇ6] 659c-d; CH 6 [430ª26–ᵇ5] 662d-663a; CH 10 [433ª21–28] 665d-666a / *Sense and the Sensible*, CH 4 [442ᵇ4–9] 680a-b / *Memory and Reminiscence*, CH 1 [451ª8–12] 692a / *Dreams* 702a-706d

9 ARISTOTLE: *Ethics*, BK III, CH 1 [1110ᵇ17–1111ª20] 356b-357a; CH 4 359a-c; BK VI, CH 9 391c-392b / *Rhetoric*, BK III, CH 7 [1408ª20–25] 659b

12 LUCRETIUS: *Nature of Things*, BK IV [379–521] 49a-51a; [1141–1191] 59a-d

12 EPICTETUS: *Discourses*, BK I, CH 7 112b-113d

14 PLUTARCH: *Marcus Brutus*, 816d-817c

18 AUGUSTINE: *City of God*, BK XI, CH 2, 323c; BK XIX, CH 6 514b-515a; CH 18 523a-b / *Christian Doctrine*, BK I, CH 9 627a

19 AQUINAS: *Summa Theologica*, PART I, Q 17 100d-104b; Q 84, A 8 450b-451b; Q 85, A 1, REP 1 451c-453c; A 6 458d-459c; Q 89, A 5, ANS 477a-478b; Q 94, A 4 505a-506a; PART I-II, Q 5, A 8, REP 3 642d-643d

20 AQUINAS: *Summa Theologica*, PART I-II, Q 53, A 1 19d-21a; Q 72, A 5, ANS 115a-116b; Q 88, A 1, ANS 193a-194b; PART III SUPPL, Q 82, A 3, ANS 971a-972d

21 DANTE: *Divine Comedy*, PARADISE, XIII [112–120] 126c

23 HOBBES: *Leviathan*, PART I, 51b-52b; 56b-d; 57c-d; 58d-60a; 78a-79b; PART II, 139c; PART III, 172b-d; PART IV, 258b-d

25 MONTAIGNE: *Essays*, 269d-294b esp 270c-276a, 285c-292d; 497c-d; 517d-518b

27 SHAKESPEARE: *Sonnets*, CXLVIII 608d-609a

28 GILBERT: *Loadstone*, BK V, 105c

28 HARVEY: *Motion of the Heart*, 268a-c / *On Animal Generation*, 333b-d; 335a-c; 364a-365a esp 365a; 411c-d

30 BACON: *Advancement of Learning*, 13c-15a; 16a; 43d-44c; 51b-d; 60b-61c esp 61b-c; 66c-d; 98c / *Novum Organum*, BK I, APH 12 107d; APH 14–17 107d-108a; APH 20 108b; APH 30 109a; APH 38–70 109c-117a; APH 78–92 119b-125d; APH 104–106 128a-c / *New Atlantis*, 213d

31 DESCARTES: *Rules*, II, 2d-3a; XII, 22c-23b / *Meditations*, I–II 75a-81d passim; III, 83a; IV 89a-93a esp 91b; VI, 100a-103d / *Objections and Replies*, 123d-126a; 141a; 142c; 215b-216c; 229d-230d

31 SPINOZA: *Ethics*, PART II, PROP 17, SCHOL 381b-d; PROP 33 385c-d; PROP 35 385d-386b; PROP 40–41 387a-388c; PROP 47, SCHOL 390c-391a; PROP 49, SCHOL 391d-394d passim; PART IV, PROP 1 424c-425a

33 PASCAL: *Pensées*, 82–88 186b-189b / *Geometrical Demonstration*, 441a-b

34 NEWTON: *Optics*, BK I, 384b-385b

35 LOCKE: *Human Understanding*, BK II, CH XXI, SECT 58–70 193d-197b; CH XXXII, SECT 19 247a-b; CH XXXIII 248b-251d esp SECT 18 251a-c; BK III, CH IX, SECT 21–23 290c-291c; CH X 291d-300a passim, esp SECT 9 293d-294a, SECT 16 295d, SECT 34 299d-300a; CH XI, SECT 1–7 300a-301c; BK IV, CH V, SECT

9 330d-331a; CH VI, SECT 16 336d; CH VII, SECT 12–20 342d-344d passim; CH XVII, SECT 12–13 378b-c; CH XX 388d-394c
35 BERKELEY: *Human Knowledge*, INTRO 405a-412a,c passim, esp SECT 1–4 405a-d, SECT 17–25 409d-412a,c; SECT 86–88 429c-430b
35 HUME: *Human Understanding*, SECT I, DIV 6–7, 453c-454a; SECT V, DIV 45 469c; SECT VII, DIV 48 470d-471c
36 STERNE: *Tristram Shandy*, 234b-236b
42 KANT: *Pure Reason*, 1a-4a,c; 109b-c; 133c-134d; 193a-b; 200c-209d; 219a-220b; 224a-227a esp 224a-c, 226b-d; 229b-c / *Fund. Prin. Metaphysic of Morals*, 260d-261b / *Practical Reason*, 294c-295d; 302a-d; 348d-349a / *Judgement*, 575b-c
43 FEDERALIST: NUMBER 1, 29d-30a; NUMBER 31, 103c-104a; NUMBER 38, 122a-b
43 MILL: *Liberty*, 274b-293b passim
44 BOSWELL: *Johnson*, 106d; 126b
48 MELVILLE: *Moby Dick*, 313a-b
51 TOLSTOY: *War and Peace*, BK XIII, 585b
53 JAMES: *Psychology*, 240a-241b; 264b-268a; 460a-469a esp 462b-464a, 468b-469a; 506a-520a passim, esp 508a; 533a-538b; 610b-625a passim, esp 618b-621a, 625a
54 FREUD: *Interpretation of Dreams*, 148d-149a; 210c-d; 337a-d; 353d-355b esp 354c-355a; 379b-d / *General Introduction*, 472a-c / *Ego and Id*, 700c; 701d / *War and Death*, 760d-761a / *New Introductory Lectures*, 819b-c

3d(3) Rules for the correction or prevention of error in thought

7 PLATO: *Sophist*, 557b-558d / *Statesman*, 582d-584a / *Philebus*, 610d-613a
8 ARISTOTLE: *Topics* 143a-223a,c / *Sophistical Refutations* 227a-253d
12 EPICTETUS: *Discourses*, BK I, CH 7 112b-113d
23 HOBBES: *Leviathan*, PART I, 56b-d; 58d-60c
28 HARVEY: *Motion of the Heart*, 268a-c / *On Animal Generation*, 331b-332a; 333b-d; 335a-c
30 BACON: *Advancement of Learning*, 11a-17b esp 13a-c, 14c-15a, 16b-c; 33d-34b; 43d-44c; 47d-49b; 51b-d; 60a-61d; 64a-66a esp 64d-65a / *Novum Organum* 105a-195d esp BK I, APH 11–26 107d-108d, APH 39–69 109c-116b, APH 103–106 127d-128c, APH 124 133c-d / *New Atlantis*, 213d
31 DESCARTES: *Rules*, II–XII 2a-25a / *Discourse* 41a-67a,c esp PART II, 47a-48a, PART IV, 51b-52a, PART VI, 64d / *Meditations*, I 75a-77c; VI, 103a-d / *Objections and Replies*, 206a-c
32 MILTON: *Areopagitica*, 389b-390a
33 PASCAL: *Vacuum*, 365b-366a / *Geometrical Demonstration*, 430a-434a
35 LOCKE: *Human Understanding*, BK III, CH XI 300a-306d
35 BERKELEY: *Human Knowledge*, INTRO 405a-412a,c passim, esp SECT 1–4 405a-d, SECT 21–25 411b-412a,c
35 HUME: *Human Understanding*, SECT I, DIV 7 453c-454a; DIV 10, 455b; SECT XII, DIV 116, 503d-504a
41 GIBBON: *Decline and Fall*, 299b
42 KANT: *Pure Reason*, 5a-13d; 101b-d; 129c-130a; 209b-211c; 218d-227a; 248d-250a,c esp 250a,c / *Practical Reason*, 293c-294b esp 293d [fn 3]; 335b-c; 336d-337a,c / *Judgement*, 575b-c; 600d-603d
43 MILL: *Liberty*, 276b-277a; 283a-288c passim
45 FARADAY: *Researches in Electricity*, 774d-775a

4. Comparison of the various disciplines with respect to truth

4a. Truth in science and religion: the truth of reason and the truth of faith

18 AUGUSTINE: *City of God*, BK XI, CH 2 323a-c; BK XIX, CH 18 523a-b
19 AQUINAS: *Summa Theologica*, PART I, Q 1, AA 1–2 3b-4c
20 AQUINAS: *Summa Theologica*, PART I–II, Q 109, A 1 338b-339c; PART II–II, Q 1, A 1 380b-381a; AA 3–5 381d-384b; Q 2, AA 3–4 392d-394b; A 10 399b-400b; Q 4, A 1 402a-403d; A 8 409a-d
21 DANTE: *Divine Comedy*, PURGATORY, III [16–45] 56a-b; PARADISE, II [25–148] 108a-109b passim
23 HOBBES: *Leviathan*, PART I, 83b; PART IV, 274c-d; CONCLUSION, 282c
25 MONTAIGNE: *Essays*, 80b-82b; 208c-209c; 212a-215a; 238c-239d; 267c-268a; 272d-273b; 291b-294b
30 BACON: *Advancement of Learning*, 33c-d; 55b-d; 95d-101c
31 DESCARTES: *Discourse*, PART I, 43c / *Objections and Replies*, 125c-126a; 284d
32 MILTON: *Paradise Lost*, BK XII [552–587] 331a-332a
33 PASCAL: *Provincial Letters*, 147b-148b; 163a-166a / *Pensées*, 434 248a-250a; 846 339a-b; 857–858 342a; 862–865 342b-343b / *Vacuum*, 355b-356b; 365b-366a / *Geometrical Demonstration*, 440a-b
35 LOCKE: *Human Understanding*, BK IV, CH VII, SECT 11, 340b-c; CH XVII, SECT 23–24 380b-d; CH XVIII 380d-384b passim, esp SECT 2 381a-b, SECT 8–9 383b-d; CH XIX, SECT 4 385b
35 HUME: *Human Understanding*, SECT XI, DIV 102 497b-d
38 ROUSSEAU: *Inequality*, 333d-334a
40 GIBBON: *Decline and Fall*, 190c-d
42 KANT: *Judgement*, 601d-607c esp 601d-602a, 603a-b, 604d-606d
43 MILL: *Utilitarianism*, 455a-c
46 HEGEL: *Philosophy of Right*, PART III, par 360 113d-114a,c / *Philosophy of History*, INTRO, 158c-160b; PART IV, 349b-350b
48 MELVILLE: *Moby Dick*, 276a-b; 360b-361a
51 TOLSTOY: *War and Peace*, BK V, 196a-197c; EPILOGUE II, 695d-696d

(*4. Comparison of the various disciplines with respect to truth. 4a. Truth in science and religion: the truth of reason and the truth of faith.*)

53 JAMES: *Psychology*, 864a
54 FREUD: *New Introductory Lectures*, 874a-881c esp 874d-875a, 878b-880d, 881c

4b. Truth in science and poetry: the truth of fact and the truth of fiction

6 HERODOTUS: *History*, BK II, 71a-73b esp 72a-b; BK IV, 127a-b
6 THUCYDIDES: *Peloponnesian War*, BK I, 354b
7 PLATO: *Protagoras*, 52d-57c / *Gorgias*, 281d-282a / *Republic*, BK II, 320d-324c; BK X, 427c-431b / *Sophist*, 561b-d; 577d-579d / *Laws*, BK II, 660b-662a
9 ARISTOTLE: *Poetics*, CH 25 696d-698c
14 PLUTARCH: *Cimon*, 390b-d
21 DANTE: *Divine Comedy*, HELL, XVI [106-136] 23c-d; XXV [34-48] 36d; XXVIII [112-126] 42c d
22 CHAUCER: *Troilus and Cressida*, BK II, STANZA 147-149 40b 41a / *Prelogue* [715-746] 171b-172a / *Miller's Prologu* [3167-3186] 212a-b / *Prologue to Melibeus* 400b-401a
23 HOBBES: *Leviathan*, PART I, 67b-c
25 MONTAIGNE: *Essays*, 41b-42a; 199a-200d; 258c-259a
26 SHAKESPEARE: *Midsummer-Night's Dream*, ACT V, SC I [1-27] 370d-371a
27 SHAKESPEARE: *Hamlet*, ACT III, SC II [18-42] 49a-b
28 HARVEY: *Motion of the Heart*, 268a-b
29 CERVANTES: *Don Quixote*, PART I, 183d-193a esp 184b-d, 186b-d; PART II, 212a-215b esp 213b-c, 214c-d
30 BACON: *Advancement of Learning*, 38d-39b
31 DESCARTES: *Discourse*, PART I, 43a-b
37 FIELDING: *Tom Jones*, 19a-20a; 49b-50c
40 GIBBON: *Decline and Fall*, 88a-d; 186c-d; 345c; 471c-d
41 GIBBON: *Decline and Fall*, 40d-41a; 337c
42 KANT: *Pure Reason*, 173b-174a
44 BOSWELL: *Johnson*, 98d-99a; 282c-d
46 HEGEL: *Philosophy of History*, PART III, 285d-286a
47 GOETHE: *Faust*, PART II [7428-7433] 181b-182a
51 TOLSTOY: *War and Peace*, BK III, 134a-c; BK IX, 366d-367b; BK X, 405b-406c
53 JAMES: *Psychology*, 641a-643a
54 FREUD: *Group Psychology*, 692c-693a

4c. Truth in metaphysics, mathematics, and the empirical sciences: the truth of principles, hypotheses, and conclusions in the several speculative disciplines

7 PLATO: *Republic*, BK VI, 383d-388a; BK VII, 391b-398c / *Timaeus*, 447b-d / *Philebus*, 633a-635a
8 ARISTOTLE: *Posterior Analytics*, BK I, CH 32 120c-121b / *Metaphysics*, BK IX, CH 9 [1051^{a} 22-34] 577b-c; BK XIII, CH 2 [1077^{b}11]-CH 3 [1078^{a}31] 609a-d
9 ARISTOTLE: *Generation of Animals*, BK II, CH 6 [742^{b}18-35] 283d-284a / *Ethics*, BK I, CH 3 [1094^{b}23-28] 339d-340a; CH 7 [1098^{a}25-35] 343d
16 PTOLEMY: *Almagest*, BK XIII, 429a-b
16 COPERNICUS: *Revolutions of the Heavenly Spheres*, 505a-506a
16 KEPLER: *Epitome*, BK IV, 888b-890a
17 PLOTINUS: *First Ennead*, TR III 10a-12b
20 AQUINAS: *Summa Theologica*, PART I-II, Q 94, A 4, ANS 223d-224d
23 HOBBES: *Leviathan*, PART I, 59b-c; PART IV, 269b
30 BACON: *Advancement of Learning*, 48b-49a
31 DESCARTES: *Rules*, II, 2d-3b / *Discourse*, PART II, 47b-48a; PART VI, 66a-b / *Meditations*, I, 76c / *Objections and Replies*, 218b
31 SPINOZA: *Ethics*, PART II, PROP 37-39 386b-387a
34 NEWTON: *Optics*, BK III, 543a-b
35 LOCKE: *Human Understanding*, BK IV, CH III, SECT 9-30 315c-323c passim
38 ROUSSEAU: *Inequality*, 348a,c
42 KANT: *Pure Reason*, 15c-16c; 17d-19a; 194b-c; 217a-c; 245c-248d / *Fund. Prin. Metaphysic of Morals*, 264d / *Practical Reason*, 311d-313d; 330d-331a; 351b-352c / *Intro. Metaphysic of Morals*, 388a-c / *Science of Right*, 398c-399c
43 FEDERALIST: NUMBER 31, 103c-104a
43 MILL: *Liberty*, 283d-284b / *Utilitarianism*, 445b-c
46 HEGEL: *Philosophy of Right*, ADDITIONS, I 115a-d
49 DARWIN: *Origin of Species*, 239c / *Descent of Man*, 590a
51 TOLSTOY: *War and Peace*, EPILOGUE II, 690a-b
53 JAMES: *Psychology*, 862a-866a esp 863a-865a, 866a; 870a-878a; 882a-886a esp 883a, 884a-b
54 FREUD: *Beyond the Pleasure Principle*, 661c-662b / *Inhibitions, Symptoms, and Anxiety*, 722a-b / *New Introductory Lectures*, 873d-875b

4d. Truth and probability in rhetoric and dialectic

5 EURIPIDES: *Phoenician Maidens* [469-472] 382a
5 ARISTOPHANES: *Clouds* [889-901] 499b-c
6 THUCYDIDES: *Peloponnesian War*, BK III, 425c-d
7 PLATO: *Protagoras*, 39d-42c / *Euthydemus* 65a-84a,c / *Phaedrus*, 131b-141a,c / *Apology*, 200a-c / *Gorgias* 252a-294d esp 258b-d / *Republic*, BK VI, 386d-388a / *Sophist*, 578d-579d / *Philebus*, 634b-635a / *Seventh Letter*, 809c-810d
8 ARISTOTLE: *Topics*, BK I, CH I [100^{a}18-^{b}31] 143a-c; CH 2 [101^{a}34-^{b}4] 144a / *Metaphysics*, BK IV, CH 2 [1004^{b}15-27] 523d
9 ARISTOTLE: *Ethics*, BK I, CH 3 [1094^{b}18-28] 339d-340a / *Rhetoric*, BK I, CH I [1355^{a}4-40] 594b-d; CH 2 [1356^{a}36-1357^{b}21] 596a-597c;

BK II, CH 23 [1397b12–27] 645d-646a; [1400a5–14] 648d; CH 25 [1402b13–1403a17] 652b-653a; BK III, CH 7 [1408a20–23] 659b

18 AUGUSTINE: *Confessions*, BK IV, par 2 19d; BK V, par 10 29b-d / *Christian Doctrine*, BK II, CH 36 653d; BK IV, CH 5 677a-d; CH 12 683d-684c

23 HOBBES: *Leviathan*, PART I, 67c

30 BACON: *Advancement of Learning*, 12a-c

31 DESCARTES: *Rules*, X, 16d-17a / *Discourse*, PART VI, 63c-d

32 MILTON: *Paradise Lost*, BK II [108–118] 113b / *Areopagitica*, 382a-383a

35 LOCKE: *Human Understanding*, BK III, CH X, SECT 34 299d-300a

42 KANT: *Pure Reason*, 108a-109d

43 MILL: *Liberty*, 292b-293b

5. The eternal verities and the mutability of truth

OLD TESTAMENT: *Psalms*, 100:5; 117:2; 119:160; 146:6—(*D*) *Psalms*, 99:5; 116:2; 118:160; 145:6-7 / *Proverbs*, 8:22-30

APOCRYPHA: *Wisdom of Solomon*, 7:24-26—(*D*) OT, *Book of Wisdom*, 7:24-26 / *Ecclesiasticus*, 24:9—(*D*) OT, *Ecclesiasticus*, 24:14

NEW TESTAMENT: *II John*, 2

7 PLATO: *Cratylus*, 113c-114a,c / *Phaedrus*, 125a-b / *Meno*, 184d / *Theaetetus*, 528b-c

8 ARISTOTLE: *Categories*, CH 5 [4a10–b12] 8b-9a / *Posterior Analytics*, BK I, CH 8 104a-b / *Metaphysics*, BK II, CH 1 [993b19–31] 512a-b; BK IX, CH 10 [1051b33–1052a12] 578a,c

18 AUGUSTINE: *Confessions*, BK I, par 6 2b-c; par 9 3a-b; BK XI, par 9–11 91c-92b / *City of God*, BK VIII, CH 7 269c-d / *Christian Doctrine*, BK I, CH 8–10 626c-627b; BK II, CH 38 654b-c

19 AQUINAS: *Summa Theologica*, PART I, Q 10, A 3, REP 3 42c-43b; Q 14, A 15, REP 3 89b-90b; Q 16, AA 7-8 99a-100d; Q 84, A 1, REP 3 440d-442a

20 AQUINAS: *Summa Theologica*, PART I-II, Q 93, A 2 216c-217b; PART II-II, Q 1, A 1, CONTRARY 380b-381a

23 HOBBES: *Leviathan*, PART IV, 267b

30 BACON: *Advancement of Learning*, 27d-28c / *Novum Organum*, BK I, APH 56 112a

31 DESCARTES: *Meditations*, V, 93b-94c / *Objections and Replies*, 216d-217b; 229c-d

31 SPINOZA: *Ethics*, PART I, DEF 8 355c; PROP 8, SCHOL 2 356d-357d; PROP 17, SCHOL, 363a-b; PROP 19, SCHOL 363d; PROP 20, COROL 1 364a

33 PASCAL: *Vacuum*, 358b

35 LOCKE: *Human Understanding*, BK IV, CH I, SECT 9 308c-309b; CH III, SECT 31 323c-d; CH XI, SECT 14 358b-c

43 MILL: *Liberty*, 274b-293b passim

46 HEGEL: *Philosophy of Right*, PREF, 1d-2a; 6a-7c; PART III, par 270, 85c; ADDITIONS, 1 115a-d / *Philosophy of History*, INTRO, 156d-157b; 176b-c; PART IV, 349b-350a

47 GOETHE: *Faust*, PRELUDE [73–74] 3a

50 MARX-ENGELS: *Communist Manifesto*, 428b-d

51 TOLSTOY: *War and Peace*, BK V, 216d-218b esp 217c

53 JAMES: *Psychology*, 879b-882a; 889a-890a

6. The accumulation or accretion of truth, and the correction of error, in the progress of human learning

8 ARISTOTLE: *Sophistical Refutations*, CH 34 [183b16–184b8] 253a-d / *Heavens*, BK I, CH 10 [279b4–12] 370d; BK IV, CH 1 [307b28–308a8] 399a-b / *Metaphysics*, BK I, CH 3 [983a33–b6] 501c-d; CH 7 506b-d; CH 10 511c-d; BK II, CH 1 511b,d-512b; BK III, CH 1 [995a23–b4] 513b,d; BK XII, CH 10 [1075a25–1076a4] 606a-d; BK XIII, CH 1 [1076a8–17] 607a / *Soul*, BK I CH 2 [403b20–23] 633a

9 ARISTOTLE: *History of Animals*, BK III, CH 3 [513a7–14] 36c-d / *Parts of Animals*, BK I, CH 1 [642a25–30] 165b-c / *Ethics*, BK I, CH 6 [1096a11–16] 341b / *Rhetoric*, BK I, CH 1 [1355a 34–39] 594d

10 HIPPOCRATES: *Regimen in Acute Diseases*, par 1 26a-c

10 GALEN: *Natural Faculties*, BK I, CH 14, 178d-179a; CH 16 180c-182b; BK II, CH 8, 192a-b; CH 9, 199a,c; BK III, CH 10 207b-d

15 TACITUS: *Annals*, BK III, 49c

16 PTOLEMY: *Almagest*, BK I, 6b

16 KEPLER: *Epitome*, BK IV, 846a-850a / *Harmonies of the World*, 1009b-1010a

18 AUGUSTINE: *Confessions*, BK VII, par 13–15 47c-48c / *City of God*, BK VIII, CH 5 267d-268d; CH 10–11 271a-272c / *Christian Doctrine*, BK II, CH 40 655b-656a

20 AQUINAS: *Summa Theologica*, PART I-II, Q 97, A 1, ANS 236a-d; PART II-II, Q 1, A 7 385c-387a

23 HOBBES: *Leviathan*, PART I, 56b-d; PART II, 114d-115a; 164a,c; PART IV, 267c-269b passim; CONCLUSION, 282b-d

25 MONTAIGNE: *Essays*, 271a-c; 276b-278a

27 SHAKESPEARE: *Coriolanus*, ACT II, SC III [119–128] 367b

28 GILBERT: *Loadstone*, PREF, 2b-d

28 HARVEY: *Motion of the Heart*, 267b,d-269a; 274a-b; 279d-280c; 293b-d / *Circulation of the Blood*, 306a-c / *On Animal Generation*, 331a-332a; 336d-337a,c; 364a-365a; 377a-c; 433c; 457b

30 BACON: *Advancement of Learning*, 14c-15d; 16c; 32a; 47d-48d; 64a-b / *Novum Organum*, BK I, APH 56 112a; APH 84 121b-d; APH 92–115 125b-130d passim

31 DESCARTES: *Discourse* 41a-67a,c esp PART I, 42b-44c, PART II, 46c-48a, PART III, 49d-50b, PART VI 60d-67a,c

32 MILTON: *Areopagitica* 381a-412b esp 384b-389a, 398a-b, 404a-b

33 PASCAL: *Vacuum*, 357a-358a

35 LOCKE: *Human Understanding*, 85a-c; 89a-b

36 SWIFT: *Gulliver*, PART III, 118a-119a

36 STERNE: *Tristram Shandy*, 224b-225a

38 ROUSSEAU: *Inequality*, 330a-d; 346d-347a

(6. ***The accumulation or accretion of truth, and the correction of error, in the progress of human learning.***)

40 GIBBON: *Decline and Fall*, 23d-24a
41 GIBBON: *Decline and Fall*, 274a-d; 298a-300b
42 KANT: *Pure Reason*, 1d-2b [fn 2]; 5d-6c; 220b-221b; 248d-250a,c / *Practical Reason*, 336d-337a,c / *Judgement*, 513d-514b
43 MILL: *Liberty*, 274b-293b passim, esp 280a-c, 288d-290a
44 BOSWELL: *Johnson*, 129a; 222a
45 FARADAY: *Researches in Electricity*, 332a-b; 391b-c
49 DARWIN: *Descent of Man*, 590a
51 TOLSTOY: *War and Peace*, BK V, 196a-b; BK IX, 342b-343a
53 JAMES: *Psychology*, 37b; 125b-126a
54 FREUD: *Psycho-Analytic Therapy*, 125d-126a / *General Introduction*, 550d-551a / *New Introductory Lectures*, 880d-881c

7. The skeptical denial of truth

7*a*. The impossibility of knowing the truth: the restriction of all human judgments to degrees of probability; the denial of axioms and of the possibility of demonstration

7 PLATO: *Euthydemus*, 72d-73a / *Cratylus*, 86a-d; 107d-109a / *Phaedo*, 236c-238a / *Theaetetus*, 517b-532c passim, esp 517b-c, 522b, 525a-526c, 531b-532a
8 ARISTOTLE: *Posterior Analytics*, BK I, CH 3 [72^b5 33] 99b-c / *Metaphysics*, BK IV, CH 3-8 524b-532d; BK X, CH 1 [1053^a31–$^b3$] 580a; CH 6 [1057^b7–11] 584b; BK XI, CH 5-6 590a-592b
12 LUCRETIUS: *Nature of Things*, BK IV [469-477] 50b
12 EPICTETUS: *Discourses*, BK II, CH 20 164c-166c
18 AUGUSTINE: *Confessions*, BK V, par 19 32b-c / *City of God*, BK XIX, CH 18 523a-b
19 AQUINAS: *Summa Theologica*, PART I, Q 16, A 1, REP 2 94b-95c; Q 84, A 1, ANS 440d-442a; Q 85, A 2, ANS 453d-455b
25 MONTAIGNE: *Essays*, 80b-82b; 208a-294b esp 240c-246a, 257d-264a, 270a-279c, 285c-294b; 308c-d; 318a-319b; 439c-440a; 497d-502c; 517b-519a
30 BACON: *Advancement of Learning*, 57d-58b / *Novum Organum*, BK I, APH 67 115d-116a
31 DESCARTES: *Objections and Replies*, 272a-273a
33 PASCAL: *Pensées*, 72 181a-184b esp 182b; 381-385 238b-239a
35 BERKELEY: *Human Knowledge*, INTRO, SECT 1-2 405a-b; SECT 86-88 429c-430b; SECT 101-102 432c-433a
35 HUME: *Human Understanding*, SECT IV, DIV 26 460b-c; SECT IV, DIV 28–SECT V, DIV 38 460d-466c esp SECT V, DIV 34 463d-464b; SECT VII, DIV 60 477a-c; SECT XII 503c-509d
42 KANT: *Pure Reason*, 129c-130a; 218d-222b; 224a-227a / *Practical Reason*, 294c-295d; 311d-313d
46 HEGEL: *Philosophy of Right*, PREF, 2b-c; 3b-5c; 7a; PART I, par 44 23c; PART III, par 270, 86b-c / *Philosophy of History*, INTRO, 159b-c
47 GOETHE: *Faust*, PART I [354-429] 11a-12b; [656-675] 17b-18a; [1064-1067] 26b; [1908-1945] 45b-46a
50 MARX-ENGELS: *Communist Manifesto*, 427a-b; 428b-d
51 TOLSTOY: *War and Peace*, BK V, 194b-195a
53 JAMES: *Psychology*, 884b-886a
54 FREUD: *New Introductory Lectures*, 881d-882a

7*b*. The defense of truth against the skeptic

7 PLATO: *Cratylus*, 86b-d; 113c-114a,c / *Meno*, 179b-183b esp 179d-180b, 182c-183b / *Theaetetus*, 517b-532c esp 527b-528c
8 ARISTOTLE: *Metaphysics*, BK IV, CH 4-8 525a-532d; BK XI, CH 6 590d-592b
12 LUCRETIUS: *Nature of Things*, BK IV [469-521] 50b-51a
12 EPICTETUS: *Discourses*, BK II, CH 20 164c-166c
18 AUGUSTINE: *City of God*, BK XIX, CH 18 523a-b
19 AQUINAS: *Summa Theologica*, PART I, Q 2, A 1, REP 3 10d-11d; Q 16, A 1, REP 2 94b-95c; Q 85, A 2, ANS 453d-455b
30 BACON: *Advancement of Learning*, 13a-c; 57d-58b / *Novum Organum*, BK I, APH 67 115d-116a
31 DESCARTES: *Meditations*, V, 95d-96a / *Objections and Replies*, 206c-207a; 272a-273a
33 PASCAL: *Pensées*, 378 238a; 912-922 349b-351b
35 LOCKE: *Human Understanding*, INTRO, SECT 4-7 94a-95c esp SECT 7 95a-c
35 BERKELEY: *Human Knowledge*, PREF, 404a; INTRO, SECT 1-5 405a-d; SECT 40 420b; SECT 85-91 429c-431a; SECT 101 102 432c-433a; SECT 133 439c-440a
35 HUME: *Human Understanding*, SECT I, DIV 8-9, 454b-455a; SECT XII, DIV 126-128 507a-508a
42 KANT: *Pure Reason*, 129c-130a; 200c; 218d-222b; 224a-227a / *Practical Reason*, 294c-295d; 311d-313d
44 BOSWELL: *Johnson*, 121c-d; 126b
46 HEGEL: *Philosophy of Right*, PREF, 3b-5c; 7a; PART III, par 272, 90a
53 JAMES: *Psychology*, 671a-672a
54 FREUD: *New Introductory Lectures*, 881d-882b

8. The moral and political aspect of truth

8*a*. Prevarication and perjury: the injustice of lying or bearing false witness

OLD TESTAMENT: *Genesis*, 4:8-10; 27; 39:7-20 / *Exodus*, 20:16; 23:1,7 / *Leviticus*, 6:2-7; 19:11-12 / *Deuteronomy*, 5:20; 19:15-21 / *II Chronicles*, 18—(*D*) *II Paralipomenon*, 18 / *Job*, 8:11-18; 27:3-4,8-10 / *Psalms*, 5:6; 15:1-2; 24:3-4; 31:18; 34:11-13; 43:1; 50:16-21; 52:1-5; 55:23; 101:7; 119:29-30; 120:1-3—(*D*) *Psalms*, 5:7; 14:1-3; 23:3-4; 30:19; 33:12-

14; 42:1; 49:16–21; 51:1–7; 54:24; 100:7; 118: 29–30; 119:1–3 / *Proverbs*, 3:3; 6:16–19; 8:7–9; 10:18; 11:1,9; 12:17–22; 13:5; 14:5,25; 17:4,7; 19:5,9,22; 20:17,23; 21:6,28; 24:24,26; 25:18; 26:18–28; 30:5–9 / *Isaiah*, 9:13–17; 28:14–18; 59 passim—(*D*) *Isaias*, 9:13–17; 28:14–18; 59 passim / *Jeremiah*, 5:1–5; 9:1–9; 14:10–16; 23: 16–40—(*D*) *Jeremias*, 5:1–5; 9:1–9; 14:10–16; 23:16–40 / *Nahum*, 3:1 / *Zechariah*, 8:16–19—(*D*) *Zacharias*, 8:16–19 / *Malachi*, 2:1–9; 3:5–18—(*D*) *Malachias*, 2:1–9; 3:5–18

APOCRYPHA: *Wisdom of Solomon*, 1:11—(*D*) OT, *Book of Wisdom*, 1:11 / *Ecclesiasticus*, 1:28–30; 4:25; 7:12–13; 15:8; 19:26–28; 20: 18,24–26; 25:2; 27:9; 34:4; 41–17; 51:1–3—(*D*) OT, *Ecclesiasticus*, 1:37–40; 4:30; 7:13–14; 15:8; 19:23–26; 20:20,26–28; 25:3–4; 27:10; 34:4; 41:21; 51:1–5 / *Susanna*—(*D*) OT, *Daniel*, 13

NEW TESTAMENT: *Matthew*, 5:33–37; 19:17–18; 26:55–75; 28:11–15 / *Mark*, 14:48–72 / *Luke*, 3:14; 22:54–62 / *John*, 8:44; 18:15–27 / *Acts*, 5:1–10; 6:11–15 / *Romans*, 9:1 / *II Corinthians*, 4:2 / *Ephesians*, 4:14–15,25 / *Colossians*, 3:8–10 / *I Timothy*, 2:7; 4:1–3 / *Titus*, 2:3 / *James*, 3:14–17 / *I Peter*, 2:1 / *Revelation*, 21:6–8,27; 22:13–15—(*D*) *Apocalypse*, 21:6–8,27; 22:13–15

5 SOPHOCLES: *Oedipus the King* [216–462] 101a-103c / *Trachiniae* [335–496] 173a-174c / *Philoctetes* 182a-195a,c esp [50–134] 182d-183c, [895–962] 190a-d

5 EURIPIDES: *Phoenician Maidens* [861–961] 385d-386d

6 HERODOTUS: *History*, BK III, 105c-d; BK VI, 201d-202c; BK VII, 217d

7 PLATO: *Euthyphro*, 192a-193b / *Apology*, 208c-210d esp 209a-b / *Laws*, BK XI, 783c-784b

8 ARISTOTLE: *Physics*, BK VIII, CH 1 [$251^{a}28$–$^{b}1$] 334d-335a / *Metaphysics*, BK V, CH 29 [$1025^{a}1$–12] 547a

9 ARISTOTLE: *Ethics*, BK IV, CH 7 374b-375a / *Rhetoric*, BK I, CH 14 [$1375^{a}8$–13] 619c; CH 15 [$1377^{a}8$–$^{b}12$] 621d-622d

12 AURELIUS: *Meditations*, BK IX, SECT 1, 291a-b

18 AUGUSTINE: *Christian Doctrine*, BK I, CH 36 634d-635b

19 AQUINAS: *Summa Theologica*, PART I, Q 21, A 2, REP 2 125c-d

20 AQUINAS: *Summa Theologica*, PART I-II, Q 100, A 5, ANS and REP 5 255a-257c; A 6, ANS 257c-258c

21 DANTE: *Divine Comedy*, HELL, XI [16–66] 15b-d; XVII [1–33] 23d-24a; XXIII [58–148] 33c-34c esp [142–144] 34c; XXIX [37]–XXX [148] 43c-46a; PARADISE, XXIX [82–126] 151a-c

23 HOBBES: *Leviathan*, PART II, 101c

25 MONTAIGNE: *Essays*, 16a-17c; 314d-316a; 323c-324b; 381d-382b; 383b-384b

32 MILTON: *Paradise Lost*, BK IV [114–125] 155a

33 PASCAL: *Provincial Letters*, 67b-69a; 117b-127a

35 LOCKE: *Toleration*, 14a

36 SWIFT: *Gulliver*, PART IV, 146b

37 FIELDING: *Tom Jones*, 40b-41a; 66c-d; 130d-131a; 295b; 318d-319a; 382b

40 GIBBON: *Decline and Fall*, 215b-216a; 296b-c

42 KANT: *Fund. Prin. Metaphysic of Morals*, 260a-c; 267d-268a; 269a-c; 272c-d / *Science of Right*, 432c-433c

43 MILL: *Liberty*, 280d-281c / *Utilitarianism*, 455c-456a

44 BOSWELL: *Johnson*, 2d-3a; 99a; 124a; 157c-d; 372c-373a; 377b; 542a-c

46 HEGEL: *Philosophy of Right*, PART II, par 140 49b-54a

51 TOLSTOY: *War and Peace*, BK III, 134a-c; BK VIII, 304c-305a; BK IX, 366d-367b; BK X, 441a-b

8b. The expediency of the political lie

4 HOMER: *Iliad*, BK XIV [301–360] 101b-d / *Odyssey*, BK XIII [250–310] 257d-258b

5 SOPHOCLES: *Trachiniae* [335 496] 173a-174c / *Philoctetes* 182a-195a,c esp [50–134] 182d-183c

6 HERODOTUS: *History*, BK III, 105c-d; BK VI, 186b-c; BK VIII, 264a-c

6 THUCYDIDES: *Peloponnesian War*, BK III, 427b-c

7 PLATO: *Republic*, BK II, 323c-324a; BK III, 326b-c; 340b-341a / *Laws*, BK II, 658a-c

13 VIRGIL: *Aeneid*, BK II [1–246] 124a-131a

14 PLUTARCH: *Alcibiades*, 160b-161b / *Lysander*, 357a-b; 365a-366a

15 TACITUS: *Histories*, BK III, 256a-b

21 DANTE: *Divine Comedy*, HELL, XXVI–XXVII 38a-41b

23 MACHIAVELLI: *Prince*, CH XVIII 25a-26a

25 MONTAIGNE: *Essays*, 11b-13c; 16a-17c; 306a-d; 314d-316a; 381a-388c; 487d-488a

38 MONTESQUIEU: *Spirit of Laws*, BK XII, 94c

40 GIBBON: *Decline and Fall*, 48a

43 MILL: *Liberty*, 277b-278a / *Utilitarianism*, 455c-456a

44 BOSWELL: *Johnson*, 212a-d

49 DARWIN: *Descent of Man*, 315a-b

54 FREUD: *Interpretation of Dreams*, 197c-d / *War and Death*, 757b

8c. Truth in relation to love and friendship: the pleasant and the unpleasant truth

OLD TESTAMENT: *Proverbs*, 11:9–13

NEW TESTAMENT: *I Corinthians*, 13:6 / *Galatians*, 4:16 / *Ephesians*, 4:15,25 / *I John*, 3:18–19

5 SOPHOCLES: *Oedipus the King* 99a-113a,c / *Trachiniae* [335–496] 173a-174c / *Philoctetes* 182a-195a,c esp [895–962] 190a-d

5 EURIPIDES: *Phoenician Maidens* [861–961] 385d-386d

7 PLATO: *Symposium*, 161b-d / *Apology*, 201d-203c / *Phaedo*, 234c-235a / *Republic*, BK I, 297b-c; BK V, 356d-357b; BK X, 427c / *Philebus*, 622d-631d

9 ARISTOTLE: *Ethics*, BK I, CH 6 [$1096^{a}11$–16] 341b; BK IV, CH 3 [$1124^{b}26$–30] 371d; CH 7 374b-375a

(8. *The moral and political aspect of truth.* 8c. *Truth in relation to love and friendship: the pleasant and the unpleasant truth.*)

12 EPICTETUS: *Discourses*, BK IV, CH I 213a-223d passim
12 AURELIUS: *Meditations*, BK VI, SECT 21 276a
14 PLUTARCH: *Cimon*, 390b-d
15 TACITUS: *Annals*, BK II, 26b
19 AQUINAS: *Summa Theologica*, PART I-II, Q 38, A 4 788d-789b
20 AQUINAS: *Summa Theologica*, PART I-II, Q 100, A 5, REP 5 255a-257c
21 DANTE: *Divine Comedy*, HELL, XI [16-66] 15b-d passim; XVIII 25b-26d; XXIII [58-148] 33c-34c; XXVI-XXVII 38a-41b; XXIX [37]-XXX [148] 43c-46a; PARADISE, XVII [103-142] 133b-c
22 CHAUCER: *Nun's Priest's Tale* [15,288-452] 457b-460b
25 MONTAIGNE: *Essays*, 307a; 320c-321a; 323c-324b; 522b-d
26 SHAKESPEARE: *2nd Henry IV*, ACT I, SC I [60-135] 468d-469c
27 SHAKESPEARE: *Troilus and Cressida*, ACT III, SC II [165-212] 121d-122b / *Antony and Cleopatra*, ACT I, SC II [99-115] 313b-c / *Timon of Athens* 393a-420d esp ACT I, SC II [220-234] 399c-d, ACT IV, SC III [197-218] 413a / *Sonnets*, CXXXVII-CLII 607a-609c
28 HARVEY: *On Animal Generation*, 331c-332a
31 DESCARTES: *Rules*, I, 1d
33 PASCAL: *Pensées*, 100-101 191a-192b / *Geometrical Demonstration*, 440a-b
35 LOCKE: *Human Understanding*, 87a-b
44 BOSWELL: *Johnson*, 94b; 106d; 299b-d; 393c; 402a-c; 542a-c
49 DARWIN: *Descent of Man*, 315b
51 TOLSTOY: *War and Peace*, BK VI, 247d-248a; BK VIII, 310c-d; 319c-d; 333b-334c
52 DOSTOEVSKY: *Brothers Karamazov*, BK II, 20a-b
54 FREUD: *General Introduction*, 453a

8d. Civil liberty as a condition for discovering the truth: freedom of thought and discussion

5 SOPHOCLES: *Antigone* [499-511] 135b-c; [683-739] 137a-c
6 HERODOTUS: *History*, BK VII, 216d-217a
6 THUCYDIDES: *Peloponnesian War*, BK II, 397b-c; BK III, 427a-c
7 PLATO: *Apology*, 200a-210b passim / *Statesman*, 601c-602c
15 TACITUS: *Histories*, BK I, 189a-b
23 HOBBES: *Leviathan*, PART II, 102d-103a
31 DESCARTES: *Objections and Replies*, 283c-d
32 MILTON: *Areopagitica* 381a-412b esp 383b-384a, 392a-393a, 401b-402a, 404a-b, 409b-410a
35 LOCKE: *Toleration* 1a-22d esp 4a, 9a-10a, 15c / *Human Understanding*, BK IV, CH III, SECT 20 319b-c
35 HUME: *Human Understanding*, SECT XI, DIV 102 497b-d; DIV 114 503a-b
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8e. The love of truth and the duty to seek it: the moral distinction between the sophist and the philosopher; martyrdom to the truth

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ADDITIONAL READINGS

Listed below are works not included in *Great Books of the Western World*, but relevant to the idea and topics with which this chapter deals. These works are divided into two groups:

I. Works by authors represented in this collection.
II. Works by authors not represented in this collection.

For the date, place, and other facts concerning the publication of the works cited, consult the Bibliography of Additional Readings which follows the last chapter of *The Great Ideas.*

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Chapter 95: TYRANNY

INTRODUCTION

IF any point in political theory is indisputable, it would seem to be that tyranny is the worst corruption of government—a vicious misuse of power and a violent abuse of the human beings who are subject to it. Aristotle's remark that "no freeman, if he can escape from it, will endure such government," would seem to express the sentiments of all who, loving liberty and abhoring slavery, look upon tyranny as destroying the one and establishing the other.

Certainly the word "tyranny" is seldom if ever used eulogistically. Such phrases as "a just tyranny" or "a good tyrant" are at once seen to be as self-contradictory as "a round square." The great books of history give the impression that tyrants and despots, who vastly outnumber good rulers, are always objects of hate and fear, never of love and admiration. If there are exceptions, if there are peoples who willingly submit to or even deserve the yoke of despotism and tyranny, they are, in the judgment of ancients and moderns alike, politically primitive.

The traditional association of the word "despotism" with "tyranny" requires us to consider whether our understanding of these terms is as uniformly clear as the denunciation of what they denote seems to be universal. Are despotism and tyranny the same? It may be thought that the tyrant must always have despotic power at his disposal, power unlimited by law, so that the lawless ruler is at once both despot and tyrant. But need the despot, the absolute ruler, always rule tyrannically?

The familiar phrase, "benevolent despotism," at once suggests the negative answer, and also some line of distinction between despotism and tyranny. Tyranny can never be benevolent. But despotism may be no worse than paternalism. While its injustice may consist in treating adults, able to govern themselves, as if they were children, it may also derive an air of justice from the fact that the despot, like the father, rules his subjects for their own good. If he treats them like slaves rather than children, exploiting them to serve his own interests, then he is not a benevolent but a tyrannical despot.

This understanding of the meaning of "despotism" and "tyranny" seems to be only partly supported by their etymology. The Greek word from which "despot" comes signifies the head of a household, the *paterfamilias* (as he is called by the Romans) who exercises the absolute authority of a master over chattel slaves, and of a parent over his children. In contrast, the Greek word *tyrannos* refers to the ruler of a state rather than a family, and is sometimes used as if it were equivalent in meaning to "king." Yet both words carry the connotation of absolute power, and when, in addition, the subjects of a tyrant are considered to be no better off than slaves, the difference in the meaning of the two words almost disappears.

The difficulty of grasping what is essential to the nature of tyranny and despotism seems to be complicated by certain criteria, originally proposed by the Greeks, for distinguishing between king and tyrant, or between royal and despotic rule. Both Plato and Aristotle speak of the king as a good monarch and the tyrant as a bad one. Both say that monarchy, or rule by a single man, is royal when it is for the welfare of the ruled and tyrannical when it serves only the interests of the ruler. Both make lawlessness—either a violation of existing laws or government by personal fiat without settled laws—a mark of tyranny.

Yet, for Aristotle at least, some of these criteria also apply to despotism, and even to royal government, insofar as these are distinguished from political or constitutional government—government by law rather than by men. Furthermore, the association of either tyranny or

despotism with monarchy—rule by *one* man, whether just or unjust—seems to be counterbalanced by Aristotle's discussion of the tyranny of the *few* and of the *many*. In a monarchy, the king can turn tyrant; but so can the wealthy become despotic in an oligarchy, or the poor in a lawless democracy.

The nature of tyranny thus seems to be more difficult to define precisely than would at first appear from the almost universal condemnation of it as the worst perversion of government.

To some extent, the difficulties may be verbal. The word "tyranny" is used with many meanings, not only by the Greeks, but throughout the tradition of the great books. Some writers identify tyranny and despotism; some distinguish the two sharply. Some writers consider tyranny and despotism only in connection with monarchy; some extend the consideration to other forms of government. The words are sometimes used descriptively, without the connotation of good or evil; and sometimes they are more derogatory than descriptive.

Even when the necessary verbal clarifications are achieved, genuine issues still remain. Conflicting accounts are given of the causes of tyranny or the circumstances from which it develops. Concerning despotism, some writers take the position that it may be justified by conquest, or by the need of a people for absolute government, or, in the form of a temporary dictatorship, by emergency conditions. Not even the condemnation of tyranny seems to be unanimous, if the views of Hobbes are to be reckoned with; nor, among those who condemn tyranny, is the fairly general approval of tyrannicide free from the strong dissenting voice of Kant.

THE FOREGOING INDICATES how the notions of tyranny and despotism are involved in other chapters dealing with the various forms of government and, in addition, such chapters as JUSTICE, LIBERTY, and SLAVERY. The distinction, for example, between domestic and political slavery bears on one of the ways in which despotism and tyranny are distinguished; and the discussion in the chapters on MONARCHY and CONSTITUTION concerning absolute and limited government raises a question which must also be considered here, namely, whether absolute monarchy can be distinguished from despotism and whether it has an inveterate tendency to become tyrannical.

That question deserves immediate attention, because its answers are connected with opposed views of the justice or defensibility of tyranny and despotism. Plato and Aristotle, for example, treat tyranny as the prototype of political injustice, and the tyrant as the extreme case of the vicious man; yet there are passages which appear to have a contrary tenor. In the *Laws*, the Athenian Stranger proposes a good tyrant as the best means for establishing the laws. To the question, "What are the conditions which you require in a state before you can organize it?" he thinks the legislator's answer should be: "Give me a state which is governed by a tyrant, and let the tyrant be young and have a good memory; let him be quick at learning and of a courageous and noble nature"—in short, let him have temperance and every other virtue.

More readily than monarchy, democracy, or oligarchy, tyranny is the stepping stone to the best state, according to the Athenian Stranger, because it involves the greatest power concentrated in a single man. The combination of virtue and power may rarely be found, but, he says, "when the supreme power in man coincides with the greatest wisdom and temperance, then the best laws and the best constitution come into being, and in no other way."

Aristotle's classification of the types of kingship, or the forms of royal government, seems to include tyranny among them. He refers to the kind of monarchy which prevails among the barbarians who, "being more servile in character than Hellenes . . . do not rebel against a despotic government. Such royalties," he goes on, "have the nature of tyrannies because the people are by nature slaves, but there is no danger of their being overthrown, for they are hereditary and legal." Even among the Hellenes in ancient times, Aristotle points out, there was a form of monarchy or "dictatorship" that may be defined "as an elective tyranny, which like the barbarian monarchy, is legal, but differs from it in not being hereditary."

These two forms of tyranny, Aristotle says elsewhere, "are both according to law, and therefore easily pass into royalty." The line be-

tween king and tyrant is not, however, as shadowy as might first appear. "Kings rule according to law over voluntary subjects, but tyrants over involuntary; and the one are guarded by their fellow citizens, the others are guarded against them." The forms of monarchy which Aristotle also calls "tyrannies" seem to him to have a mixed character. "They are royal," he says, "in so far as the monarch rules according to law over willing subjects; but they are tyrannical in so far as he is despotic and rules according to his own fancy." But there is also a kind of tyranny which, being unmixed, is "the counterpart of perfect monarchy. This tyranny is just that arbitrary power of an individual which is responsible to no one, and governs all alike, whether equals or better, with a view to its own advantage, not to that of its subjects, and therefore against their will."

Aristotle explains his association of tyranny with monarchy on the ground that "both are forms of one-man rule, but," he adds, "there is the greatest difference between them; the tyrant looks to his own advantage, the king to that of his subjects." Tyrannical government is "monarchy exercising the rule of a master over political society," and therefore deserves to be called "despotic" as well as tyrannical. When it has no admixture of royalty, tyranny is not only self-serving but lawless rule. It is "the very reverse of a constitution," or rule by law. Except for the hypothetical case in which the truly superior, the almost god-like man is king, Aristotle seems to identify absolute or unconstitutional monarchy with tyranny and despotism, and he condemns both for violating the very nature of the state conceived as "a community of free men."

THE LINE BETWEEN KING and tyrant is similarly drawn by Plato. Monarchy for him "divides into royalty and tyranny" according as one man rules by law or lawlessly, over voluntary or involuntary subjects. If the one man were like a god in relation to other men, it would be fitting for him to rule the state by his wisdom or science and without recourse to laws. "If there could be such a despot," the Eleatic Stranger says in the *Statesman*, "he alone would be the happy ruler of a true and perfect state," but men "can never be made to believe that any one can be worthy of such authority." (History suggests the contrary in such cases as Caesar, Napoleon, and Hitler.)

Giving the name of "king" to the monarch who abides by and maintains established laws, the Stranger gets Socrates to agree that the ruler should be called a "tyrant" when he "governs neither by law nor by custom, but, imitating the true man of science, pretends that he can only act for the best by violating the laws, while in reality appetite and ignorance are the motives of the imitation."

In the *Republic*, Socrates refers to Euripides' praise of "tyranny as god-like," and gives, as another reason for excluding the poets from the state, the fact that "they are the eulogists of tyranny." Far from being god-like, the tyrannical man is described by Socrates as "drunken, lustful, passionate." Tyrants "are always either the masters or servants and never the friends of anybody; the tyrant never tastes of true freedom or friendship." Oriental despotism, Hegel later writes, appears to give freedom to one man, but "the freedom of that one is only caprice, ferocity—brutal recklessness of passion. . . . That *one* is therefore only a despot; not a *free man*."

According to Plato, tyranny is not only the greatest evil a state can suffer, but the tyrant is also the unhappiest of men. "Will not he who has been shown to be the wickedest," Socrates asks, "be also the most miserable?" Polus, in the *Gorgias*, tries to prove that, like the successful criminal who goes unpunished, the tyrant who does injustice to everybody, but suffers none, achieves more happiness than other men. But Socrates, taking the position that it is better to suffer than to do injustice, argues to the contrary that the tyrant is more miserable than those whom he oppresses.

If this is true, the confirmed tyrant is probably the man least able to perceive or acknowledge it. Plutarch reports the story of Plato's first meeting with Dionysius, the tyrant of Syracuse. When Plato tried to prove to him that "tyrants, of all men, had the least pretence to virtue," and that, since they lacked justice, they suffered "the miserable condition of the unjust," Dionysius would not hear the argument out. "He asked the philosopher in a rage," Plutarch relates, "what business he had in Sic-

ily. To which Plato answered, 'I come to seek a virtuous man.' 'It seems, then,' replied Dionysius, 'you have lost your labor.'" According to Plutarch, Dionysius tried to have Plato killed on his return voyage to Greece; or failing that, to have him sold into slavery. He would not be harmed by that, Dionysius reasoned, because, "being the same just man as before, he would enjoy his happiness, though he lost his liberty."

ON THE WHOLE, THEN, Aristotle's and Plato's disapproval of tyrants and tyranny seems to be unequivocal. The passages which might cause this to be questioned can perhaps be accounted for by the ancient tendency to use the word "tyrant" descriptively to denote the possessor of absolute power. Yet even in the *Laws*, where such usage occurs, Plato observes that kings, unable "to sustain the temptation of arbitrary power," tend to overthrow the laws and so become tyrannical in the invidious sense of the word.

With the exception of Hobbes, mediaeval and modern writers are no less disapproving than the ancients. "Tyrannical government," according to Aquinas, "is altogether corrupt" and completely lawless. It is the tyrant himself, rather than those who may rebel against a government so lacking in justice, who is "guilty of sedition, since he encourages discord and sedition among his subjects, that he may lord over them more securely." When a king, by becoming a tyrant, "has dethroned himself and put himself in a state of war with his people, what shall hinder them" asks Locke, "from prosecuting him who is no king, as they would any other man who has put himself in a state of war with them?"

In Locke's view, it is a mistake to think that the fault of tyranny "is proper only to monarchies. For wherever the power that is put in any hands for the government of the people and the preservation of their properties is applied to other ends, and made use of to impoverish, harass, or subdue them to the arbitrary irregular commands of those that have it, there it presently becomes tyranny, whether those that thus use it are one or many. . . . Wherever law ends, tyranny begins, if the law be transgressed to another's harm."

Tyranny is thus defined by Locke as "the exercise of power beyond right, which nobody can have a right to." Such "absolute arbitrary power, or governing without settled standing laws, can neither of them consist with the ends of society and government." Tyranny so defined may not be limited to monarchies; but, according to Locke, absolute monarchy is always tyrannical. For that very reason it is, he writes, "inconsistent with civil society, and so can be no form of civil government at all."

What Locke calls "tyranny" or, without change of meaning, "absolute monarchy," Kant calls "autocracy." But Kant distinguishes the monarch "who has the *highest* power" from the autocrat "who has *all* power." Hegel calls "despotism" that "state of affairs where law has disappeared and where the particular will as such, whether of a monarch or a mob, counts as law or rather takes the place of law." The writers of the *Federalist* use the words "tyranny" and "despotism" interchangeably, but do not vary from the definition which Montesquieu gives of despotic government as "that in which a single person directs everything by his own will and caprice." In all other governments, even in monarchy when it is constitutional, the separation of powers puts some limitation on the power entrusted to the offices of state.

Following Montesquieu's doctrine, Madison declares: "The accumulation of all powers, legislative, executive, and judiciary, in the same hands, whether of one, a few, or many, and whether hereditary, self-appointed, or elective, may justly be pronounced the very definition of tyranny." He reinforces his point by quoting Jefferson's dictum that concentrating "all the powers of government . . . in the same hands, is precisely the definition of despotic government."

HOBBES SEEMS TO BE the one exception in the great books to this variously expressed opinion of the evil of absolute power. Locke may have him in mind when he says that absolute monarchy is "by some men . . . counted the only government in the world." Certainly Hobbes would not repudiate the charge that he thinks none but absolute government feasible; nor is he dismayed by the tendency of other writers

to call absolute government "tyrannical" or "despotic." On the contrary, he dismisses this as so much empty name-calling.

In every form of government, according to Hobbes, the sovereign power must be absolute to be effective. "Though of so unlimited a power, men may fancy many evil consequences, yet the consequences of the want of it, which is perpetual war of every man against his neighbor, are much worse." Describing the absolute dominion of the father over his children, and the equally absolute dominion of the master over his slaves, Hobbes says that "the rights and consequences of both paternal and despotical dominion are the very same with those of a sovereign by institution," for unless the sovereign is also absolute, "there is no sovereignty at all."

To the cry "Tyranny," Hobbes replies that just as men who "find themselves grieved under a *Democracy*, call it *Anarchy*," or those who "are displeased with *Aristocracy*, call it *Oligarchy*," so "they that are discontented under *Monarchy*, call it *Tyranny*." He holds Aristotle's *Politics* responsible for spreading the fallacy of regarding anything except popular government as tyrannical; and in general he blames the Greek and Roman writers for fomenting sedition against kings by treating tyrannicide as lawful.

Hobbes offers an historical explanation of the origin of these confusions. "A *Tyrant*," he writes, "originally signified no more simply, but a *Monarch*. But when afterwards in most parts of Greece that kind of government was abolished, the name began to signify, not only the thing it did before, but with it the hatred which the popular states bore towards it; as also the name of King became odious after the deposing of the Kings of Rome."

A word like "tyranny" carries only emotional force. Used descriptively, Hobbes declares, "it signifies nothing more nor less than the name of Sovereignty, saving that they that use the former word are understood to be angry with them they call Tyrants." He is willing to make himself the object of that anger by identifying "a professed hatred of Tyranny" with "hatred to Commonwealth in general," and by regarding the toleration of both hatreds alike as evil seeds of sedition.

IN ONE NEGATIVE RESPECT, Rousseau seems to agree with Hobbes. Not that the man who holds that only republican institutions are legitimate, in any way accepts the identification of either prince or popular government with sovereign power. But he, like Hobbes, rejects Aristotle's distinction between the king and the tyrant as good and bad monarchs, the one governing for the good of his subjects, the other in his own interest. Rousseau contends not only that most Greek authors used "the word *tyrant* in a different sense . . . but also," he adds, "it would follow from Aristotle's distinction that, from the very beginning of the world, there has not yet been a single king."

It is only according to a vulgar usage that a tyrant is conceived as "a king who governs violently and without regard for justice or law." The more precise conception, Rousseau insists, defines the tyrant as "an individual who arrogates to himself the royal authority without having a right to it. This is how the Greeks understood the word 'tyrant'; they applied it indifferently to good and bad princes whose authority was not legitimate. *Tyrant* and *usurper* are thus perfectly synonymous terms."

The usurpation of power is, according to Rousseau, the root of both tyranny and despotism, but they are not for that reason to be confused. "I call him who usurps the royal authority a tyrant," Rousseau writes, "and him who usurps the sovereign power a *despot*. The tyrant is he who thrusts himself in contrary to the laws to govern in accordance with the laws; the despot is he who sets himself above the laws themselves. Thus the tyrant cannot be a despot, but the despot is always a tyrant."

Other writers distinguish between tyranny and despotism on different principles. They accept, where Rousseau rejects, the notion that tyranny is not merely a usurpation of power, but always a self-serving or unjust use of that power. They reject Rousseau's conception of despotism as inseparable from usurpation. Absolute power can be gained and held in other ways.

Locke, for example, conceives despotical dominion as the rule of a master over slaves, or the government of a vanquished people by their conquerors in a just war. "Despotical power," in his opinion, "is an absolute arbitrary power

one man has over another to take away his life whenever he pleases." Unlike tyranny, it is not "power beyond right," for "the conqueror, if he have a just cause, has a despotical right over the persons of all that actually aided and concurred in the war against him." Since, in Locke's view, "a usurper can never have right on his side," despotic dominion, when justified, is not achieved by usurpation.

For Montesquieu, despotisms constitute one of the three major forms of government, the other two being republics (aristocratic or democratic) and monarchies. Though he regards despotism as an intrinsically corrupt form of government, in which the rulers wield personal power without the restraint of law, he also judges it to be appropriate to the servile natures or temperaments of certain peoples. Like Aristotle and Hippocrates before him, he attributes to the climate and disposition of the Asiatic peoples their submissiveness to the worst excesses of despotism.

Montesquieu does not so much condemn despotism as he deplores the conditions which seem to render it necessary or natural for a large part of mankind. He does not suggest, as Mill does, that despotic government can and should serve to civilize those who are as yet unprepared for self-government. Despotism is benevolent, according to Mill, only if it prepares a people for freedom; if it tries to perpetuate itself, it is tyrannical or enslaving.

Though Mill holds the view that, relative to a free society, there cannot be a "good despot" no matter how benevolent his intentions, he also thinks that, in dealing with barbarians, "despotism is a legitimate mode of government . . . provided the end be their improvement, and the means justified by actually effecting that end. Liberty, as a principle, has no application to any state of things anterior to the time when mankind has become capable of being improved by free and equal discussion. Until then, there is nothing for them but implicit obedience to an Akbar or a Charlemagne, if they are so fortunate as to find one."

Under certain "conditions of society . . . a vigorous despotism," according to Mill, "is in itself the best mode of government for training the people in what is specifically wanting to render them capable of a higher civilization." In his opinion, still other conditions justify despotism. "I am far from condemning," he writes, "in cases of extreme exigency, the assumption of absolute power in the form of a temporary dictatorship." In another place, he says that "the establishment of the despotism of the Caesars was a great benefit to the entire generation in which it took place" because "it put a stop to civil war, and abated a vast amount of malversation and tyranny by praetors and proconsuls."

But in all these cases the essential point is that the despotic rule should be temporary. Mill applies the same criterion to the despotism which occurs in the government of colonial dependencies. It should aim to benefit a subject people by training them in the arts of government, and it should not seek to outlast the conferring of this benefit. "The ruling country," he thinks, "ought to be able to do for its subjects all that could be done by a succession of absolute monarchs, guaranteed by irresistible force against the precariousness of tenure of barbarian despotisms. . . . Such is the ideal rule of a free people over a barbarous or semi-barbarous one."

This may be the ideal, but critics of imperialism, like Swift or Marx, think that colonial policies are in fact otherwise motivated—by land-grabbing, by the desire for national aggrandizement, and by the profits to be made from the economic exploitation of colonies or subject peoples. Throughout the pages of Thucydides and Tacitus, the spokesmen for empire dwell upon the blessings which Athenian or Roman rule bestows, only to be answered by the protests of the colonists or the conquered, who seem to prefer the insecurities and uncertainties of liberty to the mixed motives of even the best despot.

As ALREADY INDICATED, the political significance of tyranny and despotism is broader than the conception of the tyrant as an unjust king or of the despot as an absolute monarch. The reign of the Thirty Tyrants at Athens and of the Decemviri at Rome are classical examples of oligarchical tyranny. Advocates of republican or democratic institutions, like the writers of the *Federalist* or J. S. Mill, are as much concerned to safeguard constitutional or representative government from the tyranny of special interests—whether of a dominant majority or

of concentrated wealth—as they are to protect the rule of law from the encroachments of despotism which begin with usurpations of power by elected officials.

Moderns and ancients alike fear the susceptibility of the mob to the wiles of the demagogue, who encourages their lawlessness in order to take the law into his own hands. Both Hegel and Plato see in the alliance between a scheming demagogue and an unruly populace the step by which a corrupt democracy turns into a tyranny. Though Aristotle disagrees with what he takes to be the theory of Socrates in the *Republic*, that tyranny normally arises from democracy in the progressive degeneration of the state, his own opinion seems to be that "tyranny is a compound of oligarchy and democracy in their most extreme forms" and that "almost all tyrants have been demagogues who gained the favor of the people by their accusation of the notables."

These aspects of tyranny are discussed in the chapters on DEMOCRACY and OLIGARCHY. The traditional emphasis, however, is on the individual tyrant, whether he is an hereditary prince who misuses his autocratic power, the usurper of an established throne, or the demagogue who makes himself dictator. However tyranny arises, monarchy is the form it usually takes in the pages of history or poetry—the domination of the state by one man. But while the great political philosophers offer conflicting theories of the origin of tyranny, there seems to be remarkable agreement concerning the methods the tyrant uses to maintain himself in power.

Other political practices may vary greatly from one historical epoch to another, but the devices of tyranny seem to have a certain timelessness. When they are describing the actions of the tyrant, Herodotus, Plutarch, Tacitus, and Gibbon tell stories of iniquity, of cruelty, of cowardly and unscrupulous stratagems, so alike in detail that the reader loses all sense of time and place. Nor need he exert any effort of imagination to place the figure of the tyrant thus delineated in the setting of contemporary events.

The past also speaks with contemporary relevance in Plato's enumeration of the tyrant's desperate measures, his stirring up of foreign wars to smother domestic discord, his assassination of enemies, his purging of friends or followers, and his confiscation of property as well as his generally indiscriminate blood-letting. The resort to unwarranted searches and seizures, the creation of *ex post facto* crimes, the arrest and punishment of men without trial "have been," writes Hamilton, "in all ages the favorite and most formidable instruments of tyranny." So, too, in all ages, the tyrant, fearing reprisal and revenge, lives in a state of war, turns his palace into an armed camp, and goes nowhere without a numerous bodyguard which, as both Aristotle and Machiavelli suggest, functions most efficiently when composed of hirelings or mercenaries.

The great books contain not only the record of tyrannical perfidy and violence, but also recommendations to the would-be tyrant of the best means to use for his nefarious purposes. Though Rousseau refers to Machiavelli's *Prince* as "the book of Republicans," and thinks that "the choice of his detestable hero, Caesar Borgia, clearly enough shows his hidden aim," the rules which Machiavelli formulates for the prince seem, on the surface at least, to be essentially similar to the advice Aristotle gives the tyrant.

The end in both cases is the same—success in the effort to gain and keep power. The means, in general, are force and fraud or, as Machiavelli phrases it, the methods of the lion and the fox. Machiavelli counsels the prince "to inspire fear in such a way that, if he does not win love, he avoids hatred." He tells him that he should appear to keep faith without hesitating to break his promises, that he should avoid flatterers and sycophants, and that he should acquire a reputation for liberality without cost to himself. Not very different is Aristotle's advice to the tyrant—to lop off the heads of those who are too high and to humble all the rest, to sow discord among his subjects, to impoverish the people by multiplying taxes, to employ informers, and to encourage the betrayal of one faction by another.

But in his suggestion of another course for the tyrant to take—the policy of not merely pretending, but of actually trying, to conduct himself like a just king—Aristotle seems to deviate from the spirit of Machiavelli's maxim that

the appearance of virtue is profitable so long as it does not interfere with doing whatever is expedient, however vicious. Yet even here Aristotle says that "the tyrant must be careful . . . to keep power enough to rule over his subjects, whether they like him or not, for if he once gives this up he gives up his tyranny."

The best commentary on these recommendations seems to be indirectly expressed by their authors. Both Aristotle and Machiavelli draw one striking conclusion from the history of those—call them princes or tyrants—who have tried to put such rules into practice. Whether its collapse is due to the inherent weakness of might without right, as Aristotle suggests, or, in Machiavelli's terms, to the unforeseeable mishaps of fortune, tyranny, of all forms of government, seems to be the shortest-lived.

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To find the passages cited, use the numbers in heavy type, which are the volume and page numbers of the passages referred to. For example, in **4** HOMER: *Iliad*, BK II [265–283] **12d**, the number **4** IS the number of the volume in the set; the number **12d** indicates that the passage is in section d of page 12.

PAGE SECTIONS: When the text is printed in one column, the letters **a** and **b** refer to the upper and lower halves of the page. For example, in **53** JAMES: *Psychology*, **116a-119b**, the passage begins in the upper half of page 116 and ends in the lower half of page 119. When the text is printed in two columns, the letters **a** and **b** refer to the upper and lower halves of the left-hand side of the page, the letters **c** and **d** to the upper and lower halves of the right-hand side of the page. For example, in **7** PLATO: *Symposium*, **163b-164c**, the passage begins in the lower half of the left-hand side of page 163 and ends in the upper half of the right-hand side of page 164.

AUTHOR'S DIVISIONS: One or more of the main divisions of a work (such as PART, BK, CH, SECT) are sometimes included in the reference; line numbers, in brackets, are given in certain cases; *e.g.*, *Iliad*, BK II [265–283] **12d**.

BIBLE REFERENCES: The references are to book, chapter, and verse. When the King James and Douay versions differ in title of books or in the numbering of chapters or verses, the King James version is cited first and the Douay, indicated by a (*D*), follows; *e.g.*, OLD TESTAMENT: *Nehemiah*, 7:45—(*D*) *II Esdras*, 7:46.

SYMBOLS: The abbreviation "esp" calls the reader's attention to one or more especially relevant parts of a whole reference; "passim" signifies that the topic is discussed intermittently rather than continuously in the work or passage cited.

For additional information concerning the style of the references, see the Explanation of Reference Style; for general guidance in the use of *The Great Ideas*, consult the Preface.

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1*a*. The lawlessness of tyrannical rule: might without right

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1*b*. The injustice of tyrannical government: rule for self-interest

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9 ARISTOTLE: *Politics*, BK V, CH 10 [1310^{b}14-31] 513a; [1313^{a}8-10] 515c; BK VII, CH 14 [1333^{b}28-38] 538c-d

14 PLUTARCH: *Caius Marius*, 344c-354a,c / *Sulla*, 369a-374a; 382a-387a,c / *Sertorius*, 469a-470d / *Pompey* 499a-538a,c esp 524b-c / *Caesar* 577a-604d
15 TACITUS: *Annals*, BK I, 1b-2a; 4b-d; BK II, 32d-33c / *Histories*, BK I, 195a-201c esp 197a-c
26 SHAKESPEARE: *3rd Henry VI*, ACT III, SC II [124-195] 87c-88a / *Richard III* 105a-148a,c esp ACT V, SC III [237-270] 146b-c
35 LOCKE: *Civil Government*, CH XVI, SECT 176 66a-b; CH XVII 70c-71a; CH XIX, SECT 212-220 74a-75d passim
38 MONTESQUIEU: *Spirit of Laws*, BK XI, 77a-b; 78d-79b
38 ROUSSEAU: *Social Contract*, BK III, 408b-c; 419a-c; 424a-d; BK IV, 432c-433a
40 GIBBON: *Decline and Fall*, 24b,d-28b esp 24d-25a, 27b-d; 43b-44b; 69a-71a; 111b-113a esp 111d; 386a-387d; 436a-438a esp 436c-437b; 489d-491a; 515b-518a passim
43 FEDERALIST: NUMBER 16, 68b-c; NUMBER 17, 70a-c; NUMBER 21, 78d-79b; NUMBER 26, 94a-d; NUMBER 28, 97c-98b; NUMBER 31, 104d-105c; NUMBER 33, 108d-109a; NUMBER 41, 133a-b; NUMBER 44, 146c-d; NUMBER 45, 148b-d; NUMBER 78, 230a-232c; NUMBER 81, 239a-c
43 MILL: *Representative Government*, 350d-351c
51 TOLSTOY: *War and Peace*, BK I, 8d-10d; EPILOGUE I, 647b-649d; EPILOGUE II, 681a-d

1d. The character of the tyrannical man: the friends of the tyrant

OLD TESTAMENT: *I Kings*, 21—(*D*) *III Kings*, 21 / *Proverbs*, 28:15-16 / *Ecclesiastes*, 10:5-7,16-17
5 AESCHYLUS: *Prometheus Bound* [196-243] 42b-c
5 SOPHOCLES: *Oedipus the King* [863-910] 107b-c
6 HERODOTUS: *History*, BK III, 107c-d
7 PLATO: *Gorgias*, 262a-270c; 285d-287c / *Republic*, BK I, 308c-309a; BK II, 311c-312d; BK IX 416a-427b / *Laws*, BK III, 671c
9 ARISTOTLE: *Ethics*, BK VIII, CH II [1161a30-b10] 413c-d; BK X, CH 6 [1176b9-23] 431a-b / *Politics*, BK II, CH 7 [1267a3-17] 462c-d; BK IV, CH 4 [1292a15-17] 491c; BK V, CH II [1313b30-1314a12] 516c-d
12 EPICTETUS: *Discourses*, BK I, CH 19 125b-126c; BK IV, CH I, 215b-d; CH 5, 229a-b
13 VIRGIL: *Aeneid*, BK VIII [481-495] 272a
14 PLUTARCH: *Timoleon*, 201b-202c / *Pelopidas*, 242b-243c / *Lysander*, 362b-365a / *Sulla*, 384a-c / *Lysander-Sulla*, 387b,d-388c / *Lucullus*, 409d-410d / *Demetrius* 726a-747d esp 742c-743b / *Antony-Demetrius* 780a-781a,c / *Dion*, 782b-788b / *Aratus*, 835b-836d / *Artaxerxes* 846a-858d esp 856b-c
15 TACITUS: *Annals*, BK I, 20b-c; BK IV, 63d-64c; 65c-67a; 79b-c; BK VI, 87b-88b; BK XI, 102d-103a; BK XIV, 145a-d; 153d-154d; BK XV, 172c-173a / *Histories*, BK I, 195a-c; 197a-b; BK II, 224c-d; 233d; 238d-240b; BK III, 256d-257d; BK IV, 268b-c
20 AQUINAS: *Summa Theologica*, PART I-II, Q 105, A 1, REP 2,4-5 307d-309d
22 CHAUCER: *Physician's Tale* 366a-371a
23 MACHIAVELLI: *Prince*, CH VIII, 13a-c; CH XV-XIX 22b-30a; CH XXIII 33d-34b
25 MONTAIGNE: *Essays*, 3a-5a; 126b-131a passim; 337b-c; 351b-353c
26 SHAKESPEARE: *Richard III* 105a-148a,c esp ACT III, SC I [151-200] 124c-125a, SC V 128b-129c, ACT IV, SC II 133d-135b, ACT V, SC I 142d-143a / *Julius Caesar*, ACT I, SC II [94-214] 570b-571c; ACT III, SC I [31-73] 580d-581b
27 SHAKESPEARE: *Measure for Measure*, ACT II, SC IV 184c-186c / *Macbeth*, ACT IV, SC III [50-114] 304a-c / *Pericles*, ACT I, SC I [92-104] 422d / *Winter's Tale*, ACT III, SC II 501b-504a
32 MILTON: *Paradise Lost*, BK IV [366-394] 160b-161a
36 SWIFT: *Gulliver*, PART I, 24b-25a
38 ROUSSEAU: *Inequality*, 364a-b
40 GIBBON: *Decline and Fall*, 29b; 32d-33a; 34d-39d esp 35b, 37a; 53c-56d; 59b-61a; 70c-71a; 76a; 167a-d; 388d-389c
41 GIBBON: *Decline and Fall*, 113c-114a; 166a-167c; 173b-174a; 189b-193c
48 MELVILLE: *Moby Dick*, 107a-b
51 TOLSTOY: *War and Peace*, BK I, 8d-10d; BK X, 465c-467a; EPILOGUE I, 647b-649d

2. Tyranny as the corruption of other forms of government

2a. The perversion of monarchy: the tyrannical king

5 SOPHOCLES: *Oedipus the King* [616-630] 104d-105a / *Antigone* [640-745] 136d-137c
5 EURIPIDES: *Heraclcs Mad* [140-274] 366b-367c
6 HERODOTUS: *History*, BK III, 107c-108c
6 THUCYDIDES: *Peloponnesian War*, BK I, 352c-d
7 PLATO: *Republic*, BK IX, 418d-419a / *Statesman*, 590c-d; 598b-604b / *Laws*, BK III, 672d-674d
9 ARISTOTLE: *Ethics*, BK VIII, CH 10 [1160a31-b8] 412c-d; [1160b23-33] 413a / *Politics*, BK III, CH 7 [1279b4-10] 476d-477a; CH 8 [1279b16-17] 477a; CH 14 [1285a17-29] 483b-c; CH 17 [1287b38-1288a5] 486c; BK IV, CH 2 [1289a26-b4] 488b-c; CH 4 [1292a15-19] 491c; CH 10 [1295a9-23] 495a-b; BK V, CH 10 [1310a39-1311a28] 512d-513c; [1312a40-b9] 514d-515a; [1312b37-1313a16] 515c-d; CH 11 [1314a37-1315b11] 517b-518c / *Rhetoric*, BK I, CH 8 [1365b39-1366a2] 608b
14 PLUTARCH: *Romulus-Theseus*, 30c-d / *Demetrius*, 742c-743b
18 AUGUSTINE: *City of God*, BK II, CH 21, 162a
20 AQUINAS: *Summa Theologica*, PART I-II, Q 105, A 1, REP 2,4-5 307d-309d
23 HOBBES: *Leviathan*, PART II, 105a; 150c-151a; PART IV, 273a-b

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26 SHAKESPEARE: *Richard III*, ACT V, SC III [237–270] 146b-c
27 SHAKESPEARE: *Macbeth*, ACT IV, SC III [31–114] 303d-304c
30 BACON: *Advancement of Learning*, 27a-c
33 PASCAL: *Pensées*, 15 174a
35 LOCKE: *Civil Government*, CH II, SECT 13 28a-b; CH VII, SECT 90–94 44d-46c; CH VIII, SECT 106–111 49a-51a passim; CH XIV 62b-64c passim; CH XVIII 71a-73c esp SECT 200 71a-c; CH XIX 73d-81d passim, esp SECT 231–239 78c-81b
37 FIELDING: *Tom Jones*, 268c-269b
38 MONTESQUIEU: *Spirit of Laws*, BK VIII, 53a-c; BK XI, 75d; 77c
38 ROUSSEAU: *Inequality*, 357b-c / *Social Contract*, BK III, 412d-413a; 414c-d; 419b-c
40 GIBBON: *Decline and Fall*, 31b; 32c-33a; 34d-39d passim; 255b,d-257a
41 GIBBON: *Decline and Fall*, 39b-c
43 FEDERALIST: NUMBER 48, 157b-c
43 MILL: *Liberty*, 267d-268b / *Representative Government*, 366a-c
44 BOSWELL: *Johnson*, 195c-d
46 HEGEL: *Philosophy of Right*, PART III, par 286 96c-97a / *Philosophy of History*, INTRO, 173c-d

2b. The degeneration of oligarchy: the tyranny of the wealthy

6 THUCYDIDES: *Peloponnesian War*, BK I, 352c
7 PLATO: *Laws*, BK IV, 681b-682c
9 ARISTOTLE: *Politics*, BK III, CH 10 [1281^{a}21–28] 478d-479a; CH 15 [1286^{b}8–22] 484d-485a; BK IV, CH 6 [1293^{a}12–34] 492d-493a; CH 11 [1296^{a}22–^{b}2] 496b-c; BK V, CH 8 [1308^{a}14–24] 510b; CH 9 [1309^{b}14–1310^{a}12] 511d-512b / *Athenian Constitution*, CH 2 553a-c
14 PLUTARCH: *Coriolanus*, 180c-d
18 AUGUSTINE: *City of God*, BK II, CH 21, 162a
23 HOBBES: *Leviathan*, PART IV, 273a-b
27 SHAKESPEARE: *Coriolanus*, ACT I, SC I 351a-354d
35 LOCKE: *Civil Government*, CH XVIII, SECT 201 71c
38 MONTESQUIEU: *Spirit of Laws*, BK V, 23a-25a passim
38 ROUSSEAU: *Inequality*, 359b-d
42 KANT: *Science of Right*, 450c
43 FEDERALIST: NUMBER 57 176d-179b passim
43 MILL: *Representative Government*, 393d-394d
50 MARX-ENGELS: *Communist Manifesto*, 420b-d

2c. The corruption of democracy: the tyranny of the masses or of the majority; the rise of the demagogue

5 EURIPIDES: *Suppliants* [399–425] 261d-262a
5 ARISTOPHANES: *Knights* 470a-487a,c esp [1111–1150] 483d-484b / *Wasps* [463–507] 512d-513c; [650–724] 515c-516d / *Lysistrata* [608–635] 591b-c / *Plutus* [567–571] 636a
6 HERODOTUS: *History*, BK III, 107c-108c
6 THUCYDIDES: *Peloponnesian War*, BK VI, 516b-517a; 523b-c; 524d-525d; 533a-c
7 PLATO: *Republic*, BK VIII, 411d-413a; BK IX, 416c-417b / *Statesman*, 603d-604b / *Laws*, BK III, 675c-676b; BK IV, 681b-682c
9 ARISTOTLE: *Politics*, BK II, CH 12 [1273^{b}35–1274^{a}22] 470c-d; BK III, CH 7 [1279^{b}4–10] 476d-477a; CH 10 [1281^{a}11–23] 478d-479a; BK IV, CH 4 [1292^{a}4–37] 491b-d; CH 6 [1293^{a}1–10] 492c; CH 14 [1298^{a}29–34] 498d; BK V, CH 5 [1305^{a}8–28] 506d-507a; CH 8 [1308^{a}14–24] 510b; CH 9 [1309^{b}14–1310^{a}12] 511d-512b; [1310^{a}25–36] 512c; CH 10 [1310^{a}39–^{b}18] 512d-513a; [1312^{a}40–^{b}8] 514d-515a; CH 11 [1313^{b}38–1314^{a}1] 516c; BK VI, CH 4 [1319^{b}26–32] 523b
14 PLUTARCH: *Agis*, 648b,d-649b
15 TACITUS: *Histories*, BK III, 265a-b
18 AUGUSTINE: *City of God*, BK II, CH 21, 162a
27 SHAKESPEARE: *Coriolanus*, ACT I, SC I [1–225] 351a-353d; ACT II, SC I [1–106] 361a-362a; ACT III, SC I [140–161] 370d-371a; ACT IV, SC VI [74–156] 383a-384a
38 MONTESQUIEU: *Spirit of Laws*, BK III, 10a; BK VIII, 51a-52c
38 ROUSSEAU: *Social Contract*, BK III, 411a-b; 419b
40 GIBBON: *Decline and Fall*, 14b
41 GIBBON: *Decline and Fall*, 73b-c; 94d
43 FEDERALIST: NUMBER 1, 30b; NUMBER 8–9, 45a-47c passim; NUMBER 10 49c-53a passim; NUMBER 22, 84c-d; NUMBER 43, 141d-142c; NUMBER 48 156d-159a passim; NUMBER 51, 164a-165a; NUMBER 58, 181b-182a; NUMBER 63, 192c-193a; NUMBER 78, 232a-d
43 MILL: *Liberty*, 268d-274a; 298b-299a; 302b-c; 309a-b / *Representative Government*, 330a; 366c-389b passim, esp 377b, 380c-381d; 406c-d
44 BOSWELL: *Johnson*, 260b
46 HEGEL: *Philosophy of Right*, ADDITIONS, 180 148b / *Philosophy of History*, PART II, 273d-274a; 277d; PART III, 295d-296b; 300a-b; PART IV, 365c-366b

3. The choice between tyranny or despotism and anarchy

6 HERODOTUS: *History*, BK I, 23b-24a
14 PLUTARCH: *Solon*, 68d-70d / *Pompey*, 525a-526d / *Caesar*, 588c-591d; 598d-599a / *Cato the Younger*, 638b-639a
15 TACITUS: *Annals*, BK I, 1b-c; BK III, 51b-52a / *Histories*, BK IV, 290a-d
23 HOBBES: *Leviathan*, PART II, 104b-d; 112b-d; PART IV, 273a-b
35 LOCKE: *Civil Government*, CH II, SECT 13 28a-b; CH VII, SECT 90–93 44d-46a; CH XI, SECT 137 56d-57b; CH XVIII, SECT 203–210 72a-73c; CH XIX, SECT 224–229 76d-78a

38 ROUSSEAU: *Inequality*, 356b-c; 359b-c / *Social Contract*, BK I, 389b; BK IV, 433a-434b
43 FEDERALIST: NUMBER 8–9, 45a-47c passim; NUMBER 16–20 66c-78b passim, esp NUMBER 16 66c-68d; NUMBER 70, 210c-d
43 MILL: *Representative Government*, 344c-d; 350b-355b passim, esp 351c-d; 367b-c

4. The nature and effects of despotism

7 PLATO: *Statesman*, 590c-d; 598b-604b
9 ARISTOTLE: *Ethics*, BK VIII, CH 11 [1161^{a}11–22] 413b-c / *Politics*, BK I, CH 5 447d-448c; BK III, CH 13 [1284^{a}3–^{b}34] 482a-483a; CH 14 [1285^{a}17–^{b}34] 483b-484a; BK IV, CH 10 [1295^{a}9–23] 495a-b
15 TACITUS: *Annals*, BK III, 51b
19 AQUINAS: *Summa Theologica*, PART I, Q 81, A 3, REP 2 430c-431d; PART I-II, Q 17, A 7, ANS 690d-692a
35 LOCKE: *Civil Government*, CH III, SECT 17–18 28d-29b; CH IV 29d-30b; CH VII, SECT 85 43c-d; CH XV, SECT 172–174 65b-d
38 MONTESQUIEU: *Spirit of Laws*, BK II, 4a; 8d-9a,c; BK III, 12a-13c; BK IV, 15a-c; BK V, 26a-30a; BK VI, 33d-35a; 39d-40d; BK VIII, 54a-b; 57b-58d; BK IX, 60a-b; BK X, 68b-d; BK XV, 109a; BK XVIII, 128d; BK XIX, 137c-140c
38 ROUSSEAU: *Social Contract*, BK I, 387b,d-391b
40 GIBBON: *Decline and Fall*, 50a-b; 91a; 154b-c
41 GIBBON: *Decline and Fall*, 81c-d; 320d-321b
42 KANT: *Science of Right*, 438a-b; 450c-d
43 MILL: *Liberty*, 297a-b / *Representative Government*, 341d-344d; 367b-c; 382b-c
46 HEGEL: *Philosophy of Right*, PART III, par 270, 89b; par 286, 96c-d; par 355 112d-113a; ADDITIONS, 180 148b / *Philosophy of History*, INTRO, 161a-c; PART I, 213b-214d; 222a-c; 230a-c; PART III, 285d; 302a-d

4a. The relation of despotism to tyranny and monarchy: the benevolence of despots

6 THUCYDIDES: *Peloponnesian War*, BK VI, 523b-524d
7 PLATO: *Statesman*, 590c-d; 598b-604b / *Laws*, BK III, 672d-674d; BK IV, 681b-d
9 ARISTOTLE: *Ethics*, BK VIII, CH 10 [1160^{b}23–32] 413a; CH 11 413b-d / *Politics*, BK III, CH 14 [1285^{a}17–^{b}34] 483b-484a; CH 17 [1287^{b}37–1288^{a}7] 486c; BK IV, CH 10 [1295^{a}9–23] 495a-b; BK V, CH 10 [1310^{b}14–32] 513a; CH 11 [1314^{a}30–1315^{b}11] 517a-518c / *Athenian Constitution*, CH 15 559b-c
14 PLUTARCH: *Theseus*, 9a-d / *Romulus-Theseus*, 30c-d / *Solon*, 75c-76d / *Poplicola*, 80d-82a / *Alexander* 540b,d-576d passim
19 AQUINAS: *Summa Theologica*, PART I, Q 81, A 3, REP 2 430c-431d
23 HOBBES: *Leviathan*, PART II, 110b-111a
24 RABELAIS: *Gargantua and Pantagruel*, BK III, 131b,d-133b
35 LOCKE: *Civil Government*, CH VII, SECT 90–94 44d-46c; CH VIII, SECT 107 49b-d; CH XIX, SECT 231–239 78c-81b
36 SWIFT: *Gulliver*, PART II, 74a-76b; PART III, 120a
38 MONTESQUIEU: *Spirit of Laws*, BK II, 4a; 7c-9a,c; BK III, 12a-13c; BK IV, 15a-c; BK V, 25d-26c; 30a-31b; BK V-VI, 32b-35a; BK VI, 36a-b; 37a-38b; 43c; BK VII, 46a; 47d-48a; 50a-b; BK VIII, 56d-57c; BK IX, 60a-61a; BK XI, 75a-b; 75d; BK XII, 90b-c; BK XIII, 97a-b; 98d-100b; 102a,c; BK XV, 109a; BK XXV, 211c-d
38 ROUSSEAU: *Inequality*, 357a-c / *Social Contract*, BK III, 419b-c
40 GIBBON: *Decline and Fall*, 24b; 32c-33a; 40d-41d; 50a; 255b,d-257a; 338d-344a,c passim; 389c-390c
41 GIBBON: *Decline and Fall*, 39b-40b
43 MILL: *Liberty*, 267d-268c / *Representative Government*, 339a-340d; 341d-344d; 348d-349a; 351a-354b passim
46 HEGEL: *Philosophy of Right*, PART III, par 286 96c-97a

4b. The comparison of paternal and despotic dominion: the justification of absolute rule by the incapacity of the ruled for self-government

5 SOPHOCLES: *Antigone* [640–676] 136d-137a
5 EURIPIDES: *Suppliants* [399–425] 261d-262a
6 HERODOTUS: *History*, BK I, 35c-d; BK III, 107c-108c; 120b-c
7 PLATO: *Statesman*, 598b-604b / *Laws*, BK III, 670c-671a; BK IV, 679c-680d
9 ARISTOTLE: *Ethics*, BK V, CH 6 [1134^{b}8–18] 382b-c; BK VIII, CH 10 [1160^{b}23–32] 413a; CH 11 413b-d / *Politics*, BK I, CH 5 447d-448c; CH 8 [1256^{b}22–25] 450c; CH 12-13 453d-455a,c; BK III, CH 13 [1284^{a}3–^{b}34] 482a-483a; BK VII, CH 2 [1324^{b}23–41] 528d-529a
15 TACITUS: *Annals*, BK III, 51b / *Histories*, BK I, 191d-192a; 193c-194a; BK IV, 290a-d
18 AUGUSTINE: *City of God*, BK II, CH 21 161b-162d; BK XIX, CH 21, 524c-525a
23 HOBBES: *Leviathan*, PART II, 104b-d; 109b-112d; PART IV, 273a-c
32 MILTON: *Samson Agonistes* [1010–1060] 361b-362b
35 LOCKE: *Civil Government*, CH VI 36a-42a passim; CH VII, SECT 84–86 43c-44a; CH VIII, SECT 105–110 48c-50d; CH XV, SECT 170 64d-65a; SECT 172–174 65b-d
37 FIELDING: *Tom Jones*, 100b-102a; 359b-362c
38 MONTESQUIEU: *Spirit of Laws*, BK I, 3b; BK V, 22d-23a; BK VIII, 57b; BK XV, 110a-111c; BK XVI, 116a-120a; BK XVII, 122a-123b; 124c-d; BK XVIII, 128d; BK XXIII, 189b
38 ROUSSEAU: *Inequality*, 324a-b; 357a-b / *Political Economy*, 367a-368c passim / *Social Contract*, BK II, 402d-403a; BK III, 414c-d
40 GIBBON: *Decline and Fall*, 32b-ç; 513b-c

(4. The nature and effects of despotism. 4b. The comparison of paternal and despotic dominion: the justification of absolute rule by the incapacity of the ruled for self-government.)

42 KANT: *Science of Right*, 404d; 420b-422d; 436d-437c; 445c-446a
43 FEDERALIST: NUMBER 9, 47b-c; NUMBER 55, 174c-d
43 MILL: *Liberty*, 271d-272a; 317c-318a / *Representative Government*, 329c; 339a-341c; 344c; 351c-354b; 436b-437a
46 HEGEL: *Philosophy of Right*, PART I, par 93 36a-b / *Philosophy of History*, INTRO, 174a-c; 198b-199c; PART III, 300c-301c
52 DOSTOEVSKY: *Brothers Karamazov*, BK V, 127b-137c

5. The contrast between despotic and constitutional government: government by men and government by laws

5 AESCHYLUS: *Eumenides* [681-710] 88b-c
5 SOPHOCLES: *Oedipus at Colonus* [904-931] 122d-123a
5 EURIPIDES: *Suppliants* [399-462] 261d-262b
5 ARISTOPHANES: *Wasps* [463-507] 512d-513c
6 HERODOTUS: *History*, BK III, 107c-108c; BK V, 175b; BK VII, 233a-d
6 THUCYDIDES: *Peloponnesian War*, BK I, 368c-d; BK III, 425a-c; 438a-b
7 PLATO: *Statesman*, 598b-604b / *Laws*, BK III, 667c-676b; BK IV, 681b-682c; BK VIII, 733d-734a; BK IX, 754a-b / *Seventh Letter*, 805d; 807b
9 ARISTOTLE: *Ethics*, BK V, CH 6 [$1134^{a}24$-$^{b}8$] 382a-b; BK X, CH 9 [$1180^{a}14$-24] 434d-435a / *Politics*, BK I, CH I [$1252^{a}13$-17] 445a-b; CH 5 [$1254^{a}34$-$^{b}9$] 448a; CH 7 [$1255^{b}16$-20] 449b; CH 12 453d-454a, BK II, CH 10 [$1272^{a}35$-$^{b}10$] 468d-469a; BK III, CH 6 [$1278^{b}30$-$1279^{a}22$] 476a-c; CH 10 [$1281^{a}29$-39] 479a; CH 11 [1282^{b} 1-13] 480b-c; CH 15-17 484b-487a; BK IV, CH 6 492b-493a passim; CH 8 [$1293^{b}22$-27] 493c; CH 10 [$1295^{a}9$-23] 495a-b
14 PLUTARCH: *Caesar*, 591d / *Cato the Younger*, 638b-639a
15 TACITUS: *Annals*, BK I, 1a-2b; BK III, 51b-c; 61c-62a
20 AQUINAS: *Summa Theologica*, PART I-II, Q 95, A 1, REP 2 226c-227c; Q 96, A 5, REP 3 233d-234d
23 HOBBES: *Leviathan*, PART II, 114b-115a; 131d-132a; 149d-150a
35 LOCKE: *Civil Government*, CH IV, SECT 21 29d; CH VII, SECT 87-94 44a-46c; CH XI 55b-58b passim; CH XVIII 71a-73c
37 FIELDING: *Tom Jones*, 268c-269b
38 MONTESQUIEU: *Spirit of Laws*, BK II, 4a; 8b-d; BK III, 12a-d; BK V, 25d-26c; 30a-c; BK VI, 33a-35a; 36a-37a; BK VIII, 54a-b; BK XIX, 137c-d; BK XXV, 211c-d; BK XXVI, 223c-d
38 ROUSSEAU: *Inequality*, 323d-324a; 357b-c; 358b-d; 361c-362a / *Political Economy*, 370b-371a / *Social Contract*, BK I, 387b,d-391b; BK II, 400a; BK III, 408c; 419a-c; BK IV, 433a-434b
40 GIBBON: *Decline and Fall*, 24b,d-28b passim; 51c-d; 154a-c; 342a-c; 592a
41 GIBBON: *Decline and Fall*, 73d-75a; 96d; 125a
42 KANT: *Science of Right*, 450b-d
43 DECLARATION OF INDEPENDENCE: 1a-3b passim
43 FEDERALIST: NUMBER 47, 153c-154d; NUMBER 55, 174c-d; NUMBER 57, 177d-178a; NUMBER 78, 230d-232a
43 MILL: *Liberty*, 267d-268b; 274b,d [fn 1] / *Representative Government*, 338d-341d; 341d-350a esp 346a-b
46 HEGEL: *Philosophy of Right*, PART III, par 278 92c-93a; par 286 96c-97a; ADDITIONS, 171 146b-c / *Philosophy of History*, INTRO, 198b-199c; PART I, 208b-c; PART II, 262a-c; PART III, 301c-302d; PART IV, 342a-d
54 FREUD: *Civilization and Its Discontents*, 780b-d

5a. Despotic and constitutional government with respect to political liberty and equality: the rights of the governed

5 SOPHOCLES: *Oedipus at Colonus* [907-931] 122d-123a
5 EURIPIDES: *Suppliants* [429-456] 262a-b
6 HERODOTUS: *History*, BK III, 107c-d; BK VII, 233c-d
7 PLATO: *Statesman*, 598b-604b / *Laws*, BK III, 672d-674d; BK IV, 681b-682b
9 ARISTOTLE: *Ethics*, BK V, CH 6 [$1134^{a}24$-$^{b}17$] 382a-c passim; BK VIII, CH 11 [$1161^{a}30$-$^{b}10$] 413c-d / *Politics*, BK I, CH 7 [$1255^{b}16$-20] 449b; BK III, CH 6 [$1278^{b}30$-$1279^{a}22$] 476a-c; CH 16-17 485b-487a; BK IV, CH 4 [$1292^{a}4$-37] 491b-d; CH 10 [$1295^{a}9$-23] 495a-b; BK V, CH 9 [$1310^{a}25$-36] 512c
12 AURELIUS: *Meditations*, BK I, SECT 14 254b-c
15 TACITUS: *Annals*, BK III, 61c-62a / *Histories*, BK I, 189a-b; BK IV, 290a-d
19 AQUINAS: *Summa Theologica*, PART I, Q 81, A 3, REP 2 430c-431d; PART I-II, Q 17, A 7, ANS 690d-692a
25 MONTAIGNE: *Essays*, 383c-d
32 MILTON: *Paradise Lost*, BK V [769-799] 192a-b
35 LOCKE: *Toleration*, 19a-d / *Civil Government*, CH IV 29d-30b; CH VI, SECT 61-63 38a-c; CH VII, SECT 87-94 44a-46c; CH IX, SECT 131 54d; CH XI, SECT 135-139 55d-58a; CH XV, SECT 171-CH XVI, SECT 196 65a-70c
38 MONTESQUIEU: *Spirit of Laws*, BK III, 12b-13c; BK VI, 33a-35a; BK XII, 85a-c; BK XV, 109a-b; 112c-d; BK XIX, 142a
38 ROUSSEAU: *Inequality*, 323d-324a; 356b-358b; 359b-d; 361c-362a / *Political Economy*, 370d-371a; 375b-c / *Social Contract*, BK I, 387b,d-391b; BK IV, 438c
40 GIBBON: *Decline and Fall*, 14a-c; 33a-34a,c; 91a; 522c-524a

41 GIBBON: *Decline and Fall*, 81c-82a; 96a-d; 161c-162a
42 KANT: *Science of Right*, 436d; 451b-c
43 DECLARATION OF INDEPENDENCE: 1a-3b passim
43 FEDERALIST: NUMBER 8-9, 45a-47c passim; NUMBER 84, 251b-253d
43 MILL: *Liberty*, 267d-268c; 274b-275a / *Representative Government*, 339d-340c; 341d-344d; 348c-350a
46 HEGEL: *Philosophy of Right*, PART III, par 215 71c-d; par 286 96c-97a; par 297 99b; ADDITIONS, 180 148b / *Philosophy of History*, INTRO, 161a-c; PART I, 213b-214d; 230a-c; PART II, 271d-272d; PART III, 301c-302a; PART IV, 342b-d

5b. Despotic and constitutional government with respect to juridical defenses against misgovernment, or redress for grievances through due process of law

35 LOCKE: *Civil Government*, CH VII, SECT 87-94 44a-46c; CH XII, SECT 143 58c-d; CH XVIII, SECT 202-207 71d-73a
38 MONTESQUIEU: *Spirit of Laws*, BK VI, 33a-35a; 36a-b; 37a-c; BK XI, 69d-75a passim; BK XII, 85a-c
38 ROUSSEAU: *Social Contract*, BK III, 407d-408a; 424a-d; BK IV, 432b-433a
41 GIBBON: *Decline and Fall*, 93a-c; 94c-95c; 96c-d; 173c-d
42 KANT: *Science of Right*, 436d
43 DECLARATION OF INDEPENDENCE: [52-55] 2a; [66-67] [70-71] 2b; [95-105] 3a
43 CONSTITUTION OF THE U.S.: PREAMBLE 11a,c; ARTICLE I, SECT 6 [143-151] 12c-d; SECT 9 [267-272] 13d; SECT 9 [289]-SECT 10 [303] 14a; ARTICLE II, SECT 4, ARTICLE III, SECT 1 [463-468] 15c; ARTICLE III, SECT 3 [507-511] 16a; AMENDMENTS, I-X 17a-18a; XIV, SECT 1 18d
43 FEDERALIST: NUMBER 44, 144d-145a; NUMBER 47-50 153c-162c; NUMBER 51, 164a-165a; NUMBER 53, 167b-168b; NUMBER 57, 177d-178a; NUMBER 78 229d-233c passim; NUMBER 83 244b-251a passim, esp 245d-246b; NUMBER 84, 251b-253d
43 MILL: *Liberty*, 267d-268b; 269a-c / *Representative Government*, 401d-402b
44 BOSWELL: *Johnson*, 195c-d
46 HEGEL: *Philosophy of Right*, PART III, par 286 96c-97a

5c. The location of sovereignty in despotic and constitutional government: the sovereign person, the sovereign office, the sovereign people

OLD TESTAMENT: *Judges*, 21:24 / *I Samuel*, 8:4-20—(*D*) *I Kings*, 8:4-20
5 EURIPIDES: *Suppliants* [429-456] 262a-b / *Andromache* [464-492] 319b-c
6 HERODOTUS: *History*, BK III, 107c-108c
7 PLATO: *Laws*, BK III, 672c-676c
9 ARISTOTLE: *Politics*, BK II, CH 2 [1261a23-b6] 456a-b; BK III, CH 1 [1275a22-b21] 472a-c; CH 10 [1281a29]-CH 11 [1282b14] 479a-480c; CH 17 486c-487a
14 PLUTARCH: *Tiberius Gracchus*, 678b-d
20 AQUINAS: *Summa Theologica*, PART I-II, Q 90, A 3 207a-c; Q 96, A 5, REP 3 233d-234d; Q 105, A 1, ANS 307d-309d
23 HOBBES: *Leviathan*, PART I, 97c-d; PART II, 100c-101b; 104d-106d
35 LOCKE: *Civil Government*, CH VII, SECT 87-94 44a-46c; CH IX, SECT 127-CH X, SECT 132 54a-55b; CH XIV 62b-64c passim; CH XV, SECT 171-174 65a-d
38 MONTESQUIEU: *Spirit of Laws*, BK II, 4a; 7c-9a,c; BK V, 30a-c; BK XI, 69d-75a
38 ROUSSEAU: *Social Contract*, BK II, 395a-396a; BK III, 408b-c; 412c-413a; 419a-c; 423a-c; 424a-d
40 GIBBON: *Decline and Fall*, 24b,d-28b esp 25a, 26d-27c; 51a-d; 100d; 241b
41 GIBBON: *Decline and Fall*, 74b-d; 320d-321a
42 KANT: *Science of Right*, 436c; 437c-d; 439a-c; 450a-c; 451c-452a
43 DECLARATION OF INDEPENDENCE: 1a-3b esp [43-47] 2a
43 CONSTITUTION OF THE U.S.: PREAMBLE 11a,c; AMENDMENTS, IX-X 17d-18a
43 FEDERALIST: NUMBER 22, 84d-85a; NUMBER 33, 108b-c; NUMBER 39, 125c-d; NUMBER 46, 150b-c; NUMBER 49, 159c; NUMBER 51, 164a-165a; NUMBER 53, 167d-168b
43 MILL: *Liberty*, 267d-269c / *Representative Government*, 341d-350a passim; 355b-356b
46 HEGEL: *Philosophy of Right*, PART III, par 275 92a-b; par 279 93a-94d; ADDITIONS, 167 145c / *Philosophy of History*, PART II, 272b-273a; PART III, 300a-301c; PART IV, 342b-d; 355c-d; 365c-366b
51 TOLSTOY: *War and Peace*, EPILOGUE II, 680b-684a

5d. The analogues of despotic and constitutional rule in the relation of the powers of the soul: the tyranny of the passions

7 PLATO: *Phaedrus*, 120b-c / *Republic*, BK I, 296b-c; BK IX, 416a-418c; 419b-421a
9 ARISTOTLE: *Ethics*, BK I, CH 13 [1102a27-1103a3] 347d-348c / *Politics*, BK I, CH 5 [1254a33-b26] 448a-b; CH 13 [1260a4-8] 454c
12 EPICTETUS: *Discourses*, BK IV, CH 1, 213d; 218a-c; CH 5, 229a-b
15 TACITUS: *Annals*, BK VI, 87b-c
17 PLOTINUS: *Sixth Ennead*, TR IV, CH 15, 304c-d; TR VIII, CH 1, 343a-b
18 AUGUSTINE: *City of God*, BK IV, CH 3, 190c; BK XIV, CH 11, 386b; BK XIX, CH 15 521a-c; CH 21, 524c-d / *Christian Doctrine*, BK I, CH 24 630c-631a
19 AQUINAS: *Summa Theologica*, PART I, Q 81, A 3, REP 2 430c-431d; PART I-II, Q 9, A 2, REP 3 658d-659c; Q 17, A 7 690d-692a

(***5. The contrast between despotic and constitutional government: government by men and government by laws. 5d. The analogues of despotic and constitutional rule in the relation of the powers of the soul: the tyranny of the passions.***)

25 MONTAIGNE: *Essays*, 184b-d
27 SHAKESPEARE: *Measure for Measure*, ACT IV, SC II [82-88] 194b / *Macbeth*, ACT IV, SC III [32-114] 303d-304c
32 MILTON: *Paradise Lost*, BK XII [79-101] 321a-b esp [90-95] 321a
35 LOCKE: *Human Understanding*, BK II, CH XXI, SECT 54 192b-c
38 ROUSSEAU: *Social Contract*, BK I, 393c
42 KANT: *Judgement*, 586d-587a
46 HEGEL: *Philosophy of History*, PART I, 233b-c; PART IV, 346a-c
54 FREUD: *Ego and Id*, 715a-b; 715d-716a / *New Introductory Lectures*, 838d-839b

6. Imperial rule as despotic, and as tyrannical or benevolent: the government of conquered peoples or colonies

OLD TESTAMENT: *Exodus*, 1:8-14; 5 / *Judges*, 6:1-6
APOCRYPHA: *I Maccabees*, 1:41-64—(*D*) OT, *I Machabees*, 1:43-67 / *II Maccabees*, 5:21-7:42—(*D*) OT, *II Machabees*, 5:21-7:42
6 HERODOTUS: *History*, BK I, 30b-31a; 35c-36a; 38b c; BK V, 184a-d; BK VI, 189d; 191b-c; BK VII, 222b-c; 225d-226b
6 THUCYDIDES: *Peloponnesian War*, BK I, 368b-370d passim; 379b-c; BK II, 403b-404a; BK III, 424d-429b; BK V, 504c-507c; BK VI, 529b-533a
9 ARISTOTLE: *Politics*, BK I, CH 8 [1256^{b}22-25] 450c; BK III, CH 13 [1284^{a}26-^{b}2] 482b-c; BK VII, CH 2 [1324^{b}23-41] 528d-529a; CH 14 [1333^{b}38-1334^{a}2] 538d
14 PLUTARCH: *Lucullus*, 409b-410b
15 TACITUS: *Annals*, BK I, 17c-d; BK IV, 76a; 82d-83a; BK XII, 117c-d; BK XIV, 149a-b / *Histories*, BK IV, 286c-287a; 290a-d
18 AUGUSTINE: *City of God*, BK XIX, CH 15 521a-c; CH 21 524a-525b
23 MACHIAVELLI: *Prince*, CH III-V 3c-8c
23 HOBBES: *Leviathan*, PART II, 101b-111a; CONCLUSION, 280b-281a
25 MONTAIGNE: *Essays*, 440b-443d
35 LOCKE: *Toleration*, 13c-d / *Civil Government*, CH XVI 65d-70c
36 SWIFT: *Gulliver*, PART I, 24b-25a; PART IV, 182b-183a
38 MONTESQUIEU: *Spirit of Laws*, BK VIII, 56d-57c; BK X, 62b-63a; BK XI, 83c-84c; BK XIII, 96d-97a; BK XV, 110a-d
38 ROUSSEAU: *Inequality*, 359b / *Social Contract*, BK I, 389d-390d
40 GIBBON: *Decline and Fall*, 14d-15a; 18a; 23c-d; 33d-34a,c; 147a-b; 420b-d; 522c-523a,c; 550d-551b; 608b,d-609a; 620a; 632d-633a
41 GIBBON: *Decline and Fall*, 51a-53b passim; 216c-217a; 307a-c; 420c; 505a-c
42 KANT: *Science of Right*, 413d; 454d-455a
43 DECLARATION OF INDEPENDENCE: 1a-3b
43 MILL: *Representative Government*, 353c; 436b-437a
44 BOSWELL: *Johnson*, 179c
46 HEGEL: *Philosophy of Right*, PART III, par 351 112a-b; ADDITIONS, 172 146c-d / *Philosophy of History*, PART III, 298a-299c; 301c-302a
50 MARX: *Capital*, 372c-374a

7. The ways of tyrants or despots to attain and maintain power

OLD TESTAMENT: *Daniel*, 3:1-12
APOCRYPHA: *I Maccabees*, 1:41-64; 10:22-46—(*D*) OT, *I Machabees*, 1:43-67; 10:22-46
5 AESCHYLUS: *Prometheus Bound* [196-243] 42b-c
5 ARISTOPHANES: *Wasps* [650-724] 515c-516d
6 HERODOTUS: *History*, BK I, 12b-14a; 21b; 23a-24b; 25c-29b; 35c-36a; BK III, 99a-c; 102d-106c; 114c-115a; 123c; BK IV, 148a-b; BK V, 164a-c; 166c-d; 172c-174b; 179c-180a; BK VI, 187b-c; 191a-b; 192c-d; BK VII, 243b-c
6 THUCYDIDES: *Peloponnesian War*, BK I, 380d-382b; BK III, 425a-426d; BK VI, 524c-d; BK VIII, 579c-590c
7 PLATO: *Gorgias*, 264c-265a / *Republic*, BK VIII, 411d-415c / *Seventh Letter*, 803a-b; 811b-813d
9 ARISTOTLE: *Politics*, BK III, CH 13 [1284^{a}3-^{b}3] 482a-c; BK V, CH 10 [1310^{a}39-1311^{a}28] 512d-513c; [1312^{b}9-1313^{a}17] 515a-d; CH 11 [1313^{a}34]-CH 12 [1315^{b}39] 516a-518d; BK VI, CH 4 [1319^{b}26-32] 523b / *Rhetoric*, BK I, CH 2 [1357^{b}30-1358^{a}1] 597c-d
12 EPICTETUS: *Discourses*, BK IV, CH 13, 244a-b
14 PLUTARCH: *Romulus*, 27c-28d / *Solon*, 75c-76d / *Poplicola* 77a-86a,c passim / *Camillus*, 117c-121a,c / *Coriolanus*, 176b-184c / *Caius Marius*, 344c-354a,c / *Sulla*, 382a-387a,c / *Agesilaus*, 482a-484a; 489b-c; 495a-b / *Pompey*, 521a-b / *Caesar*, 580b / *Cato the Younger*, 636c-d / *Agis* 648b,d-656d / *Tiberius Gracchus* 671b,d-681a,c / *Marcus Brutus*, 809b-811a esp 810b
15 TACITUS: *Annals*, BK I, 1b-2a; 2c-4d; 14a-b; 21b-22b; 23c; BK II, 29d-30d; 31d-32a; 32d-34a; 35c-d; 38c-d; 40a-b; 42b; BK III, 58d-59a; BK IV, 68b-69c; 82a-b; BK XIV, 155b-156a; BK XV, 168a-c; 170c-176b / *Histories*, BK I, 195a-196c; 198c-199c; 200c-d; 208b-c; 209d-210b
23 MACHIAVELLI: *Prince* 1a-37d esp CH III, 3c-5a, CH V 8a-c, CH VI, 9b-10a, CH VII, 11b-c, CH VIII, 14a-c, CH XV-XX 22b-31c
25 MONTAIGNE: *Essays*, 51a-55d

26 SHAKESPEARE: *Richard III* 105a-148a,c / *King John* 376a-405a,c esp ACT III, SC IV [131-159] 392b-c
35 LOCKE: *Civil Government*, CH VII, SECT 93 45d-46a; CH XVIII, SECT 210 73b-c
36 SWIFT: *Gulliver*, PART I, 37a-b; PART III, 102b-103a
38 MONTESQUIEU: *Spirit of Laws*, BK X, 68b-d; BK XII, 95b-96a,c; BK XIX, 137c-139c; 140a-c; BK XXV, 212a-b
38 ROUSSEAU: *Inequality*, 358d-359a; 360a-b; 361c-362a; 364a-b / *Political Economy*, 380b-c / *Social Contract*, BK III, 412d-413a; 417b-c; BK IV, 432c-d
40 GIBBON: *Decline and Fall*, 24b,d-30a esp 28b, 29b-c, 30a; 42b,d-43b; 50a-51b; 53c-59b esp 54c-55b, 56a; 153c-155b; 171d; 525d-526c
43 FEDERALIST: NUMBER 1, 30b; NUMBER 8, 45a-47a passim; NUMBER 16, 66d-67a; NUMBER 25, 90d; NUMBER 29, 100d-101a; NUMBER 60, 186c-187a; NUMBER 84, 251d-252a
43 MILL: *Representative Government*, 366a-c

8. The fate of tyrants: revolutions for liberty and justice against tyranny and despotism; tyrannicide

OLD TESTAMENT: *Judges*, 3:14-4:24; 6-7; 9:1-11:33; 13:1-5,24-25; 14-16 / *I Kings*, 12:1-25 --(*D*) *III Kings*, 12:1-25 / *II Kings*, 9:1-10:11; 11; 21:18-26—(*D*) *IV Kings*, 9:1-10:11; 11; 21:18-26 / *II Chronicles*, 10; 23—(*D*) *II Paralipomenon*, 10; 23 / *Jeremiah*, 41—(*D*) *Jeremias*, 41
APOCRYPHA: *I Maccabees*, 1-9 passim—(*D*) OT, *I Machabees*, 1-9 passim / *II Maccabees*, 1-13 passim, esp 6—(*D*) OT, *II Machabees*, 1-13 passim, esp 6
6 HERODOTUS: *History*, BK I, 12b-14a; BK II, 84a-d; 85b-c; BK V 160a-185a,c passim, esp 166c-167b, 171c-172c; BK VI, 208d-209b
6 THUCYDIDES: *Peloponnesian War*, BK II, 387a-389b; BK VI, 523c-524c; BK VIII, 579c-590c
7 PLATO: *Gorgias*, 264c-266b; 285d-286b; 293b-c / *Republic*, BK IX, 418c-420d; BK X, 438a-c
9 ARISTOTLE: *Politics*, BK V, CH 4 [1304^{a}31-38] 506a; CH 10 [1311^{a}28-1312^{b}33] 513c-515b; CH 12 [1315^{b}12-39] 518c-d / *Athenian Constitution*, CH 14-19 558d-561d
13 VIRGIL: *Aeneid*, BK VIII [481-496] 272a
14 PLUTARCH: *Poplicola* 77a-86a,c passim / *Timoleon* 195a-213d passim / *Pelopidas* 232a-246a,c passim / *Lysander*, 366b-c / *Caesar*, 598d-604d / *Cato the Younger* 620a-648a,c passim / *Agis* 648b,d-656d passim / *Tiberius Gracchus* 671b,d-681a,c / *Caius Gracchus* 681b,d-689a,c / *Demetrius*, 728b-729d / *Dion* 781b,d-802a,c / *Marcus Brutus* 802b,d-824a,c / *Aratus* 826a-846a,c passim / *Galba*, 859a-c
15 TACITUS: *Annals*, BK I, 9d-15a; 17c-d; 18c-20b; BK IV, 76a-77c; 82d-83b; BK XI, 102d-103a; BK XII, 112a-114a; BK XV, 169a-176b / *Histories*, BK II-III, 234b-265d esp BK II, 234b-235a; BK IV, 269b-277d esp 269d-270b; 283b-292b; BK V, 298c-302a
20 AQUINAS: *Summa Theologica*, PART II-II, Q 42, A 2, REP 3 584b-d
23 MACHIAVELLI: *Prince*, CH V 8a-c
23 HOBBES: *Leviathan*, PART II, 150c-151a
26 SHAKESPEARE: *Richard III* 105a-148a,c esp ACT V, SC III [237-270] 146b-c / *Julius Caesar*, ACT I, SC II [90-161] 570b-571a; SC III [72-130] 573b-d; ACT II, SC I [10-34] 574c-d; [112-183] 575d-576b; ACT III, SC II [13-44] 583d-584a
27 SHAKESPEARE: *Macbeth*, ACT IV, SC III [159-240] 305a-306b
35 LOCKE: *Civil Government*, CH III, SECT 17-18 28d-29b; CH XIV, SECT 166-168 63d-64c; CH XVI, SECT 176 66a-b; SECT 190-196 69b-70c passim; CH XVIII, SECT 202 71d-72a; SECT 210 73b-c; CH XIX 73d-81d esp SECT 223-228 76c-78a
38 MONTESQUIEU: *Spirit of Laws*, BK V, 25d-26c; 28b-29a; BK VIII, 54b-c; BK XIV, 107b-d passim
38 ROUSSEAU: *Inequality*, 361c-362a / *Social Contract*, BK II, 402c-d
40 GIBBON: *Decline and Fall*, 29c-d; 37a-38a; 39c-40d; 44b-c; 56b-c; 61a; 71b-76a esp 71c-d, 73b-74a; 144a-d; 246a; 420b-d; 449d-450a; 521a-b
41 GIBBON: *Decline and Fall*, 51a-54b; 114a-116a; 166a-167d; 216d-217b; 443b-444a; 574b-577b; 587b-588a
42 KANT: *Science of Right*, 441b-c; 450d-451a
43 DECLARATION OF INDEPENDENCE: [1-23] 1a-b; [99-121] 3a-b
43 FEDERALIST: NUMBER 14, 62c-d; NUMBER 16, 68c-d; NUMBER 28, 97c-98b; NUMBER 45, 147d-148a; NUMBER 46, 152b-153b
43 MILL: *Liberty*, 267d-268c; 274b,d [fn 1]
44 BOSWELL: *Johnson*, 195c-d
46 HEGEL: *Philosophy of History*, PART III, 295d-296c; PART IV, 345a-b; 359a; 363d-367a
50 MARX-ENGELS: *Communist Manifesto*, 424d-425b

CROSS-REFERENCES

For: Other discussions bearing on the nature and injustice of tyranny, *see* GOVERNMENT 1d-1f; JUSTICE 9c; LAW 7d; SLAVERY 6a.

The relation of tyranny to other forms of government, *see* ARISTOCRACY 2e; DEMOCRACY 2a; MONARCHY 4b; OLIGARCHY 3a.

For: The distinction between tyranny and despotism in terms of the distinction between slavery and subjection, *see* SLAVERY 6a–6b; and for the relation of despotism to absolute monarchy, *see* MONARCHY 4a–4b, 4e(1).

Other statements of the justification of benevolent despotism or of absolute monarchy relative to certain conditions, *see* DEMOCRACY 4d; GOVERNMENT 2c; MONARCHY 4e(2); SLAVERY 6c; and for comparisons of domestic and political government which are relevant to this justification of despotism, *see* FAMILY 2a; MONARCHY 4a, 4e(1); STATE 1b.

The distinction between despotism and constitutional government in terms of the distinction between subjection and citizenship, *see* CITIZEN 2b; JUSTICE 9d; LAW 7b; LIBERTY 1d; SLAVERY 6b.

The distinction between government by men and government by law, *see* CONSTITUTION 1; LAW 7a; MONARCHY 1a(1); and for the political significance of this distinction, *see* CONSTITUTION 7b; DEMOCRACY 4b; GOVERNMENT 1g(1)–1g(3); LAW 7b; LIBERTY 1d; MONARCHY 4e(3).

The analogies of despotic and constitutional rule in the relations of reason and the passions, *see* LIBERTY 3a–3b; SLAVERY 7.

The analogies in the economic order of political tyranny and despotism, *see* JUSTICE 8c–8c(1); LABOR 5a–5d, 7f; SLAVERY 4a–4c.

Other discussions of imperialism, *see* DEMOCRACY 7b; GOVERNMENT 5b; MONARCHY 5–5b; REVOLUTION 7; SLAVERY 6d; STATE 10b; WAR AND PEACE 6a.

The struggle for power and for liberty as between tyrants or despots and the people they oppress, *see* LABOR 7c–7c(3); LIBERTY 6b–6c; OLIGARCHY 5c; PROGRESS 3b; REVOLUTION 3a–3b, 3c(3), 4a, 5b; SLAVERY 3c.

ADDITIONAL READINGS

Listed below are works not included in *Great Books of the Western World*, but relevant to the idea and topics with which this chapter deals. These works are divided into two groups:

I. Works by authors represented in this collection.
II. Works by authors not represented in this collection.

For the date, place, and other facts concerning the publication of the works cited, consult the Bibliography of Additional Readings which follows the last chapter of *The Great Ideas.*

I.

MACHIAVELLI. *The Discourses*
——. *Castruccio Castracani*
MILTON. *The Readie and Easie Way to Establish a Free Commonwealth*
DOSTOEVSKY. *The Possessed*

II.

MARSILIUS OF PADUA. *Defensor Pacis*
LUTHER. *Whether Soldiers, Too, Can Be Saved*
LA BOÉTIE. *Anti-Dictator, the Discours de la servitude volontaire*
MARLOWE. *Tamburlaine the Great*
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Chapter 96: UNIVERSAL AND PARTICULAR

INTRODUCTION

ON such speculative problems as the existence of God, the immortality of the soul, the infinity of time and space, or the limits of human knowledge, the conversation of philosophers seems to make contact with the discourse of scientists, the language of poets, and the speech of ordinary men. The philosophers usually begin at least by propounding questions which correspond to those asked by men who do not profess to be philosophers. But throughout the tradition of western thought, the problem of the universal, unlike these others, seems to have the character of a professional secret.

The various solutions of the problem of the universal are so many esoteric doctrines, each with its own sectarian name. The initiated can distinguish themselves from the novices by their proficiency in this area; and the outsider who overhears the discussion of professionals may be completely left behind, wondering as much about how the question arose as about the meaning of the conflicting answers.

No genuine philosophical problem, it seems reasonable to suppose, can be so remote from questions intelligible to common sense. If it is not just a specious riddle to amuse the experts, the problem of the universal, despite its technical appearance, should raise issues from which, in some form or other, no one can escape. Whether or not this is so can be tested by considering the various ways in which the problem occurs in other chapters under different guises and in different contexts.

In the chapter on SAME AND OTHER, we find the question how two individuals can be the same in some particular respect—how in spite of their separate existence they can share in the possession of a common nature or attribute. Anyone who classifies things or tries to make definitions may be led to wonder whether classifications are entirely verbal and definitions fictions of the mind, or whether things themselves belong together in some real community based upon an inherent sameness or similarity.

In the chapter on ONE AND MANY, the question takes the form of asking how two or more things can be one in any way. Again, both science and common sense seem able to deal with an infinite number of individuals by applying a single name to them or apprehending them all under a single concept or notion. But it may be asked what justifies the denomination of many things by one name. What unity in the things verifies the tendency of thought to unify them conceptually? Does a real unity exist in things, by virtue of their being somehow one as well as many, or as a result of the many somehow participating in a one which exists separately from them?

In the chapters on DEFINITION and SIGN AND SYMBOL the same questions are at least implicit. In connection with the object of definition, one issue is whether what Aristotle calls "the formulable essence" exists as the common nature of many individuals, or whether, as Locke suggests, definitions formulate only the nominal, not the real, essences of things. As that and related issues are faced, anyone who acknowledges the familiar distinction between proper and common names may become involved in questioning what common or general names signify and how they get the meanings with which they are used in everyday discourse.

The problem of the sameness of things distinct from one another, the problem of the one *in* the many or the one *and* the many, the problem of essences and common names, are other statements of the problem of the universal and the particular. Attention to the words themselves confirms this. The word "*uni*versal" connotes a unity—the one as opposed to the many,

the common as opposed to the unique or special. The word "*par*ticular" connotes participation—the part as opposed to the whole, the member as opposed to the class. As the reference already made to essence and individual indicates, these are not the only pairs of terms which somehow correspond in significance to universal and particular, but others, like model and imitation, form and matter, abstract and concrete, are more obscure in meaning. The discussion of universal and particular throws light on them rather than gains clarity from them.

THE READER OF THE great books can witness the origin of the problem of the universal and particular as it occurs in a conversation, not between technical philosophers, but between Socrates and his friends. In the *Meno*, Socrates and Meno get into a discussion of how virtue is acquired. Socrates thinks it is necessary to inquire first what virtue is. Meno responds by enumerating different virtues, but Socrates is not satisfied. He wants a definition which will cover all the virtues. Even if Meno could say what justice or temperance is, that would not do, for each of these is, as Socrates says, *a* virtue, not *virtue*—a particular virtue or a part of virtue, not the whole of it.

"In searching after one virtue," Socrates tells Meno, "we have found many . . . but we have been unable to find the common virtue which runs through them all." To help Meno, who claims he is not able to follow Socrates in his "attempt to get at one common notion of virtue," Socrates shifts the discussion to colors and figures. He warns Meno that color cannot be defined by naming colors, and that, even if he could define a square, a circle, and all other figures, he would not be saying what *figure* is. To proceed in this way is to be "landed in particulars."

"Tell me then," Socrates says, "since you call them by a common name, and say that they are all figures, even when opposed to one another, what is that common nature which you designate as figure?"

If Meno were to reply, "I do not know what you want," not much further explanation could be given. To someone who remained perplexed at this point, we could only say, Socrates suggests, "Do you not understand that we are looking for the same in the many?" Or, put in another form, we might ask, he says, "What is that [one in many] which you call figure, and which includes not only the round and straight figures, but all?"

Thus stated, the problem of the universal seems inescapable—a problem for everyone, not just for philosophers. But the philosophers complicate the problem almost as soon as it is stated. Giving his version of the history of philosophy, Aristotle offers an explanation of how the problem shifted to another level. Socrates, he writes, "was busying himself about ethical matters" and, "seeking the universal in these ethical matters, [he] fixed thought for the first time on definitions. Plato accepted his teaching, but held that the problem applied not to sensible things, but to entities of another kind—for this reason, that the common definition could not be a definition of any sensible thing, as they were always changing. Things of this other sort he called Ideas, and sensible things, he said, were all named after these, and in virtue of a relation to these; for the many existed by participation in the Ideas that have the same name as they."

It is at this point, according to Aristotle, that the great philosophical controversy begins. Whereas "the thinkers of old ranked particular things as substances, *e.g.*, fire and earth, not what is common to both, body," the Platonists or idealists—"the thinkers of the present day"—"tend to rank universal as substances, for genera are universal." Aristotle repeatedly tries to distinguish between the Socratic inquiry and what he regards as the Platonic doctrine—the theory of Ideas. "The first to raise the problem of universal definition . . . Socrates," he writes, "did not make the universals or the definitions exist apart; they, however,"—the Platonists—"gave them separate existence, and this was the kind of thing they called Ideas."

As between Socrates and his disciple, Aristotle does not hesitate to take sides. "Socrates gave the impulse to this theory of ideas . . . but he did not *separate* universals from individuals; and in not separating them," Aristotle adds, "he thought rightly." The issue between Aristotle and his own teacher, Plato, cannot, how-

ever, be stated by so simple an affirmation and denial.

On Aristotle's side, it involves the fundamental principles of his metaphysics, especially his doctrine of substance, as well as his theory of what and how the intellect knows, as contrasted with the perceptions of the senses. On Plato's side, it involves many questions concerning the intelligible and the sensible, being and becoming, the one and the many—questions the Aristotelian answers to which would not satisfy Plato.

Wherever the truth lies, Aristotle recognizes that on this issue, perhaps more than on any other, he is most sharply opposed to Plato. It is the one matter wherein he feels a conflict between devotion to his teacher and to the truth as he sees it. The consideration of the universal good, he declares in the *Ethics*, is made difficult "by the fact that the Forms have been introduced by friends of our own," but "while both are dear, piety requires us to honor truth above our friends."

THE HISTORIANS OF PHILOSOPHY, beginning with Aristotle, attribute one solution of the problem of universals to Plato. That solution comes to be called "realism" because it affirms the independent reality of universals as separately existing Ideas or Forms. But all the commentators do not, like Aristotle, dissent from Plato's solution. In our own time, for example, Bertrand Russell, treating of "the world of universals" in the *Problems of Philosophy*, says, "the problem with which we are now concerned is a very old one, since it was brought into philosophy by Plato. Plato's 'theory of ideas' is an attempt to solve this very problem, and in my opinion it is one of the most successful attempts hitherto made. The theory to be advocated in what follows is largely Plato's, with merely such modifications as time has shown to be necessary."

For one thing, Russell thinks "the word 'idea' has acquired in the course of time many associations which are quite misleading when applied to Plato's 'ideas.' We shall, therefore," he writes, "use the word 'universal' instead of the word 'idea' to describe what Plato meant. . . . We speak of whatever is given in sensation . . . as a *particular*; by opposition to this, a *universal* will be anything which may be shared by many particulars. . . . Broadly speaking, proper names stand for particulars, while other substantives, adjectives, prepositions, and verbs stand for universals."

Russell here calls attention to another point which he thinks has too seldom been observed, namely, that universals are not exclusively signified by common nouns and adjectives, but that, in addition, there are relational universals signified by prepositions and verbs. This sort of universal, according to him, most readily shows that universals have being apart from particulars. It can also be shown, he argues, "that their being is not merely mental . . . that whatever being belongs to them is independent of their being thought of or in any way apprehended by minds."

If the word "existence" implies definite location in time and space, then, Russell concludes, in the sense in which "thoughts and feelings, minds and physical objects *exist*. . . universals do not exist." We must say instead that "they *subsist* or *have being*, where 'being' is opposed to 'existence' as being timeless. The world of universals, therefore, may also be described as the world of being. The world of being is unchangeable. . . . The world of existence is fleeting. . . . According to our temperaments, we shall prefer the contemplation of the one or the other. The one we do not prefer will probably seem to us a pale shadow of the one we prefer, and hardly worthy to be regarded as in any sense real. But the truth is that both have the same claim on our impartial attention, both are real, and both are important to the metaphysician. Indeed no sooner have we distinguished the two worlds than it becomes necessary to consider their relations."

IT IS THIS CONSIDERATION which seems to be for Plato *the* problem of the universal—the central difficulty in the theory of Ideas or separate Forms. As indicated in the chapters on FORM and IDEA, the separation of the two worlds—the sensible world of becoming and the intelligible world of being—always calls for some explanation of their resemblance.

Socrates sometimes refers to the doctrine of Ideas as if its truth could be assumed, and sometimes argues the necessity of a realm of immu-

table and intelligible being as the object of thought, comparable to sensible, changing things as the object of perception. In the *Phaedo*, for example, he gets Cebes to admit that the ideas, "which in the dialectical process we define as essences or true existences," are not subject to change, but that they are "always what they are, having the same simple self-existent and unchanging forms." In contrast to absolute beauty or goodness, the many beautiful or good things "are always in a state of change." These, Socrates says, "you can touch and see and perceive with the senses, but the unchanging things you can only perceive with the mind. Let us suppose then," he adds, "that there are two sorts of existences—one seen, the other unseen."

Later in the same dialogue, Socrates repeats the assumption that "there is an absolute beauty and goodness and greatness and the like." No other assumption seems to him to provide as satisfactory an explanation of how particular things can be beautiful or good or have any other characteristics. "Nothing makes a thing beautiful," he declares, "but the presence and participation of beauty in whatever way or manner obtained; for as to the manner I am uncertain, but I stoutly contend that by beauty all beautiful things become beautiful."

In later Platonic dialogues, the question of the manner comes to the fore. Though the Eleatic Stranger in the *Sophist* refers to the "endless conflict raging" between the materialists and the idealists concerning the existence of the unseen world of ideas, he himself seems to be doubtful only on the point of how the changing things of sense participate in the immutable forms. One answer is suggested in the *Timaeus*. According to the story of creation which Timaeus tells, the artificer of the world made its sensible particulars copy an eternal pattern. When many things seem to be of one nature or to share the same quality, they are so by virtue of imitating the eternal forms, which are not only absolute essences in themselves, but are also the models for created or generated things.

But in the *Parmenides* Socrates seems unable to defend the view that "the ideas are, as it were, patterns fixed in nature, and other things are like them, and resemblances of them—for what is meant by the participation of other things in the ideas, is really assimilation to them." Nor can he meet other objections which Parmenides raises, such as the difficulty of two or more individuals participating in one idea; for if the idea is wholly in one individual, it cannot be in another, and if each of the many partake of the idea only in part, then the idea cannot be one and indivisible. "In what way, Socrates," Parmenides asks, "will all things participate in ideas, if they are unable to participate in them as parts or wholes?"

In the course of the discussion Parmenides rebukes Socrates for being squeamish about positing absolute essences for "such things as hair, mud, dirt, or anything else which is vile and paltry," as well as for things which are beautiful and good. But his main intention seems to be to leave Socrates with an unresolved dilemma. On the one hand, the difficulties with the theory of Ideas make the denial of their separate existence reasonable; on the other, the denial of their existence seems to make thought and reasoning impossible, because it deprives the mind of its proper objects.

Some of Aristotle's arguments against the separate existence of universals repeat the objections raised by Parmenides, to which no answer is given in the dialogues of Plato. If it were not for the fact that Aristotle attributes to Plato himself the theory he criticizes, the dialogues would leave us in some doubt as to whether it is Plato or his followers, the Platonists, who hold that theory. But whether or not Aristotle's criticisms apply to Plato—and even if they involve some misunderstanding of his doctrine—the objections Aristotle raises help define his own position.

To say that the Forms "are patterns and that other things share in them," Aristotle writes, "is to use empty words and poetical metaphors." In his view, "the most paradoxical thing of all is the statement that there are certain things besides those in the material universe, and that these are the same as sensible things except that they are eternal while the latter are perishable." To posit the separate being of the forms of things seems to him a useless multiplication of existences. To say that "there must be Ideas of all things that are spoken of universally" is to make substances of ideas.

Those who say the Forms exist would be right, Aristotle concedes, "*if* they are substances." He does not think it is impossible to establish the existence of imperishable and insensible substances, but such substances, if they exist, would not stand in relation to sensible substances as universal to particular, or as one to many. His objection to the theory of Ideas is that, in speaking of absolute beauty or beauty-itself, of the idea Man or man-itself, the Platonists do no more than add words like "absolute" or "itself" to the names of sensible things, and posit the existence of these absolutes or universals over and above the existence of the sensible particulars having the same name.

Aristotle's own position seems to be that only individual substances exist, whether they are sensible or intelligible, perishable or eternal, and that "no universal can be a substance" or exist separately in and of itself. He does not thereby deny the reality of the universal. On the contrary, he holds that "without the universal it is not possible to get knowledge," *i.e.*, scientific knowledge in distinction from mere sense-perception. "All knowledge is of the universal and of the 'such,'" he writes; yet in adding that "substance is not a universal, but is rather a 'this,'" Aristotle indicates what is for him the central problem of the universal.

Aristotle's theory that the mind abstracts universal concepts from the particulars of sense-experience, and that such concepts are the terms of the universal propositions constituting scientific knowledge, leaves a question concerning the object of science. If science is knowledge of real existence, not of our own concepts, and if only individual things really exist, then how can the object of science be the universal, not the individual? What is the object apprehended by the universal concept 'man' or 'horse'?

Aristotle's answer seems to be that if the universal term 'man' can be truly predicated of an indefinite number of individuals, it must signify something common to them all. The common nature or properties shared by a number of individuals cannot be actually universal, however, since, in Aristotle's opinion, whatever exists in the individual—the form as well as the matter of the concrete substance—is itself individual. He finds it necessary to say, therefore, that the universal exists potentially, not actually, whenever a number of individuals have something in common.

The form which constitutes human nature, for example, is an individual form in Socrates and Callias; but it has the potentiality of being universal insofar as it is capable of being separated from the individual matter of these two men by the abstractive power of the mind. When the abstraction takes place and results in the universal concept 'man,' the form thus received in the mind becomes actually universal and enables the mind to apprehend the nature common to all individual men.

ARISTOTLE'S DOCTRINE THAT the universal exists potentially in individual things and actually in the abstract concepts of the mind, later comes to be called "moderate realism," in contrast to the extreme realism of the position which asserts the actual subsistence of universals, outside of minds as well as apart from individual things. It affirms that the universal has what Russell calls "extra-mental reality," even though it severely qualifies the real being of the universal by saying it is neither actual nor subsistent.

As Aristotle denies unqualified reality to universals, later philosophers deny that they have any reality at all. Those who are sometimes called "conceptualists" admit the existence of universals only as abstract ideas in the mind. The "nominalist" position, taken by Hobbes and Berkeley, goes further and even denies abstract ideas or universal notions in the mind. It holds that universality is a property of words alone, which manifests itself in the meaning of general or common names.

In the progressive complication of the controversy, each of the theories which has acquired a traditional title undergoes modification as it is reformulated in different contexts. This is especially true of the two middle positions which tend to lean toward one or the other of the extremes.

Locke, for example, may be called a conceptualist because he thinks that general names derive their universal significance from the abstract ideas they signify. But though he denies that by means of our universal notions or abstract ideas we can know the real essences of things, he does not deny real essences. To this

extent, he may lean toward moderate realism more than a philosopher like William of Ockham, or a psychologist like William James who says, "*We must decide in favor of the conceptualists*, and affirm that the power to think things, qualities, relations . . . isolated and abstracted from the total experience in which they appear, is the most indisputable function of our thought." Similarly, the development which Aquinas gives to Aristotle's views, especially in the point he adds concerning ideas in the mind of God—the "eternal exemplars"—may be a form of moderate realism which, more than Aristotle's, has some affinity with the theory of self-subsistent ideas as the eternal archetypes for sensible particulars.

Aquinas presents his own theory in the context of stating his understanding of the issue between Plato and Aristotle. "Plato supposed," he declares, "that the forms of natural things subsisted apart from matter, and consequently that they are intelligible, for a thing is actually intelligible from the very fact that it is immaterial. And he called such forms *species* or *ideas*. From a participation in these, he said that even corporeal matter was formed, in order that individuals might be naturally established in their proper genera and species. . . . But since Aristotle did not allow that the forms of natural things exist apart from matter, and since forms existing in matter are not actually intelligible, it follows that the natures or forms of the sensible things which we understand are not actually intelligible."

Aquinas speaks of the forms (which exist only in union with matter in individual things) as "universal forms," even though they are not actually intelligible. "We abstract universal forms from their particular conditions," he says, and by doing so we "make them actually intelligible." The Platonic error, in his opinion, consists in thinking that "the form of the thing known must be in the knower in the same manner as in the thing known." From the fact that "the form of the thing understood is in the intellect under conditions of universality, immateriality, and immobility," Plato concluded, erroneously, according to Aquinas, "that the things which we understand must subsist in themselves under the same conditions of immateriality and immobility."

As Aquinas states what he takes to be Aristotle's correction of this error, it consists in distinguishing two ways in which the universal can be considered. "First, the universal nature may be considered together with the intention of universality. And since the intention of universality—*viz.*, the relation of one and the same to many—is due to intellectual abstraction, the universal thus considered is subsequent, in our knowledge. . . . Secondly, the universal can be considered according to the nature itself (for instance, *animality* or *humanity*) as existing in the individual." In the order of generation and time, the potential universal precedes the actual universal; that is, the universal form or common nature exists in individual things under conditions of particularity before it exists in the human mind under conditions of abstraction.

Even as forms exist in things (though they are not actually universal prior to their existence as universal concepts of the mind), so they have a mode of being prior to their existence in things. Here Aquinas attributes to Augustine the correction of a pagan error and the substitution for it of a Christian truth. "Whenever Augustine, who was imbued with the doctrines of the Platonists," he writes, "found in their teaching anything consistent with the faith, he adopted it; and those things which he found contrary to faith, he amended."

Plato, positing "the forms of things subsisting of themselves apart from matter," had supposed that, "just as corporeal matter, by participating in the Idea of stone, becomes a stone, so our intellect, by participating in the same Idea, has knowledge of the stone." But, according to Aquinas, "it seems contrary to faith that the forms of things should subsist of themselves without matter outside the things themselves. . . . Therefore, in place of the Ideas defended by Plato, Augustine said that the exemplars of all creatures existed in the divine mind. It is according to these that all things are formed, as well as that the human soul knows all things."

THE SOLUTION TO THE problem of universals which Aquinas proposes seems to involve a threefold distinction with respect to the being of forms: they are (1) in the human mind by

abstraction from our experience of sensible particulars; (2) in individual things; and (3), prior to their existence in things, in the divine mind.

But Aquinas himself says that in God there is no distinction between universal and particular; nor does knowledge "exist in God after the mode of created knowledge, so as to be universal or particular." The divine ideas, whether considered as the exemplars by which God creates things or as the types and likeness by which God knows them, are not abstractions and so do not have the universality characteristic of human concepts. Whereas our abstract universals do not give us knowledge of individual things in their singularity, the divine ideas, according to Aquinas, are the principles whereby God at once knows the singular and the universal.

If the universal *as such* is not in the divine mind, neither, in Ockham's opinion, is it really in things—not even potentially. Everything that exists in an individual—its form and matter, all its parts and properties—is the unique and singular possession of that individual. If there were something common to two things, it would have to be one and two at the same time. As common to both, it would have to be somehow one and the same in both, yet as existing in each, it would have to be distinct in each; it would have to be as singular in each as each individual thing in which it existed. But since Ockham regards this as impossible, he concludes that "no universal really exists outside the soul in an individual substance; nor is it of the substance or the being of things, but is only in the soul."

The old riddle thus returns in another form. If abstract concepts are in the mind—or if, as Ockham suggests, the logical "terms 'animal' and 'man' are universals because predicable of many, not through themselves, but for the things they signify"—then what in reality is the object signified by the universal term or concept? It cannot be the many unless the numerically distinct individuals are also alike as men or animals; and how can they be really alike, as opposed to being merely conceived as such, unless they have a common nature or attribute and to that extent are one and the same?

Locke puts the question another way. "Since all things are only particulars," he asks, "how come we by general terms, or where find we those general natures they are supposed to stand for?" He answers that "words become general, by being made the signs of general ideas; and ideas become general by separating from them the circumstances of time and place, and other ideas that may determine them to this or that particular existence. By this way of abstraction, they are made capable of representing more individuals than one; each of which having in it a conformity to that abstract idea is (as we call it) of that sort."

But if, as Locke goes on to say, general natures (or genera and species) are "nothing else but abstract ideas, more or less comprehensive, with names annexed to them," then in what way do the many individuals represented by one abstract idea have in them "a conformity to that abstract idea"? Locke's position seems to avoid this problem. "Abstract ideas," he writes, give us "no knowledge of existence at all." Only particular propositions are about real existences. "Universal propositions, of whose truth or falsehood we can have certain knowledge, concern not existence." Such propositions express nothing but "the agreement or disagreement of our abstract ideas."

In addition to denying their reference to reality, Locke regards abstract ideas as "fictions or contrivances of the mind," which are imperfect precisely to the extent that they succeed in being universal. The general idea of triangle, he observes, must be neither equilateral, isosceles, nor scalene, "but all and none of these at once. In effect, it is something imperfect, that cannot exist." Where Locke seems to mean only that there can be no counterpart in reality to our general ideas, Berkeley, observing the same "imperfection" in what are supposed to be abstract ideas, denies that they can exist even in the mind. "I deny," he writes, "that I can abstract from one another, or conceive separately, those qualities which it is impossible should exist so separated, or that I can frame a general notion by abstracting from particulars."

Berkeley admits that "a man may consider a figure merely as triangular, without attending to the particular qualities of the angles or relations of the sides. So far he may abstract; but

this will never prove that he can frame an abstract, general, inconsistent idea of a triangle." He recognizes also that all our common names have general significance, but he rejects Locke's explanation of their general meaning. "A word becomes general," he says, "by being made the sign, not of an abstract general idea, but of several particular ideas, any one of which it indifferently suggests to the mind."

Does a nominalist like Berkeley escape the persistent riddle? Does it not reappear in the question which must be asked: what is there in this set of particular ideas, as opposed to some other set, which makes it possible for a general name to signify any one of them indifferently? If each particular idea were absolutely unique and had nothing in common with any other, would the universal have any truth even on the level of names?

James thinks the nominalists are somehow forced to "admit a *quasi*-universal, something which we think *as if it were* universal, though it is not; and in all that they say about this something which they explain to be 'an indefinite number of particular ideas,' the same vacillation between the subjective and objective points of view appears. The reader never can tell," James continues, "whether an 'idea' spoken of is supposed to be a knower or a known. The authors themselves do not distinguish. They want to get something in the mind which shall *resemble* what is out of the mind, however vaguely, and they think that when that fact is accomplished, no farther questions will be asked."

SOME PHILOSOPHERS DEAL with the universal and particular in a manner which leads away from rather than into the traditional problem.

To Spinoza, for example, universal terms, such as *man*, *horse*, *dog*, represent confused images drawn from sense-experience. They provide us with an inadequate knowledge of things. To know things adequately we must proceed "from an adequate idea of the formal essence of certain attributes of God to the adequate knowledge of the essence of things." Quite opposite to the abstract universal (or indeterminate image from experience), the adequate idea is universal in the totally different sense of comprehending an infinite whole.

Hegel also distinguishes between abstract universality and "true infinity or concrete universality." The former is "something determinate; *i.e.*, being abstraction from all determinacy, it is itself not without determinacy; to be something abstract and one-sided constitutes its determinacy, its defectiveness, its finitude." The antithesis of the abstract universal is the particular, the determinate content implicitly contained in an abstract universal. The synthesis is the individual; not the particular individual, but the infinite individual which is the concrete universal.

The concrete universal is neither "the universal as a common characteristic, nor the abstract universality which stands outside and over against the individual, the abstract identity of the Understanding." It is "the universality which has the particular as its opposite, but the particular which by its reflection into itself has been equalized with the universal. This unity is individuality, not individuality in its immediacy as a unit . . . but individuality in accordance with its concept." For Hegel, the concrete universal is the immanent Idea itself. It is the manifestation of the Absolute Spirit or God.

HOWEVER IT IS formulated and whether or not it is or can be solved, the problem of the universal seems to have a critical bearing on the discussion of many other great ideas. In addition to the chapters enumerated at the beginning, we can now see that the universal, the particular, and the individual are implicated in the consideration of BEING and INFINITY, FORM and IDEA, MATTER and MIND, EXPERIENCE, INDUCTION, JUDGMENT, and SCIENCE. These chapters, in turn, do more than throw light on the various solutions proposed to the problem of the universal. They help us understand the importance of the problem—certainly to the philosophers of the western tradition. If in the broader context of connected issues, it is discovered that the proof of man's distinctive rationality, or even the possibility of an immortal soul, may depend on the affirmation or denial of universals, at least as concepts in the mind, then, perhaps, some tolerance and patience may be won for the burdensome technicalities of the problem.

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6c. The universality of law and particular dispensations of equity

7. Universality and particularity in relation to the distinction between the objective and the subjective, the absolute and the relative

7a. The issue concerning the universality of truth

7b. The issue concerning the universality of moral principles 972

7c. The issue concerning the universality of aesthetic standards: the subjective universal

REFERENCES

To find the passages cited, use the numbers in heavy type, which are the volume and page numbers of the passages referred to. For example, in **4** HOMER: *Iliad*, BK II [265–283] **12d**, the number **4** is the number of the volume in the set; the number **12d** indicates that the passage is in section d of page 12.

PAGE SECTIONS: When the text is printed in one column, the letters **a** and **b** refer to the upper and lower halves of the page. For example, in **53** JAMES: *Psychology*, **116a-119b**, the passage begins in the upper half of page 116 and ends in the lower half of page 119. When the text is printed in two columns, the letters **a** and **b** refer to the upper and lower halves of the left-hand side of the page, the letters **c** and **d** to the upper and lower halves of the right-hand side of the page. For example, in **7** PLATO: *Symposium*, **163b-164c**, the passage begins in the lower half of the left-hand side of page 163 and ends in the upper half of the right-hand side of page 164.

AUTHOR'S DIVISIONS: One or more of the main divisions of a work (such as PART, BK, CH, SECT) are sometimes included in the reference; line numbers, in brackets, are given in certain cases; *e.g.*, *Iliad*, BK II [265–283] **12d**.

BIBLE REFERENCES: The references are to book, chapter, and verse. When the King James and Douay versions differ in title of books or in the numbering of chapters or verses, the King James version is cited first and the Douay, indicated by a *(D)*, follows; *e.g.*, OLD TESTAMENT: *Nehemiah*, 7:45—*(D) II Esdras*, 7:46.

SYMBOLS: The abbreviation "esp" calls the reader's attention to one or more especially relevant parts of a whole reference; "passim" signifies that the topic is discussed intermittently rather than continuously in the work or passage cited.

For additional information concerning the style of the references, see the Explanation of Reference Style; for general guidance in the use of *The Great Ideas*, consult the Preface.

1. The distinction and relation between universal and particular: essence and individual, whole and part, class and member, one and many, same and other, the common and the unique

7 PLATO: *Laches*, **32c-33a** / *Cratylus*, **113c-114a,c** / *Meno*, **174a-179b** / *Euthyphro*, **193c** / *Phaedo*, **242c 243c** / *Republic*, BK III, **333b-d**; BK VI, **383d 388a**; BK VII, **392a-394a** / *Parmenides*, **486d-489a** / *Theaetetus*, **514b-515d**; **534d-536b** / *Sophist*, **559a-c**; **569d-574c** / *Philebus*, **610d 613a**

8 ARISTOTLE: *Categories*, CH 2 [1^a20 ^{b}9] **5b-c** / *Posterior Analytics*, BK I, CH 11 [77^a5-9] **105d-106a**; CH 24 [85^a31-^{b}3] **116c-d**; [85^b15-21] **117a** / *Heavens*, BK I, CH 9 [277^b26-278^b9] **369a-d** / *Metaphysics*, BK I, CH 6 **505b-506b**; CH 7 [988^a34 ^{b}5] **506c**; BK III, CH 3 [998^a20]-CH 4 [1000^a4] **517a-518d**; CH 4 [1001^a18-^{b}6] **520a-b**; BK V, CH 3 [1014^b3-13] **534d**; CH 6 [1016^b17-1017^a3] **537b-c**; CH 25 [1023^b17-19] **545b-c**; CH 25 [1023^b22]-CH 26 [1023^b32] **545c**; BK VII, CH 10 [1034^b35-1036^a25] **558b-559d**; CH 13 **562a-563a**; CH 15 **563c-564c**; BK X, CH 1–2 **578b,d-580d** esp CH 1 [1052^a28-37] **578d**; BK XII, CH 1 [1069^a18-25] **598a**; CH 4–5 **599d-601a**; CH 8 [1074^a32-39] **604d**; BK XIII, CH 10 **618c-619a,c** / *Soul*, BK III, CH 5 [430^a10-17] **662c**

17 PLOTINUS: *Fourth Ennead*, TR III, CH 2 **142a-143b**; TR IX **205a-207a,c**

18 AUGUSTINE: *Christian Doctrine*, BK III, CH 34, **670c-d**

19 AQUINAS: *Summa Theologica*, PART I, Q 3, A 2, REP 3 **15c-16a**; A 3 **16a-d**; A 4, REP 1 **16d-17c**; A 5, ANS **17c-18b**; Q 4, A 1, REP 3 **20d-21b**; Q 11, A 3, ANS **49a-c**; Q 13, A 9, ANS and REP 2 **71b-72c**; Q 14, A 6, ANS **80a-81c**; Q 16, A 4, REP 1 **97a-c**; Q 30, A 3, ANS and REP 1 **169b-170c**; A 4 **170c-171b**; Q 42, A 4, REP 3 **227d-228d**; Q 77, A 1, REP 1 **399c-401b**; Q 79, A 5, REP 2 **418c-419b**; Q 85, A 3 **455b-457a**; PART I-II, Q 2, A 5, REP 2–3 **618d-619c**; Q 10, A 1, REP 3 **662d-663d**; Q 46, A 1, ANS **813b-814a**

20 AQUINAS: *Summa Theologica*, PART I-II, Q 81, A 1, ANS **163a-164d**; PART III, Q 2, A 1, ANS **710a-711c**; A 2, ANS **711d-712d**; A 5, REP 2 **715a-716b**; Q 7, A 13, REP 3 **755c-756c**; PART III SUPPL., Q 92, A 1, ANS **1025c-1032b**

23 HOBBES: *Leviathan*, PART I, **55b-c**

28 HARVEY: *On Animal Generation*, **332a-333b**

31 DESCARTES: *Rules*, VI **8a-10a** / *Objections and Replies*, **123a**

31 SPINOZA: *Ethics*, PART II, PROP 37–40 386b-388b
35 LOCKE: *Human Understanding*, BK II, CH XI, SECT 9 145b-c; CH XXXII, SECT 6–8 244b-d; BK III, CH I, SECT 3 251d-252a; CH III 254d-260a; CH VI 268b-283a passim, esp SECT 32 277c-278b, SECT 36–37 279a-b; BK IV, CH VII, SECT 9 338d-339b; CH IX, SECT 1 349a
35 BERKELEY: *Human Knowledge*, INTRO, SECT 6–19 405d-410c esp SECT 12–16 408a-409d; SECT 126–128 438b-d
35 HUME: *Human Understanding*, SECT XII, DIV 125, 507b [fn 1]
38 ROUSSEAU: *Inequality*, 341b-342b
42 KANT: *Pure Reason*, 115b-c; 193a-200c esp 197b-198a, 199b-c; 211c-218d
45 LAVOISIER: *Elements of Chemistry*, PREF, 4b-c
46 HEGEL: *Philosophy of Right*, INTRO, par 24 17d-18a; PART III, par 184 64b; par 353 112b-c / *Philosophy of History*, INTRO, 165a-b; 182d-183c
53 JAMES: *Psychology*, 166a-b; 308a-312a

2. The problem of the universal

2a. The reality of universals: their actual existence as separate forms, or their potential existence in the forms of things

7 PLATO: *Cratylus*, 87d-89a; 113c-114a,c / *Phaedo*, 224a-225a; 228d-230c; 231c-232a; 240b-246c esp 242c-244b / *Republic*, BK VI, 383d-388a; BK IX-X, 426d-429b / *Timaeus*, 447a-d; 457c-d / *Parmenides*, 487c-491a / *Theaetetus*, 535a-536b / *Sophist*, 561d-574c / *Philebus*, 610d-613a / *Seventh Letter*, 809c-810b
8 ARISTOTLE: *Posterior Analytics*, BK I, CH II [77^{a}5–9] 105d-106a; CH 24 [85^{a}31–^{b}3] 116c-d; [85^{b}15–21] 117a / *Sophistical Refutations*, CH 22 [178^{b}37–39] 246c / *Metaphysics*, BK I, CH 6 505b-506b; CH 9 508c-511c; BK III, CH 1 [995^{b}13–18] 514a; [995^{b}31–996^{a}10] 514b-c; CH 2 [997^{a}34–998^{a}19] 516a-d; CH 4 [999^{a}24–1000^{a}4] 518a-d; [1001^{a}4–^{b}25] 519d-520c; CH 6 [1002^{b}11–31] 521b-d; BK VII, CH 8 [1033^{b}19–1034^{a}8] 556d-557b; CH 10 [1035^{b}28–32] 559b; CH 11 [1037^{a}5–9] 560c; CH 13-14 562a-563c; CH 15 [1040^{a}8–^{b}4] 564a-c; CH 16 [1040^{b}28–1041^{a}4] 564d-565a; BK VIII, CH 6 569d-570d esp [1045^{a}14–19] 569d-570a, [1045^{b}8–25] 570c-d; BK IX, CH 8 [1050^{b}35–1051^{a}2] 576d-577a; BK X, CH 2 580b-d; CH 10 586c-d; BK XI, CH 1 [1059^{a}39–^{b}8] 587b-c; BK XII, CH 1 [1069^{a}27–37] 598b; CH 3 [1070^{a}4–30] 599b-d; CH 5 [1071^{a}17–30] 600d-601a; BK XIII, CH 1 607a-c; CH 4–5 610a-611d; CH 9 [1086^{a}29–^{b}12] 618b-c
17 PLOTINUS: *Sixth Ennead*, TR V, CH 5–8 307a-308c
18 AUGUSTINE: *Confessions*, BK I, par 9, 3a; BK X, par 19 76a-b / *City of God*, BK VIII, CH 6, 269b-c; BK XI, CH 27, 337d-338a
19 AQUINAS: *Summa Theologica*, PART I, Q 3, A 3, ANS 16a-d; Q 8, A 4, REP 1 37c-38c; Q 13, A 9, ANS 71b-72c; Q 15, A 3, REP 4 93b-94a; Q 16, A 7, REP 2 99a-d; Q 29, A 2, REP 4 163b-164b; Q 30, A 4 170c-171b; Q 76, A 2, REP 4 388c-391a; Q 79, A 3 416a-417a; A 5 418c-419b; Q 84, A 1, ANS 440d-442a; A 4, ANS and REP 1–2 444d-446b; A 5 446c-447c; A 6, ANS 447c-449a; A 7, ANS and REP 1 449b-450b; Q 85, A 1, ANS and REP 1-2 451c-453c; A 2, REP 2 453d-455b; A 3, REP 1,4 455b-457a; PART I–II, Q 29, A 6, ANS and REP 1,3 748b-749a
20 AQUINAS: *Summa Theologica*, PART III, Q 2, A 5, REP 2 715a-716b; PART III SUPPL, Q 92, A 1, ANS 1025c-1032b
23 HOBBES: *Leviathan*, PART I, 59d
30 BACON: *Advancement of Learning*, 43d-44c
35 LOCKE: *Human Understanding*, BK III, CH III, SECT 11 257a-b; CH VI, SECT 26–27 274d-276a; SECT 30, 277a-b
42 KANT: *Judgement*, 551a-552c
53 JAMES: *Psychology*, 309a-311a passim; 873a-b

2b. Universals as abstractions or concepts in the human mind

7 PLATO: *Parmenides*, 489b-c
8 ARISTOTLE: *Posterior Analytics*, BK I, CH II [77^{a}5–9] 105d-106a; CH 24 116b-118a / *Physics*, BK VII, CH 3 [247^{b}1–7] 330b / *Soul*, BK I, CH 1 [402^{b}5–9] 631c-d; BK II, CH 5 [417^{b}17–24] 648b-c; BK III, CH 4 [429^{a}18–29] 661c
18 AUGUSTINE: *Confessions*, BK X, par 19 76a-b / *City of God*, BK VIII, CH 6–7, 269b-d; BK XI, CH 27, 337d-338a
19 AQUINAS: *Summa Theologica*, PART I, Q 13, A 9, ANS 71b-72c; Q 16, A 7, REP 2 99a-d; Q 75, A 5, ANS and REP 1 382a-383b; Q 76, A 2, ANS and REP 3-4 388c-391a; Q 79, A 3 416a-417a; Q 84, A 1, ANS and REP 1 440d-442a; A 2, ANS 442b-443c; A 3 443d-444d; A 4, ANS and REP 1 444d-446b; Q 85, A 2, REP 2 453d-455b
20 AQUINAS: *Summa Theologica*, PART III, Q 2, A 5, REP 2 715a-716b; PART III SUPPL, Q 92, A 1, ANS 1025c-1032b
28 HARVEY: *On Animal Generation*, 332a-333b
31 DESCARTES: *Objections and Replies*, 136d-137a; 216d-217d
31 SPINOZA: *Ethics*, PART II, PROP 40, SCHOL 1 387b-388a
35 LOCKE: *Human Understanding*, BK I, CH 1, SECT 15 98d-99a; BK II, CH XI, SECT 9 145b-c; CH XII, SECT 1, 147b-c; CH XXXII, SECT 6–8 244b-d; BK III, CH I, SECT 3 251d-252a; CH III, SECT 6–20 255c-260a; CH V–VI 263d-283a passim, esp CH V, SECT 1–3 263d-264a, CH VI, SECT 26–51 274d-283a; BK IV, CH III, SECT 31 323c-d; CH VI, SECT 4 331d-332b esp 332b; CH VII, SECT 9 338d-339b esp 339a-b; CH IX, SECT 1 349a
35 BERKELEY: *Human Knowledge*, INTRO, SECT 6–19 405d-410c passim; SECT 126 438b-c

(2. *The problem of the universal.* 2b. *Universals as abstractions or concepts in the human mind.*)

35 HUME: *Human Understanding*, SECT XII, DIV 122 505c-d
38 ROUSSEAU: *Inequality*, 341b-342b
46 HEGEL: *Philosophy of Right*, INTRO, par 24 17d-18a
53 JAMES: *Psychology*, 305a-311a

2c. The reduction of universals or abstractions to the meaning of general or common names

23 HOBBES: *Leviathan*, PART I, 55b-56a
31 DESCARTES: *Objections and Replies*, 136d-137a
31 SPINOZA: *Ethics*, PART II, PROP 40, SCHOL I 387b-388a
35 LOCKE: *Human Understanding*, BK III, CH VI, SECT 32, 278a-b
35 BERKELEY: *Human Knowledge*, INTRO, SECT 11 12 407b-408b; SECT 15 409a-b; SECT 18-19 410a-c; SECT 122 437b-c
35 HUME: *Human Understanding*, SECT XII, DIV 125, 507b [fn 1]
53 JAMES: *Psychology*, 309a-311a

3. The problem of the individual: the principle of individuality; the concrete universal

8 ARISTOTLE: *Categories*, CH 2 [1^a20-$^b9$] 5b-c / *Metaphysics*, BK III, CH 4 [999^b24-1000^a4] 518c-d; CH 6 [1003^a5-16] 521d-522a,c; BK V, CH 6 536a-537c passim; BK VII, CH 10 [1035^b 28 32] 559b; CH 11 [1037^a5-9] 560c; CH 15 [1039^b27-31] 563d; BK X, CH 1 [1052^a28-37] 578d; BK XIII, CH 9 [1086^a29]-CH 10 [1087^a25] 618b-619a,c
17 PLOTINUS: *Fifth Ennead*, TR VII 238a-239b
19 AQUINAS: *Summa Theologica*, PART I, Q 3, A 2, REP 3 15c-16a; Q 7, A 1, ANS 31a-d; Q 13, A 9, ANS 71b-72c; Q 14, A 11, ANS and REP 1,3 84c-85c; Q 15, A 3, REP 4 93b-94a; Q 29, A 1 162a-163b; Q 47, A 2, ANS 257b-258c; Q 50, A 4, ANS and REP 3-4 273b-274b; Q 56, A 1, REP 2 292a-d; Q 57, A 2, ANS and REP 2-3 295d-297a; Q 65, A 3, ANS 341c-342b; Q 75, A 4, ANS 381b-382a; A 5, ANS 382a-383b; A 7, ANS 384d-385c; Q 76, A 2 388c-391a; Q 84, A 2, ANS 442b-443c; Q 85, A 1, ANS and REP 1-2 451c-453c; A 5, REP 3 457d-458d; A 7, REP 3 459c-460b; Q 89, A 4, ANS 476c-477a; Q 115, A 1, ANS and REP 3 585d-587c
20 AQUINAS: *Summa Theologica*, PART III, Q 2, A 2, ANS 711d-712d; A 3, REP 3 713a-714c; PART III SUPPL, Q 92, A 1, ANS 1025c-1032b
31 SPINOZA: *Ethics*, PART II, DEF 7 373c
35 LOCKE: *Human Understanding*, BK II, CH XXVII 218d-228c passim, esp SECT 3 219d-220a
46 HEGEL: *Philosophy of Right*, PREF, 6a-7a; INTRO, par 5-9 13a-14d; par 21 17a-c; par 24 17d-18a; par 26 18b-c; par 31-32 19c-20b; PART III, par 207 69b-c; par 229 75b; par 352-353 112b-c; par 360 113d-114a,c; ADDITIONS, 2 115d; 7 117b-c; 19 119c-d / *Philosophy of History*, INTRO, 156d-157b; 158a-159b; 160b-178a esp 165a-b, 176b-c; 179c-d; 182d-183c; PART III, 285b-d

4. Universals and particulars in the order of knowledge

4a. Universals as objects of knowledge: the intuitive or reflexive apprehension of universals

7 PLATO: *Cratylus*, 113c-114a,c / *Meno*, 179c-183a / *Phaedo*, 224a-c; 228a-230c; 231c-232a / *Republic*, BK III, 333b-d; BK V, 370d-373c; BK VI, 383d-388a / *Parmenides*, 489d-491a / *Theaetetus*, 535b-536a / *Sophist*, 570a-574c / *Seventh Letter*, 809c-810b
8 ARISTOTLE: *Posterior Analytics*, BK I, CH 11 [77^a5-9] 105d-106a / *Physics*, BK I, CH 5 [188^b26-189^a9] 264b-c; BK VII, CH 3 [247^b1-7] 330b / *Metaphysics*, BK I, CH 6 [987^a29-$^b7$] 505b-c; CH 9 [990^b9-28] 508d-509a; BK III, CH 4 [999^a24-$^b5$] 518a-b; BK XIII, CH 9 [1086^a 29-$^b12$] 618b-c / *Soul*, BK II, CH 5 [417^b17-23] 648b-c
9 ARISTOTLE: *Ethics*, BK VI, CH 3 [1139^b25-34] 388c
18 AUGUSTINE: *Confessions*, BK X, par 19 76a-b / *City of God*, BK VIII, CH 6-7, 269b-d; BK XI, CH 27, 337d-338a / *Christian Doctrine*, BK II, CH 38 654b-c
19 AQUINAS: *Summa Theologica*, PART I, Q 14, A 11, REP 1 84c-85c; Q 55, A 3, REP 1-2 291a-d; Q 76, A 2, REP 3-4 388c-391a; Q 84, A 1, ANS 440d-442a; A 4, ANS and REP 1-2 444d-446b; A 5 446c-447c; A 6, ANS 447c-449a; A 7, ANS and REP 1 449b-450b; Q 85, A 1, ANS and REP 1-2 451c-453c; A 2 453d-455b; Q 86, A 1, ANS and REP 4 461c-462a; A 2, REP 4 462a-463a; PART I-II, Q 1, A 2, REP 3 610b-611b; Q 2, A 6, ANS 619d-620d; Q 29, A 6, ANS and REP 1,3 748b-749a; Q 30, A 4, REP 2 751c-752b
20 AQUINAS: *Summa Theologica*, PART III, Q 10, A 3, REP 2 769d-771b; PART III SUPPL, Q 92, A 1, ANS 1025c-1032b
35 LOCKE: *Human Understanding*, BK IV, CH III, SECT 31 323c-d
53 JAMES: *Psychology*, 308a-314a passim

4b. Universals in relation to the angelic intellect and the divine mind

19 AQUINAS: *Summa Theologica*, PART I, Q 14, A 1, REP 3 75d-76c; A 11 84c-85c; Q 16, A 7, REP 2 99a-d; Q 22, A 2, ANS 128d-130d; Q 55, AA 2-3 289d-291d; Q 57, A 1, REP 3 295a-d; A 2 295d-297a; Q 84, A 2, ANS 442b-443c; AA 4-5 444d-447c; Q 105, A 1, REP 2 538d-539c; Q 106, A 1, ANS 545d-546d; Q 108, A 1, ANS 552c-553c

4c. The abstraction of universal concepts from the particulars of sense

8 ARISTOTLE: *Prior Analytics*, BK II, CH 21 87d-89b / *Posterior Analytics*, BK I, CH I [71a16-b8] 97b-d; CH II [77a5-9] 105d-106a; BK II, CH 19 [99b20-100b3] 136a-d / *Soul*, BK III, CH 4 [429a18-29] 661c; CH 7 [431a14]-CH 8 [432a14] 663d-664d / *Memory and Reminiscence*, CH I [449b30-450a10] 690c-d

9 ARISTOTLE: *Ethics*, BK VI, CH 8 [1142a13-19] 391b

19 AQUINAS: *Summa Theologica*, PART I, Q 13, A 9, ANS 71b-72c; Q 14, A 11, REP 1 84c-85c; Q 16, A 7, REP 2 99a-d; Q 40, A 3, ANS 215c-216d; Q 55, A 3 291a-d; Q 57, A 2, REP 1,3 295d-297a; Q 75, A 5, ANS and REP 1 382a-383b; Q 76, A 2, ANS and REP 3-4 388c-391a; Q 79, AA 3-5 416a-419b; Q 84 440b-451b; Q 85, AA 1-4 451c-457d; Q 86, A 1, ANS and REP 4 461c-462a; A 2, ANS and REP 2,4 462a-463a; Q 89, A 4, ANS and REP 1 476c-477a; PART I-II, Q 29, A 6, ANS and REP 1,3 748b-749a

20 AQUINAS: *Summa Theologica*, PART III, Q 2, A 5, REP 2 715a-716b; PART III SUPPL, Q 92, A 1, ANS 1025c 1032b

28 HARVEY: *On Animal Generation*, 332a-334d

31 DESCARTES: *Discourse*, PART IV, 53b / *Objections and Replies*, 167c-d; 215b c; 216d-217d

31 SPINOZA: *Ethics*, PART II, PROP 40, SCHOL 1 2 387b-388b

35 LOCKE: *Human Understanding*, BK I, CH I, SECT 15 98d-99a; BK II, CH XI, SECT 9 145b-c; CH XII, SECT 1, 147b-c; BK III, CH III, SECT 6-9 255c-256c; CH IV, SECT 16 263b-c; CH VI, SECT 32 277c-278b; BK IV, CH VII, SECT 9 338d-339b esp 339a-b; CH IX, SECT 1 349a

35 BERKELEY: *Human Knowledge*, INTRO, SECT 6-16 405d-409d passim, esp SECT 12-16 408a-409d; SECT 5 414a-b; SECT 97-100 431d 432c

35 HUME: *Human Understanding*, SECT XII, DIV 122 505c-d

38 ROUSSEAU: *Inequality*, 341b-342b

42 KANT: *Pure Reason*, 45d-46a; 115b-c

53 JAMES: *Psychology*, 308a-311a

4d. The distinction between particular and universal in relation to the distinction between percept and concept, or between image and idea

7 PLATO: *Cratylus*, 113c-114a,c / *Phaedrus*, 126b-c / *Republic*, BK III, 333b-d; BK VI, 386d-388a / *Theaetetus*, 534d-536b / *Seventh Letter*, 809c-810d

8 ARISTOTLE: *Posterior Analytics*, BK I, CH 18 111b-c; CH 31 120a-c; BK II, CH 19 [99b33-100b5] 136b-d / *Physics*, BK I, CH 5 [189a5-9] 264b-c / *Metaphysics*, BK I, CH 1 [980a28-981b13] 499a-500a; BK III, CH 4 [999a24-b5] 518a-b; BK VII, CH 10 [1035b35-1036a12] 559b-c / *Soul*, BK II, CH 5 [417b17-28] 648b-c

9 ARISTOTLE: *Ethics*, BK VII, CH 3 [1147b3-6] 397d

18 AUGUSTINE: *Confessions*, BK X, par 16-19 75b-76b

19 AQUINAS: *Summa Theologica*, PART I, Q 57, A 2 295d-297a; Q 81, A 3, ANS 430c-431d; Q 84, AA 1-2 440d-443c; AA 6-8 447c-451b; Q 85, A 1 451c-453c; A 3, ANS 455b-457a; Q 86, A 1, ANS 461c-462a; PART I-II, Q 17, A 7, ANS 690d-692a; Q 29, A 6, ANS and REP 1,3 748b-749a

31 DESCARTES: *Meditations*, VI, 96d-97a / *Objections and Replies*, 136d-137a; 138d-139a; 218c-d

31 SPINOZA: *Ethics*, PART II, PROP 44 389b-390a

35 LOCKE: *Human Understanding*, BK II, CH XI, SECT 8-9 145b-c; BK IV, CH VII, SECT 9, 339a-b

35 BERKELEY: *Human Knowledge*, INTRO, SECT 6-19 405d-410c passim, esp SECT 12-16 408a-409d; SECT 126-128 438b-d

38 ROUSSEAU: *Inequality*, 341d-342a

42 KANT: *Pure Reason*, 23a-24a; 115b-c

53 JAMES: *Psychology*, 307b-311a esp 307b-308b, 311b-312b [fn 1]; 480b-484a esp 482b-483b

4e. The inadequacy of our knowledge of individuals: their indefinability

8 ARISTOTLE: *Categories*, CH 5 [2b6-37] 6c-7a / *Posterior Analytics*, BK I, CH 31 120a-c / *Physics*, BK I, CH 5 [188b26-189a9] 264b-c; BK VII, CH 3 [247b1-7] 330b / *Metaphysics*, BK III, CH 4 [999a24-b5] 518a-b; CH 6 [1003a5-17] 521d-522a,c; BK VII, CH 10 [1035b33-1036a12] 559b-c; CH 15 563c-564c; BK XI, CH 2 [1060b20-23] 588d; BK XIII, CH 10 618c-619a,c

9 ARISTOTLE: *Rhetoric*, BK I, CH 2 [1356b28-35] 596b-c

19 AQUINAS: *Summa Theologica*, PART I, Q 3, A 3, ANS 16a-d; Q 12, A 8, REP 4 57b-58b; Q 13, A 9, ANS 71b-72c; Q 14, A 11 84c-85c; Q 15, A 3, REP 4 93b-94a; Q 29, A 1, REP 1 162a-163b; Q 56, A 1, REP 2 292a-d; Q 57, A 2 295d-297a; Q 86, A 1 461c-462a; Q 89, A 4 476c-477a

20 AQUINAS: *Summa Theologica*, PART III, Q 11, A 1, REP 3 772b-773a

53 JAMES: *Psychology*, 312a

4f. The generality of science: the universality of its principles

7 PLATO: *Republic*, BK VI, 383d-388a; BK VII, 391b-398c

8 ARISTOTLE: *Posterior Analytics*, BK I, CH 4-5 100a-102b; CH 11 [77a5-9] 105d-106a; CH 13-14 107c-109a; CH 18 111b-c; CH 24 116b-118a; CH 31 120a-c; BK II, CH 18-19 135d-137a,c / *Physics*, BK I, CH 1 259a-b / *Metaphysics*, BK I, CH 1 499a-500b; CH 2 [982a21-25] 500c; BK VI, CH 1 [1026a23-33] 548b-c; BK VII, CH 15 563c-564c; BK XI, CH 7 [1064b6-13] 592d-593a

9 ARISTOTLE: *Ethics*, BK VI, CH 3 [1139b25-34] 388c; BK X, CH 9 [1180b13-23] 435b-c / *Rhetoric*, BK I, CH 2 [1356b28-35] 596b-c

(4. Universals and particulars in the order of knowledge. 4f. The generality of science: the universality of its principles.)

19 AQUINAS: *Summa Theologica*, PART I, Q 84, A 1, ANS 440d-442a
28 HARVEY: *On Animal Generation*, 332a-334d esp 334c-d
30 BACON: *Advancement of Learning*, 98c / *Novum Organum*, BK I, APH 17-25 108a-d; APH 103-106 127d-128c; BK II, APH 5 138b-139a; APH 33 161b-d
31 DESCARTES: *Discourse*, PART II, 47c-d / *Objections and Replies*, 167c-d
33 PASCAL: *Vacuum*, 358a-b
34 NEWTON: *Principles*, 1a-2a; BK III, RULES 270a-271b / *Optics*, BK III, 541b-542a; 543a-b
34 HUYGENS: *Light*, PREF, 551b-552a
35 LOCKE: *Human Understanding*, BK IV, CH I, SECT 9, 308d-309b; CH III, SECT 14 316b-d; SECT 28-29 322a-323a; SECT 31 323c-d; CH VI, SECT 4-16 331d-336d passim
35 BERKELEY: *Human Knowledge*, INTRO, SECT 12 408a-b; SECT 15-16 409a-d; SECT 62-66 425a-426a; SECT 103-109 433a-434b passim; SECT 126-128 438b-d
35 HUME: *Human Understanding*, SECT I, DIV 9 454c-455a; SECT IV, DIV 26 460b-c; SECT XII, DIV 132, 509c
42 KANT: *Pure Reason*, 14c-15a; 195d-198a esp 197b-198a; 211c-218d / *Judgement*, 562d-563b
45 FOURIER: *Theory of Heat*, 169a-b; 177a
46 HEGEL: *Philosophy of Right*, ADDITIONS, 120 136b-c / *Philosophy of History*, INTRO, 182d-183c; PART IV, 361a-b
53 JAMES: *Psychology*, 671a-672a; 861b-886a passim, esp 862a-863a, 865b-866a, 869a-871b, 873a-874a, 882a-884b

5. Universal and particular in relation to grammar and logic

5a. The distinction between proper and common names

8 ARISTOTLE: *Interpretation*, CH 7 [17^a37-40] 26d / *Sophistical Refutations*, CH 22 [178^b38-179^a 10] 246c / *Metaphysics*, BK VII, CH 10 [1035^b 28-32] 559b; CH 11 [1037^a5-9] 560c; CH 15 [1040^a8-14] 564a
19 AQUINAS: *Summa Theologica*, PART I, Q 13, A 9 71b-72c; A 11 73c-74b; Q 30, A 4, ANS 170c-171b; Q 33, AA 2-3 181c-183c
20 AQUINAS: *Summa Theologica*, PART II-II, Q 9, A 2, ANS 424b-425a
23 HOBBES: *Leviathan*, PART I, 55b-c
35 LOCKE: *Human Understanding*, BK I, CH I, SECT 15 98d-99a; BK II, CH XI, SECT 9 145b-c; BK III, CH I, SECT 3 251d-252a; CH III, SECT 1-9 254d-256c; SECT 12 257b-c; CH VI, SECT 42 280b-c
35 BERKELEY: *Human Knowledge*, INTRO, SECT 11-12 407b-408b; SECT 18-19 410a-c
38 ROUSSEAU: *Inequality*, 341b-342b
45 LAVOISIER: *Elements of Chemistry*, PREF, 4b-c
53 JAMES: *Psychology*, 310a-311a; 447b-448a

5b. The classification of universals: their intension and extension; their degrees of generality

7 PLATO: *Theaetetus*, 535c / *Sophist*, 569d-574c
8 ARISTOTLE: *Categories*, CH 2 [1^a20-$^b2$] 5b-c; CH 3 [1^b10]-CH 5 [3^b24] 5d-8a / *Prior Analytics*, BK I, CH 27 [43^a25-44] 60c-d / *Posterior Analytics*, BK I, CH 4 100a-101b; CH 19-22 111c-115b; BK II, CH 13 131b-133c / *Topics*, BK I, CH 4-9 144b-147b / *Metaphysics*, BK I, CH 9 [991^a27-32] 509c; [992^b9-13] 510d; BK III, CH 1 [995^b 27-31] 514b; CH 3 [998^b14-999^a23] 517b-518a; BK V, CH 3 [1014^b3-13] 534d; CH 25 [1023^b22-25] 545c; BK VII, CH 12 [1038^a5]-CH 13 [1039^a23] 561c-563a; BK X, CH 2 [1053^b16-23] 580b-c; BK XI, CH 1 [1059^b21-1060^a1] 587d-588a
19 AQUINAS: *Summa Theologica*, PART I, Q 3, A 4, REP 1 16d-17c; A 5, ANS 17c-18b; Q 30, A 4, ANS and REP 3 170c-171b; Q 40, A 3, ANS 215c-216d; Q 50, A 2, REP 1 270a-272a; Q 66, A 2, REP 2 345d-347b; Q 76, A 3, REP 4 391a-393a; A 6, REP 1-2 396a-d; Q 77, A 4, REP 1 403a-d; Q 85, A 1 451c-453c; A 3, REP 4 455b-457a; A 5, REP 3 457d-458d; Q 86, A 2, REP 4 462a-463a; Q 88, A 2, REP 4 471c-472c; PART I-II, Q 18, AA 5-11 697a-703a passim; Q 30, A 4, REP 2 751c-752b; Q 35, A 8, ANS and REP 3 779c-780c; Q 46, A 1 813b-814a
20 AQUINAS: *Summa Theologica*, PART I-II, Q 61, A 1, REP 1 54d-55c; PART III, Q 10, A 3, REP 2 769d-771b
23 HOBBES: *Leviathan*, PART I, 55b-c
35 LOCKE: *Human Understanding*, BK II, CH XVI, SECT 1 165c-d; BK III, CH III, SECT 8-9 256a-c; CH IV, SECT 16 263b-c; CH VI, SECT 32-33 277c-278c
53 JAMES: *Psychology*, 870b-871a

5c. Particulars and universals in predications or judgments: the quantity of propositions; the universal, the particular, and the singular judgment

8 ARISTOTLE: *Categories*, CH 1-3 5a-d; CH 5 [2^a11-3^b23] 6a-8a / *Interpretation*, CH 7 [17^a37-$^b16$] 26d-27a / *Prior Analytics*, BK I, CH 1 [24^a16-21] 39a / *Posterior Analytics*, BK I, CH 10 [77^a3-4] 105d / *Soul*, BK III, CH 11 [434^a16-22] 667a
9 ARISTOTLE: *Ethics*, BK II, CH 7 [1107^a27-31] 352d-353a; BK III, CH 1 [1110^b28-1111^a2] 356c-d; BK VII, CH 3 [1146^b35-1147^a9] 397a-b; [1147^a25-$^b18$] 397c-398a
19 AQUINAS: *Summa Theologica*, PART I, Q 13, A 9, ANS 71b-72c; Q 30, A 4, ANS and REP 3 170c-171b; Q 85, A 5, REP 3 457d-458d
20 AQUINAS: *Summa Theologica*, PART I-II, Q 76, A 1, ANS 141a-c; Q 77, A 2 145d-147c

35 LOCKE: *Human Understanding*, BK IV, CH V, SECT 10 331a; CH VI 331b-336d; CH IX, SECT 1 349a; CH XI, SECT 13-14 357d-358c; CH XVII, SECT 8 377b-d
42 KANT: *Pure Reason*, 14c-15c; 39c-41c esp 39d-40a; 51d-52b

5d. Rules concerning the universality and particularity of premises in reasoning: the quantity of the conclusion in relation to the quantity of the premises

8 ARISTOTLE: *Prior Analytics*, BK I, CH 4-7 40d-45b; CH 24 58b-d; CH 26 59d-60b / *Posterior Analytics*, BK I, CH 14 108d-109a; CH 24 116b-118a
9 ARISTOTLE: *Ethics*, BK VII, CH 3 [1146^{b}35-1147^{b}18] 397a-398a / *Rhetoric*, BK I, CH 2 [1357^{a}23-^{b}24] 596d-597c
19 AQUINAS: *Summa Theologica*, PART I, Q 86, A 1, REP 2 461c-462a
20 AQUINAS: *Summa Theologica*, PART I-II, Q 76, A 1, ANS 141a-c; Q 77, A 2 145d-147c
35 LOCKE: *Human Understanding*, BK IV, CH XVII, SECT 8 377b-d
42 KANT: *Pure Reason*, 110d-112d esp 110d-111c; 118a-c / *Judgement*, 540a-b esp 540b [fn 1]

6. Applications of the distinction between universal and particular

6a. Particular and universal in the analysis of matter and form

8 ARISTOTLE: *Metaphysics*, BK V, CH 28 546b-c; BK VII, CH 10 [1035^{b}28-32] 559b; CH 11 [1037^{a}5-9] 560c; BK XII, CH 4-5 599d-601a; BK XIII, CH 10 618c-619a,c esp [1087^{a}10-25] 619c / *Soul*, BK II, CH 1 [412^{a}6-8] 642a; BK III, CH 5 [430^{a}10-17] 662c
17 PLOTINUS: *Second Ennead*, TR IV 50a-57c / *Sixth Ennead*, TR III, CH 3 282a-c
19 AQUINAS: *Summa Theologica*, PART I, Q 3, A 2, REP 3 15c-16a; A 3, ANS 16a-d; Q 4, A 1, REP 3 20d-21b; Q 7, A 1, ANS 31a-d; Q 14, A 11, ANS 84c-85c; Q 19, A 6, ANS 113c-114d; Q 29, A 1, REP 4 162a-163b; A 2, REP 3 163b-164b; A 3, REP 4 164c-165c; Q 47, A 2, ANS 257b-258c; Q 65, A 3, ANS 341c-342b; Q 75, A 4, ANS 381b-382a; Q 76, A 2 388c-391a; A 3, REP 2 391a-393a; Q 84, A 2, ANS 442b-443c; Q 85, A 1, REP 2 451c-453c; A 5, REP 3 457d-458d; A 7, REP 3 459c-460b; Q 115, A 1, ANS and REP 1-3 585d-587c; Q 119, A 1, ANS 604c-607b; PART I-II, Q 2, A 6, ANS 619d-620d
20 AQUINAS: *Summa Theologica*, PART III, Q 2, A 2, ANS 711d-712d

6b. Universal and particular causes

8 ARISTOTLE: *Posterior Analytics*, BK I, CH 2 [71^{b}33-72^{a}6] 98b-c / *Physics*, BK I, CH 5 [188^{b}26-189^{a}9] 264b-c / *Metaphysics*, BK I, CH 6 505b-506b; BK V, CH 2 [1014^{a}15-25] 534b-c; BK XII, CH 4-5 599d-601a
19 AQUINAS: *Summa Theologica*, PART I, Q 5, A 2 24b-25a; Q 14, A 11, ANS 84c-85c; Q 19, A 6, ANS and REP 3 113c-114d; Q 22, A 2 128d-130d; Q 55, A 3, REP 3 291a-d; Q 57, A 2, ANS 295d-297a; Q 65, A 3, ANS 341c-342b; Q 84, A 2, ANS and REP 3 442b-443c; Q 115, A 2, ANS 587c-588c; PART I-II, Q 1, A 2, REP 3 610b-611b; Q 9, A 6 662a-d; Q 46, A 1, ANS 813b-814a
20 AQUINAS: *Summa Theologica*, PART III, Q 4, A 4, REP 1 733a-734a
31 SPINOZA: *Ethics*, PART I, PROP 16 362a; PROP 28 365c-366a

6c. The universality of law and particular dispensations of equity

7 PLATO: *Laws*, BK VI, 699d-700b; BK IX, 754a-d; BK XI, 777d-778b; BK XII, 785c-786a
9 ARISTOTLE: *Ethics*, BK V, CH 7 382c-383a; CH 10 385c-386b / *Politics*, BK III, CH 16 485b-486c; BK IV, CH 4 [1292^{a}19-37] 491c-d / *Rhetoric*, BK I, CH 1 [1354^{a}26-^{b}16] 593b-d; CH 13 [1373^{b}1-17] 617c-d; [1374^{a}17-^{b}24] 618c-619a
20 AQUINAS: *Summa Theologica*, PART I-II, Q 90, A 1, REP 2 205b-206b; Q 96, A 6 235a-d; Q 97, A 4 238b-239b; Q 100, A 8, ANS and REP 1 259d-261a
23 HOBBES: *Leviathan*, PART I, 94d; PART II, 133d-135d; 144c; 156b-c
35 LOCKE: *Civil Government*, CH II, SECT 6 26b-c; CH XI, SECT 135-139 55d-58a; SECT 142 58b; CH XIV, SECT 159 62b-c; CH XVI, SECT 195 70a-b
36 SWIFT: *Gulliver*, PART IV, 152b-154a
38 MONTESQUIEU: *Spirit of Laws*, BK I, 3c
38 ROUSSEAU: *Social Contract*, BK II, 397a-d; 399b-400c
41 GIBBON: *Decline and Fall*, 73d-74b; 77d-78a; 88c-89d; 91b-c; 96d
42 KANT: *Pure Reason*, 60a-c / *Practical Reason*, 305d-307d / *Science of Right*, 399c-400a
43 FEDERALIST: NUMBER 78, 232c-d; NUMBER 80, 237a-b; NUMBER 83, 244b-245c passim; 248d-249a
46 HEGEL: *Philosophy of Right*, PART III, par 209 69d; par 214 71a-c; par 216 71d-72a; par 219 72d-73a; par 223-229 73c-75b; ADDITIONS, 132 137d-138b; 134 138b-c; 141 139c / *Philosophy of History*, PART IV, 364d-365a

7. Universality and particularity in relation to the distinction between the objective and the subjective, the absolute and the relative

7a. The issue concerning the universality of truth

7 PLATO: *Cratylus*, 86a-d / *Theaetetus*, 517b-532a
8 ARISTOTLE: *Metaphysics*, BK IV, CH 5-6 528c-531c; BK X, CH 1 [1053^{a}31-^{b}3] 580a; BK XI, CH 6 590d-592b

(7. *Universality and particularity in relation to the distinction between the objective and the subjective, the absolute and the relative.* 7a. *The issue concerning the universality of truth.*)

12 LUCRETIUS: *Nature of Things*, BK IV [469–521] 50b-51a
12 EPICTETUS: *Discourses*, BK II, CH 20 164c-166c
18 AUGUSTINE: *City of God*, BK XIX, CH 18 523a-b
19 AQUINAS: *Summa Theologica*, PART I, Q 2, A 1, REP 3 10d-11d; Q 16, A 1, REP 2 94b-95c; A 7, REP 2 99a-d; Q 85, A 2, ANS 453d-455b
23 HOBBES: *Leviathan*, PART I, 56b; 65c; PART IV, 267b
25 MONTAIGNE: *Essays*, 209c-212a; 240c-246a; 251d-253c; 259c-261c; 267c-d; 271b-272d; 318a-319b; 439c-440a
30 BACON: *Advancement of Learning*, 13a-c; 57d-58b / *Novum Organum*, BK I, APH 67 115d-116a
31 DESCARTES: *Rules*, I–II 1a-3b / *Discourse*, PART II, 46b c / *Meditations*, V, 95b-96a / *Objections and Replies*, 272a-273a
33 PASCAL: *Pensées*, 72 181a-184b esp 182b; 381–385 238b-239a / *Vacuum*, 358b
35 LOCKE: *Human Understanding*, INTRO, SECT 4–7 94a-95c esp SECT 7 95a-c; BK IV, CH XI, SECT 13–14 357d-358c
35 BERKELEY: *Human Knowledge*, PREF, 404a; INTRO, SECT 1–5 405a-d; SECT 40 420b; SECT 101–102 432c-433a
35 HUME: *Human Understanding*, SECT I, DIV 8–9, 454b-455a esp DIV 9, 455a; SECT XII, DIV 126–128 507a-508a
42 KANT: *Pure Reason*, 36a-37b; 129c-130a; 194b c; 202b-203c; 218d-222b; 224a-227a; 240b-243c / *Practical Reason*, 311d-313d
43 MILL: *Liberty*, 274b-293b passim
46 HEGEL: *Philosophy of History*, INTRO, 160b-178a
53 JAMES: *Psychology*, 639a-646a; 671a-672a; 880b-881a

7a. The issue concerning the universality of moral principles

5 EURIPIDES: *Phoenician Maidens* [499–502] 382b
6 HERODOTUS: *History*, BK III, 97d-98a
7 PLATO: *Protagoras*, 58a-62d / *Cratylus*, 86a-d / *Meno*, 183b-184c; 187d-190a,c / *Gorgias*, 271b-277c passim / *Republic*, BK VI, 383d-386c / *Theaetetus*, 525c-526a; 528b-532a / *Laws*, BK X, 760c
9 ARISTOTLE: *Ethics*, BK I, CH 3 339d-340b; CH 7 [1098^{a}25–^{b}8] 343d-344a; BK II, CH 2 [1104^{a}1–9] 349b-c; BK III, CH 4 359a-c; BK V, CH 7 382c-383a; BK VII, CH 11 [1152^{b}1–3] 403c; CH 12 [1152^{b}25–33] 403d-404a; BK X, CH 5 [1176^{a}3–29] 430c-d / *Politics*, BK I, CH 6 [1255^{a}32–37] 449a; BK VII, CH 1 [1323^{a}34–36] 527b
12 AURELIUS: *Meditations*, BK IV, SECT 4 264a
18 AUGUSTINE: *Confessions*, BK III, par 13 16c-d / *Christian Doctrine*, BK III, CH 14 663c-d
19 AQUINAS: *Summa Theologica*, PART I–II, Q 1, A 7, ANS 614c-615a
20 AQUINAS: *Summa Theologica*, PART I–II, Q 77, A 2 145d-147c; Q 94, A 4 223d-224d
23 HOBBES: *Leviathan*, PART I, 57d-58a; 61d-62a; 91a-92b; 95d-96b; PART II, 140b; PART IV, 272c
25 MONTAIGNE: *Essays*, 46b-47c; 93b-c; 115b-119d; 124c-125a; 146b-c; 209c-212a; 281a-284c
27 SHAKESPEARE: *Hamlet*, ACT II, SC II [254–257] 43b / *Troilus and Cressida*, ACT II, SC II [51–60] 114a-b
31 DESCARTES: *Discourse*, PART II, 46b-c
31 SPINOZA: *Ethics*, PART I, APPENDIX, 371b-372d; PART IV, PREF 422b,d-424a; PROP 8 426b-c; PROP 64 444b
33 PASCAL: *Provincial Letters*, 29b-44a / *Pensées*, 309 228b; 312 229a; 325 230b-231a; 381–385 238b-239a
35 LOCKE: *Human Understanding*, BK I, CH II, SECT 1–21 103d-111a passim; BK II, CH XXI, SECT 55–56 192c-193b
35 HUME: *Human Understanding*, SECT XII, DIV 132, 509c-d
38 ROUSSEAU: *Inequality*, 330d 331c; 343d-345c; 362a-b / *Political Economy*, 369a-370a / *Social Contract*, BK IV, 434c
42 KANT: *Pure Reason*, 173b-174a; 239a-b / *Fund. Prin. Metaphysic of Morals*, 253d-254d; 260a-261d; 264b-d; 265c-266d; 270d-271a; 273d-287d esp 275b-d, 277d-279d, 281c-283d / *Practical Reason*, 294c-295d; 297a-314d esp 301a, 307d-314d; 317a-b / *Pref. Metaphysical Elements of Ethics*, 372b-d; 377c-d / *Intro. Metaphysic of Morals*, 388b-c; 390b,d-391c; 392b-393a / *Science of Right*, 397a-398b / *Judgement*, 478a-479d
43 MILL: *Liberty*, 269c-270c; 274b-293b passim / *Utilitarianism*, 445c-446d; 461c-464d; 471b-476a,c
46 HEGEL: *Philosophy of Right*, PART I, par 89 35c-d; PART II, par 107 40b-c; par 112 41c-d; par 135 47b-d; ADDITIONS, 71 127b-c; 86 129c; 131 137d / *Philosophy of History*, PART II, 280b-281b
49 DARWIN: *Descent of Man*, 314c-316a
50 MARX-ENGELS: *Communist Manifesto*, 427a-b; 428b-d
51 TOLSTOY: *War and Peace*, BK V, 194a-195a; 213a-216c; BK XIV, 611a-c; EPILOGUE I, 645a-646c
53 JAMES: *Psychology*, 886b-888a

7c. The issue concerning the universality of aesthetic standards: the subjective universal

7 PLATO: *Ion* 142a-148a,c / *Symposium*, 167a-d / *Statesman*, 593d-595a / *Laws*, BK II, 653c-656b; 660a-662a; BK III, 675c-676b
12 AURELIUS: *Meditations*, BK IV, SECT 20 265a-b

17 PLOTINUS: *First Ennead*, TR VI, CH 2–3 21d-23a / *Sixth Ennead*, TR III, CH 11, 287b-c
18 AUGUSTINE: *Confessions*, BK IV, par 20 24b-c / *City of God*, BK VIII, CH 6, 269b-c
19 AQUINAS: *Summa Theologica*, PART I, Q 5, A 4, REP 1 25d-26c; PART I–II, Q 27, A 1, REP 3 737b-d
20 AQUINAS: *Summa Theologica*, PART II–II, Q 180, A 2, REP 3 608c-609c
25 MONTAIGNE: *Essays*, 230b-231c
26 SHAKESPEARE: *Merchant of Venice*, ACT V, SC I [89–110] 431d
27 SHAKESPEARE: *Hamlet*, ACT II, SC II [454–471] 45a
31 SPINOZA: *Ethics*, PART I, APPENDIX, 371b-372d
33 PASCAL: *Pensées*, 105 193a
35 HUME: *Human Understanding*, SECT XII, DIV 132, 509c-d
42 KANT: *Pure Reason*, 23d [fn 1] / *Judgement*, 476a-479d esp 479a-d; 480d-482b; 488a-492a esp 488a-491c; 513b-516b; 516d-517c; 524d-525a; 540b-542a
44 BOSWELL: *Johnson*, 202b; 362b-c
46 HEGEL: *Philosophy of History*, INTRO, 185c-d
49 DARWIN: *Origin of Species*, 95a-d / *Descent of Man*, 301c-302a; 462d-463a; 569c; 571c-577d esp 573b-c, 575d, 577b-c; 595d-596a
53 JAMES: *Psychology*, 755a-757b; 886b-888a

CROSS-REFERENCES

For: Other general discussions of the distinction between the universal and the particular, *see* IDEA 4b(2); ONE AND MANY 1c.

The problem of the reality or existence of universals, *see* BEING 7d(2); FORM 2a, 3b; SAME AND OTHER 2a.

The character and conditions of individual existence, *see* IDEA 1f; MATTER 1c; and for the problem of our knowledge of individuals, *see* FORM 3b; KNOWLEDGE 5a(4)

Discussions relevant to the consideration of universals as objects of knowledge, *see* FORM 1a; IDEA 1a; KNOWLEDGE 6a(3).

Various statements of the theory of abstraction and of the distinction between sensory images and abstract ideas, *see* IDEA 2g; MEMORY AND IMAGINATION 5b, 6c(1); SENSE 5a; and for the abstraction of universal concepts in relation to inductive generalization, *see* EXPERIENCE 2b; INDUCTION 1a.

The universality of scientific laws, *see* SCIENCE 4d.

Another discussion of proper and common names, *see* SIGN AND SYMBOL 2d.

The ordering of universal concepts according to their degrees of generality, *see* IDEA 4b(3), 5d; RELATION 5a(4); SAME AND OTHER 3a(1).

Universal and particular in the logical theory of judgment and reasoning, *see* JUDGMENT 6a; REASONING 2a(2).

Other discussions of the good in general and the order of goods, *see* BEING 3–3b; GOOD AND EVIL 5a–5d; HAPPINESS 2b–2b(7).

The conception of equity as rectifying the imperfection of laws which results from their universality, *see* JUSTICE 10d; LAW 5h.

Other comparisons of history, poetry, and philosophy, *see* HISTORY 1; PHILOSOPHY 1d; POETRY 5b; TRUTH 4b.

Other discussions of the true, the good, and the beautiful as objective or subjective, absolute or relative, *see* BEAUTY 5; CUSTOM AND CONVENTION 5a, 9a–9b; GOOD AND EVIL 6d; RELATION 6b–6c; TRUTH 7b.

ADDITIONAL READINGS

Listed below are works not included in *Great Books of the Western World*, but relevant to the idea and topics with which this chapter deals. These works are divided into two groups:

I. Works by authors represented in this collection.
II. Works by authors not represented in this collection.

For the date, place, and other facts concerning the publication of the works cited, consult the Bibliography of Additional Readings which follows the last chapter of *The Great Ideas*.

I.

AQUINAS. *On Being and Essence*, CH III–IV
——. *Quaestiones Disputatae, De Anima*, A 4
DESCARTES. *The Principles of Philosophy*, PART I, 58–59
HEGEL. *Science of Logic*, VOL II, SECT I, CH I
J. S. MILL. *A System of Logic*, BK I, CH 2; BK II, CH 3

II.

PORPHYRY. *Introduction to Aristotle's Predicaments*
BOETHIUS. *In Isagogem Porphyri Commenta*
ABAILARD. *Glosses on Porphyry*
JOHN OF SALISBURY. *Metalogicon*, BK II, CH 17
ALBERTUS MAGNUS. *On the Intellect and the Intelligible*, TRLATISE I–II
DUNS SCOTUS. *Reportata Parisiensia*, BK I–II
OCKHAM. *Summa Totius Logicae*
——. *Expositio Aurea et Admodum Utilis Super Artem Veterem*, PART I–II
CAJETAN. *In De Ente et Essentia D. Thomae Aquinatis Commentaria*
SUÁREZ. *Disputationes Metaphysicae*, IV (4–8), V–VI, XXV
JOHN OF SAINT THOMAS. *Cursus Philosophicus Thomisticus, Ars Logica*, PART II, QQ 3–12
T. REID. *Essays on the Intellectual Powers of Man*, V
BROWN. *Lectures on the Philosophy of the Human Mind*, VOL II, pp 458–497
W. HAMILTON. *Lectures on Metaphysics and Logic*, VOL I (34–36)
ROYCE. *The World and the Individual*, SERIES I (9–10)
WHITEHEAD and RUSSELL. *Principia Mathematica*, PART I, SECT C, D, E; PART II, SECT A
BRADLEY. *The Principles of Logic*, Terminal Essays, V
——. *Essays on Truth and Reality*, CH 3
W. E. JOHNSON. *Logic*, PART I, CH 8, 11
McTAGGART. *The Nature of Existence*, BK III
WHITEHEAD. *An Introduction to Mathematics*, CH 2
——. *Science and the Modern World*, CH 10
SANTAYANA. *The Realm of Essence*, CH 1–11
DEWEY. *Logic, the Theory of Inquiry*, CH 13–14
BLANSHARD. *The Nature of Thought*, CH 16–17
B. RUSSELL. *Principles of Mathematics*, CH 4–8
——. *The Problems of Philosophy*, CH 9–10
——. *Introduction to Mathematical Philosophy*, CH 13, 15–17
——. *The Analysis of Mind*, LECT 11
——. *The Analysis of Matter*, CH 27
——. *Human Knowledge, Its Scope and Limits*, PART II, CH 3, 10; PART IV, CH 8

Chapter 97: VIRTUE AND VICE

INTRODUCTION

IN their currently popular connotations, the words "virtue" and "vice" have extremely limited significance. Virtue tends to be identified with chastity or at least with conformity to the prevailing standards of sexual behavior. The popular notion of vice retains a little more of the traditional meaning, insofar as it implies injury to a person's character or health as the result of strong *habitual* addictions. But, as in the case of virtue, the things which are popularly called "vices" are largely concerned with pleasures or sensual indulgences.

In the tradition of the great books, however, the scope of these terms and the range of the problems in which they are involved seem to be co-extensive with morality; or, in other words, with the broadest consideration of good and evil in human life, with what is right and wrong for man not only to do, but also to wish or desire, and even to think. For some of the great moral philosophers, other terms—such as duty for Marcus Aurelius and Kant, or pleasure and utility for Mill—seem to be more central. But for Plato, Aristotle, and Aquinas virtue is a basic moral principle. By reference to it they define the good man, the good life, and the good society. Yet even for them it is not the first principle of ethics. They define virtue itself by reference to a more ultimate good—happiness. For them the virtues are ordered to happiness as means to an end.

THE ANCIENT ENUMERATION of particular virtues may show the range of things comprehended under the notion of virtue generally. It may also further sharpen the contrast with the contemporary tendency to use the words "virtue" and "vice" as if they applied only to matters which fall within the sphere of one of the virtues. That one is the virtue which both Plato and Aristotle call "temperance," and which they conceive as concerned chiefly with the bodily appetites and pleasures. Plato and Aristotle give somewhat different enumerations, but courage and justice are as fundamental for them as temperance; and when certain virtues come later to be classified as the cardinal or principal virtues, these three are always named together. In that classification, there is a fourth—prudence or, as it is sometimes called, "practical wisdom."

Plato's enumeration of the virtues in the *Republic* also adds wisdom to temperance, courage, and justice. This indicates at once that the ancient conception of virtue as the quality which makes a man good, extends to his mind as well as to his character—to the sphere of thinking and knowing as well as to desire, emotion, and action. Aristotle makes this explicit by dividing all the virtues into moral and intellectual, or excellences of character and of mind. He names five intellectual virtues: in addition to wisdom and prudence (which he distinguishes as speculative and practical wisdom), he lists art, science, and what he calls "intuitive reason," which Aquinas later calls "understanding."

The division of the virtues into moral and intellectual leads, in Aristotle's analysis, to the further distinction between those intellectual virtues—understanding, science, wisdom—which represent the possession of speculative insight or theoretic knowledge, and those—art and prudence—which represent skill in practical thinking or in the application of knowledge to production and action respectively. Because it is concerned with action, or moral conduct, the virtue of prudence is most closely associated with the moral virtues of justice, courage, and temperance. The grouping together by Aquinas of these four as the cardinal virtues carries the implication that the remaining four (*i.e.*, art and the three virtues of the speculative rea-

son) play a secondary role. The implication is simply that a man may be made good as a scientist or good as an artist by the acquisition of these virtues, but he is not made good as a man by these virtues, nor do they enable him to lead a good life and achieve happiness, as do the moral virtues accompanied by prudence.

In line with the principle by which he regards certain virtues as cardinal or indispensable for human rectitude and welfare, the Christian moralist goes further than the moral philosopher in developing the theory of virtue. Considering man's limitations and his fallen nature, he holds that more than all the natural virtues (*i.e.*, the virtues which men can attain by their own effort) is required for salvation—for the supernatural end of eternal happiness. Faith, hope, and charity, according to St. Paul, are indispensable to lift man's life to a plane, and direct it to a goal, which exceed his nature. These gifts of God's grace are subsequently treated by Augustine and Aquinas as virtues—supernatural, not natural virtues. Aquinas specifically calls them "theological virtues" to distinguish them from other supernatural endowments, such as the infused moral virtues and the gifts of the Holy Ghost.

THE READER MAY OBSERVE that of all the virtues so far named, only the three theological virtues are not the subject of separate chapters in this collection of great ideas. The chapters on COURAGE, JUSTICE, TEMPERANCE, PRUDENCE, WISDOM may include discussions of these qualities which do not specifically treat them as virtues. Certainly that is true of the chapters on ART and SCIENCE, and the chapter on PRINCIPLE, wherein the virtue of intuitive reason or the understanding of first principles is considered. Nevertheless, that all but one of these chapters bear the name of the traditionally recognized virtues indicates how widely and variously they make their appearance throughout the great books—by example and comment in poetry and history as well as by definition and analysis in the ethical and political treatises. In contrast, the theological virtues appear only in Christian, not pagan literature, and then mainly in religious rather than secular writing.

It is also of interest to note the relation which this chapter bears to those dealing with other fundamental concepts of moral philosophy or theology. Some of the terms mentioned in the foregoing paragraphs—duty, pleasure, happiness, good—name chapters which are co-implicated with this one in the problem of how men should live and what they should seek. The Outline of Topics will reveal still others—knowledge, desire, emotion, reason, will, wealth, honor, friendship, teaching, family, state, citizen, law, sin, and grace—each of which is (or indicates) the title of a chapter that treats of matters related to virtue as cause or consequence, as psychological factor or external condition.

One chapter not yet mentioned has maximum relevance for most of the authors who offer some analysis of virtue. The chapter on HABIT treats an idea that is crucial to the definition of virtue. Aquinas, for example, allocates the discussion of virtue and vice to his Treatise on Habit in the *Summa Theologica*. He divides this treatise into questions concerning habits in general and questions concerning good and evil habits—or virtues and vices—in particular. But the notion that virtue combines the elements of habit and goodness is not peculiarly his. With varying degrees of emphasis and explicitness, it appears in Plato and Aristotle, in Augustine, Bacon, Hegel, and James. Kant alone expressly dissents, declaring that virtue "is not to be defined and esteemed merely as *habit*, and . . . as a long *custom* acquired by the practice of morally good actions."

THE DISCUSSION OF VIRTUE originates in the dialogues of Plato and the *Ethics* of Aristotle with a number of related questions. Meno's opening question—"Can you tell me, Socrates, whether virtue is acquired by teaching or by practice; or if by neither teaching nor practice, then whether it comes to man by nature, or in some other way?"—requires, in the opinion of Socrates, other questions to be faced: what virtue is, how virtue is related to knowledge, whether virtue is one or many, and if many, how the several particular virtues are related to one another.

In the course of the dialogue, each of the alternatives is considered. If virtue were identical with knowledge, it could be taught and learned just as geometry is. If virtue were simply a hab-

it, it could be acquired by practice, that is, by the repetition of similar acts. But neither practice nor teaching seems by itself to explain how men come by virtue, and even less why virtuous fathers should so often fail to produce virtue in their sons. Yet Socrates does not completely dismiss these possibilities or the possibility considered at the end, that "virtue comes to the virtuous by the gift of God." What truth there is in each of them, he concludes, cannot be determined until we know precisely what virtue is.

Another dialogue, the *Protagoras*, pursues a similar inquiry and seems to reach a similarly indeterminate conclusion. The relation of virtue to knowledge here leads to the question whether "wisdom and temperance and courage and justice and holiness" are "five names of the same thing." To the extent that each depends on knowledge of what is good and evil, they would seem to be, if not identical, at least inseparable aspects of the same thing. Protagoras objects on the score that a man may be courageous and at the same time "utterly unrighteous, unholy, intemperate, ignorant." But Socrates finally gets him to admit reluctantly that courage consists in knowledge, and cowardice in ignorance, of what is and is not dangerous.

It was Protagoras, however, who originally contended against Socrates that virtue can be taught. The reduction of all the virtues to some form of knowledge would therefore seem to confirm his opinion. Socrates, in winning the argument about virtue and knowledge, seems to overthrow his own view that virtue cannot be taught. "The result of our discussion," Socrates says at the end, "appears to me to be singular. For if the argument had a human voice, that voice would be heard laughing at us and saying: 'Protagoras and Socrates, you are strange beings; there are you, Socrates, who were saying that virtue cannot be taught, contradicting yourself now by your attempt to prove that all things are knowledge, including justice and temperance and courage—which tends to show that virtue can certainly be taught. . . . Protagoras, on the other hand, who started by saying that it might be taught, is now eager to prove it to be anything rather than knowledge.' "

The only way "this terrible confusion of our ideas" might be cleared up, Socrates suggests, is for the conversation to go on "until we ascertain what virtue is." But that particular conversation does not go on; nor do the definitions of virtue which are proposed in other Platonic dialogues seem to be decisive on the point whether virtue is knowledge or whether it can be taught. In the *Laws*, for example, the Athenian Stranger, saying that "harmony of the soul, taken as a whole, is virtue," proposes that education should consist in training "the first instincts of virtue in children" by producing suitable habits in them. But his training does not seem to be, like ordinary teaching, the inculcation of knowledge. It is "training in respect of pleasure and pain," whereby we are led to hate what we ought to hate and love what we ought to love.

In the *Republic*, Socrates compares the harmony produced by virtue in the soul with the harmony of the parts in a healthy body. "Virtue is the health and beauty and well-being of the soul," he declares, "and vice the disease and weakness and deformity of the same." Though wisdom consists in the rule of the other parts of the soul by reason in the light of "knowledge of what is for the interest of each of the parts and of the whole," it does not seem to be the whole of virtue, nor does Socrates suggest that men become virtuous simply by becoming wise. On the contrary, he intimates that "good practices lead to virtue, and evil practices to vice," and that, like certain bodily qualities, the "virtues of the soul . . . can be implanted by habit and exercise."

IT IS SOMETIMES SUPPOSED that Aristotle differs from Plato on fundamental points in the theory of virtue. The fact that Aristotle criticizes Socrates for "thinking that all the virtues are forms of practical wisdom," seems to imply a basic disagreement on the relation of virtue to knowledge. But Aristotle also remarks that Socrates was right "in saying they implied practical wisdom." His own view that the moral virtues of courage, temperance, and justice are inseparable from the intellectual virtue of prudence does not seem to differ substantially from the statements of Socrates that "virtue must be a sort of wisdom or prudence" and that "virtue is either wholly or partly wisdom." Such differ-

ence as there is appears to be not so much in what is being affirmed or denied as in the manner of statement or analysis, and beyond that, perhaps, in a method of exposition which permits Aristotle to give definite answers to questions Plato's dialogues often leave unanswered.

Aristotle's analysis, of course, sometimes changes the questions themselves to make them answerable, but this is not always so. His summary of existing opinions concerning the acquisition of virtue—that "some think we are made good by nature, others by habituation, others by teaching"—is nearly equivalent, as an enumeration of the possibilities, to Meno's opening question. But where Socrates in answering Meno contents himself with suggesting that there may be some truth in each possibility as against the others, Aristotle definitely affirms that the whole truth about the matter combines all three factors. "There are three things," he writes, "which make men good and virtuous: these are nature, habit, rational principle." Even Socrates' final point, that virtue may be a gift of God, seems to be affirmed by Aristotle's comment that, in effecting virtue, "nature's part evidently does not depend on us, but as a result of some divine causes is present in those who are truly fortunate."

But in the case of two Platonic questions—the one about the relation of virtue to knowledge and the other about the unity of virtue—Aristotle's analysis transforms the problem. His basic distinction between moral and intellectual virtue turns the question about virtue and knowledge into one concerning the role which one very special kind of knowledge, represented by the virtue of prudence, plays in the formation and operation of good moral habits— habits in the sphere of action and passion, or of the will and the emotions. By substituting a number of distinct intellectual virtues for the single term 'knowledge,' Aristotle can definitely answer both Yes and No to the question. Not all the intellectual virtues, not art and science, or even speculative wisdom, are needed for courage, temperance, and justice; but if by "knowledge" is meant nothing more than prudence, then Aristotle affirms these moral virtues to involve knowledge of a sort.

The distinction between moral and intellectual virtue also enables Aristotle to reformulate the problem of the unity of virtue. Instead of asking whether there is only one virtue, having many aspects, or many distinct virtues, he considers which virtues are interdependent and which can exist separately from one another. Virtue has unity in the inseparability of the moral virtues from one another and from prudence. The sailor who appears to be courageous without being temperate, or the thief who appears to be prudent without being just, has only the appearance of these virtues. But though Aristotle uses the phrase "perfect virtue" to signify both the integration of these virtues and the perfection of each when it is integrated with the others, he does not include all the particular virtues in the unity of virtue. Some, like art and science, can exist apart from prudence or the moral virtues, and they from it.

By showing how all of the moral virtues depend upon prudence or practical wisdom, Aristotle thinks he is able to "refute the argument ... that the virtues exist in separation from each other." But he does not find any greater unity of the virtues than is involved in their inseparability as a result of their common dependence on prudence. Following Aristotle, Aquinas criticizes those who assert a more profound unity by claiming that prudence, temperance, fortitude, and justice signify "only certain general conditions ... to be found in all the virtues." This, according to Aquinas, is tantamount to denying that they are distinct habits.

Insisting that they are really distinct as habits, Aquinas nevertheless suggests that "these four virtues qualify one another by a kind of overflow. For," he explains, "the qualities of prudence overflow into the other virtues in so far as they are directed by prudence. And each of the others overflows into the rest, for the reason that whoever can do what is more difficult, can do what is less difficult." The man who "can curb his desires for the pleasures of touch, which is a very hard thing to do ... is more able to check his daring in dangers of death ... which is much easier"; the man who can withstand the "dangers of death, which is a matter of great difficulty, is more able to remain firm against the onslaught of pleasures."

As for justice, Aquinas holds that legal justice, "by commanding the other virtues ... draws

them all into the service of the commonweal." Aristotle also sees a certain unification of the virtues, at least all the moral virtues, in terms of justice—the kind of justice he calls "general" to distinguish it from the special virtue of justice. He conceives general justice as comprising all the moral virtues, including special justice, insofar as all these virtues are directed toward the welfare of society and the good of other men. "Justice in this sense," he writes, "is not a part of virtue, but virtue entire." Holding that it "is complete virtue, not absolutely, but in relation to our neighbor," he also adds that "it is complete because he who possesses it can exercise his virtue not only in himself, but towards his neighbor as well."

Some writers tend in the opposite direction toward a greater separation of the virtues. Justice, according to Marcus Aurelius, is prior to the other virtues, for "in justice the other virtues have their foundation." In suggesting that a man can secure "a favorable and commodious interpretation of his vices" by coloring them in the light of his virtues, Bacon seems to accept the conjunction of virtue with vice which is expressed in the familiar phrase "the defects of one's virtues." That a gentleman may with honor be permitted certain failings is similarly implied by Dr. Johnson's reference to "the genteel vices."

This comfortable doctrine that a man can be truly virtuous in some aspects of character while vicious in others seems, however, to be rejected by Montaigne and Kant, as well as by Plato and Aristotle. The standard of Christian virtue is even more stringent. What may appear to be virtues are, according to Augustine, "rather vices than virtues so long as there is no reference to God in the matter. For although some suppose that virtues which have a reference only to themselves, and are desired only on their own account, are yet true and genuine virtues, the fact is that even they are inflated with pride, and are therefore to be reckoned vices."

The theological virtue of charity—the love of God—is held by the theologians to be indispensable to the perfection of all the other virtues in a Christian life. Not only, according to Aquinas, do faith and hope lack "the perfect character of virtue without charity," but all the other virtues are imperfect in its absence.

"It is possible by means of human works," he writes, "to acquire the moral virtues in so far as they produce good works that are directed to an end not surpassing the natural ability of man. And when they are acquired thus, they can be without charity, even as they were in many of the pagans. But in so far as they produce good works in relation to a supernatural last end, thus they have the character of virtue truly and perfectly, and cannot be acquired by human acts, but are infused by God. Such moral virtues cannot be without charity. . . . Only the infused virtues are perfect, and deserve to be called virtues absolutely. . . . The other virtues, those, namely, that are acquired, are virtues in a restricted sense."

THAT VIRTUE IS GOOD and vice evil seems to go undisputed in the tradition of the great books, even by Machiavelli who bemoans the "necessity" of vice in a successful prince. But unanimity on this point does not preclude a variety of answers to the question, What is the good of virtue?

Is it an end in itself, or a means, and if a means, what end does it serve? Moreover, what is the principle of goodness in the virtues? Does it lie in the rule of reason, in conformity to nature, in obedience to the moral law and the imperative of duty, in submission to God's will? Or are the virtues good only to the extent that they are useful and profitable? To the individual alone or to society as well? As these questions are differently answered, different conceptions of virtue appear.

Marcus Aurelius gives the simplest and most familiar answer. Virtue is its own reward. "What more dost thou want," the Stoic asks, "when thou hast done a man a service? Art thou not content that thou hast done something conformable to thy nature, and dost thou seek to be paid for it?" The virtues are not only self-rewarding but they are the only things in which a good man can take delight. "When thou wishest to delight thyself," Aurelius says, "think of the virtues of those who live with thee . . . For nothing delights so much as the examples of the virtues."

Locke seems to make profit or utility the source of goodness in the virtues. "God, hav-

ing, by an inseparable connexion, joined virtue and public happiness together," Locke writes, "and made the practice thereof necessary to the preservation of society, and visibly beneficial to all with whom the virtuous man has to do, it is no wonder that everyone should not only allow, but recommend and magnify those rules to others, from whose observance of them he is sure to reap advantage to himself."

The virtues seem to become conventional in Locke's view. They are whatever the members of a particular society deem advantageous. "Virtue and vice are names pretended, and supposed, everywhere to stand for actions in their nature, right and wrong; and as far as they are really so applied, they are so far coincident with the divine law . . . But yet, whatever is pretended," Locke adds, "this is visible, that these names, virtue and vice, in the particular instances of their application, through the several nations and societies of men in the world, are constantly attributed only to such actions as, in each country and society, are in reputation or discredit. . . . Thus, the measure of what is everywhere called and esteemed virtue and vice, is the approbation or dislike, praise or blame," which establishes itself in a society "according to the judgment, maxims, or fashion of that place. . . . That this is the common measure of virtue and vice, will appear," Locke thinks, "to anyone who considers, that though that passes for vice in one country, which is counted a virtue, or at least not a vice, in another; yet everywhere, virtue and praise, vice and blame, go together."

Hobbes also regards the names of the virtues as "inconstant names" varying according to "the nature, disposition and interest of the speaker . . . for one man calleth *wisdom*, what another calleth *fear*; and one *cruelty*, what another *justice*; one *prodigality*, what another *magnanimity*." Yet this does not prevent Hobbes from proposing a list of virtues which derive their goodness from the natural law. "All men agree on this," he writes, "that peace is good; and therefore also the ways or means of peace, which . . . are *justice*, *gratitude*, *modesty*, *equity*, *mercy*, and the rest of the Laws of Nature, are good; that is to say, *Moral Virtues*; and their contrary *Vices*, evil."

Moral philosophy, according to Hobbes, is "the science of Virtue and Vice" and "therefore the true doctrine of the Laws of Nature is the true moral philosophy." Though other writers of moral philosophy "acknowledge the same virtues and vices," Hobbes thinks they do not see "wherein consisted their goodness; nor that they come to be praised as the means of peaceable, sociable, and comfortable living."

Like Kant, he criticizes Aristotle's doctrine of the mean; or, as Hobbes refers to it, the notion that virtue consists in "a mediocrity of the passions; as if not the cause, but the degree of daring, made *fortitude*; or not the cause, but the quantity of a gift, made *liberality*." The cause of virtue, according to Hobbes, is the natural law, commanding men to do whatever is required for peace and self-preservation. In terms of a quite different conception of law and duty, Kant also says that "the difference between virtue and vice cannot be sought in the degree in which certain maxims are followed, but only in the specific *quality* of the maxims. In other words, the vaunted principle of Aristotle, that virtue is the *mean* between two vices, is false."

It is not Kant but Spinoza who seems to bear an affinity to Hobbes in the theory of virtue. Both make self-preservation the end which determines the direction of virtuous conduct. Both consider civil peace or the good of others in relation to self. Both draw up lists of moral virtues from their enumeration of the passions, Hobbes by reference to natural law, Spinoza in terms of adequate ideas of God's nature. Spinoza identifies virtue with power and holds that "the more each person strives and is able to seek his own profit, that is to say, to preserve his own being, the more virtue does he possess." But though he makes "the endeavor after self-preservation . . . the primary and only foundation of virtue," he conceives self-preservation itself to have its foundation in knowledge of God.

"To act in conformity with virtue," Spinoza maintains, "is to act according to the guidance of reason, and every effort which we make through reason is an effort to understand, and therefore the highest good of those who follow after virtue is to know God, that is to say, it is a good which is common to all men, and can be equally possessed by all in so far as they are of the same nature." In direct consequence, he

declares that "the good which everyone who follows after virtue seeks for himself, he will desire for other men; and his desire on their behalf will be greater in proportion as he has greater knowledge of God."

ALL THOSE WHO RELATE virtue to happiness do not do so in the same way. "The multiplication of happiness," writes Mill, "is, according to the utilitarian ethics, the object of virtue." He attributes to "a very imperfect state of the world's arrangements" the fact that "anyone can best serve the happiness of others by the absolute sacrifice of his own; yet so long as the world is in that imperfect state," he goes on to say, "the readiness to make such a sacrifice is the highest virtue which can be found in man."

But Mill repeatedly insists that only an increase of happiness justifies sacrifice, and only its contribution to happiness makes virtue good. He criticizes the Stoics for striving "to raise themselves above all concern about anything but virtue" and for supposing that "he who has that has everything. . . . No claim of this description is made for the virtuous man by the utilitarian doctrine."

While admitting that virtue may come to be desired disinterestedly, as an ingredient of happiness rather than as a means to it, Mill does not regard virtue as a natural and necessary condition of happiness. "Virtue, according to the utilitarian doctrine, is not naturally and originally part of the end, but it is capable of becoming so." If there are some who do not desire virtue, either because it gives them no pleasure or because the lack of it causes them no pain, they can be happy without it.

The view taken by Plato and Aristotle seems to be directly contrary. All things which have ends appointed by their nature, Socrates argues at the beginning of the *Republic*, must also be capable of virtues or excellences whereby to achieve their ends. If happiness is the end of the soul or of human life, then we must look to such excellences as the virtue of justice and temperance to provide the means. When Glaucon and Adeimantus ask Socrates to prove that only the virtuous man can be happy, he undertakes the long analysis of the parts of the soul and the parts of the state to discover the virtues appropriate to each and to the whole. When the virtues are defined, Glaucon admits that the question he originally asked "has now become ridiculous."

The answer to the question is evident as soon as virtue and happiness are seen to be reciprocal notions, like cause and effect. Yet Aristotle's definition of moral virtue as a habit of choice, consisting in a mean—a mean relative to ourselves, determined by reason or as the prudent man would determine it—does not immediately explain why happiness is defined as "the realization and perfect exercise of virtue." The connection between virtue as means and happiness as end becomes apparent only in terms of the conception that happiness is the ultimate end *because* it includes all good things and leaves nothing to be desired.

As an object of desire, as something worth having in itself, virtue is only one type of good. It does not constitute happiness. Happiness, according to Aristotle, includes as well such bodily and external goods as health and pleasure, friendship and wealth. But unlike these other goods, the virtues alone are capable of producing happiness because, in Aristotle's view, they are the causes of our thinking and acting well with respect to all other goods.

"We do not acquire or preserve virtue by the help of external goods," Aristotle says, "but external goods by the help of virtue." This applies to health and pleasures, no less than to wealth and friends. Because the moral virtues, together with prudence, direct our desires, determine our choices, and govern our actions in accordance with reason's discrimination between real and apparent goods, the exercise of these habits results in happiness or living well. But since external goods are goods of fortune and not entirely within our control, Aristotle finds it necessary to qualify the definition of happiness. To the statement that the happy man is one "who is active in accordance with complete virtue," he adds that he is one "who is sufficiently equipped with external goods, not for some chance period, but throughout a complete life."

According to Kant, "the connexion of virtue and happiness may be understood in two ways: either the endeavor to be virtuous and the rational pursuit of happiness are not two distinct actions, but absolutely identical . . . or the con-

nexion consists in this, that virtue produces happiness as something distinct from the consciousness of virtue, as a cause produces an effect." Kant thinks that both the Stoic and Epicurean doctrines choose the first of these alternatives. They differ from each other, in his opinion, only in the way they conceive the identity of virtue and happiness. "The Epicurean notion of virtue," he writes, "was already involved in the maxim: to promote one's own happiness. According to the Stoics, on the other hand, the feeling of happiness was already contained in the consciousness of virtue."

Kant's own resolution of what he calls "the antinomy of practical reason" seems to depend on his conception of the *summum bonum*. For him it is not happiness; it consists rather in being worthy of happiness through doing one's duty. "Morality," he says, "is not properly the doctrine how we should *make* ourselves happy, but how we should become *worthy* of happiness." Under the moral law, to be happy is not a duty, but to be worthy of happiness is. In Kant's view, therefore, virtue is related to happiness through the medium of duty. Virtue, he declares, is "a coincidence of the rational will with every duty firmly settled in the character." It is "the moral strength of a man's will in his obedience to duty."

But in addition to being the will's strength in overcoming obstacles– "the natural inclinations which may come into conflict with the moral purpose"—virtue, or rather "the imperative, which commands the duty of virtue," includes "besides the notion of constraint, that of an end." Not an end that we have, Kant explains, but one that "we ought to have," an end "which, therefore, pure practical reason has in itself, whose highest, unconditional end (which, however, continues to be a duty) consists in this: that virtue is its own end, and by deserving well of men is also its own reward."

THE ISSUE BETWEEN KANT and Aristotle concerning the good of virtue, as a means or an end, involves the whole of their moral philosophy. It goes to the central conflict between their fundamental principles, which is discussed in the chapters on DUTY and HAPPINESS. Fundamental differences in political philosophy also arise from different views of virtue in relation to the forms of government and the ends of the state.

The ancients, for example, define aristocracy in terms of virtue. The point is not only that aristocracy is a form of government in which the few who are most virtuous rule; it is also that form of government the principle of which is virtue, as liberty is the principle of democracy, and wealth of oligarchy. Montesquieu makes virtue the principle in republican government, in contrast to honor as the principle in monarchies and fear in despotism. "What I distinguish by the name of virtue, in a republic," he explains, "is the love of one's country—that is, the love of equality. It is not a moral, nor a Christian, but a political virtue; and it is the spring which sets republican government in motion, as honor is the spring which gives motion to monarchy." Since for Montesquieu both democracy and aristocracy are forms of republican government, the former rests on virtue as much as the latter.

Agreeing that the conditions Montesquieu sets for republican government "could not exist without virtue," Rousseau criticizes him for failing to see that, "the sovereign authority being everywhere the same, the same principle should be found in every well-constituted state, in a greater or less degree, it is true, according to the form of government." So for Mill, virtue defines the aim of good government itself, without respect to particular forms. "The most important point of excellence which any form of government can possess," he writes, "is to promote the virtue and intelligence of the people themselves."

The virtues which a government promotes, however, may be those of the good citizen rather than the good man. This distinction between civic and moral virtue occupies the ancients, related as it is to the problem of the virtuous man living in a bad society—a problem which Socrates actually faces, as well as discusses, in the *Apology* and the *Crito*.

"The virtue of the citizen," Aristotle writes, "must be relative to the constitution of the state of which he is a member. . . . Hence it is evident that the good citizen need not of necessity possess the virtue which makes a good man." Yet "in some states, the good man and the good citizen are the same."

In this vein Aquinas, considering whether the laws should try to make men good, says of a tyrannical or unjust law that "in so far as it has something of the nature of law, its aim is that the citizens be good." At least "it aims at being obeyed by them; and this," he adds, "is to make them good, not absolutely, but with respect to that particular government." But Aquinas also contemplates the need for disobeying a civil ordinance if it demands too great a sacrifice of virtue by requiring the citizen to violate the natural or the divine law. As Rousseau later says, "a man's duty" takes precedence over "that of a citizen."

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PAGE SECTIONS: When the text is printed in one column, the letters **a** and **b** refer to the upper and lower halves of the page. For example, in **53** JAMES: *Psychology*, **116a-119b**, the passage begins in the upper half of page 116 and ends in the lower half of page 119. When the text is printed in two columns, the letters **a** and **b** refer to the upper and lower halves of the left-hand side of the page, the letters **c** and **d** to the upper and lower halves of the right-hand side of the page. For example, in **7** PLATO: *Symposium*, **163b-164c**, the passage begins in the lower half of the left-hand side of page 163 and ends in the upper half of the right-hand side of page 164.

AUTHOR'S DIVISIONS: One or more of the main divisions of a work (such as PART, BK, CH, SECT) are sometimes included in the reference; line numbers, in brackets, are given in certain cases; *e.g.*, *Iliad*, BK II [265-283] **12d**.

BIBLE REFERENCES: The references are to book, chapter, and verse. When the King James and Douay versions differ in title of books or in the numbering of chapters or verses, the King James version is cited first and the Douay, indicated by a (*D*), follows; *e.g.*, OLD TESTAMENT: *Nehemiah*, 7:45—(*D*) *II Esdras*, 7:46.

SYMBOLS: The abbreviation "esp" calls the reader's attention to one or more especially relevant parts of a whole reference; "passim" signifies that the topic is discussed intermittently rather than continuously in the work or passage cited.

For additional information concerning the style of the references, see the Explanation of Reference Style; for general guidance in the use of *The Great Ideas*, consult the Preface.

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54 FREUD: *Civilization and Its Discontents*, 793a-794a

1*e*. The distinction between virtue and continence: the consequences of the theory of virtue as habit

8 ARISTOTLE: *Topics*, BK IV, CH 5 [125^{b}20–28] 174d-175a
9 ARISTOTLE: *Ethics*, BK II, CH 1 348b,d-349b; BK IV, CH 9 [1128^{b}34–35] 376c; BK VII, CH 1–10 395a-403c
19 AQUINAS: *Summa Theologica*, PART I, Q 95, A 3, REP 4 508a-509b
20 AQUINAS: *Summa Theologica*, PART I–II, Q 55 26a-29d; Q 58, A 3, REP 2 43b-44a; Q 109, A 10, ANS 347a-d; PART III, Q 7, A 2, REP 3 746c-747b
21 DANTE: *Divine Comedy*, HELL, XI [79–90] 15d-16a
25 MONTAIGNE: *Essays*, 200d-204d esp 203a-b; 494d-495a
27 SHAKESPEARE: *Hamlet*, ACT III, SC IV [160–170] 56b
37 FIELDING: *Tom Jones*, 122d-123a
42 KANT: *Pref. Metaphysical Elements of Ethics*, 368d; 378a-b
43 MILL: *Utilitarianism*, 464b-c
44 BOSWELL: *Johnson*, 375b-c
49 DARWIN: *Descent of Man*, 311c
53 JAMES: *Psychology*, 81b-83b

2. The classification of the virtues: the correlative vices

7 PLATO: *Republic*, BK IV, 346a-355c / *Laws*, BK I, 643c
9 ARISTOTLE: *Ethics*, BK I, CH 13–BK II, CH 9 347b-355a,c; BK III, CH 5 [1115^{a}3]–BK VI, CH 13 [1145^{a}14] 361a-394d
17 PLOTINUS: *First Ennead*, TR II, CH 2–3 7b-8a
20 AQUINAS: *Summa Theologica*, PART I–II, QQ 57 62 35a-63a
21 DANTE: *Divine Comedy* esp HELL, XI 15a-16b, PURGATORY, XVII [82–139] 79b-d, PARADISE, IV [28–63] 111a-b
23 HOBBES: *Leviathan*, PART I, 62c-63d
31 SPINOZA: *Ethics*, PART IV, PROP 41–73 437a-447a

2*a*. The division of virtues according to the parts or powers of the soul: the distinction between moral and intellectual virtue; the theory of the cardinal virtues

7 PLATO: *Republic*, BK IV, 346a-355a; BK VII, 390a / *Laws*, BK I, 643c
8 ARISTOTLE: *Physics*, BK VII, CH 3 [246^{a}10–248^{a}8] 329c-330d
9 ARISTOTLE: *Ethics*, BK I, CH 13 347b-348d; BK II, CH 1 [1103^{a}14–18] 348b; BK VI, CH 1–2 387a-388b; CH 12 [1144^{a}1–11] 393c-d; CH 13 394b-d; BK X, CH 8 [1178^{a}8 ^{b}8] 432d-433b / *Politics*, BK VII, CH 14 [1333^{a}16–30] 538a; CH 15 [1334^{b}8–28] 539b-d; BK VIII, CH 2 [1337^{a}33–^{b}1] 542b c
17 PLOTINUS: *First Ennead*, TR II, CH 2–3 7b-8a; TR III, CH 6 11d-12b
18 AUGUSTINE: *City of God*, BK V, CH 20 225b-226a; BK XIX, CH 4 511a-513c
19 AQUINAS: *Summa Theologica*, PART I, Q 113, A 1, REP 2 576a-d
20 AQUINAS: *Summa Theologica*, PART I–II, Q 51, A 3 14b-15a; Q 53, A 1, ANS and REP 3 19d-21a; Q 56 29d-35a; Q 58 41a-45c; Q 61 54d-59d; Q 65, A 1 70b-72a; Q 68, A 8 95c-96c; PART II–II, PROLOGUE 379a-b

2*a*(1) Enumeration and description of the moral virtues

8 ARISTOTLE: *Physics*, BK VII, CH 3 [246^{b}20–247^{a}19] 330a-b
9 ARISTOTLE: *Ethics*, BK I, CH 13 [1103^{a}3-10] 348c-d; BK II, CH 7–8 352d-354d; BK III, CH 5 [1115^{a}3]–BK V, CH 11 [1138^{b}15] 361a-387a,c / *Politics*, BK I, CH 13 [1260^{a}20 28] 454d / *Rhetoric*, BK I, CH 9 [1366^{b}1–22] 608d-609a
12 AURELIUS: *Meditations*, BK III, SECT 6 261a-c; SECT 11 262a-b; BK V, SECT 5 269b; SECT 12 271a; BK VIII, SECT 39 288c
17 PLOTINUS: *First Ennead*, TR II, CH 6–7, 9b-10a
18 AUGUSTINE: *City of God*, BK XIX, CH 4 511a-513c; CH 20 523d-524a
19 AQUINAS: *Summa Theologica*, PART I, Q 113, A 1, REP 2 576a-d
20 AQUINAS: *Summa Theologica*, PART I–II, Q 60 49d-54d; Q 64, AA 1–2 66d-68b
27 SHAKESPEARE: *Macbeth*, ACT IV, SC III [91–100] 304b-c
31 SPINOZA: *Ethics*, PART IV, PROP 41–72 437a-446c
36 SWIFT: *Gulliver*, PART IV, 165b-166a
42 KANT: *Fund. Prin. Metaphysic of Morals*, 256a-b / *Pref. Metaphysical Elements of Ethics*, 368b-369a
51 TOLSTOY: *War and Peace*, BK V, 200c-d

2*a*(2) Enumeration and description of the intellectual virtues

8 ARISTOTLE: *Physics*, BK VII, CH 3 [247^{b}1–248^{a}8] 330b-d
9 ARISTOTLE: *Ethics*, BK I, CH 13 [1103^{a}3–10] 348c-d; BK VI 387a-394d
19 AQUINAS: *Summa Theologica*, PART I, Q 14, A 1, REP 2 75d-76c
20 AQUINAS: *Summa Theologica*, PART I–II, Q 50, A 4 9a-10b; Q 57 35a-41a; Q 64, A 3 68b-69b
23 HOBBES: *Leviathan*, PART I, 66c-71b
31 SPINOZA: *Ethics*, PART IV, PROP 25–28 430d-431c

2b. The distinction between natural and supernatural virtues

18 AUGUSTINE: *City of God*, BK XIX, CH 4, 513b-c
20 AQUINAS: *Summa Theologica*, PART I-II, Q 51, A 4 15a-d; Q 55, A 4, ANS and REP 6 28c-29d; Q 62, AA 1-2 60a-61b; Q 63, A 2, ANS and REP 2 64b-65a; AA 3-4 65a-66c; Q 68, AA 1-2 87c-90c; A 8 95c-96c; PART II-II, PROLOGUE 379a-b
23 HOBBES: *Leviathan*, PART II, 149c-d

2c. The appearances of virtue: imperfect or conditional virtues; the counterfeits of virtue; natural or temperamental dispositions which simulate virtue

6 HERODOTUS: *History*, BK IX, 303c-304a
7 PLATO: *Phaedo*, 225d-226c
9 ARISTOTLE: *Ethics*, BK IV, CH 9 375d-376a,c; BK VI, CH 12 [1144^{a}11]-CH 13 [1145^{a}2] 393d-394d; BK VII, CH 10 [1152^{a}8-24] 403a-b / *Rhetoric*, BK I, CH 9 [1367^{a}36-^{b}7] 610a-b
20 AQUINAS: *Summa Theologica*, PART I-II, Q 51, A 1, ANS 12b-13c; Q 63, A 1 63a-64a; Q 65, A 1, REP 1 70b-72a; PART II-II, Q 23, A 7, ANS 487d-488d
23 HOBBES: *Leviathan*, PART I, 68a
25 MONTAIGNE: *Essays*, 103c-104d; 160c-161a; 200d-204d esp 203a-b; 336c; 394a-395b; 494d-495a
29 CERVANTES: *Don Quixote*, PART II, 391b-d
40 GIBBON: *Decline and Fall*, 435b-d; 534c
42 KANT: *Pure Reason*, 169b [fn 1] / *Fund. Prin. Metaphysic of Morals*, 256a-b; 258b-c / *Practical Reason*, 325c-327a / *Pref. Metaphysical Elements of Ethics*, 368d-369a
44 BOSWELL: *Johnson*, 126a-b
54 FREUD: *War and Death*, 759b-c

3. The order and connection of the virtues

3a. The equality and inequality of the virtues: the hierarchy of virtue and the degrees of vice

7 PLATO: *Protagoras*, 48a-50d / *Republic*, BK IV, 346a-355a / *Statesman*, 605d-608d / *Laws*, BK I, 643a-652d esp 643b-d; BK III, 674a-b; BK XII, 795c-796b
8 ARISTOTLE: *Topics*, BK III, CH 2 [117^{a}26-^{b}2] 164a; [118^{a}16-17] 165a
9 ARISTOTLE: *Ethics*, BK IV, CH 3 [1123^{b}28-1124^{a}4] 370d; BK V, CH 1 [1129^{b}25-1130^{a}13] 377b-c; BK VI, CH 7 390a-d passim; CH 12-13 393b-394d; BK X, CH 6-8 430d-434a / *Politics*, BK II, CH 9 [1271^{b}1-9] 467d; BK III, CH 7 [1279^{a}40-^{b}2] 476d
12 AURELIUS: *Meditations*, BK VIII, SECT 39 288c; BK XI, SECT 10 303b-c
17 PLOTINUS: *First Ennead*, TR II, CH 2-3 7b-8a; CH 7 9c-10a; TR III, CH 6 11d-12b
18 AUGUSTINE: *City of God*, BK XIX, CH 20, 524a / *Christian Doctrine*, BK III, CH 10, 662a
20 AQUINAS: *Summa Theologica*, PART I-II, Q 61, AA 3-4 56b-58b; Q 62, A 4 62b-63a; Q 66 75b-81b; Q 68, AA 7-8 94c-96c; PART II-II, Q 4, A 7 407d-409a
21 DANTE: *Divine Comedy* esp HELL, XI 15a-16b, PURGATORY, XVII [82-139] 79b-d, PARADISE, IV [28-63] 111a-b
25 MONTAIGNE: *Essays*, 162c-163a; 183a-c; 200d-205b
27 SHAKESPEARE: *Coriolanus*, ACT II, SC II [86-91] 365a
31 SPINOZA: *Ethics*, PART IV, PROP 19-28 429d-431c esp PROP 22 430b-c, PROP 28 431c
33 PASCAL: *Pensées*, 102 192b
42 KANT: *Pref. Metaphysical Elements of Ethics*, 368c-d
43 MILL: *Utilitarianism*, 473c-476a,c
44 BOSWELL: *Johnson*, 251a
49 DARWIN: *Descent of Man*, 314c-316a
51 TOLSTOY: *War and Peace*, BK V, 200c; 202d; BK VI, 246a-d

3b. The independence or interdependence of the virtues

OLD TESTAMENT: *Proverbs*, 8:20; 10:31; 15:21; 28:1
APOCRYPHA: *Wisdom of Solomon*, 1:4-6—(*D*) OT, *Book of Wisdom*, 1:4-6
NEW TESTAMENT: *Galatians*, 5:22-23 / *II Peter*, 1:3-9
7 PLATO: *Protagoras*, 48b-50b / *Meno*, 183d-184c / *Republic*, BK IV, 350a-355a / *Statesman*, 605d-608d / *Laws*, BK I, 642c-646a; BK III, 674a-b; BK XII, 795c-796b
9 ARISTOTLE: *Ethics*, BK IV, CH 3 [1123^{b}28-1124^{a}4] 370d; BK VI, CH 5 389a-c; CH 7 390a-d passim; CH 13 394b-d; BK VII, CH 10 [1152^{a}7-8] 403a
12 AURELIUS: *Meditations*, BK IX, SECT 1 291a-c
17 PLOTINUS: *First Ennead*, TR III, CH 6 11d-12b
18 AUGUSTINE: *City of God*, BK XIX, CH 20, 524a
20 AQUINAS: *Summa Theologica*, PART I-II, Q 56, A 2, REP 2-3 30c-31a; Q 57, A 5 39a-40a; Q 58, A 2, REP 2-3 42a-43a; AA 4-5 44a-45d; Q 65 70a-75a; Q 68, A 5 92c-93c; PART II-II, Q 181, A 2 617d-618c
25 MONTAIGNE: *Essays*, 204c-d
29 CERVANTES: *Don Quixote*, PART II, 256c-d; 291d
31 SPINOZA: *Ethics*, PART IV, PROP 19-24 429d-430d
32 MILTON: *Comus* [331-489] 40b-44a / *Paradise Lost*, BK IX [335-339] 254b
40 GIBBON: *Decline and Fall*, 534c
42 KANT: *Pref. Metaphysical Elements of Ethics*, 368c-d; 377d
43 MILL: *Utilitarianism*, 469a-b
44 BOSWELL: *Johnson*, 160b; 251a

4. The natural causes or conditions of virtue

4a. Natural endowments: temperamental dispositions toward virtue or vice; the seeds or nurseries of virtue

5 EURIPIDES: *Hecuba* [582–603] 357d-358a / *Iphigenia at Aulis* [543–572] 429d-430a
6 THUCYDIDES: *Peloponnesian War*, BK II, 396d-397a
7 PLATO: *Protagoras*, 46d-47b; 59a / *Meno* 174a-190a,c esp 184b-c, 190a,c / *Republic*, BK VII, 389d-390b / *Timaeus*, 474c-d / *Statesman*, 607b-608d
9 ARISTOTLE: *Ethics*, BK II, CH I [1103^{a}14–^{b}2] 348b,d-349a; BK VI, CH II [1143^{b}7–13] 393a; CH 13 [1144^{b}1–1145^{a}2] 394b-d; BK X, CH 9 [1179^{a}33–^{b}26] 434a-c / *Politics*, BK II, CH 5 458a-460a esp [1263^{a}38–^{b}26] 458c-d; BK VII, CH 13 [1332^{a}39–^{b}10] 537a-b; CH 15 [1334^{b}8–28] 539b-d
14 PLUTARCH: *Alcibiades*, 156c-d / *Coriolanus*, 174b,d 175a / *Demetrius*, 726c
17 PLOTINUS: *First Ennead*, TR III, CH 1–3 10a-11a
20 AQUINAS: *Summa Theologica*, PART I II, Q 51, A 1 12b 13c; Q 63, A 1 63a-64a; A 2, RLP 3 64b-65a; A 3, ANS and REP 3 65a-d; Q 94, A 3 223a c
21 DANTE: *Divine Comedy*, PURGATORY, VII [112 123] 63d-64a; XVII [91–105] 79b-c; XXX [109 115] 100c-d; PARADISE, VIII [91–148] 117d-118c
22 CHAUCER: *Tale of Wife of Bath* [6691 6788] 274b-276a
23 HOBBES: *Leviathan*, PART I, 86b; 96a-b
25 MONTAIGNE: *Essays*, 43a c; 200d-204d; 264b-265a; 307c-308a; 337b-c; 381b-c; 391c-392a
27 SHAKESPEARE: *Hamlet*, ACT I, SC IV [23–37] 36a b / *All's Well That Ends Well*, ACT I, SC I [70–81] 143a; ACT II, SC III [124–151] 152d-153a
28 HARVEY: *On Animal Generation*, 455d-456a
30 BACON: *Advancement of Learning*, 69d-70a; 76d 78d
31 SPINOZA: *Ethics*, PART V, PROP 4, SCHOL 453b-d
38 ROUSSEAU: *Inequality*, 330d-331c; 333c-d; 337d-338c; 343a-345c; 362a-d / *Political Economy*, 375d-376b
40 GIBBON: *Decline and Fall*, 192b
42 KANT: *Fund. Prin. Metaphysic of Morals*, 263d-264a / *Practical Reason*, 303b-304b / *Judgement*, 521c-523c
43 MILL: *Representative Government*, 367d-368a / *Utilitarianism*, 459c-460a; 469b-470c
44 BOSWELL: *Johnson*, 413a-b
46 HEGEL: *Philosophy of Right*, PART III, par 150 56c-57a; ADDITIONS, 96 132c
49 DARWIN: *Descent of Man*, 310a-d; 318a-c
52 DOSTOEVSKY: *Brothers Karamazov*, BK II, 19d-20b; 38d-40c; BK III, 53b-54b
53 JAMES: *Psychology*, 886b-888a
54 FREUD: *War and Death*, 757d-758a; 758d-759a

4b. The role of teaching in the spheres of moral and intellectual virtue

OLD TESTAMENT: *Proverbs*, 4:1–4,10–11; 5:7–13; 6:23; 10:17; 13:1; 15:5
APOCRYPHA: *Ecclesiasticus*, 7:23; 30:3–(*D*) OT, *Ecclesiasticus*, 7:25; 30:3
NEW TESTAMENT: *II Timothy*, 3:16 / *Titus*, 2:1–3:2
5 EURIPIDES: *Suppliants* [838–917] 265d-266b / *Hecuba* [582–603] 357d-358a / *Iphigenia at Aulis* [543–572] 429d-430a
5 ARISTOPHANES: *Clouds* 488a-506d esp [882–1104] 499b-502a
7 PLATO: *Laches* 26a-37d esp 30a-b / *Protagoras* 38a-64d esp 43a-47c, 64a-d / *Euthydemus* 65a-84a,c / *Symposium*, 169c-170a / *Meno* 174a-190a,c esp 183b-190a,c / *Gorgias*, 258b-259c; 290b-291a / *Republic*, BK II-IV, 320c-355a; BK VII 388a-401d esp 389d-398c / *Timaeus*, 474c-d / *Sophist*, 556c-558d / *Statesman*, 605d-608d / *Laws*, BK I, 649b-d; BK II, 657c-658b; BK V, 688c-689c; BK XII, 796b-799a / *Seventh Letter*, 801c-802d; 809c-810d esp 810c-d
9 ARISTOTLE: *Ethics*, BK I, CH 4 [1095^{b}4–13] 340c-d; CH 9 345a-c; BK II, CH 1 [1103^{a}14–17] 348b; CH 4 350d-351b; BK X, CH 9 [1179^{a}33–^{b}24] 434a-435c / *Politics*, BK II, CH 7 [1266^{b}27–36] 462b-c; BK IV, CH 11 [1295^{b}14–18] 495d; BK VII, CH 13 [1332^{a}39–^{b}10] 537a-b; CH 15 [1334^{b}8–28] 539b-d; BK VIII 542a-548a,c esp CH 2 542b-d
12 EPICTETUS: *Discourses*, BK I, CH 4 108d-110a; BK III, CH 1 175a-177c
14 PLUTARCH: *Pericles*, 121a-122b / *Alcibiades*, 156c-158b / *Coriolanus*, 174d-175a / *Timoleon*, 195a-b / *Cato the Younger*, 623a b / *Demetrius*, 726a-d / *Dion*, 782c-788b
17 PLOTINUS: *First Ennead*, TR III, CH 2 10d
18 AUGUSTINE: *Christian Doctrine*, BK IV, CH 27–30 696a-697d
20 AQUINAS: *Summa Theologica*, PART I II, Q 95, A 1, ANS 226c-227c; A 3 228c-229b
23 HOBBES: *Leviathan*, PART I, 66c-d; 68b
25 MONTAIGNE: *Essays*, 43a-c; 55d-62a esp 60c-61c; 69d-72b; 321a-c; 391c-392a
30 BACON: *Advancement of Learning*, 69d-70a
31 SPINOZA: *Ethics*, PART IV, APPENDIX, IX 448a
36 STERNE: *Tristram Shandy*, 250b-251a
38 ROUSSEAU: *Inequality*, 326c-d; 345b-c / *Political Economy*, 373c-374a; 375d-376b
40 GIBBON: *Decline and Fall*, 34d; 338d-339a; 435b-d
42 KANT: *Fund. Prin. Metaphysic of Morals*, 260d-261d; 263a-b; 264b [fn 1]; 278a-b / *Practical Reason*, 327a-d; 356c-360d / *Pref. Metaphysical Elements of Ethics*, 365b-d; 377a / *Intro. Metaphysic of Morals*, 387d-388a / *Judgement*, 513d-514b
43 MILL: *Utilitarianism*, 456a-b; 457c-461c passim
44 BOSWELL: *Johnson*, 413a-b

46 HEGEL: *Philosophy of Right*, PART III, par 187 65a-c; ADDITIONS, 97 132c-133a
49 DARWIN: *Descent of Man*, 593a
51 TOLSTOY: *War and Peace*, BK I, 47b-48d; BK VI, 244d-245d
52 DOSTOEVSKY: *Brothers Karamazov*, BK IV, 83a-88a passim; EPILOGUE, 411b 412d
53 JAMES: *Psychology*, 274b-275a
54 FREUD: *Sexual Enlightenment of Children*, 122a,c / *General Introduction*, 573c-574b; 592b-c / *New Introductory Lectures*, 870a-c

4c. Training or practice as cause of virtue or vice: the process of habit formation

OLD TESTAMENT: *Proverbs*, 22:6 / *Jeremiah*, 13:23—(*D*) *Jeremias*, 13:23
APOCRYPHA: *Ecclesiasticus*, 30:8--(*D*) OT, *Ecclesiasticus*, 30:8
5 EURIPIDES: *Suppliants* [838-917] 265d-266b / *Electra* [367-395] 330c-d / *Iphigenia at Aulis* [543-572] 429d-430a
7 PLATO: *Meno* 174a-190a,c esp 174a, 190a / *Republic*, BK III, 329c-331c; BK VII, 389d-390b; 391c-d / *Timaeus*, 474d-475d / *Theaetetus*, 518b / *Laws*, BK I, 649b-d; BK II, 653a-c; 657c-658b
8 ARISTOTLE: *Categories*, CH 10 [13^{a}16-31] 18d
9 ARISTOTLE: *Ethics*, BK I, CH 4 [1095^{b}4-13] 340c-d; CH 9 345a-c; BK II, CH 1 348b,d-349b; CH 2 [1104^{a}26 ^{b}3] 349d-350a; CH 4 350d-351b; BK VI, CH 5 [1140^{b}11-19] 389b-c; CH 11 [1143^{b}7 13] 393a; BK VII, CH 10 [1152^{a}25-33] 403b; BK IX, CH 9 [1170^{a}4-12] 423d; BK X, CH 9 [1179^{a}33-1180^{b}24] 434a-435c / *Politics*, BK VII, CH 13 [1332^{a}39-^{b}10] 537a-b; CH 15 [1334^{b}8-28] 539b-d; BK VIII, CH 1 [1337^{a}19-21] 542b
12 EPICTETUS: *Discourses*, BK I, CH 2 106d-108b; BK II, CH 18 161a-162b; BK III, CH 12 187b-188b; BK IV, CH 9, 238c-d
12 AURELIUS: *Meditations*, BK V, SECT 16 271c-d
20 AQUINAS: *Summa Theologica*, PART I-II, Q 51, AA 2-3 13c-15a; Q 63, A 2 64b-65a; Q 71, A 4, ANS 108b-109a
23 HOBBES: *Leviathan*, PART I, 66c-d
25 MONTAIGNE: *Essays*, 43a-c; 176c-177a; 200d-205b esp 202d-203a; 390b-393a
27 SHAKESPEARE: *Hamlet*, ACT III, SC IV [140-170] 56a-b
29 CERVANTES: *Don Quixote*, PART II, 332c
30 BACON: *Advancement of Learning*, 69d-70a; 78d-81c
35 LOCKE: *Human Understanding*, BK II, CH XXI, SECT 71 197b-198a
42 KANT: *Practical Reason*, 327a-d / *Pref. Metaphysical Elements of Ethics*, 368d; 374c / *Judgement*, 513d-514b
43 MILL: *Liberty*, 294d-295a / *Utilitarianism*, 449c-450a
46 HEGEL: *Philosophy of Right*, PART III, par 150-152 56c-57b; ADDITIONS, 96-97 132c-133a
49 DARWIN: *Descent of Man*, 305a; 311c-d; 313d-314a; 318a; 322a
51 TOLSTOY: *War and Peace*, BK I, 47b-48d; BK IX, 369c-d
53 JAMES: *Psychology*, 78b-83b esp 81b-83b; 433a-434a; 711b-712a; 751b-752a

4d. The role of the family and the state in the development of moral virtue

4d(1) The influence of parental authority on the formation of character

OLD TESTAMENT: *Exodus*, 12:24 27 / *Deuteronomy*, 4:9-10; 6:6-7; 11:18 19 / *Proverbs*, 1:8 9; 3:12; 13:1 13; 6:20 24; 13:1,24; 15:5; 19:18; 22:15; 23:13-24:34; 29:15,17
APOCRYPHA: *Tobit*, 4:1-19--(*D*) OT, *Tobias*, 4:1-20 / *Ecclesiasticus*, 7:23-24; 30:1-13—(*D*) OT, *Ecclesiasticus*, 7:25-26; 30:1 13
NEW TESTAMENT: *Ephesians*, 6:4 / *Colossians*, 3:21 / *I Thessalonians*, 2:11 / *Hebrews*, 12.7-9
5 EURIPIDES: *Suppliants* [838 917] 265d-266b
7 PLATO: *Laches*, 26a-30c / *Protagoras*, 45d-47a / *Meno*, 186a-187b / *Republic*, BK V, 366a c / *Laws*, BK V, 687d-688a; BK IX, 745d-746a
9 ARISTOTLE: *Ethics*, BK X, CH 9 [1180^{a}14 ^{b}12] 434d-435b / *Politics*, BK I, CH 13 454a 455a,c passim, esp [1260^{b}8-19] 455c; BK IV, CH 11 [1295^{b}14-18] 495d; BK VII, CH 17 [1336^{a}23-^{b}3] 541b-c
12 AURELIUS: *Meditations*, BK I 253a-256d esp SECT 7-9 253b-254a, SECT 11 254b, SECT 14-16 254b-255d
13 VIRGIL: *Aeneid*, BK V [701-748] 205b-206b
14 PLUTARCH: *Marcus Cato*, 286c-287b
18 AUGUSTINE: *Confessions*, BK I, par 14 15 4c-5a; BK II, par 2 8 9b-10d; BK III, par 19-20 18b-19a; BK IX, par 19 22 67a-d
20 AQUINAS: *Summa Theologica*, PART I-II, Q 95, A 1, ANS 226c-227c; Q 105, A 4, ANS 318b-321a
22 CHAUCER: *Physician's Tale* [12,006-036] 367b-368a
25 MONTAIGNE: *Essays*, 16c-d; 43a-c; 63d-64d; 66c 67a; 184a-187d; 414a-d
29 CERVANTES: *Don Quixote*, PART II, 251b
31 SPINOZA: *Ethics*, PART III, PROP 55, SCHOL 413b-d; DEF 27, EXPL 419a-b
35 LOCKE: *Civil Government*, CH VI, SECT 55-69 36c-40b passim
36 SWIFT: *Gulliver*, PART I, 29b-31a; PART IV, 166b
38 MONTESQUIEU: *Spirit of Laws*, BK IV, 15c; BK V, 22d-23a
38 ROUSSEAU: *Inequality*, 326c-d; 327c-328a / *Political Economy*, 376b-377a
39 SMITH: *Wealth of Nations*, BK V, 337c-d
42 KANT: *Science of Right*, 420b-421c
44 BOSWELL: *Johnson*, 199d-200d; 314b-d; 372c
46 HEGEL: *Philosophy of Right*, PART III, par 173-175 61a-d; par 239 76d; ADDITIONS, 111 134d-135a; 147 140c

(4d. The role of the family and the state in the development of moral virtue. 4d(1) The influence of parental authority on the formation of character.)

52 DOSTOEVSKY: *Brothers Karamazov*, BK XII, 369a-373c passim; 395a-398d passim
54 FREUD: *Origin and Development of Psychoanalysis*, 17d-18a / *Narcissism*, 408b / *Ego and Id*, 704d-707d / *Civilization and Its Discontents*, 794c-795a esp 795b [fn 2] / *New Introductory Lectures*, 834b-c; 844b-c; 876c

4d(2) The moral use of rewards and punishments: the role of precept and counsel, praise and blame

OLD TESTAMENT: *Psalms*, 94:10-13; 141:5—(*D*) *Psalms*, 93:10-13; 140:5 / *Proverbs*, 1:8-9,20-33; 3:12; 4:1-4; 5:7-13; 6:23; 9:7-8; 10:17; 13:1, 18,24; 15:5,10,12,31-32; 17:10; 19:18,25; 20:30; 22:15; 23:13 14; 25:12; 29:15,17 / *Isaiah*, 28:7-13—(*D*) *Isaias*, 28:7-13
APOCRYPHA: *Wisdom of Solomon*, 12:25-26—(*D*) OT, *Book of Wisdom*, 12:25-26 / *Ecclesiasticus*, 7:23; 19:13-14; 30:1-13—(*D*) OT, *Ecclesiasticus*, 7:25; 19:13-14; 30:1-13
NEW TESTAMENT: *Luke*, 17:3 / *Ephesians*, 5:11-13 / *I Thessalonians*, 2:11-13 / *I Timothy*, 4:13; 5:1-2,20 / *II Timothy*, 3:16; 4:2 / *Titus*, 2 / *Hebrews*, 3:13; 10:24-25; 12:5-11
5 AESCHYLUS: *Eumenides* [490-565] 86b-87a; [681-710] 88b-c
5 SOPHOCLES: *Antigone* [1348-1353] 142d
5 ARISTOPHANES: *Clouds* [1303-1464] 504b-506c
6 THUCYDIDES: *Peloponnesian War*, BK II, 399a; 400d 401a
7 PLATO: *Protagoras*, 45b-d / *Gorgias*, 283b-285a / *Republic*, BK II, 313b-d; BK IX, 426d-427a / *Laws*, BK I, 643d; BK V, 688c-689a; BK IX, 745a-746a; BK X, 760d-761b
9 ARISTOTLE: *Ethics*, BK II, CH 3 [1104^{b}14-18] 350a; BK III, CH 5 [1113^{b}21-1114^{a}2] 359d-360a; BK X, CH 9 [1179^{b}4-1180^{a}24] 434b-435a
14 PLUTARCH: *Lycurgus*, 41a-42b; 45c / *Lysander*, 354d
15 TACITUS: *Annals*, BK III, 57d-58b
18 AUGUSTINE: *Confessions*, BK I, par 14-16 4c-5b; par 19-23 5d-7a / *City of God*, BK XIX, CH 15-16 521a-522a
19 AQUINAS: *Summa Theologica*, PART I, Q 48, A 6, CONTRARY and REP 1 264a-d
20 AQUINAS: *Summa Theologica*, PART I-II, Q 87, A 2, REP 1 186c-187b; Q 92, A 2, REP 4 214d-215a,c; Q 95, A 1 226c-227c
22 CHAUCER: *Tale of Melibeus* 401a-432a esp par 62-68 427b-429a
23 HOBBES: *Leviathan*, PART II, 141a-b
25 MONTAIGNE: *Essays*, 16c-d; 43a-c; 66c; 73c-74a; 181d-183a; 184d-185d; 300c-306d esp 306a-c
30 BACON: *Advancement of Learning*, 69d-70a; 79b-c
31 SPINOZA: *Ethics*, PART III, DEF 27, EXPL 419a-b
35 LOCKE: *Human Understanding*, BK I, CH II, SECT 5-6 105a-c; SECT 13 107d-108c; BK II, CH XXVIII, SECT 5-12 229c-231c passim, esp SECT 6 229d
36 SWIFT: *Gulliver*, PART I, 28b
37 FIELDING: *Tom Jones*, 41a-c
38 MONTESQUIEU: *Spirit of Laws*, BK VI, 37d-38b; 39c-40c; BK VII, 47c-d; BK XII, 86b; BK XIX, 139c
38 ROUSSEAU: *Inequality*, 360b-361a / *Political Economy*, 372b-373b; 376c-377a / *Social Contract*, BK IV, 434b-435a
40 GIBBON: *Decline and Fall*, 92a-b
42 KANT: *Fund. Prin. Metaphysic of Morals*, 264b [fn 1]; 270d-271a / *Practical Reason*, 325d-327d / *Intro. Metaphysic of Morals*, 383a-b / *Judgement*, 513d-514b
43 FEDERALIST: NUMBER 72, 217a-b
43 MILL: *Liberty*, 302d-312a passim, esp 306c-307a / *Utilitarianism*, 457c-461c passim, esp 458a-b; 464b-c
44 BOSWELL: *Johnson*, 199d-200d; 314b-d; 363a-b
49 DARWIN: *Descent of Man*, 305a; 310c-d; 322a-c; 592d; 593b
51 TOLSTOY: *War and Peace*, EPILOGUE I, 655c-656b
52 DOSTOEVSKY: *Brothers Karamazov*, BK II, 28d-32a; EPILOGUE, 411b-412d
53 JAMES: *Psychology*, 203a-204b
54 FREUD: *War and Death*, 757c; 758c-759b / *Civilization and Its Discontents*, 792b-795b / *New Introductory Lectures*, 876c-d

4d(3) The guidance of laws and customs: the limits of positive law with respect to commanding virtue and prohibiting vice

5 AESCHYLUS: *Eumenides* [490-565] 86b-87a; [681-710] 88b-c
5 EURIPIDES: *Orestes* [491-525] 399a-b
6 HERODOTUS: *History*, BK I, 3a; BK VII, 232d-233a
6 THUCYDIDES: *Peloponnesian War*, BK II, 396c-d; BK IV, 478d-479b
7 PLATO: *Protagoras*, 45b-47c / *Gorgias*, 271b-272b / *Republic*, BK II, 314b-c; BK II-IV, 320c-355a; BK VI, 377a-379c / *Statesman*, 607b-608d / *Laws*, BK I, 642d-648c; 650a-b; BK II, 653a-662a; BK VII, 724c-730d; BK VIII, 735c-738c; BK XII, 792c-d / *Seventh Letter*, 800b-c; 806b-c
9 ARISTOTLE: *Ethics*, BK II, CH 1 [1103^{b}3-6] 349a; BK V, CH 1 [1129^{b}12-24] 377a; CH 2 [1130^{b}7-29] 378a-b / *Politics*, BK II, CH 5 458a-460a passim, esp [1263^{a}38-^{b}26] 458c-d; CH 7 [1266^{b}14-1267^{a}17] 462b-d; CH 9 [1269^{b}13-1270^{a}14] 465d-466b; BK VII, CH 13-17 536b-542a,c
14 PLUTARCH: *Lycurgus* 32a-48d / *Lycurgus-Numa* 61b,d-64a,c / *Solon*, 70c-74b / *Lysander*, 361a-d / *Cleomenes*, 659d-660a
15 TACITUS: *Annals*, BK III, 57b-58d

18 AUGUSTINE: *Confessions*, BK VI, par 2 35a-c / *Christian Doctrine*, BK III, CH 12 662c-663c
20 AQUINAS: *Summa Theologica*, PART I-II, Q 92, A 1 213c-214c; A 2, REP 4 214d-215a,c; Q 95, A 1 226c-227c; Q 96, AA 2-3 231c-233a; Q 98, A 6, ANS 244c-245b; Q 99, A 2 246b-247a; A 6 250a-251a; Q 100, A 9 261b-262b
21 DANTE: *Divine Comedy*, PURGATORY, VI [58-151] 61b-62c; XVI [85-114] 77d-78a; PARADISE, XV [97] XVI [154] 129b-132a
23 HOBBES: *Leviathan*, PART II, 131a-b
25 MONTAIGNE: *Essays*, 131b-132a
27 SHAKESPEARE: *Measure for Measure*, ACT I, SC II [120-139] 176b-c; SC III 177b-d; ACT II, SC I [225-270] 181a-c; ACT III, SC II [91-128] 190c-d
30 BACON: *Advancement of Learning*, 78d-81c
32 MILTON: *Paradise Lost*, BK XII [285-314] 325b-326a / *Areopagitica* 381a-412b esp 383a-395b
35 LOCKE: *Human Understanding*, 90a-d; BK I, CH II, SECT 8 105d-106a; SECT 20 110c-111a; BK II, CH XXVIII, SECT 9-13 230b-231c
35 HUME: *Human Understanding*, SECT VIII, DIV 76, 485a
38 MONTESQUIEU: *Spirit of Laws*, BK IV, 13b,d-17b; BK V, 18b,d-19d; 21d-25a; BK VII, 44d-45c; 47c-50c; BK XII, 87c 88a; BK XIV, 105a-106b; BK XVI, 119d; BK XIX, 137c-142d
38 ROUSSEAU: *Political Economy*, 372a-373b / *Social Contract*, BK IV, 434b-435a
40 GIBBON: *Decline and Fall*, 92c-d; 100c-101b; 291d-292a
41 GIBBON: *Decline and Fall*, 93c-94a; 389d
42 KANT: *Pref. Metaphysical Elements of Ethics*, 366d; 367b-c; 373b-c / *Intro. Metaphysic of Morals*, 383a-b; 387b; 387d 388a / *Science of Right*, 397c-398a
43 CONSTITUTION OF THE U.S.: AMENDMENTS, XVIII 19c-d; XXI 20c
43 FEDERALIST: NUMBER 12, 58b-c
43 MILL: *Liberty*, 269b-271d; 272d-273d; 278a-281c passim; 286b-287a; 295d-296b; 300a-301c; 302d-323a,c / *Representative Government*, 335a-b; 348c-350a / *Utilitarianism*, 456a-d; 457c-458b; 467b-468a
44 BOSWELL: *Johnson*, 197a-b; 222d-223b; 301c-d
46 HEGEL: *Philosophy of Right*, PART I, par 38 21d; PART III, par 150 56c-57a; par 234 75d-76a / *Philosophy of History*, INTRO, 166b
49 DARWIN: *Descent of Man*, 317a-d
52 DOSTOEVSKY: *Brothers Karamazov*, BK II, 28d-32a
53 JAMES: *Psychology*, 190b-191a
54 FREUD: *War and Death*, 758c-d

4d(4) The influence on moral character of poetry, music, and other arts: the guidance of history and example

APOCRYPHA: *Wisdom of Solomon*, 4:1-2—(*D*) OT, *Book of Wisdom*, 4:1-2
NEW TESTAMENT: *I Corinthians*, 8:6-13; 10:5-11 / *Philippians*, 3:17 / *II Thessalonians*, 3:7-9 / *I Timothy*, 5:20 / *Hebrews*, 4:11 / *I Peter*, 2:21-23 / *II Peter*, 2:6 / *Jude*, 7
5 EURIPIDES: *Suppliants* [881-887] 266a-b
5 ARISTOPHANES: *Clouds* 488a-506d esp [882-1104] 499b-502a / *Frogs* [1008-1098] 576b-577c / *Thesmophoriazusae* 600a-614d esp [330-567] 604b-606c
7 PLATO: *Protagoras*, 46b-c / *Republic*, BK II-IV, 320c-355a; BK VII 388a-401d esp 389d-398c; BK VIII, 409d; BK X, 427c 434c / *Timaeus*, 455b-c / *Laws*, BK II, 653a 662a; BK III, 675c-676b; BK VII, 724c-730d
9 ARISTOTLE: *Politics*, BK VIII, CH 2-7 542b-548a,c
12 AURELIUS: *Meditations*, BK XI, SECT 26 306b
14 PLUTARCH: *Lycurgus*, 33d-34a; 43b-d / *Solon*, 76a / *Pericles*, 121a-122b / *Timoleon*, 195a-b / *Demetrius*, 726a-d
15 TACITUS: *Annals*, BK XIV, 146b-c
17 PLOTINUS: *First Ennead*, TR III, CH 1-2, 10c-d
18 AUGUSTINE: *Confessions*, BK I, par 20-27 6a-7d; BK III, par 2-6 13c-14c; BK X, par 49-53 83c-85a / *City of God*, BK I, CH 31 33 147d-149a; BK II, CH 8-14 153d-157c; BK IV, CH 26-27 202a-203c
21 DANTE: *Divine Comedy*, PARADISE, XVII [100-142] 133a-c
22 CHAUCER: *L'Envoi* 550a-b
25 MONTAIGNE: *Essays*, 197a-199c; 455d-456a
26 SHAKESPEARE: *Merchant of Venice*, ACT V, SC I [66-110] 431b-d
29 CERVANTES: *Don Quixote* esp PART I, xiiic-d, 1a 3b, 13b-16c, 183d-187c, 189d 191d, PART II, 252a-b, 322a-c, 427a-429d
30 BACON: *Advancement of Learning*, 38c-39d; 79c-80a; 85a-b
32 MILTON: *Areopagitica*, 385a-386b
33 PASCAL: *Pensées*, II 173b-174a
36 STERNE: *Tristram Shandy*, 250b-251a
38 MONTESQUIEU: *Spirit of Laws*, BK IV, 17b 18d
39 SMITH: *Wealth of Nations*, BK V, 337d-338c
40 GIBBON: *Decline and Fall*, 94a-b; 284a-b; 449a-b
41 GIBBON: *Decline and Fall*, 225a-c; 311b
42 KANT: *Fund. Prin. Metaphysic of Morals*, 263a-b; 266d [fn 2] / *Practical Reason*, 327a-d / *Judgement*, 513d-514b; 523a-c; 587a
44 BOSWELL: *Johnson*, 116b; 259b-c; 308b-d
46 HEGEL: *Philosophy of History*, INTRO, 155c-d
53 JAMES: *Psychology*, 826b-827a

4e. The moral quality of human acts

4e(1) The distinction between human or moral acts and the nonvoluntary or reflex acts of a man

7 PLATO: *Protagoras*, 45b-c / *Timaeus*, 474b-d
9 ARISTOTLE: *Ethics*, BK I, CH 13 [1102^{a}13-17] 347c; [1102^{a}34-^{b}13] 347d-348a; BK III, CH 1 355b,d-357b; CH 5 359c-361a; CH 12 [1119^{a}21-34] 365d-366a / *Rhetoric*, BK I, CH 10 [1368^{b}7-12] 611d

(4e. The moral quality of human acts. 4e(1) The distinction between human or moral acts and the nonvoluntary or reflex acts of a man.)

12 AURELIUS: *Meditations*, BK XI, SECT 18 304b-305b
18 AUGUSTINE: *Confessions*, BK I, par 19 5d
19 AQUINAS: *Summa Theologica*, PART I-II, Q 1, AA 1-3 609b-612a; Q 6 644a-651c; Q 8, A 6, ANS 697d-698c; Q 21, A 2 718a-d
21 DANTE: *Divine Comedy*, PURGATORY, XVI [52-81] 77b-c
23 HOBBES: *Leviathan*, PART I, 61a-b
27 SHAKESPEARE: *Hamlet*, ACT V, SC II [236-255] 70b-c
31 SPINOZA: *Ethics*, PART IV, DEF 8 424b-c; PROP 1-18 424c-429d
38 ROUSSEAU: *Inequality*, 337d-338a
42 KANT: *Pure Reason*, 164b-c; 235c-d / *Fund. Prin. Metaphysic of Morals*, 282b-283d / *Practical Reason*, 304a-d / *Pref. Metaphysical Elements of Ethics*, 378a-b / *Intro. Metaphysic of Morals*, 386d-387a,c
49 DARWIN: *Descent of Man*, 311b-d; 592b
51 TOLSTOY: *War and Peace*, EPILOGUE II, 688a-690a
53 JAMES: *Psychology*, 186b-187a; 807a-808a; 814b-819a passim, esp 814b-815a, 818b

4e(2) The criteria of goodness and evil in human acts

7 PLATO: *Republic*, BK IV, 354d-355c; BK X, 439b-d / *Laws*, BK IX, 747b-d
9 ARISTOTLE: *Ethics*, BK II, CH 4 350d-351b; CH 6 351c-352d passim; BK VI, CH 12 [1144^{a}12-24] 393d-394a
12 EPICTETUS: *Discourses*, BK I, CH 6 110c-112b; CH 11 116d-118d; BK III, CH 1 175a-177c; CH 3 178d-180a; CH 10 185d-187a; CH 20 192d-193d; BK IV, CH 5-6 228a-232c
12 AURELIUS: *Meditations*, BK II, SECT 11 258a-b; BK IV, SECT 24 265c-d; SECT 39 267a; BK V, SECT 12 271a; SECT 14-16 271b-d; BK VII, SECT 20 281b; SECT 55 283b-c; BK VIII, SECT 1 285a-b; BK IX, SECT 1 291a-c; SECT 16 293a
18 AUGUSTINE: *Confessions*, BK III, par 15-17 17a-18a
19 AQUINAS: *Summa Theologica*, PART I-II, QQ 18-21 693b,d-720a,c
21 DANTE: *Divine Comedy*, HELL, XI 15a-16b; PURGATORY, XVII [82-139] 79b-d; XXVII [124-142] 95d-96a
23 HOBBES: *Leviathan*, PART I, 61d-62a; 85d; 86b; 91b-92d; 96a-b; PART II, 149b-c; PART IV, 272c
25 MONTAIGNE: *Essays*, 103c-104d; 159a-162c
30 BACON: *Advancement of Learning*, 70d-71b
31 SPINOZA: *Ethics*, PART IV, PREF-DEF 2 422b,d-424a; DEF 8 424b-c; PROP 1-28 424c-431c esp PROP 18-19 428d-429d, PROP 22 430b-c; PROP 45-46 438a-d; PROP 50-54 439b-440c; PROP 58-59 441d-442d; PROP 61-63 443a-444a; PROP 65-66 444b-d
33 PASCAL: *Pensées*, 499 260b
35 LOCKE: *Human Understanding*, 90a-d; BK I, CH II, SECT 5-6 105a-c; BK II, CH XXI, SECT 43 188d; SECT 55-56 192c-193b; CH XXVIII, SECT 4-17 229b-232d
36 STERNE: *Tristram Shandy*, 257a-268a
37 FIELDING: *Tom Jones*, 38c-40a
38 ROUSSEAU: *Inequality*, 343a-345c
39 SMITH: *Wealth of Nations*, BK V, 346c-347d
42 KANT: *Pure Reason*, 114d-115a; 169b [fn 1] / *Fund. Prin. Metaphysic of Morals*, 253d-254d; 262a-c; 270c-d / *Practical Reason*, 317b-318c; 321b-329a esp 325a-327d; 341c-342a; 358a / *Intro. Metaphysic of Morals*, 387b; 387d-388a; 389a-390a,c / *Judgement*, 595a-d
43 MILL: *Liberty*, 270a-271d; 286b-287a; 307b-d / *Utilitarianism* 445a-476a,c esp 448a, 454a-455a, 461c-464d, 467b-471b
44 BOSWELL: *Johnson*, 112a-b; 145c-d; 310d-311a
46 HEGEL: *Philosophy of Right*, PART II, par 113 41d-42a; par 135 47b-d; par 140 49b-54a; PART III, par 234 75d-76a; ADDITIONS, 56 125b-c; 67 126d; 86 129c; 91 131a-d
49 DARWIN: *Descent of Man*, 592d-593a
51 TOLSTOY: *War and Peace*, BK XIV, 611a-c
53 JAMES: *Psychology*, 796a-798a passim
54 FREUD: *War and Death*, 758a; 759a-c / *Civilization and Its Discontents*, 792b-c

4e(3) Circumstances as affecting the morality of human acts

9 ARISTOTLE: *Ethics*, BK II, CH 3 [1104^{b}24-27] 350b; BK III, CH 1 [1110^{b}28-1111^{a}20] 356c-357a; BK IV, CH 5 372d-373c
19 AQUINAS: *Summa Theologica*, PART I-II, Q 7 651d-655a; Q 18, AA 10-11 701b-703a
20 AQUINAS: *Summa Theologica*, PART I-II, Q 73, A 7 124d-125c
23 HOBBES: *Leviathan*, PART I, 86b; 91a-b; 96a-b
25 MONTAIGNE: *Essays*, 13d-14c; 103c-104d; 203a-c
30 BACON: *Advancement of Learning*, 76d-78d
33 PASCAL: *Provincial Letters*, 19a-62a passim
35 LOCKE: *Human Understanding*, BK II, CH XXI, SECT 54 192b-c
35 HUME: *Human Understanding*, SECT VIII, DIV 76 485a-c
37 FIELDING: *Tom Jones*, 271c-273a,c
38 ROUSSEAU: *Inequality*, 343a-d; 347d-348a; 362a-d; 363a-366d / *Social Contract*, BK I, 393b-c
42 KANT: *Pure Reason*, 169c-170a
44 BOSWELL: *Johnson*, 283a; 429d-430b
46 HEGEL: *Philosophy of Right*, PART II, par 115-117 42b-d; ADDITIONS, 74 127d-128a; 144 140a / *Philosophy of History*, INTRO, 165a-166b
51 TOLSTOY: *War and Peace*, BK I, 9c-10d; BK VIII, 303a-305b; BK XIII, 578d-579a; BK XV, 627b-c; EPILOGUE I, 645a-646c; EPILOGUE II, 686c-687a
54 FREUD: *General Introduction*, 531a-d

5. Psychological factors in the formation of moral virtue

5*a*. The emotions and pleasure and pain as the matter of virtue: the role of desire or appetite

7 PLATO: *Laches*, 32c / *Protagoras*, 59a-62d / *Phaedrus*, 120a-122a / *Gorgias*, 275d-285a / *Republic*, BK IV, 347a-348d; 350a-355a; BK VI, 374c; BK VII, 390b / *Timaeus*, 466b; 474b-d / *Laws*, BK I-II, 644b-653c; BK V, 689c-690c; BK VI, 712b; BK VII, 714c-716a; BK VIII, 735c-738c

8 ARISTOTLE: *Physics*, BK VII, CH 3 [246^{b}20-247^{a}19] 330a-b

9 ARISTOTLE: *Ethics*, BK I, CH 13 [1102^{b}13-1103^{a}11] 348a-d; BK II, CH 2 [1104^{a}19]-CH 3 [1105^{a}17] 349c-350c; CH 6 [1106^{b}8-1107^{a}28] 352a-d; CH 7 [1108^{a}30-^{b}6] 353d-354a; CH 9 [1109^{a}32-^{b}13] 355a,c; BK III, CH 1 [1111^{a}22-^{b}3] 357a-b; CH 9-12 363d-366a,c; BK IV, CH 5 372d-373c; CH 8 375a-d; BK VII 395a-406a,c; BK X, CH 1-5 426a-430d passim; CH 8 [1178^{a}8-22] 432d; CH 9 [1179^{b}4-1180^{a}24] 434b-435a / *Politics*, BK I, CH 13 [1260^{a}4-^{b}8] 454c-455a,c; BK VII, CH 7 531d-532c; CH 15 [1334^{b}8-28] 539b-d; BK VIII, CH 5 544c-546a passim

12 EPICTETUS: *Discourses*, BK II, CH 18 161a-162b; BK III, CH 24, 208b-210a

12 AURELIUS: *Meditations*, BK VII, SECT 55 283b-c; BK IX, SECT 1 291a-c; SECT 7 292b

14 PLUTARCH: *Antony*, 753d-754a; 760d-761a; 761c; 772c / *Dion*, 798b-d

18 AUGUSTINE: *Confessions*, BK VIII, par 10-11 55c-56b; BK X, par 41-53 81c-85a / *City of God*, BK XIV, CH 5-9 379c-385b

19 AQUINAS: *Summa Theologica*, PART I-II, Q 24 727a-730a esp A 4 729c-730a; Q 34, A 4 771c-772b; Q 39, A 2 790d-791b

20 AQUINAS: *Summa Theologica*, PART I-II, Q 50, A 3 8b-9a; Q 56, A 4 32b-33c; A 5, REP 1 33c-34b; QQ 59-60 45d-54d; Q 107, A 4, ANS 329d-330d; PART II-II, Q 15, A 3 453c-454c

21 DANTE: *Divine Comedy*, HELL, I-II 1a-4a; PURGATORY 53a-105d esp XV [40]-XVIII [75] 75d-80c

23 HOBBES: *Leviathan*, PART I, 61a-63a; 68b-c; 85d; 96a-b; PART II, 141a-b; PART IV, 272c

25 MONTAIGNE: *Essays*, 20d-22a passim; 89b-91b; 118d-119d; 124c-125a; 159a-162c passim; 200d-204d passim; 350d-354b; 540b-c

27 SHAKESPEARE: *Othello*, ACT I, SC III [322-337] 212b-c

30 BACON: *Advancement of Learning*, 66c-d; 78a-d

31 SPINOZA: *Ethics*, PART IV, DEF 8 424b-c; PROP 1-18 424c-429d esp PROP 18, DEMONST 428d-429a; PROP 59-73 442b-447a esp PROP 60 442d-443a

32 MILTON: *Areopagitica*, 390b-391a

33 PASCAL: *Provincial Letters*, 64b-67b / *Pensées*, 160 202a-b; 412-413 242a; 423 243b; 502 260b-261a

35 LOCKE: *Human Understanding*, BK II, CH XXI, SECT 35 186b-d; SECT 46-48 189d-190d; SECT 52-56 191d-193b; SECT 71-72 197b-198c

38 ROUSSEAU: *Inequality*, 343a-b

42 KANT: *Fund. Prin. Metaphysic of Morals*, 256b; 258d-259a; 282d-283d; 286a-c / *Practical Reason*, 298b-c; 341c-342a / *Pref. Metaphysical Elements of Ethics*, 365b-366d; 368d-369a; 375a-b / *Intro. Metaphysic of Morals*, 385a-c / *Judgement*, 586d-587a

43 MILL: *Liberty*, 295b-d / *Utilitarianism*, 461c-464d

49 DARWIN: *Descent of Man*, 311a-314b passim; 316a-317a; 318d-319a

51 TOLSTOY: *War and Peace*, BK VI, 245b-c; 248b-250a

53 JAMES: *Psychology*, 799a-b; 808a-814b passim, esp 810a; 816a-817a

54 FREUD: *Origin and Development of Psycho-Analysis*, 16c / *General Introduction*, 501d-504b / *War and Death*, 758a-d / *New Introductory Lectures*, 837d-838d; 844c

5*b*. Deliberation and judgment in the formation of virtue: the role of reason

5 EURIPIDES: *Hippolytus* [373-387] 228b-c

6 THUCYDIDES: *Peloponnesian War*, BK I, 370a-c

7 PLATO: *Republic*, BK IV, 350a-355a / *Laws*, BK III, 669b-d / *Seventh Letter*, 810c-d

9 ARISTOTLE: *Ethics*, BK I, CH 13 [1102^{b}13-1103^{a}3] 348a-c; BK II, CH 6 351c-352d passim; BK III, CH 1-5 355b,d-361a; CH 12 [1119^{a}35-^{b}19] 366a,c; BK VI, CH 1-2 387a-388b; CH 5 389a-c; CH 9-13 391c-394d passim; BK VII, CH 7-10 400d-403c passim; BK IX, CH 8 [1168^{b}28-1169^{a}11] 422b-d; BK X, CH 8 [1178^{a}16-24] 432d-433a; CH 9 [1179^{b}4-1180^{a}13] 434b-d / *Politics*, BK VII, CH 13 [1332^{a}39-^{b}10] 537a-b; CH 15 [1334^{b}8-28] 539b-d

12 AURELIUS: *Meditations*, BK II, SECT 5 257b-c; BK IX, SECT 7 292b

18 AUGUSTINE: *City of God*, BK XIX, CH 4, 512a-b

19 AQUINAS: *Summa Theologica*, PART I-II, Q 45, A 4, ANS 812b-813a

20 AQUINAS: *Summa Theologica*, PART I-II, Q 56, A 3, ANS 31a-32b

23 HOBBES: *Leviathan*, PART I, 64a-c; PART II, 141a-b

25 MONTAIGNE: *Essays*, 21c-22a; 115b-119d; 124c-125a; 159a-162c; 200d-205b; 353c-354b

30 BACON: *Advancement of Learning*, 66c-67b

31 SPINOZA: *Ethics*, PART IV, PROP 17, SCHOL 428c-d; PROP 23-24 430c-d; PROP 59-73 442b-447a; PART V, PROP 1-20 452d-458a

32 MILTON: *Paradise Lost*, BK IX [335-375] 254b-255b

33 PASCAL: *Pensées*, 381-383 238b

35 LOCKE: *Human Understanding*, BK II, CH XXI, SECT 46-54 189d-192c; SECT 69 196d-197a

38 ROUSSEAU: *Inequality*, 337d-338a; 344d-345c

42 KANT: *Fund. Prin. Metaphysic of Morals*, 256c-257d; 263a-b; 266b-c / *Practical Reason*, 305d-

(*5. Psychological factors in the formation of moral virtue. 5b. Deliberation and judgment in the formation of virtue: the role of reason.*)

306a; 321b-325c; 339b-d; 357c-360d / *Pref. Metaphysical Elements of Ethics*, 374a-c; 378a-b / *Intro. Metaphysic of Morals*, 387d-388a

44 BOSWELL: *Johnson*, 297b

46 HEGEL: *Philosophy of History*, INTRO, 165c-166b

49 DARWIN: *Descent of Man*, 310c-d; 312a-313a; 593a-b

51 TOLSTOY: *War and Peace*, BK VI, 248b-250a

53 JAMES: *Psychology*, 14b-15a; 202b; 886b-888a

5c. Intention and choice as conditions of virtue: the role of will

APOCRYPHA: *Ecclesiasticus*, 15:11-20 – (*D*) OT, *Ecclesiasticus*, 15:11-21

9 ARISTOTLE: *Ethics*, BK I, CH 13 [1102^{b}13-1103^{a}4] 348a-c; BK II, CH 6 351c 352d esp [1106^{b}36-1107^{a}9] 352c; BK III, CH 1-5 355b,d-361a; CH 12 [1119^{a}21-34] 365d 366a; BK VI, CH 1-2 387a-388b; BK VII, CH 7 10 400d-403c; BK VIII, CH 13 [1163^{a}21-24] 415d; BK IX, CH 8 [1168^{a}28-1169^{a}11] 421d-422d; BK X, CH 8 [1178^{a}34 ^{b}8] 433a-b / *Politics*, BK VII, CH 13 [1332^{a}28-32] 537a

12 EPICTETUS: *Discourses*, BK I, CH 22 127c-128c

18 AUGUSTINE: *City of God*, BK XIV, CH 5-6 379c-380c; CH 13 387c-388c

20 AQUINAS: *Summa Theologica*, PART I-II, Q 50, A 5 10b-d; Q 55, A 1, REP 2 26b-27a; Q 56, A 6 34b-35a; Q 60, AA 2-3 50d-52b

21 DANTE: *Divine Comedy*, PURGATORY, XVIII [40-75] 80b-c; XXVII [124-142] 95d-96a

23 HOBBES: *Leviathan*, PART IV, 272c

24 RABELAIS: *Gargantua and Pantagruel*, BK I, 65c 66b

25 MONTAIGNE: *Essays*, 13d-14c

32 MILTON: *Paradise Lost*, BK III [80-134] 137a-138a

35 LOCKE: *Human Understanding*, BK II, CH XXI, SECT 51-54 191b-192c

38 ROUSSLAU: *Inequality*, 337d-338a

42 KANT: *Fund. Prin. Metaphysic of Morals*, 256a-b; 259a-b / *Practical Reason*, 291b,d [fn 1]; 304a-d; 309d / *Pref. Metaphysical Elements of Ethics*, 378a-b

43 MILL: *Liberty*, 295a-297b / *Utilitarianism*, 463a-464d

46 HEGEL: *Philosophy of Right*, ADDITIONS, 67 126d / *Philosophy of History*, INTRO, 165c-166b

51 TOLSTOY: *War and Peace*, BK VI, 248b-250a

52 DOSTOEVSKY: *Brothers Karamazov*, BK II, 20a-c; BK V, 129d-132b

53 JAMES: *Psychology*, 186b-187a; 271b-275a passim, esp 272b-273a, 274a-275a; 806a-808a; 814b-819a passim, esp 818a-b; 825a-827a

6. Virtue in relation to other moral goods or principles

6a. Duty and virtue

12 AURELIUS: *Meditations*, BK VI, SECT 2 274a; BK VIII, SECT 32 287d-288a

14 PLUTARCH: *Pericles*, 121a-122b

18 AUGUSTINE: *City of God*, BK XIX, CH 19 523b-d

21 DANTE: *Divine Comedy*, PURGATORY, XVII [82]-XVIII [75] 79b-80c; XXX-XXXI 99b-102b passim

25 MONTAIGNE: *Essays*, 300c-307a esp 303a c

30 BACON: *Advancement of Learning*, 74b-c

38 ROUSSLAU: *Political Economy*, 369b-370a; 372b-373b / *Social Contract*, BK I, 393b-c

42 KANT: *Fund. Prin. Metaphysic of Morals*, 258d-259a; 262a-263c; 267b-d; 269b [fn 1] / *Practical Reason*, 305d-307d; 325a-329a esp 325c, 327d-329a / *Pref. Metaphysical Elements of Ethics*, 366d-368d; 373b-d / *Intro. Metaphysic of Morals*, 383a-390a,c esp 383a-384d, 389a 390a,c

43 MILL: *Liberty*, 290c-291a / *Utilitarianism*, 453c-454a; 457c-461c passim; 464d-476a,c passim

46 HEGEL: *Philosophy of Right*, PART II, par 135 47b-d; PART III, par 150 56c-57a; ADDITIONS, 86 129c / *Philosophy of History*, INTRO, 165c-166b

49 DARWIN: *Descent of Man*, 304a; 310d; 314a; 592c-593b passim

6b. The relation of virtue to pleasure

7 PLATO: *Protagoras*, 59a-62c / *Gorgias*, 275d-285a / *Republic*, BK II, 313d; BK IX, 421a-425b / *Laws*, BK I, 649d-650b; BK II, 656d-658b; BK III, 669b-d; BK V, 689c-690c / *Seventh Letter*, 801b-c; 806a

8 ARISTOTLE: *Topics*, BK I, CH 5 [102^{b}14 21] 145c; BK III, CH 3 [118^{b}27-36] 165d-166a / *Physics*, BK VII, CH 3 [246^{b}20-247^{a}19] 330a-b

9 ARISTOTLE: *Ethics*, BK I, CH 8 [1098^{b}30-1099^{a}30] 344b-d; BK II, CH 7 [1108^{a}23-29] 353d; BK IV, CH 8 375a-d; BK VII 395a-406a,c passim, esp CH 11-14 403c-406a,c; BK IX, CH 9 423a-424b; BK X, CH 1-5 426a-430d passim / *Politics*, BK II, CH 7 [1266^{b}27-1267^{a}17] 462b-d; BK VII, CH 1 527a-d

12 EPICTETUS: *Discourses*, BK II, CH 11, 151a-b; CH 19, 163b

12 AURELIUS: *Meditations*, BK II, SECT 10 257d-258a; BK III, SECT 6 261a-c; BK VI, SECT 16 275b-d; BK VIII, SECT 10 286b; SECT 19 286d-287a; SECT 28 287c; SECT 39 288c; BK IX, SECT 1 291a-c

18 AUGUSTINE: *Confessions*, BK VIII, par 10-11 55c-56b; BK X, par 41-53 81c-85a

19 AQUINAS: *Summa Theologica*, PART I-II, Q 32, A 6 762d-763c; Q 34, A 1 768c-769d; A 4 771c-772b

20 AQUINAS: *Summa Theologica*, PART I-II, Q 60, A 4, ANS 52b-53a; A 5, ANS 53a-54d

21 DANTE: *Divine Comedy*, PURGATORY, XXX-XXXI 99b-102b
24 RABELAIS: *Gargantua and Pantagruel*, BK I, 65c-66b
25 MONTAIGNE: *Essays*, 28a-d; 162c-167a; 200d-205b; 392a-b; 408a-b; 540b-d
30 BACON: *Advancement of Learning*, 71d-72b
31 SPINOZA: *Ethics*, PART IV, PROP 1-18 424c-429d
33 PASCAL: *Pensées*, 412-413 242a; 423 243b
35 LOCKE: *Human Understanding*, BK II, CH XXI, SECT 35 186b-d; SECT 71 197b-198a
40 GIBBON: *Decline and Fall*, 192b
42 KANT: *Fund. Prin. Metaphysic of Morals*, 256c-257c / *Practical Reason*, 298a-300a; 304a-307d; 338c-355d passim / *Pref. Metaphysical Elements of Ethics*, 365b-366d / *Intro. Metaphysic of Morals*, 387b-388a / *Judgement*, 478a-479d
43 MILL: *Utilitarianism*, 447b-450b; 463a-464d
44 BOSWELL: *Johnson*, 116b; 393a-b
49 DARWIN: *Descent of Man*, 316b-317a
51 TOLSTOY: *War and Peace*, BK V, 198b

6c. The relation of virtue to wealth

OLD TESTAMENT: *Exodus*, 20:15,17; 23:3,6,8 / *Leviticus*, 19:9-11,13,35-36; 25 / *Deuteronomy*, 5:19,21; 15:7-15; 17:16-17; 22:1-3; 24:10-22; 26:12-13 / *Nehemiah*, 5—(*D*) *II Esdras*, 5 / *Job*, 29:12-17; 31:16-23 / *Proverbs*, 1:10-19; 3:27-28; 11:1,24-28; 15:16,27; 16:8; 17:23; 19:17,22; 20:10; 21:6-7,13,26; 22:9,16,22-23; 23:4-5; 28:27; 29:7; 30:8-9 / *Ecclesiastes*, 5:10-20—(*D*) *Ecclesiastes*, 5:9-19 / *Isaiah*, 10:1-3; 33:15-17; 58:3-12—(*D*) *Isaias*, 10:1-3; 33:15-17; 58:3-12 / *Jeremiah*, 6:12-13; 8:10; 17:11; 22:13-17—(*D*) *Jeremias*, 6:12-13; 8:10; 17:11; 22:13-17 / *Ezekiel*, 22:12-16,24-31—(*D*) *Ezechiel*, 22:12-16,24-31 / *Amos*, 2:6-8
APOCRYPHA: *Tobit*, 1 passim; 4:1-19 passim; 12:8-10—(*D*) OT, *Tobias*, 1 passim; 4:1-20 passim; 12:8-10 / *Ecclesiasticus*, 7:10; 8:2; 12:1-6; 14:13; 26:29—(*D*) OT, *Ecclesiasticus*, 7:10; 8:2-3; 12:1-7; 14:13; 26:28
NEW TESTAMENT: *Matthew*, 5:40,42; 6:1-4,19-21,24-34; 19:16-30 / *Luke*, 12:13-34 / *Acts*, 20:33-34 / *II Corinthians*, 8-9 / *I Timothy*, 6:6-11,17-19 / *Hebrews*, 13:5 / *James*, 5:1-6
5 AESCHYLUS: *Persians* [165-172] 17a / *Agamemnon* [355-389] 55d-56b; [750-781] 60a-b
5 SOPHOCLES: *Antigone* [280-303] 133c-d
5 EURIPIDES: *Helen* [903-908] 306d-307a / *Electra* [367-395] 330c-d; [938-944] 335c / *Phoenician Maidens* [528-567] 382c-d
5 ARISTOPHANES: *Plutus* 629a-642d esp [415-618] 633d-636d
6 HERODOTUS: *History*, BK III, 121b-c; BK V, 169d-170a; BK VI, 201d-202c; BK IX, 288b; 297b-d
6 THUCYDIDES: *Peloponnesian War*, BK I, 379c-d
7 PLATO: *Meno*, 175b-178d esp 178c-d / *Republic*, BK I, 296c-297b; 304a-c; BK II, 312b-313a; BK III-IV, 341c-343b; BK VIII, 405c-408a; BK X, 436c-437c / *Critias*, 485b-d / *Laws*, BK II, 656d-658b; BK V, 694a-695a; BK VIII, 733b-734a; BK IX, 751c-d
9 ARISTOTLE: *Ethics*, BK II, CH 7 [1107^{b}9-21] 353a-b; BK IV, CH 1-2 366b,d-370b; BK X, CH 8 432d-434a passim / *Politics*, BK II, CH 5 458a-460a passim, esp [1263^{a}38-^{b}26] 458c-d; CH 7 [1266^{b}27-1267^{a}17] 462b-d; CH 11 [1273^{a}22-^{b}8] 469d 470a; BK VII, CH 1 527a-d; CH 8 [1328^{a}21-^{b}4] 532c-d; CH 13 [1331^{b}29-1332^{a}32] 536b-537a / *Rhetoric*, BK II, CH 16 638b-c
12 EPICTETUS: *Discourses*, BK II, CH 19, 163b; BK IV, CH 6 230b-232c
12 AURELIUS: *Meditations*, BK VIII, SECT 33 288a
14 PLUTARCH: *Pericles*, 130b-c / *Aristides-Marcus Cato*, 291b-292b / *Lysander*, 361a-d
15 TACITUS: *Annals*, BK III, 58a
18 AUGUSTINE: *Confessions*, BK VI, par 16 40a-c
20 AQUINAS: *Summa Theologica*, PART I-II, Q 60, A 5, ANS 53a-54d; Q 65, A 1, REP 1 70b-72a; Q 84, A 1 174b-175a; PART II-II, Q 186, A 3, REP 4 652d-655b
21 DANTE: *Divine Comedy*, HELL, VII [25-96] 9d-10c; XIX [1-123] 26d-28a; PURGATORY, XIX [70]-XX [123] 82b-84c
22 CHAUCER: *Tale of Wife of Bath* [6691-6788] 274b-276a / *Tale of Melibeus*, par 49-52 422a-425b; par 77, 430b-431a
24 RABELAIS: *Gargantua and Pantagruel*, BK III, 133b-135b
25 MONTAIGNE: *Essays*, 109d-110c; 126b-131a passim
27 SHAKESPEARE: *All's Well That Ends Well*, ACT II, SC III [123-153] 152d-153a / *Timon of Athens* 393a-420d esp ACT IV, SC III [24-47] 410d-411a, [382-462] 415a-d
29 CERVANTES: *Don Quixote*, PART II, 221d-222c; 338b
30 BACON: *Advancement of Learning*, 7d-8b; 77d-78a; 86b-c; 92a-b
33 PASCAL: *Provincial Letters*, 91a-94a
37 FIELDING: *Tom Jones*, 178b-d; 283d-284a
38 MONTESQUIEU: *Spirit of Laws*, BK V, 19a-d; BK VII, 44d-45c; BK XX, 146b-d
38 ROUSSEAU: *Inequality*, 327c-328a; 360b-361a / *Political Economy*, 375b-d / *Social Contract*, BK III, 411a-b
39 SMITH: *Wealth of Nations*, BK IV, 265d-266b
40 GIBBON: *Decline and Fall*, 22c
42 KANT: *Fund. Prin. Metaphysic of Morals*, 256a-b / *Practical Reason*, 330d-331a / *Pref. Metaphysical Elements of Ethics*, 370b-d
43 MILL: *Representative Government*, 335b-c / *Utilitarianism*, 463a-b
44 BOSWELL: *Johnson*, 102d-103a; 413c-d; 491b; 492b-c; 493c; 494b
46 HEGEL: *Philosophy of Right*, PART III, par 241 76d-77a
50 MARX: *Capital*, 61d; 77c-78b
51 TOLSTOY: *War and Peace*, BK I, 50b; BK V, 194d; 197b-c

(6. Virtue in relation to other moral goods or principles.)

6d. Virtue and honor

OLD TESTAMENT: *Proverbs*, 10:7; 14:34 / *Isaiah*, 14:20—(*D*) *Isaias*, 14:20

APOCRYPHA: *Wisdom of Solomon*, 3:16-17; 4—(*D*) OT, *Book of Wisdom*, 3:16-17; 4 / *Ecclesiasticus*, 10:19-31; 44:1-15; 46:11-12—(*D*) OT, *Ecclesiasticus*, 10:23-34; 44:1-15; 46:13-15

NEW TESTAMENT: *Romans*, 2:10

4 HOMER: *Iliad* 3a-179d CSP BK I 3a-9a,c, BK IV [401-418] 28a, BK V [520-532] 35c, BK IX 57a-64a,c

5 SOPHOCLES: *Ajax* 143a-155a,c esp [393-480] 146c-147b / *Electra* [1058-1097] 164d-165a / *Philoctetes* [1408-1444] 194d-195a,c

5 EURIPIDES: *Hippolytus* [373-430] 228b-d / *Heracleidae* [297-332] 251a-b / *Andromache* [319-332] 318a; [693-705] 321a-b; [768-801] 321d-322a / *Iphigenia at Aulis* [543-572] 429d-430a

6 THUCYDIDES: *Peloponnesian War*, BK II, 397d-398c

7 PLATO: *Symposium*, 152b-153b / *Meno*, 178c-d / *Republic*, BK II, 310c-315c; BK VIII, 403a-405c / *Laws*, BK III, 673d-674c

9 ARISTOTLE: *Ethics*, BK II, CH 5 [1105^b29-1106^a9] 351b-c; CH 7 [1107^b22-1108^a3] 353b-c; BK III, CH 7 [1115^b10-13] 361d; BK IV, CH 3-4 370b-372d; BK IX, CH 8 421d-423a / *Politics*, BK II, CH 7 [1266^b36-1267^a2] 462c; BK VII, CH 1 527a-d / *Rhetoric*, BK I, CH 9 608c-611c

12 AURELIUS: *Meditations*, BK II, SECT 11 258a-b; BK VI, SECT 16 275b-d; SECT 51 279b-c; BK IX, SECT 30 294b-c

14 PLUTARCH: *Aristides*, 265c-d / *Lysander*, 354d / *Cato the Younger*, 637b-c / *Agis*, 648b,d-649a

15 TACITUS: *Annals*, BK III, 58a; BK XV, 162d-163a

18 AUGUSTINE: *Confessions*, BK X, par 59-64 86b-87d / *City of God*, BK V, CH 12 20 216d-226a

19 AQUINAS: *Summa Theologica*, PART I-II, Q 2, A 2 616d-617b

20 AQUINAS: *Summa Theologica*, PART II-II, Q 25, A 1, REP 2 501b-502a; PART III, Q 25, A 1 839d-840d; PART III SUPPL, Q 96, A 7, REP 3 1061b-1062a

21 DANTE: *Divine Comedy*, HELL, IV [67-147] 6a-7a; PURGATORY, XI [73-120] 69c-70a; PARADISE, VI [112-126] 114d-115a

22 CHAUCER: *Prologue* [43-78] 159b-160a / *Knight's Tale* 174a-211a / *Franklin's Tale* [11,667-844] 361b-364b / *Physician's Tale* 366a-371a esp [12,137-191] 369b-370b

23 HOBBES: *Leviathan*, PART I, 74c-75b

24 RABELAIS: *Gargantua and Pantagruel*, BK I, 65c-d

25 MONTAIGNE: *Essays*, 103c-105c; 112a-d; 126b-127c; 181d-183c; 300c-307a; 390a-391c; 462b-c; 495d-496d

26 SHAKESPEARE: *Richard II*, ACT I, SC I [165-195] 322b-c / *1st Henry IV*, ACT I, SC II [218-240] 437c-d; SC III [160-208] 439b-d / *Julius Caesar*, ACT V, SC V [68-75] 596a,c

27 SHAKESPEARE: *Hamlet*, ACT IV, SC IV [39-66] 59b-c / *All's Well That Ends Well*, ACT II, SC III [124-153] 152d-153a

29 CERVANTES: *Don Quixote* esp PART II, 222c-d, 227d-228d

30 BACON: *Advancement of Learning*, 92a-b

33 PASCAL: *Pensées*, 404 241a

35 LOCKE: *Human Understanding*, 90a-d; BK II, CH XXVIII, SECT 10-12 230b-231c

38 MONTESQUIEU: *Spirit of Laws*, BK III, 11a-d; BK IV, 13b,d-15a

38 ROUSSEAU: *Inequality*, 360b-361a; 362a-d / *Social Contract*, BK IV, 434b-435a

39 SMITH: *Wealth of Nations*, BK V, 346c-347c; 354c-d

42 KANT: *Fund. Prin. Metaphysic of Morals*, 256a-b; 258b-c

43 FEDERALIST: NUMBER 57, 177b-c; NUMBER 72, 217a-b

43 MILL: *Liberty*, 303d-304c

44 BOSWELL: *Johnson*, 124d-125d; 310d-311a; 412b-d

49 DARWIN: *Descent of Man*, 317a-d passim; 322b-c; 592d-593a

51 TOLSTOY: *War and Peace*, BK XV, 619c-621b; EPILOGUE I, 647b-649b

52 DOSTOEVSKY: *Brothers Karamazov*, BK VI, 153d-157b

6e. Virtue in relation to friendship and love

5 EURIPIDES: *Iphigenia at Aulis* [334-414] 427d-428c

6 HERODOTUS: *History*, BK VII, 258d

6 THUCYDIDES: *Peloponnesian War*, BK III, 419a

7 PLATO: *Phaedrus*, 128d-129a / *Symposium*, 152b-155c / *Republic*, BK I, 299b-c / *Seventh Letter*, 804c

8 ARISTOTLE: *Topics*, BK III, CH 1 [116^a31-39] 162d

9 ARISTOTLE: *Ethics*, BK VIII-IX 406b,d-426a,c / *Politics*, BK II, CH 5 [1263^a38-$^b26$] 458c-d / *Rhetoric*, BK II, CH 4 [1381^a12-$^b38$] 626d-627d

12 EPICTETUS: *Discourses*, BK II, CH 22 167d-170a passim; BK IV, CH 2 223d-224b

12 AURELIUS: *Meditations*, BK XI, SECT 9 303b; SECT 13 303d

14 PLUTARCH: *Alcibiades*, 156c-158b / *Pelopidas*, 233b-d / *Cato the Younger*, 623a-b

15 TACITUS: *Histories*, BK I, 208b-c

18 AUGUSTINE: *Christian Doctrine*, BK I, CH 27-30 631d-633b

20 AQUINAS: *Summa Theologica*, PART II-II, Q 23, AA 3-8 485a-489c; Q 31, A 1, REP 3 536d-537c

21 DANTE: *Divine Comedy*, HELL, XI 15a-16b; PURGATORY, XVII [82]-XVIII [75] 79b-80c

22 CHAUCER: *Troilus and Cressida*, BK II, STANZA 122-123 37b; BK III, STANZA 254-258 87b-

88a / *Franklin's Tale* 351b-366a esp [11,830-928] 364b-366a
23 MACHIAVELLI: *Prince*, CH XVII, 24b
25 MONTAIGNE: *Essays*, 82b-88d; 390a-b
27 SHAKESPEARE: *Hamlet*, ACT III, SC II [58-79] 49c-d
31 SPINOZA: *Ethics*, PART IV, PROP 71 446a-b
36 SWIFT: *Gulliver*, PART IV, 165b-166a
38 MONTESQUIEU: *Spirit of Laws*, BK V, 18d-19d
38 ROUSSEAU: *Political Economy*, 373c-374a
43 MILL: *Utilitarianism*, 454a-455a; 474b-c
49 DARWIN: *Descent of Man*, 310c-d; 592d
52 DOSTOEVSKY: *Brothers Karamazov*, BK II, 40b-c

7. The role of virtue in political theory

7a. The cultivation of virtue as an end of government and the state

6 THUCYDIDES: *Peloponnesian War*, BK II, 395d-399a
7 PLATO: *Protagoras*, 46b-d / *Gorgias*, 282d-283a / *Republic*, BK II-VII 310c-401d / *Statesman*, 605d-608d / *Laws*, BK I, 640d-652d; BK III, 669b-670b; BK XII, 794a-799a,c / *Seventh Letter*, 806b-c
9 ARISTOTLE: *Ethics*, BK I, CH 9 [1099^{b}25-32] 345b; CH 13 [1102^{a}5-25] 347b-c; BK II, CH 1 [1103^{b}3-6] 349a; BK V, CH 1 [1129^{b}12-24] 377a; CH 2 [1130^{b}7-29] 378a-b; BK X, CH 9 [1179^{a}33-1180^{b}27] 434a-435c / *Politics*, BK I, CH 2 [1253^{a}1-39] 446b-d; CH 13 [1260^{b}8-19] 455c; BK II, CH 7 [1266^{b}27-1267^{a}17] 462b-d; CH 9 [1269^{b}13-1270^{a}14] 465d-466b; BK III, CH 9 477c-478d; BK VII, CH 1-3 527a-530a; CH 8 [1328^{a}21-^{b}4] 532c-d; CH 13-15 536b-539d
13 VIRGIL: *Aeneid*, BK VI [847-853] 233b-234a; BK XII [829-842] 376a-b
14 PLUTARCH: *Lycurgus* 32a-48d esp 36a, 48b-c / *Lycurgus-Numa* 61b,d-64a,c / *Solon* 64b,d-77a,c / *Lysander*, 361a-d
15 TACITUS: *Annals*, BK III, 57b-58d
20 AQUINAS: *Summa Theologica*, PART I-II, Q 92, A 1 213c-214c
21 DANTE: *Divine Comedy*, PURGATORY, XVI [52-114] 77b-78a; PARADISE, XXVII [121-148] 148c-d
25 MONTAIGNE: *Essays*, 60c-61c; 306a-d
29 CERVANTES: *Don Quixote*, PART II, 353a
30 BACON: *Advancement of Learning*, 54a-b
31 SPINOZA: *Ethics*, PART IV, PROP 37, SCHOL 2 435b-436a; PROP 73 446c-447a
35 LOCKE: *Toleration*, 15d / *Civil Government*, CH IX, SECT 128 54b-c / *Human Understanding*, BK I, CH II, SECT 5-6 105a-c
38 MONTESQUIEU: *Spirit of Laws*, BK III, 9b-11d; BK IV, 15c-17b; BK V, 18b,d-19d; 21d-25a; BK XVI, 119d
38 ROUSSEAU: *Political Economy*, 372a-377b / *Social Contract*, BK I, 393b-c; BK III, 411a-c; BK IV, 434b-435a
40 GIBBON: *Decline and Fall*, 100c-101b
41 GIBBON: *Decline and Fall*, 54d-55a
43 CONSTITUTION OF THE U.S.: AMENDMENTS, XVIII 19c-d; XXI 20c
43 MILL: *Representative Government*, 334a-c; 336c-338d; 346c-350a / *Utilitarianism*, 464d-476a,c passim, esp 467b-468a, 474d-476a
44 BOSWELL: *Johnson*, 178b-c
46 HEGEL: *Philosophy of Right*, PART III, par 241 76d-77a; par 257 80b; par 273, 91b-d; ADDITIONS, 183 148d-149a / *Philosophy of History*, PART IV, 365d-366a
51 TOLSTOY: *War and Peace*, BK VI, 244d-245d

7b. Civic virtue: the virtue of the good citizen compared with the virtue of the good man

OLD TESTAMENT: *Exodus*, 22:28 / *Proverbs*, 16:13; 20:2; 23:1-3; 24:21; 25:6-7 / *Ecclesiastes*, 8:2-3; 10:20
APOCRYPHA: *Ecclesiasticus*, 41:17-18—(*D*) OT, *Ecclesiasticus*, 41:21 23
NEW TESTAMENT: *Matthew*, 22:16-22 / *Mark*, 12:14 17 / *Luke*, 20:22-25 / *Acts*, 23:5 / *Romans*, 13:1-7 / *Titus*, 3:1 / *I Peter*, 2:13 21
5 SOPHOCLES: *Antigone* 131a-142d esp [633-765] 136c-137d
5 ARISTOPHANES: *Knights* 470a-487a,c esp [1316-1408] 486a-487a,c
6 HERODOTUS: *History*, BK V, 175b; BK VII, 233a-d; 258d
6 THUCYDIDES: *Peloponnesian War*, BK I, 370a-c; BK II, 397d-398c; 402d 404a; BK III, 425a-427c passim; BK VI, 511c-d
7 PLATO: *Protagoras*, 43b-47c / *Meno*, 174d-176a esp 175d-176a / *Apology* 200a-212a,c / *Crito* 213a-219a,c / *Republic*, BK I, 300b-306b; BK IV, 346a-355a / *Statesman*, 605d 608d / *Laws*, BK III, 669b-670c; 672d-674d; BK V, 686d-691b; BK VI, 706b-c; BK VIII, 740d-741a / *Seventh Letter*, 805d-806a; 806d
9 ARISTOTLE: *Ethics*, BK I, CH 9 [1099^{b}29-32] 345b; BK III, CH 8 [1116^{a}15-^{b}3] 362b-d; BK V, CH 1 [1129^{b}12-1130^{a}13] 377a-c; CH 2 [1130^{b}7-29] 378a-b; BK VI, CH 8 [1141^{b}23-1142^{a}11] 390d-391a; BK X, CH 9 434a-436a,c / *Politics*, BK I, CH 13 [1259^{b}33-1260^{a}20] 454b-d; BK II, CH 11 [1273^{a}22-^{b}8] 469d-470a; BK III, CH 4-5 473c-475d; CH 9 [1280^{b}3-11] 478a-b; CH 13 [1283^{b}44-1284^{a}3] 482a; CH 15 [1286^{a}22-^{b}5] 484c-d; CH 18 487a,c; BK IV, CH 7 [1293^{b}2-7] 493a-b; BK VII, CH 2 [1324^{a}24-^{b}6] 528b-c; CH 3 529b-530a; CH 7 531d-532c; CH 9 [1328^{b}33-1329^{a}2] 533b; CH 13-15 536b-539d; BK VIII, CH 1 [1337^{a}11-18] 542a
12 EPICTETUS: *Discourses*, BK II, CH 10 148c-150a; BK III, CH 7 182b-184a
12 AURELIUS: *Meditations*, BK II, SECT 1 256b,d; BK III, SECT 4-5 260b-261a; BK IV, SECT 4 264a; SECT 29 266a; BK V, SECT 16 271c-d; SECT 22 272b; BK VI, SECT 14 274d-275a; BK VII, SECT 5 280a-b; SECT 13 280c; SECT 66 284b-c; BK IX, SECT 23 293c; BK X, SECT 6

(*7. The role of virtue in political theory. 7b. Civic virtue: the virtue of the good citizen compared with the virtue of the good man.*)

297a-b; BK XI, SECT 8 303a-b; SECT 21 305d-306a

14 PLUTARCH: *Lycurgus*, 45b; 48b-c / *Coriolanus*, 174b,d-175a / *Aristides*, 263d / *Lysander*, 361a-d / *Agesilaus*, 480b,d-481a / *Cleomenes*, 659d-660a / *Demosthenes*, 699c-700a

15 TACITUS: *Histories*, BK I, 191c-d; BK IV, 267c-d

17 PLOTINUS: *First Ennead*, TR II 6b-10a

18 AUGUSTINE: *City of God*, BK II, CH 21 161b-162d; BK V, CH 12-13 216d-220a; BK XIX, CH 17 522b-523a; CH 21 524a-525a; CH 24-26 528b-529a

20 AQUINAS: *Summa Theologica*, PART I-II, Q 61, A 5 58b-59d; Q 92, A 1, REP 3 213c-214c

21 DANTE: *Divine Comedy*, HELL, VI [58-75] 9a; XI [1-66] 15a-d; XV [55-78] 21d; XVI [64-78] 23a-b; XXXII [70]-XXXIII [90] 48c-50c passim; PURGATORY, VI [58-151] 61b-62c; XVII [91-123] 79b-d; PARADISE, XV [97]-XVI [154] 129b-132a

23 HOBBES: *Leviathan*, PART II, 154b-155c; CONCLUSION, 279a-c

25 MONTAIGNE: *Essays*, 48a-b; 381a-388c esp 381c-d; 390c-391c; 480b-482b; 486b-489b; 490c-491d

26 SHAKESPEARE: *Julius Caesar*, ACT V, SC V [68-81] 596a,c

30 BACON: *Advancement of Learning*, 74b-c; 81d-82a; 94b-95b

31 DESCARTES: *Discourse*, PART III, 48b-49a

31 SPINOZA: *Ethics*, PART IV, PROP 73 446c-447a

33 PASCAL: *Pensées*, 6 173a

35 LOCKE: *Toleration*, 15d / *Human Understanding*, BK I, CH II, SECT 5-6 105a-c

38 MONTESQUIEU: *Spirit of Laws*, xxiia-d; BK III, 9b-12a; BK IV, 13b,d-15a; 15c-17b; BK V, 18d-19d; 21b-23a; 31b-c; BK VII, 44d-45c; BK VIII, 51a-53a; 55c-d

38 ROUSSEAU: *Inequality*, 323a-328a,c; 360b,d [fn 1]; 366b-d / *Political Economy*, 369b-370a; 372a-377b / *Social Contract*, BK II, 402b-403a; BK III, 411a-c; 412a-b; BK IV, 428a-432b passim; 434b-435a

39 SMITH: *Wealth of Nations*, BK V, 337d-338c; 340c 343d; 346c-347d

40 GIBBON: *Decline and Fall*, 193c-194a; 630b,d-631a; 644b-645c

43 FEDERALIST: NUMBER 55, 174c-d

43 MILL: *Representative Government*, 329b-330a; 334b; 336c-337b; 342d-343c; 346c-350a

44 BOSWELL: *Johnson*, 393a-c

46 HEGEL: *Philosophy of Right*, PART III, par 268 84c-d / *Philosophy of History*, INTRO, 171b-c; PART II, 272a-d; PART IV, 365b-c

49 DARWIN: *Descent of Man*, 314c-316a; 321b-c

51 TOLSTOY: *War and Peace*, BK VI, 244d-245d; 260a-262a; BK XII, 537b-538a; BK XV, 634a-635a; EPILOGUE I, 668a-669c; EPILOGUE II, 686c-687a

7c. **The aristocratic principle: virtue as a condition of citizenship or public office**

6 HERODOTUS: *History*, BK III, 107d-108a

6 THUCYDIDES: *Peloponnesian War*, BK III, 425a-c

7 PLATO: *Republic*, BK III, 339b-341d; BK V, 369c-370a; BK VI, 373c-375b; BK VII, 390b-391b / *Statesman*, 605d-608d / *Laws*, BK XII, 796b-799a / *Seventh Letter*, 807a-b

9 ARISTOTLE: *Politics*, BK II, CH 11 [1273^{a}22-^{b}7] 469d-470a; BK III, CH 4-5 473c-475d; CH 7 476c-477a; CH 9 [1281^{a}2-8] 478c-d; CH 10 478d-479a esp [1281^{a}29-34] 479a; CH 11 [1281^{a}39-^{b}15] 479b-c; CH 12-13 480c-483a; CH 15 [1286^{a}7-^{b}14] 484b-485a; CH 16 [1287^{b}12-14] 486a; CH 18 487a,c; BK IV, CH 7 493a-b; BK V, CH 7 [1307^{a}5-15] 509a; CH 9 [1309^{a}33-^{b}13] 511c-d; BK VII, CH 9 [1328^{b}22-1329^{a}2] 533a-b

14 PLUTARCH: *Lycurgus*, 45c-d / *Lysander*, 365a-366a / *Lysander-Sulla*, 387d-388a

15 TACITUS: *Annals*, BK XI, 105d-107b

27 SHAKESPEARE: *Coriolanus* 351a-392a,c esp ACT I, SC I [92-166] 352b-353a, ACT III, SC I [142-161] 370d-371a

35 LOCKE: *Civil Government*, CH VII, SECT 94 46a-c; CH VIII, SECT 105-112 48c-51b passim

38 MONTESQUIEU: *Spirit of Laws*, BK III, 10c-11a; BK V, 23a-25a; BK VIII, 52c-53a

38 ROUSSEAU: *Social Contract*, BK III, 411c-412c

40 GIBBON: *Decline and Fall*, 61d-62a

43 FEDERALIST: NUMBER 68, 206b-c

43 MILL: *Representative Government*, 336c-338c; 363a-366a; 384a-387d

44 BOSWELL: *Johnson*, 125c-d; 141a; 178b-c

46 HEGEL: *Philosophy of Right*, PART III, par 291-295 97d-99a; ADDITIONS, 169 145d

51 TOLSTOY: *War and Peace*, BK VI, 244d-245d

7d. **The virtues which constitute the good or successful ruler: the vices associated with the possession of power**

OLD TESTAMENT: *Exodus*, 18:21-26 / *Deuteronomy*, 1:13-18; 17:14-20 / *Judges*, 9:7-20 / *I Samuel*, 8:11-18; 15:22-23—(*D*) *I Kings*, 8:11-18; 15:22-23 / *I Kings*, 3:16-28—(*D*) *III Kings*, 3:16-28 / *II Chronicles*, 1:7-12—(*D*) *II Paralipomenon*, 1:7-12 / *Psalms*, 2; 72; 101—(*D*) *Psalms*, 2; 71; 100 / *Proverbs*, 14:35; 16:12-15; 17:7; 20:26,28; 25:2,5; 28:2,15-16; 29:2,4,14; 31:4-5 / *Ecclesiastes*, 10:5-7,16-17 / *Isaiah*, 3:14-15; 10:1-3; 11:1-5; 14:5-6; 16:5; 56:9-12—(*D*) *Isaias*, 3:14-15; 10:1-3; 11:1-5; 14:5-6; 16:5; 56:9-12 / *Jeremiah*, 23:1-6—(*D*) *Jeremias*, 23:1-6 / *Ezekiel*, 22:27; 45:9; 46:18—(*D*) *Ezechiel*, 22:27; 45:9; 46:18

APOCRYPHA: *Wisdom of Solomon*, 1:1; 6; 9—(*D*) OT, *Book of Wisdom*, 1:1; 6; 9 / *Ecclesiasticus*, 8:2; 10:1-3—(*D*) OT, *Ecclesiasticus*, 8:2-3; 10:1-3 / *I Maccabees*, 14—(*D*) OT, *I Machabees*, 14

4 HOMER: *Iliad*, BK IX [1–172] 57a-58d
5 AESCHYLUS: *Persians* 15a-26d esp [623–908] 21c-24d
5 SOPHOCLES: *Oedipus the King* [863–910] 107b-c / *Antigone* 131a-142d esp [162–210] 132c-d, [633–765] 136c-137d
5 EURIPIDES: *Medea* [115–130] 213b / *Suppliants* [286–358] 260d-261c / *Iphigenia at Aulis* [334–375] 427d-428b
5 ARISTOPHANES: *Knights* 470a-487a,c / *Lysistrata* 583a-599a,c esp [486–586] 589a-590d / *Ecclesiazusae* 615a-628d esp [173–240] 617a-c
6 HERODOTUS: *History*, BK III, 107c-d; BK IX, 314a,c
6 THUCYDIDES: *Peloponnesian War*, BK II, 404a-d; BK III, 425a-c; 427a-c; BK VI, 513a-d
7 PLATO: *Gorgias*, 285a-294d / *Republic*, BK I, 300b-306b; BK II–VII, 319c-401d / *Timaeus*, 442b-d / *Statesman*, 605d-608d / *Laws*, BK IV, 679c-682c; BK XII, 794a-799a,c / *Seventh Letter*, 804b 805a; 806d-807b
9 ARISTOTLE: *Politics*, BK I, CH 13 [1259^{b}33–1260^{a}20] 454b-d; BK II, CH 9 [1271^{b}1–9] 467d; BK III, CH 4 [1277^{a}5–^{b}29] 474a-475a; CH 7 [1279^{a}33–^{b}4] 476d; CH 13 481b-483a; CH 15 [1286^{b}8–22] 484d-485a; CH 17 [1287^{b}40]–CH 18 [1288^{b}6] 486c-487a,c; BK V, CH 9 [1309^{a}33–^{b}13] 511c-d; CH 11 [1314^{a}30–1315^{b}11] 517a-518c; BK VII, CH 2–3 528a-530a; CH 14 [1332^{b}12]–CH 15 [1334^{b}8] 537b-539c
12 EPICTETUS: *Discourses*, BK III, CH 7 182b-184a
12 AURELIUS: *Meditations*, BK I 253a-256d; BK III, SECT 5 261a; BK VI, SECT 30 276d-277a; BK VII, SECT 36 282b
14 PLUTARCH: *Lycurgus*, 45c; 47a-48c / *Numa Pompilius* 49a-61d esp 59c-60b / *Pericles* 121a-141a,c / *Coriolanus* 174b,d-193a,c esp 180d-181b / *Alcibiades-Coriolanus* 193a-195a,c / *Aristides* 262b,d-276a,c esp 263d-267a, 273d-275c / *Marcus Cato* 276b,d-290d esp 282a / *Aristides-Marcus Cato* 290b,d-292d / *Pyrrhus* 314b,d-332d esp 319b-321a / *Lysander* 354b,d-368a,c esp 357a-b, 362b-365a / *Sulla*, 384a-c / *Lysander-Sulla*, 387b,d-388c / *Nicias*, 423a-430d / *Crassus-Nicias*, 455d-456d / *Agesilaus* 480b,d-499a,c esp 482d-484a / *Alexander* 540b,d-576d / *Caesar* 577a-604d esp 598d-601b / *Phocion* 604b,d-619d esp 604b,d-605d / *Cato the Younger* 620a-648a,c esp 626d-627b, 637b-c / *Agis*, 648b,d-649b / *Cleomenes*, 661b-d / *Caius and Tiberius Gracchus-Agis and Cleomenes* 689b,d-691a,c / *Demetrius* 726a-747d esp 742c-743b / *Dion* 781b,d-802a,c esp 781b,d, 800a-c / *Brutus-Dion* 824b,d-826a,c
15 TACITUS: *Annals*, BK II, 41c-d; BK VI, 86a-b; 87b-c; 90d-91a; 100a-b; BK XI, 102d-103a / *Histories*, BK I, 193c-194a; 197a-b; 198b-c; 208b-c; BK II, 215c-d; 223a-b; 236d-237a; 238d-240b; BK III, 254d
18 AUGUSTINE: *City of God*, BK XIX, CH 19 523b-d
20 AQUINAS: *Summa Theologica*, PART I–II, Q 92, A 1, REP 3 213c-214c; Q 105, A 1, REP 2–3 307d-309d
21 DANTE: *Divine Comedy*, HELL, XII 16b-17d esp [103–112] 17c; XXVII [55–136] 40a-41b; PARADISE, XIII [94–108] 126b-c; XVIII [52]–XX [148] 134a-138b passim
22 CHAUCER: *Physician's Tale* 366a-371a
23 MACHIAVELLI: *Prince* 1a-37d esp CH VIII 12d-14c, CH XV–XIX 22b-30a
24 RABELAIS: *Gargantua and Pantagruel*, BK I, 58a-60c
25 MONTAIGNE: *Essays*, 314c-316a; 337b-c; 350d-354b; 386b-388c; 436c-438b; 452a-d
26 SHAKESPEARE: *Richard III* 105a-148a,c / *Merchant of Venice*, ACT IV, SC I [184–197] 427c / *1st Henry IV*, ACT I, SC II [218–240] 437c-d; ACT III, SC II [93–161] 453d-454c / *2nd Henry IV*, ACT IV, SC V 494b-496d / *Henry V*, ACT I, SC I 533a-d; ACT IV, SC I [103–301] 552d-554c / *Julius Caesar*, ACT II, SC I [10–34] 574c-d; ACT III, SC II 583c-586c
27 SHAKESPEARE: *Measure for Measure*, ACT I, SC I 174a-175b; SC III 177b-d; ACT III, SC II [275–296] 192b / *King Lear*, ACT III, SC IV [26–36] 264c / *Macbeth*, ACT IV, SC III [1–139] 303b-304d / *Coriolanus*, ACT II, SC III [162–229] 367d-368c; ACT III 369a-377a
29 CERVANTES: *Don Quixote*, PART II, 332b-336a; 340b-343a; 360d-361d
30 BACON: *Advancement of Learning*, 1a-2c; 4c-6c; 20d-25c; 74d-75a; 94b-95b / *New Atlantis*, 205d-207b
32 MILTON: *Lord Gen. Cromwell* 69a-b / *Sr Henry Vane* 69b
35 LOCKE: *Civil Government*, CH XIV, SECT 160–166 62d-64a
36 SWIFT: *Gulliver*, PART I, 28b-29b
38 MONTESQUIEU: *Spirit of Laws*, BK VI, 40a-b; BK XII, 93c-95b; BK XXI, 170a; BK XXVIII, 259b; BK XXIX, 262a
38 ROUSSEAU: *Inequality*, 362a-d / *Political Economy*, 367a-377b passim / *Social Contract*, BK III, 412d-413a; 414b-d
40 GIBBON: *Decline and Fall*, 30c-32b passim; 34a-39d; 61d-64c passim; 142b-c; 255b,d-257a passim; 284a-c; 338d-339c; 343c-344a,c; 430a-d; 448c-449d
41 GIBBON: *Decline and Fall*, 39b-40a; 67d-68b; 103d-104c; 113c-114a; 168b-177c passim, esp 176c-d; 504c-505a; 577d-579a
43 FEDERALIST: NUMBER 3, 33d-34a; NUMBER 15, 65b-d; NUMBER 22, 83c-d; NUMBER 55, 174c-d; NUMBER 57, 176d-177a; NUMBER 75, 223c-d
43 MILL: *Representative Government*, 363a-366a; 368b-369a
44 BOSWELL: *Johnson*, 120a-c; 178b-c
46 HEGEL: *Philosophy of History*, PART II, 275d-276d; 281c-282d; PART IV, 360b-362a; 366b
48 MELVILLE: *Moby Dick*, 106a-107b
51 TOLSTOY: *War and Peace*, BK I, 9c-10d; BK V, 216a-d; BK X, 465c-467a; BK XIV, 611a-c; EPILOGUE I, 645a-646c; EPILOGUE II, 680c-d

8. The religious aspects of virtue and vice

8*a*. The moral consequences of original sin

OLD TESTAMENT: *Genesis*, 3:9-24; 6:5-13; 8:21 / *Job*, 15:14-16; 25:4-6 / *Psalms*, 14:1-3; 39:5-6,11; 51:2-5; 53:1-3—(*D*) *Psalms*, 13:1-3; 38:6-7,12; 50:4-7; 52:1-4 / *Proverbs*, 20:9 / *Ecclesiastes*, 7:20,27-29; 9:3—(*D*) *Ecclesiastes*, 7:21,28-30; 9:3 / *Jeremiah*, 17:9—(*D*) *Jeremias*, 17:9

APOCRYPHA: *Wisdom of Solomon*, 2:23-24—(*D*) OT, *Book of Wisdom*, 2:23-25

NEW TESTAMENT: *John*, 8:3-8 / *Romans*, 3:9-5:21 esp 5:12-21; 7; 8:20-21; 9:29 / *I Corinthians*, 15:21-22 / *Galatians*, 2:16; 3 esp 3:11, 3:22; 4:1-7; 5:19-21 / *Ephesians*, 2:1-5 / *I John*, 2:15-17

18 AUGUSTINE: *Confessions*, BK I, par 18 5c-d / *City of God*, BK XII, CH 21-22 357a-c; BK XIII, CH 1-15 360a-366d; BK XIII, CH 23-BK XIV, CH 5 372a-380b; BK XIV, CH 12-13 387a-388c; CH 15 27 388d-397a; BK XXI, CH 12 571a-c; CH 15 572c-573b; BK XXII, CH 22-23 606d-609a; CH 30, 617c-618a

19 AQUINAS: *Summa Theologica*, PART I, Q 97, A 1, REP 3 513c-514c; Q 98, A 2 517d-519a; PART I-II, Q 17, A 9, REP 3 692d-693d

20 AQUINAS: *Summa Theologica*, PART I-II, QQ 81-83 162d-174b; Q 85 178b-184a; Q 91, A 6 212c-213c; Q 94, A 6, REP 1-2 225d-226b; Q 109, A 2, ANS 339c-340b; A 3, ANS 340c-341b; A 8, ANS 344d-346a; PART III, Q 8, A 5, REP 1 760a-d; QQ 14-15 784a-796a

21 DANTE: *Divine Comedy*, HELL, IV [13-45] 5c-d; PURGATORY, III [16-45] 56a-b; X [121-129] 68c-d; XXVIII [91]-XXIX [36] 97a-98a; XXX-XXXI 99b-102b; PARADISE, VII 115a-116c

22 CHAUCER: *Tale of Man of Law* [4778-4791] 240b-241a / *Pardoner's Tale* 374a-382b esp [12,432-445] 375a, [12,829-837] 381b / *Parson's Tale*, par 13 504b-505a; par 18-19, 507b-508a

23 HOBBES: *Leviathan*, PART II, 112a-b; PART III, 191b-c; 192a-c; 195d

24 RABELAIS: *Gargantua and Pantagruel*, BK II, 81a-b

25 MONTAIGNE: *Essays*, 213a-215b; 218c-219a; 233a-234a; 238b-239c; 250a-b; 294a-b

30 BACON: *Novum Organum*, BK II, APH 52, 195c-d

32 MILTON: *Paradise Lost*, BK III [167-216] 139a-140a; [274-304] 141b-142a; BK IV [505-535] 163b-164a; BK IX [780-1189] 264b-273a; BK X 274a-298b esp [103-123] 276b-277a, [229-409] 279b-283a, [585-640] 287a-288b, [720-844] 290a-292b; BK XI [84-98] 301a; [162-180] 302b-303a; [251-262] 304b-305a; BK XI [423]-BK XII [371] 308b-327a

33 PASCAL: *Provincial Letters*, 82a / *Pensées*, 426-427 244b; 430-431 245a-247b; 434-435 248a-251a; 439-450 251a-253a; 560 272b

37 FIELDING: *Tom Jones*, 38d

40 GIBBON: *Decline and Fall*, 183b-c

44 BOSWELL: *Johnson*, 482a

46 HEGEL: *Philosophy of Right*, ADDITIONS, 14 118c-d / *Philosophy of History*, PART III, 304d-305b; PART IV, 354a-c

50 MARX: *Capital*, 354b

51 TOLSTOY: *War and Peace*, BK VII, 275a

8*b*. The influence of religion on moral character: the indispensability of divine grace for the acquisition of natural virtue by fallen man

OLD TESTAMENT: *Proverbs*, 21:3 / *Isaiah*, 1:16-20; 58:3-7—(*D*) *Isaias*, 1:16-20; 58:3-7 / *Amos*, 5:21-24

APOCRYPHA: *Wisdom of Solomon*, 9:6; 14:22-27—(*D*) OT, *Book of Wisdom*, 9:6; 14:22-27 / *Ecclesiasticus*, 15:1; 35:3-(*D*) OT, *Ecclesiasticus*, 15:1; 35:5

NEW TESTAMENT: *Matthew*, 3:8; 7:16-27; 22:36-40; 23:1-33 / *Mark*, 7:7-13 / *Luke*, 3:8; 6:46-49; 11:37-44; 12:33 / *John*, 14:21; 15:10 / *Acts*, 26:20 / *Romans*, 2:17-29; 3:9-8:39 passim / *II Corinthians*, 12:7-9 / *Galatians*, 5:3-4,16-26 / *Ephesians*, 2:1-9; 4:1-2; 4:17-5:21; 6:10-17 / *Colossians*, 1:9-11 / *II Timothy*, 3:16-17 / *Titus*, 2-3 / *Hebrews*, 10:23-27; 13:20-21 / *James*, 1:22-27; 2:14-26; 4:1-10 / *I Peter*, 1:13-16; 4:1-6; 5:10 / *II Peter*, 1:2-10 / *I John*, 2:3-6; 3:23-24

18 AUGUSTINE: *Confessions*, BK II, par 15 12b-c / *City of God*, BK IV, CH 3 190a-c; BK V, CH 19-20 224b-226a; BK X, CH 3, 300c; BK XIII, CH 5 362b-c; BK XIX, CH 4 511a-513c; CH 21 524a-525a; CH 25 528c-d; BK XXI, CH 15-16 572c-574a / *Christian Doctrine*, BK I, CH 39 635d-636a

20 AQUINAS: *Summa Theologica*, PART I-II, Q 109 338a-347d; PART III, Q 61 855a-858b; Q 65, A 1 879c-881d

21 DANTE: *Divine Comedy*, HELL, I-II 1a-4a; IV [13-66] 5c-6a; PURGATORY, I 53a-54c; VII [1-36] 62c-d; IX 65d-67b; XI [1-30] 68d-69a; XXX-XXXI 99b-102b; PARADISE, VII [19-120] 115b-116b

22 CHAUCER: *Prologue* [118-269] 161a-163b; [477-528] 167b-168a / *Parson's Prologue* 493b-495a / *Parson's Tale* 495a-550a esp par 1-15 495a-506b

25 MONTAIGNE: *Essays*, 209c-212a; 294a-b

32 MILTON: *Sonnets*, XIV 66a / *Paradise Lost*, BK II [1030-1033] 133b; BK III [56-415] 136b-144b esp [130-134] 138a, [167-184] 139a-b, [227-238] 140b; BK XI [1-21] 299a-b; [251-262] 304b-305a; [355-364] 307a; BK XII [576-605] 331b-332a / *Samson Agonistes* [652-666] 353b-354a

33 PASCAL: *Provincial Letters*, 29b / *Pensées*, 425-427 243b-244b; 550 267a-b; 579 276a; 668 294b-295a

35 LOCKE: *Toleration*, 1b-c / *Human Understanding*, BK I, CH II, SECT 5-6 105a-c

35 HUME: *Human Understanding*, SECT XI, DIV 114, 503a
36 STERNE: *Tristram Shandy*, 255a-268a esp 257a-268a
37 FIELDING: *Tom Jones*, 38d
38 MONTESQUIEU: *Spirit of Laws*, BK XXIV 200a-208a,c
38 ROUSSEAU: *Inequality*, 366c-d
40 GIBBON: *Decline and Fall*, 191a-194a esp 191a-d; 291d-292d; 297c-298b; 303a-d; 631d-632a
42 KANT: *Pure Reason*, 238a-b / *Practical Reason*, 327c-d / *Judgement*, 595d-596c
43 MILL: *Liberty*, 290a-291d; 296b-d / *Utilitarianism*, 458a-b
44 BOSWELL: *Johnson*, 84d-85a; 151b-c; 256d; 295b; 482a-d
46 HEGEL: *Philosophy of History*, PART I, 228d-229b; PART III, 312d-313a; PART IV, 346a-c; 349c-d; 353c-354c
49 DARWIN: *Descent of Man*, 593b
51 TOLSTOY: *War and Peace*, BK VI, 271c-274a,c; BK XI, 524c-527a; BK XII, 560a-562d; BK XIV, 606a-607a
52 DOSTOEVSKY: *Brothers Karamazov*, BK II, 28d-32a; 33c-34b; BK IV, 83a-88a passim; BK V, 127b-137c; BK VI 146b,d-170d passim; BK XI, 310d-317b passim; 335c-336b; 337a-346a passim
53 JAMES: *Psychology*, 203a-204b

8c. The divine reward of virtue and punishment of vice: here and hereafter

OLD TESTAMENT: *Genesis*, 6-8; 18:20-19:25 / *Exodus*, 22:22-24 / *Leviticus*, 18:24-30 / *II Samuel*, 22 esp 22:21-25—(*D*) *II Kings*, 22 esp 22:21-25 / *I Kings*, 21:19-24—(*D*) *III Kings*, 21:19-24 / *II Kings*, 9:7-10,30-37—(*D*) *IV Kings*, 9:7-10,30-37 / *II Chronicles*, 6:23,30—(*D*) *II Paralipomenon*, 6:23,30 / *Ezra*, 9:13—(*D*) *I Esdras*, 9:13 / *Job* esp 5, 8, 15:20-35, 18:1-21, 20:1-22:30, 24:1-25, 27:1-23, 33:1-34:37, 36:1-33 / *Psalms*, 1; 7:8-17; 9; 11-12; 15; 18; 21; 34; 37; 58; 73; 84:11; 89:23-33; 94; 107:10-20; 112; 125; 140—(*D*) *Psalms*, 1; 7:9-18; 9:1-21; 10-11; 14; 17; 20; 33; 36; 57; 72; 83:12-13; 88:24-34; 93; 106:10-20; 111; 124; 139 / *Proverbs*, 1:29-31; 2:7,21-22; 3:9-10, 31-35; 4:18-19; 5:21-23; 10:2-6,24-30; 11; 12:7,28; 13:9,21,25; 14:11-12,19,32; 15:29; 16:17; 17:5,13; 19:16; 21:12-13,15-16,18,21,28; 22:8-9,22-23; 24:12,16,19-20; 25:21-22 / *Ecclesiastes*, 2:26; 3:16-17; 8:5,12-14; 9:1-2; 12:14 / *Isaiah*, 1:4-24; 2:10-4:1; 5; 9:13-10:6; 13:11; 14:4-6; 28; 32; 33:15-16; 47; 48:22; 58:3-12; 59; 65:6-7; 66:24—(*D*) *Isaias*, 1:4-24; 2:10-4:1; 5; 9:13-10:6; 13:11; 14:4-6; 28; 32; 33:15-16; 47; 48:22; 58:3-12; 59; 65:6-7; 66:24 / *Jeremiah*, 4:13-22; 5:7-9,25-29; 7:1-16; 9:1-9; 18:1-12; 21:14; 22:3-5,13-19; 23:9-20; 25:12-14; 31:30—(*D*) *Jeremias*, 4:13-22; 5:7-9,25-29; 7:1-16; 9:1-9; 18:1-12; 21:14; 22:3-5,13-19; 23:9-20; 25:12-14; 31:30 / *Lamentations* / *Ezekiel*, 3:17-21; 16; 18; 22-25; 28:1-19; 33:7-19—(*D*) *Ezechiel*, 3:17-21; 16; 18; 22-25; 28:1-19; 33:7-19 / *Daniel*, 4:4-5:31—(*D*) *Daniel*, 4-5 / *Hosea* esp 4, 7, 10:12-13—(*D*) *Osee* esp 4, 7, 10:12-13 / *Joel* / *Amos* esp 1-2, 4:1-3, 5:11-20, 8:1-14 / *Jonah*—(*D*) *Jonas* / *Micah* esp 3, 6:10-7:7—(*D*) *Micheas* esp 3, 6:10-7:7 / *Nahum* passim, esp 3 / *Habakkuk*, 2:4-17—(*D*) *Habacuc*, 2:4-17 / *Zephaniah*, 3:1-8—(*D*) *Sophonias*, 3:1-8 / *Zechariah* passim, esp 7:8-14—(*D*) *Zacharias* passim, esp 7:8-14 / *Malachi*, 3:5; 4:1-3—(*D*) *Malachias*, 3:5; 4:1-3

APOCRYPHA: *Tobit*, 4:5-11—(*D*) OT, *Tobias*, 4:6-12 / *Judith*, 7:28—(*D*) OT, *Judith*, 7:17 / *Wisdom of Solomon*, 3-5 esp 5:15; 6:1-7; 11-12; 14:10-11,27-31; 16-17; 18:10-19:22—(*D*) OT, *Book of Wisdom*, 3-5 esp 5:15; 6:1-7; 11-12; 14:10-11,27-31; 16-17; 18:10-19:22 / *Ecclesiasticus*, 5:1-8; 7:1-3,16-17; 11:16-17,26; 12:6; 16:4-14; 17:23-24; 21:2-3,9-10; 28:1; 35:12-20; 39:25-30; 40:9-15; 41:8-10—(*D*) OT, *Ecclesiasticus*, 5:1-10; 7:1-3,17-19; 11:16-17,28; 12:4; 16:5-15; 17:19-20; 21:2-4,10-11; 28:1; 35:14-26; 39:30-36; 40:9-15; 41:11-13 / *Baruch*, 1:22-2:9; 4:1—(*D*) OT, *Baruch*, 1:22-2:9; 4:1 / *I Maccabees*, 2:49-63—(*D*) OT, *I Machabees*, 2:49-63 / *II Maccabees*, 6:13-15; 7:36-38; 9—(*D*) OT, *II Machabees*, 6:13-15; 7:36-38; 9

NEW TESTAMENT: *Matthew*, 5:1-30; 6:1-4; 7:21-27; 10:14-15,41-42; 11:20-24; 13:41-43,49-50; 18:7-9; 19:16-22; 23:14-39 esp 23:33; 25:31-46 / *Mark*, 9:43-50; 16:16—(*D*) *Mark*, 9:42-49; 16:16 / *Luke*, 10:25-37; 14:7-14; 16:19-26; 18:29-30 / *Acts*, 12:20-23 / *Romans*, 2:1-10; 13:4 / *I Corinthians*, 3:8-17; 6:9-10; 7:9 / *II Corinthians*, 11:15 / *Galatians*, 6:7-10 / *Ephesians*, 6:8 / *Colossians*, 3:23-25 / *II Thessalonians*, 1:7-9; 2:1-15—(*D*) *II Thessalonians*, 1:7-9; 2:1-14 / *Hebrews*, 2:2-3; 6:10; 10:26-31 / *James*, 1:12 / *I Peter*, 3:10-12; 5:2-6 / *II Peter*, 2 / *Jude* passim / *Revelation*, 2:7,17,26-28; 3:5,12,21; 18; 20:12-15; 21:8—(*D*) *Apocalypse*, 2:7,17,26-28; 3:5,12,21; 18; 20:12-15; 21:8

4 HOMER: *Odyssey*, BK XI [568-600] 248d-249a
5 AESCHYLUS: *Suppliant Maidens* [625-709] 9a-10a / *Persians* 15a-26d esp [623-908] 21c-24d / *Agamemnon* [355-398] 55d-56b / *Eumenides* 81a-91d esp [490-565] 86b-87a
5 SOPHOCLES: *Oedipus the King* [863-910] 107b-c / *Antigone* [582-626] 136b-c / *Philoctetes* [433-452] 186a
5 EURIPIDES: *Ion* [1614-1622] 297c-d / *Helen* [894-943] 306d-307b; [998-1031] 307d-308a
6 HERODOTUS: *History*, BK I, 7a-b; BK II, 76b-77b; BK VI, 201d-202c; BK VII, 237d-239a; BK VIII, 278d-279a
7 PLATO: *Republic*, BK II, 313b-314d; 321d-322d; BK X, 436c-441a,c / *Seventh Letter*, 806a

(8. *The religious aspects of virtue and vice.* 8c. *The divine reward of virtue and punishment of vice: here and hereafter.*)

12 LUCRETIUS: *Nature of Things*, BK III [978-1023] 42d-43b
13 VIRGIL: *Aeneid*, BK VI [548-627] 225b-227b; [722-751] 230a-231a
18 AUGUSTINE: *City of God*, BK V, CH 15-16 220d-221b; BK XIX, CH 13 519a-520a; CH 28 529d-530a,c; BK XXI 560a-586a,c passim / *Christian Doctrine*, BK I, CH 20-21 629b
19 AQUINAS: *Summa Theologica*, PART I, Q 21 124b-127c
20 AQUINAS: *Summa Theologica*, PART I-II, Q 79, AA 3-4 158a-159c; Q 87, AA 3-5 187b-189c; PART III SUPPL, QQ 92-99 1025b-1085a,c
21 DANTE: *Divine Comedy* passim
22 CHAUCER: *Physician's Tale* [12,211-220] 370b-371a / *Pardoner's Tale* 374a-382b esp [12,397-593] 374a-377b / *Monk's Tale* 434a-448b / *Parson's Tale*, par 10 498b-502a
23 HOBBES: *Leviathan*, PART II, 160c-161a; 163d-164a; PART III, 193d-195d; PART IV, 250c-251b; 253b-255b
24 RABELAIS: *Gargantua and Pantagruel*, BK II, 119b-122a
26 SHAKESPEARE: *Richard III*, ACT I, SC IV [42-63] 115a-b
27 SHAKESPEARE: *Hamlet*, ACT I, SC V [9-22] 37a / *Measure for Measure*, ACT III, SC I [118-132] 188a
29 CERVANTES: *Don Quixote*, PART II, 222c; 227d-228d
31 DESCARTES: *Meditations*, 69b
32 MILTON: *Paradise Lost*, BK I [1]-BK II [628] 93b-125a esp BK II [85-92] 113a, [477-485] 121b; BK IV [1-113] 152b-155a; BK XII [101-120] 321b / *Samson Agonistes* [667-709] 354a-355a; [1156-1177] 364b-365a; [1669-1707] 376a-b
35 LOCKE: *Human Understanding*, BK I, CH II, SECT 5-6 105a-c; SECT 12-13 107b-108c; BK II, CH XXI, SECT 62 194c-d; SECT 72 198a-c; CH XXVIII, SECT 8 230a; BK IV, CH XIV, SECT 2 364c
35 HUME: *Human Understanding*, SECT XI, DIV 108 500b-d; DIV 114, 503a
37 FIELDING: *Tom Jones*, 20b-21a
38 ROUSSEAU: *Inequality*, 366c-d
40 GIBBON: *Decline and Fall*, 198d-199a
41 GIBBON: *Decline and Fall*, 233d-234d esp 234b
42 KANT: *Fund. Prin. Metaphysic of Morals*, 264b [fn 1] / *Judgement*, 594d [fn 1]
43 MILL: *Liberty*, 290c-d / *Utilitarianism*, 458a-b
44 BOSWELL: *Johnson*, 363a-b; 482a-d; 514d-515a
47 GOETHE: *Faust*, PART II [11,934-941] 290b
48 MELVILLE: *Moby Dick*, 30a-36b
51 TOLSTOY: *War and Peace*, BK VI, 272a-b; BK XIV, 606a-607a
52 DOSTOEVSKY: *Brothers Karamazov*, BK II, 33c-34b; BK V, 127b-137c; BK VI 146b,d-170d passim; BK XI, 337a-346a passim
54 FREUD: *New Introductory Lectures*, 878a-b

8*d*. The theory of the theological virtues

NEW TESTAMENT: *I Corinthians*, 13:13 / *I Thessalonians*, 1:3; 5:8
18 AUGUSTINE: *Christian Doctrine*, BK I, CH 37-40 635b-636a,c
20 AQUINAS: *Summa Theologica*, PART I-II, Q 58, A 3, REP 3 43b-44a; Q 62 59d-63a; Q 63, A 3 65a-d; Q 64, A 4 69b-70a; Q 66, A 6 80c-81b; Q 67, AA 3-6 83b-87c; Q 110, A 3, REP 1 350a-d; A 4, ANS 350d-351d; PART III SUPPL, Q 95, A 5, ANS and REP 2 1048a-1049d
21 DANTE: *Divine Comedy*, PARADISE, XXIV [1]-XXVI [81] 142d-146c
23 HOBBES: *Leviathan*, PART III, 240c-d
30 BACON: *Advancement of Learning*, 2c-4c
32 MILTON: *Paradise Lost*, BK XII [576-605] 331b-332a

8*d*(1) Faith and disbelief

OLD TESTAMENT: *Isaiah*, 7:9—(*D*) *Isaias*, 7:9 / *Habakkuk*, 2:4—(*D*) *Habacuc*, 2:4
APOCRYPHA: *Wisdom of Solomon*, 3:9,14—(*D*) OT, *Book of Wisdom*, 3:9,14 / *Ecclesiasticus*, 1:27; 25:12—(*D*) OT, *Ecclesiasticus*, 1:34; 25:16
NEW TESTAMENT: *Matthew*, 17:14-21; 21:17-22,31-32—(*D*) *Matthew*, 17:14-20; 21:17-22,31-32 / *Mark*, 5:36; 9:17-30 esp 9:23; 11:20-24; 16:16-18—(*D*) *Mark*, 5:36; 9:16-29 esp 9:22; 11:20-24; 16:16-18 / *Luke*, 8:4-15; 17:5-6 / *John*, 1:7,12-13; 3:9-18,36; 4:48; 5:24,31-47; 6:35-36,40,47; 7:37-39; 8:24,45-46; 10:24-28,37-38; 11:25-26; 12:36-46; 14:1-14; 16:8-9,27; 20:24-29,31 / *Acts*, 3:16; 10:43; 13:38 39; 15:7-9; 16:30-31 / *Romans* passim, esp 1:16-18, 3:21-5:2, 9:30-33, 10:8-17 / *I Corinthians*, 1:23; 2:4-5; 13:2,7,13; 16:13 / *II Corinthians*, 1:24; 4:3-4; 4:13-5:9; 8:7; 13:5—(*D*) *II Corinthians*, 1:23; 4:3-4; 4:13-5:9; 8:7; 13:5 / *Galatians* passim, esp 2:16, 2:20, 3:1-29, 5:5-6, 5:22 / *Ephesians*, 2:8-9; 3:11-12,17; 6:16 / *Philippians*, 1:27-29; 3:8-9 / *Colossians*, 1:21-23; 2:5-7,12 / *I Thessalonians*, 2:13; 3; 5:8 / *II Thessalonians*, 1:3-4; 2:11-12; 3:2—(*D*) *II Thessalonians*, 1:3-4; 2:10-11; 3:2 / *I Timothy*, 1:4-5; 2:15; 3:9; 4:1-2,10,12; 5:8,12; 6:10-12 / *II Timothy*, 1:12-13; 2:22; 3:8-10,15; 4:7 / *Hebrews*, 4:2-3; 6:1; 10:22-23,38-39; 11:1-12:3; 13:7 / *James*, 1:3-7; 2:1,5,14-26 / *I Peter*, 1:7-9,21; 2:6-7; 5:8-9 / *II Peter*, 1:5 / *I John*, 3:23; 4:1-3,14-16; 5:1,4-5,9-10
18 AUGUSTINE: *Confessions*, BK I, par 1 1a-b; BK VI, par 5-8 36b-37c / *City of God*, BK XI, CH 2 323a-c; BK XVI, CH 23 436a-c; BK XXI, CH 16 573b-574a / *Christian Doctrine*, BK I, CH 37-40 635b-636a,c

19 AQUINAS: *Summa Theologica*, PART I, Q I, A I 3b-4a
20 AQUINAS: *Summa Theologica*, PART I-II, Q 62, AA 3-4 61c-63a; Q 65, AA 4-5 73d-75a; Q 66, A 6 80c-81b; Q 110, A 3, REP 1 350a-d; A 4, ANS 350d-351d; PART II-II, QQ 1-16 380a-456d; PART III SUPPL, Q 99, A 4, ANS and REP 1 1083a-1084a
21 DANTE: *Divine Comedy*, PARADISE, XXIV 142d-144b
22 CHAUCER: *Parson's Tale*, par 61 529b-530a
23 HOBBES: *Leviathan*, PART I, 83a-b; PART III, 241c-242a
25 MONTAIGNE: *Essays*, 209a-215b passim; 238c-239c; 293d-294b
30 BACON: *Advancement of Learning*, 19b-c; 95d-96c; 100b
32 MILTON: *Sonnets*, XIV 66a / *Paradise Lost*, BK XII [576-605] 331b-332a
33 PASCAL: *Pensées*, 248-252 219a-220a; 256 220a; 286-288 224a-b; 504 261a; 745 319b; 749 320a
35 LOCKE: *Toleration*, 3b-4a; 10c-d
35 HUME: *Human Understanding*, SECT X, DIV 100-101 496d-497b; SECT XII, DIV 132, 509c
40 GIBBON: *Decline and Fall*, 190d-191a
42 KANT: *Judgement*, 595d-596c
44 BOSWELL: *Johnson*, 395a-b; 482a
46 HEGEL: *Philosophy of History*, PART IV, 349b-350a
48 MELVILLE: *Moby Dick*, 30a-36b
51 TOLSTOY: *War and Peace*, BK V, 196a-197b
52 DOSTOEVSKY: *Brothers Karamazov*, BK II, 26a-27d; BK III, 64c-70c; BK V, 127b-137c passim; BK VI 146b,d-170d passim; BK XI, 337a-346a passim

8d(2) Hope and despair

OLD TESTAMENT: *Numbers*, 13:16-14:10—(*D*) *Numbers*, 13:17-14:10 / *Psalms*, 22; 33:18-22; 38:15; 42:5-11; 43:5; 71 passim, esp 71:5, 71:14; 119:43,49,74,81,114,147,166; 130:5-7; 131:3; 146:5-10; 147:11—(*D*) *Psalms*, 21; 32:18-22; 37:16; 41:6-12; 42:5-6; 70 passim, esp 70:5, 70:14; 118:43,49,74,81,114,147,166; 129:4-7; 130:3; 145:5-10; 146:11 / *Proverbs*, 10:28 / *Jeremiah*, 18:11-12—(*D*) *Jeremias*, 18:11-12 / *Lamentations*, 3:24-26
APOCRYPHA: *II Maccabees*, 7:14,20; 15:7-9—(*D*) OT, *II Machabees*, 7:14,20; 15:7-9
NEW TESTAMENT: *Matthew*, 6:31-34 / *Acts*, 2:26; 24:14-15 / *Romans*, 4:18; 5:1-5; 8:19-39; 12:12; 15:4,13 / *I Corinthians*, 9:10; 13:7,13 / *II Corinthians*, 4:8 / *Ephesians*, 1:18; 2:11-12; 4:4 / *Colossians*, 1:23,27 / *I Thessalonians*, 1:3; 4:13; 5:8—(*D*) *I Thessalonians*, 1:3; 4:12; 5:8 / *Titus*, 2:12-13; 3:7 / *Hebrews*, 3:6; 6:9-20 esp 6:11, 6:18 / *I Peter*, 1:3,21; 3:15 / *I John*, 3:1-3
18 AUGUSTINE: *Confessions*, BK XIII, par 14-15 114a-d / *City of God*, BK XIX, CH 4 511a-513c / *Christian Doctrine*, BK I, CH 37-40 635b-636a,c
20 AQUINAS: *Summa Theologica*, PART I-II, Q 62, AA 3-4 61c-63a; PART II-II, QQ 17-22 456d-482c; PART III SUPPL, Q 95, A 5, ANS and REP 2 1048a-1049d
21 DANTE: *Divine Comedy*, HELL, III [1-9] 4a; VIII [67]-IX [105] 11c-13b; PURGATORY, III [103-145] 57a-c; PARADISE, XXV 144b-145d
22 CHAUCER: *Parson's Tale*, par 60-61 529b-530a; par 101-103 549a-550a

8d(3) Charity and the disorder of love

OLD TESTAMENT: *Leviticus*, 19:18,33-34 / *Deuteronomy*, 6:5; 10:12,18-19; 11:1,13,22; 13:3; 19:9; 30:6,15-20 / *Joshua*, 22:5; 23:11—(*D*) *Josue*, 22:5; 23:11 / *Psalms* passim, esp 18:1, 31:23; 116:1, 119:132, 133:1-3—(*D*) *Psalms* passim, esp 17:2, 30:24, 114:1, 118:132, 132:1-3 / *Proverbs*, 10:12; 15:17; 25:21-22 / *Song of Solomon* esp 8:6-7—(*D*) *Canticle of Canticles* esp 8:6-7
APOCRYPHA: *Tobit*, 4:13; 13:12-14—(*D*) OT, *Tobias*, 4:14; 13:16-18 / *Wisdom of Solomon*, 3:9; 6:17-18—(*D*) OT, *Book of Wisdom*, 3:9; 6:18-19 / *Ecclesiasticus*, 2:15-16; 7:30; 10:19; 13:14-15; 24:18; 25:1,11-12; 27:17; 34:16; 47:8—(*D*) OT, *Ecclesiasticus*, 2:18-19; 7:32; 10:23; 13:18-19; 24:24-25; 25:1-2,14-16; 27:18-19; 34:19-20; 47:9-10
NEW TESTAMENT: *Matthew*, 5:21-26,38-46; 19:16-21; 22:35-40 / *Mark*, 12:28-34 / *Luke*, 6:27-36; 10:25-37 / *John*, 13:31-17:26 esp 13:34-35, 14:15, 14:21, 14:23-24, 15:12-14, 15:17 / *Romans*, 8:35-39; 12:9-21; 13:8-10 / *I Corinthians*, 8:1-3; 13:1-14:1; 16:14 / *II Corinthians*, 6:6; 8:7-8 / *Galatians*, 5:6,13-15, 22 / *Ephesians*, 1:4; 3:17-19; 4:1-2,15-16; 5:1-2,25-33 / *Philippians*, 1:9,15-18; 2:1-4 / *Colossians*, 2:2; 3:14,19 / *I Thessalonians*, 3:12; 4:9-10; 5:8 / *II Thessalonians*, 1:3; 3:5 / *I Timothy*, 1:5; 4:12; 6:11 / *II Timothy*, 1:7,13; 2:22 / *Titus*, 2:2,4 / *Hebrews*, 10:24; 13:1 / *James*, 2:8 / *I Peter*, 1:7-8,22; 2:17; 3:8; 4:8-10 / *II Peter*, 1:7 / *I John* esp 2:5, 2:15, 3:10-23, 4:7-5:3 / *II John*, 5-6
18 AUGUSTINE: *Confessions*, BK IV, par 7-20 20d-24c; BK VII, par 23-24 50b-51a; BK X, par 40 81c; BK XIII, par 38-42 121b-122c / *City of God*, BK X, CH 3 300b-301a; BK XIV, CH 7 380c-381c; BK XV, CH 22 416a-c; BK XXI, CH 16 573b-574a / *Christian Doctrine*, BK I, CH 22 629b-630a; CH 28 631d-632a; CH 37-40 635b-636a,c; BK II, CH 41 656a-c; BK III, CH 10 661c-662a
19 AQUINAS: *Summa Theologica*, PART I, Q 59, A 4, REP 3 309a-310a; PART I-II, Q 4, A 2, REP 3 630b-631a; Q 26, A 3 735c-736b
20 AQUINAS: *Summa Theologica*, PART I-II, Q 62, AA 3-4 61c-63a; Q 65, AA 2-3 72a-73d; Q 66, A 6 80c-81b; Q 67, A 6 87a-c; Q 98, A 1 239b-240c; Q 110, A 3, REP 1 350a-d; A 4, ANS 350d-351d; Q 114, A 4 373a-d; A 8 376a-d; PART II-II, Q 4, AA 3-5 404c-407a; Q 19, A 6 469a-d; A

(8d. The theory of the theological virtues. 8d(3) Charity and the disorder of love.)

10 472b-d; QQ 23-46 482c-605a,c; Q 184, A 1 629a-d; PART III SUPPL, Q 93, A 3 1039d-1040c

21 DANTE: *Divine Comedy* esp PURGATORY, XV [40-81] 75d-76a, XVII [82]-XVIII [75] 79b-80c, XXX-XXXI 99b-102b, PARADISE, III [34-90] 109d-110b, XXVI [1-69] 145d-146c

22 CHAUCER: *Prologue* [529-541] 168b / *Parson's Tale*, par 30-31, 517a-518b; par 68-69 533b-534b; par 91-92 547a-b

30 BACON: *Advancement of Learning*, 2c-4c; 80b-81a

32 MILTON: *Paradise Lost*, BK XII [576-605] 331b-332a / *Areopagitica*, 409b-410a

33 PASCAL: *Provincial Letters*, 78b-80b / *Pensées*, 663-670 293b-295b passim

35 LOCKE: *Toleration*, 1a-2c

37 FIELDING: *Tom Jones*, 26a-27a

44 BOSWELL: *Johnson*, 392b-c

51 TOLSTOY: *War and Peace*, BK I, 50a; BK III, 127d-128d; BK V, 213a-216d; BK X, 465a-c; BK XI, 525c-526b; BK XII, 560a-562d

52 DOSTOEVSKY: *Brothers Karamazov*, BK II, 26a-27d; BK V, 117c-137c passim; BK VI 146b,d-170d passim

8e. The infused virtues and the moral and intellectual gifts

OLD TESTAMENT: *I Kings*, 3:5-15; 4:29-34—(*D*) *III Kings*, 3:5-15; 4:29-34 / *I Chronicles*, 22:12—(*D*) *I Paralipomenon*, 22:12 / *II Chronicles*, 1:7-12—(*D*) *II Paralipomenon*, 1:7-12 / *Job*, 32:8 / *Psalms*, 119:34-40,73,125,130,144,169—(*D*) *Psalms*, 118:34-40,73,125,130,144,169 / *Proverbs*, 2 esp 2:6 / *Ecclesiastes*, 2:26 / *Isaiah*, 11:1-5—(*D*) *Isaias*, 11:1-5 / *Daniel*, 1 esp 1:17; 2:20-23

APOCRYPHA: *Wisdom of Solomon*, 3:9; 7:7,24-25; 8:7,21; 9—(*D*) OT, *Book of Wisdom*, 3:9; 7:7,24-25; 8:7,21; 9 / *Ecclesiasticus*, 1:1,5,10; 11:15; 15:5; 24:24-28; 43:33; 50:29; 51:17—(*D*) OT, *Ecclesiasticus*, 1:1,5,10; 11:15; 15:5; 24:34-38; 43:37; 50:31; 51:22-23

NEW TESTAMENT: *Matthew*, 6:33 / *I Corinthians*, 1:30; 2 / *Ephesians*, 1:16-18 / *Philippians*, 3:9 / *James*, 1:5-7,17; 3:13-18

7 PLATO: *Meno*, 189d-190a,c

9 ARISTOTLE: *Ethics*, BK X, CH 9 [1179^{b}20-23] 434c

18 AUGUSTINE: *City of God*, BK X, CH 3 300b-301a / *Christian Doctrine*, BK I, CH 11 627b-c; CH 34 634b-c

19 AQUINAS: *Summa Theologica*, PART I, Q 113, A 1, REP 2 576a-d

20 AQUINAS: *Summa Theologica*, PART I-II, Q 51, A 4, ANS 15a-d; Q 55, A 4, ANS and REP 6 28c-29d; Q 63, AA 3-4 65a-66c; Q 68 87c-96c; Q 71, A 4, ANS 108b-109a; Q 100, A 12, ANS and REP 3 264d-265d; Q 110, AA 3-4 350a-351d; PART II-II, QQ 8-9 416d-426c; Q 19 465a-474d; Q 45 598c-603c

21 DANTE: *Divine Comedy*, PURGATORY, VII [112-123] 63d-64a; XXX [85-145] 100b-d; PARADISE, XII [31-105] 124a-d; XX [118-129] 138a; XXV [67-78] 145a

22 CHAUCER: *Clerk's Tale* [8031-8037] 298a

23 HOBBES: *Leviathan*, PART II, 149c-d; PART III, 176d-177b; 185c-d; 209d; PART IV, 270c-d

8f. The qualities which flow from charity: humility, mercy, chastity, obedience

OLD TESTAMENT: *Genesis*, 2:15-17; 3; 22:1-18 / *Exodus*, 20:14; 24:7 / *Leviticus*, 20:10 / *Numbers*, 12:3 / *Deuteronomy*, 5:18; 8:11-17 / *I Samuel*, 12:14-15; 15:22-23—(*D*) *I Kings*, 12:14-15; 15:22-23 / *II Samuel*, 15 esp 15:23; 22:26—(*D*) *II Kings*, 15 esp 15:23; 22:26 / *Job*, 22:29 / *Psalms*, 18:25; 22:26; 25:9; 37:11, 21,25-26; 131; 147:6; 149:4—(*D*) *Psalms*, 17:26; 21:27; 24:9; 36:11,21,25-26; 130; 146:6; 149:4 / *Proverbs*, 3:3; 8:13; 11:2,17; 14:21,31; 15:25,33; 16:5 6,18-19; 18:12; 20:28; 21:4,21; 22:4; 25:27; 28:25-26; 29:23 / *Ecclesiastes*, 7:8—(*D*) *Ecclesiastes*, 7:9 / *Isaiah*, 16:5—(*D*) *Isaias*, 16:5 / *Jeremiah*, 7:23—(*D*) *Jeremias*, 7:23 / *Hosea*, 12:6—(*D*) *Osee*, 12:6 / *Micah*, 6:8—(*D*) *Micheas*, 6:8 / *Zephaniah*, 2:3—(*D*) *Sophonias*, 2:3

APOCRYPHA: *Tobit*, 14:9—(*D*) OT, *Tobias*, 14:11 / *Wisdom of Solomon*, 12:19—(*D*) OT, *Book of Wisdom*, 12:19 / *Ecclesiasticus*, 1:27; 3:17-20; 7:17; 10:13-14,28-29—(*D*) OT, *Ecclesiasticus*, 1:34; 3:19-21; 7:19; 10:15-17,31-32

NEW TESTAMENT: *Matthew*, 5:1-12,27-32; 6:10; 7:21; 9:13; 10:35-39; 11:29; 12:46-50; 16:24-26; 18; 19:10-12,18; 20:20-28; 21:5; 23:23 / *Mark*, 9:33-37; 10:11,19—(*D*) *Mark*, 9:32-36; 10:11,19 / *Luke*, 6:36; 9:46-48,57-62; 14:7-14; 16:18; 18:1-14,20; 22:40-45 / *John*, 4:34; 5:30; 13:1-17 / *Acts*, 5:29-32; 11:27-30 / *Romans*, 5:19; 12:1-15:13 / *I Corinthians*, 3:18-21; 7:7-11,37-40; 13 / *II Corinthians*, 6:1-10; 10-12 esp 10:1-2, 10:17-18, 12:6-11 / *Galatians*, 5:22-23; 6:1-10 / *Ephesians*, 4:1-2; 5:1-6:9 / *Philippians*, 1:9-11; 2:1-16 / *Colossians*, 2:18; 3:5-25 / *I Thessalonians*, 5:12-28 / *II Timothy*, 2:24-25 / *Titus*, 2-3 / *Hebrews*, 10:19-39 / *James* passim / *I Peter* passim, esp 1:13-14

18 AUGUSTINE: *Confessions*, BK VII, par 13-14 47c-48b; BK VIII, par 3-5 53b-54c; BK IX, par 17-22 66a-67d / *City of God*, BK V, CH 24-26 227d-230a,c / *Christian Doctrine*, BK II, CH 41 656a-c

20 AQUINAS: *Summa Theologica*, PART II-II, QQ 28-33 527b-558d

21 DANTE: *Divine Comedy*, HELL, II [43-119] 3a-d; PURGATORY, X [22-102] 67c-68b; XV [40-132] 75d-76d; XX [16-33] 83b-c

22 CHAUCER: *Tale of Man of Law* 236b-255b / *Tale of Melibeus* 401a-432a esp par 60-78

427b-432a / *Second Nun's Tale* 463b-471b / *Parson's Tale*, par 68 533b-534a
26 SHAKESPEARE: *Merchant of Venice*, ACT IV, SC I [173-205] 427b-d
30 BACON: *Advancement of Learning*, 2c-4c
32 MILTON: *Comus* 33a-56b esp [385-489] 42a-44a / *Sonnets*, XIV 66a / *Paradise Lost*, BK XII [576-605] 331b-332a / *Areopagitica*, 409b-410a
33 PASCAL: *Provincial Letters*, 91a-94a / *Pensées*, 535-540 265a-266a
35 LOCKE: *Toleration*, 1a-2c
42 KANT: *Practical Reason*, 325a-327d
48 MELVILLE: *Moby Dick*, 30a-36b
51 TOLSTOY: *War and Peace*, BK VIII, 338b-339c; BK XV, 621b-622c
52 DOSTOEVSKY: *Brothers Karamazov*, BK II, 26a-27d; BK V, 117c-137c passim; BK VI 146b,d-170d passim; BK IX, 269a-d; BK XI, 313c-314d; EPILOGUE, 411b-412d

8g. The vows and practices of the monastic life in relation to virtue

NEW TESTAMENT: *Matthew*, 19:10-12,21 / *Mark*, 10:21 / *Luke*, 12:22-36; 18:22 / *I Corinthians*, 7:1,7-8,25-40
20 AQUINAS: *Summa Theologica*, PART I-II, Q 64, A 1, REP 3 66d-67c; Q 108, A 4 336b-337d; PART II-II, Q 184, A 8, REP 6 637a-639b; Q 185, A 8-Q 186, A 10 649b-663b
21 DANTE: *Divine Comedy*, PARADISE, III [1]-V [87] 109b-113a; XI-XII 122a-125a
22 CHAUCER: *Prologue* [118-269] 161a-163b; [477-528] 167b-168a; [623-714] 170a-171b
23 HOBBES: *Leviathan*, PART IV, 272d-273a
24 RABELAIS: *Gargantua and Pantagruel*, BK II, 126a-d
25 MONTAIGNE: *Essays*, 111a-b
40 GIBBON: *Decline and Fall*, 191a-194a; 533c-d; 593b,d-599a passim
41 GIBBON: *Decline and Fall*, 232c-233c
44 BOSWELL: *Johnson*, 283a
46 HEGEL: *Philosophy of History*, PART IV, 333b-d; 340d-341c
51 TOLSTOY: *War and Peace*, BK VI, 273c-274a,c
52 DOSTOEVSKY: *Brothers Karamazov*, BK I, 11a-15a,c; BK IV, 83a-88a passim; BK VI 146b,d-170d passim; BK VII, 189a-191a,c

9. The advance or decline of human morality

13 VIRGIL: *Aeneid*, BK I [254-296] 110a-111a; BK VIII [306-336] 267a-268a
15 TACITUS: *Annals*, BK III, 51b-c
29 CERVANTES: *Don Quixote*, PART I, 27b-28a
30 BACON: *Advancement of Learning*, 15a-b; 54a-b
32 MILTON: *Paradise Lost*, BK XI [334]-BK XII [605] 306b-332a
35 LOCKE: *Civil Government*, CH VIII, SECT 110-112 50c-51b
36 SWIFT: *Gulliver*, PART I, 29a; PART III, 121a-b; 126a
38 MONTESQUIEU: *Spirit of Laws*, BK XXI, 170a
38 ROUSSEAU: *Inequality*, 334c; 338b-c; 347d-348a; 360b-361a
40 GIBBON: *Decline and Fall*, 633d-634a,c esp 634c
43 MILL: *Representative Government*, 335d-336a
46 HEGEL: *Philosophy of History*, INTRO, 182d-184d
49 DARWIN: *Descent of Man*, 318d; 321b-323a; 330a,c; 596d-597a,c

CROSS-REFERENCES

For: The issue concerning the relation between knowledge and virtue, *see* EDUCATION 4a; GOOD AND EVIL 6a; KNOWLEDGE 8b(1); WISDOM 2b.

Another discussion of the unity of virtue, *see* ONE AND MANY 5a.

Discussions relevant to the doctrine of the mean, *see* COURAGE 2; PRUDENCE 3b, 3e; TEMPERANCE 1b.

Virtue in relation to happiness, *see* HAPPINESS 2b(3); PUNISHMENT 3b.

The role of habit in the conception of virtue, *see* HABIT 6b; and for the distinction between virtuous and continent acts by reference to habit, *see* PRUDENCE 3d; TEMPERANCE 1c.

Other treatments of the distinction between the moral and the intellectual virtues, *see* HABIT 2b, 5b, 5d; and for the analysis of particular moral or intellectual virtues, and their relation to one another, *see* ART 1; COURAGE 1, 4; JUSTICE 1c-1d; PRUDENCE 2a-2c, 3a; SCIENCE 1a(1); TEMPERANCE 1a-1b; WISDOM 2a.

Other treatments of the theological virtues, the infused virtues, and the supernatural gifts, *see* GOD 6c(2); HABIT 5e(2)-5e(3); KNOWLEDGE 6c(5); LOVE 5b(2); OPINION 4a; RELIGION 1a; WISDOM 1c.

The moral significance of temperamental dispositions, *see* EMOTION 4c; MAN 6a.

Discussions relevant to the independence or interdependence of particular virtues, *see* JUSTICE 1d; PRUDENCE 3-3a.

For: Discussions bearing on the acquisition of virtue, *see* ART 10a; CUSTOM AND CONVENTION 5b; EDUCATION 4, 4b–4d; FAMILY 6d; GOVERNMENT 2d; HABIT 4a–4b; HISTORY 2; LAW 6d; NATURE 6b; NECESSITY AND CONTINGENCY 5a; PLEASURE AND PAIN 10a; POETRY 9a; PUNISHMENT 3a; SIN 7; WILL 3a–3a(2).

The role of the various faculties in the formation of virtue, *see* DESIRE 6a; EMOTION 4b(1); MIND 9c; PLEASURE AND PAIN 8a; PRUDENCE 3; REASONING 5e–5e(3); WILL 5b(4), 8c.

The relation of virtue to other moral goods or principles, *see* DUTY 4, 5; GOOD AND EVIL 3b–3b(2); HONOR 2b; LAW 4d; LOVE 2b(3), 3a; PLEASURE AND PAIN 8a; TEMPERANCE 3; WEALTH 10a, 10c; and for the issue in moral philosophy between the ethics of duty and the ethics of virtue and happiness, *see* DUTY 2; HAPPINESS 3.

The political consideration of virtue, *see* ARISTOCRACY 6; CITIZEN 5; MONARCHY 3a; STATE 7c, 8b.

The relation of virtue to sin and sanctity, *see* RELIGION 3d; SIN 3c, 4d, 7; TEMPERANCE 6a.

The doctrine of divine law and divine rewards and punishments, *see* HAPPINESS 7c–7c(3); IMMORTALITY 5e–5f; LAW 3a–3b(2); PUNISHMENT 5d–5e(2); SIN 6c–6e.

The influence of religion on the moral life, and for the moral virtues or qualities peculiar to the religious life, *see* RELIGION 3d; SIN 7; TEMPERANCE 6a; WEALTH 10e(2).

ADDITIONAL READINGS

Listed below are works not included in *Great Books of the Western World*, but relevant to the idea and topics with which this chapter deals. These works are divided into two groups:

I. Works by authors represented in this collection.
II. Works by authors not represented in this collection.

For the date, place, and other facts concerning the publication of the works cited, consult the Bibliography of Additional Readings which follows the last chapter of *The Great Ideas.*

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AUGUSTINE. *On the Morals of the Catholic Church*, CH XV

——. *Of Continence*

——. *The Enchiridion on Faith, Hope and Love*

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AQUINAS. *Quaestiones Disputatae, De Virtutibus in Communi; De Caritate*, AA 2–5; *De Spe; De Virtutibus Cardinalibus*

——. *Summa Theologica*, PART II–II, QQ 155–156

DANTE. *Convivio* (*The Banquet*), FOURTH TREATISE, CH 17–21

SPINOZA. *Correspondence*, XLIII

HUME. *A Treatise of Human Nature*, BK II, PART I, SECT VII; BK III, PART I, III

FIELDING. *Joseph Andrews*

A. SMITH. *The Theory of Moral Sentiments*, PART VI

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J. S. MILL. *A System of Logic*, BK VI, CH 5

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II.

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HORACE. *Satires*

Pirke Aboth (*Sayings of the Fathers*)

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——. *Le misanthrope* (*The Man-Hater*)
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Chapter 98: WAR AND PEACE

INTRODUCTION

THE twentieth century may go down in history as the century of war and peace—the first in which world wars were fought, the first in which men established world peace, and so, perhaps, the last in which peace among nations was merely an armed truce, a breathing spell between wars. Even if world peace is not actually begun in our time, we may prove to be the first generation of men on earth who, under the impact of world wars, have made a firm attempt to draw a decisive conclusion from all the accumulated wisdom concerning war and peace.

It may be thought that antiquity anticipates, and that at all times the tradition contains, the fundamental notions which have recently gained so wide a currency. Socrates and Epictetus, for example, speak of world citizenship. Marcus Aurelius and Zeno the Stoic even more explicitly envision a world community. Alexander tries to conquer the world to make it one; Virgil proclaims a peace which will be as universal as the Roman empire; and Dante, recasting Virgil's vision, advocates the re-enactment of that empire and with it monarchy—by which he means *one* government—to give all Christendom political as well as spiritual unity.

To neglect these anticipations would be to overlook wisdom's perennial aspirations for unity. But if, because of their significance for peace, they should not be neglected here, neither should their importance be exaggerated. For one thing, man has always acted at variance with his wisdom, nullifying the hope of peace by preparing always for the next war. For another thing, it is doubtful that peace by conquest or by empire—the only ways in which the past could conceive the world's coming to the unity of peace—would be a peace perpetual as well as universal. The latter without the former is but a fraction of the ideal.

Even when in modern times the ideal is at last stated in terms of peaceful methods for achieving peace—by law, not by force; by consent, not by imposition—something less than the whole world in its global reality is the object of consideration. William Penn and Rousseau, for example, state the indispensable legal conditions for turning Europe from a continent perpetually wracked by wars into a society able to perpetuate peace, but their historical location causes them to limit their proposals to Europe.

Kant alone first makes the generalization which lies dormant in their reasoning, and which almost begs to be inductively drawn from the conceptions of war and peace so plainly stated by Hobbes and Locke. He conceives the possibility of a peace not only perpetual but truly world-wide. Yet for all the rightness he perceives in what he calls "the cosmopolitical ideal," it seems to remain for him an ideal—not attainable except by approximation. Yet because it is right, he holds that it must be pursued even though it is impossible. We are the first generation to argue for world peace as a conclusion on the level of reality and to conclude that it is possible because it is necessary.

The argument is not yet won, nor the conclusion enacted, but henceforth the problem of war and peace can hardly be discussed without stating the issue as a choice of world government and peace, or of world anarchy and war. If it does no more than seriously face that choice for the first time, the twentieth century makes a signal advance in understanding one of the great ideas—an advance which can change the course of history and the life of man more than the discovery of atomic fission, which is only an instrument of war or a tool of peace. But just as the release of heat and energy from nuclear combustion has its prototype in ordinary fire, which the ancients associate with the beginning

of civilization, so the insight which may exert a new civilizing force has its origin in the fundamental thinking man does about war and peace as soon as he begins to think about society.

IN THE TRADITION OF the great books, war and peace are usually discussed in political terms, or at least in terms of the relation of men to one another, individually or in groups. But the psychologist, the moralist, and the theologian sometimes use the word "peace" in another sense to signify the absence of conflict within the individual or to signify an inner harmony—peace of mind on earth or the heavenly rest of the blessed in the presence of God.

In their spiritual meanings, war and peace are considered in other chapters; *e.g.*, interior conflict is a topic in the chapter on OPPOSITION and interior peace is discussed in the chapter on HAPPINESS. We shall not treat these matters here except in their bearing on the social or political discussion; nor shall we consider civil war except for the light it throws on the nature of war and peace in general. The special problem of discord and strife within a single community belongs to the chapter on REVOLUTION.

Certain attitudes toward war between states seem to recur in every century. In the face of the ever-present fact of war, men deplore its folly or find some benefit to compensate for its devastation. But throughout most of the tradition, those who see only suffering, no less than those who celebrate the martial spirit, seem to accept the necessity of war. Good or bad, or a mixture of the glorious and the horrible, war seems, to most of those who write about it, an inevitable thing—as ineradicable as disease and death for the living body, as inescapable as tragedy. Only in recent times has the inevitability of war been questioned, and the possibility of lasting peace proposed.

The two books which look most steadily and searchingly on the face of war—Homer's *Iliad* and Tolstoy's *War and Peace*—seem to behold it as a mixed thing. Battle with sword and javelin on the plains of Troy or with musket and howitzer on the Russian steppes lets loose a fury which sweeps human nature to extremes of nobility and baseness, to actions of heroic strength and cringing weakness. To both Homer and Tolstoy, war is the realm of force and chance, and though both see in it occasions for courage and magnanimity and even for a kind of charity or at least compassion, the whole spectacle is one of agony, pervaded by darkness and dismay, torn bodies and ruined minds. "Grievous war" is Homer's repeated epithet. "Pale fear" and "black death" are the colors of battle. They are everywhere that Ares reigns, "Ares, blood stained bane of mortals," "stubborn god of war."

To the poet of any century, Homer or Tolstoy, Virgil or Shakespeare, war's human features appear to be unchanged even if its mechanical dress and physical lineaments are altered—its weapons and armor, its organization of men and materials, its scope of operations in space and time. The historian who measures the contestants and keeps the score of victories and defeats takes a different view. He dwells on all the differences which mark progress in the art of war, or which enable wealthier and more advanced societies to wage wars of greater magnitude. To Herodotus, no military undertaking ever assumed the proportions of Xerxes' army on the march, raising a cloud of dust from horizon to horizon. Yet Thucydides says that before the Peloponnesian War "there was nothing on a great scale either in war or in other matters."

The historian is attentive not only to weights and numbers, to the changing accoutrement of war and its mechanical elaboration, but also to inventions in the sphere of strategy and tactics. The Alexandrian phalanx, the patience of Fabius, the forced marches of Caesar, Hannibal's outflanking and enveloping movements at the battle of Cannae, the deployment in depth of the Roman legions on the Rhine—these are but a few of the inventions of military genius which, as Plutarch, Tacitus, and Gibbon recognize, have an effect far beyond the advantage that novelty initially gives them. They become the classical models of war's art and the principles of its science.

Tolstoy may scoff at the historians who stand in awe of military genius. He may be right that Kutuzov's lack of plans rather than Napoleon's air of outwitting all contingencies is the essence of great generalship. Nevertheless Tolstoy magnifies the campaign of 1812 as beyond comparison the greatest mass movement of humanity,

from west to east and then from east to west, just as Herodotus apotheosizes the movement of the Persian horde from east to west and Thucydides the rise of Athenian naval power.

Writing from the center of a whole continent in arms a century later, Freud in 1915 gives his impression of what was yet to become the first world war. A war of such proportions and ferocity was almost incredible before it happened. "Then the war in which we had refused to believe broke out," and, Freud writes, "not only is it more sanguinary and more destructive than any war of other days, because of the enormously increased perfection of weapons of attack and defense; but it is at least as cruel, as embittered, as implacable as any that preceded it. . . . It tramples in blind fury on all that comes in its way, as though there were to be no future and no goodwill among men after it has passed. It rends all bonds of fellowship between the contending peoples, and threatens to leave such a legacy of embitterment as will make any renewal of such bonds impossible for a long time to come."

THE ENEMIES OF WAR use a variety of weapons in their attack. The *Trojan Women* of Euripides cries out with the bitterness of Andromache and Hecuba against the misery of war's innocent victims—the women and children who are left to mourn the vanquished or to become the victors' spoils. Aristophanes turns laughter rather than pity and fear against the waste of war. Such comedies as the *Peace*, the *Acharnians*, the *Lysistrata* make light of the issues over which men fight, and give war the aspect of a wearisome business, preposterous in its motives and hollow in its victories.

The genial satire of Rabelais exposes the impostures of war, but beneath the horseplay which deflates by its exaggerations, there is the earnest, serious note of Grangousier's resolution not to "undertake war until I have first tried all the ways and means of peace." Swift's satire is not so amiable. In the eyes of the truly rational Houyhnhnms, war appears to be as senseless and despicable as the Yahoos who wage it. Gulliver tries to tell the Houyhnhnm who is his master about the wars of Europe, their causes and their cost. "I was going on to more particulars," he relates, "when my master commanded me silence. He said whoever understood the nature of the Yahoos might easily believe it possible for so vile an animal to be capable of every action I had named, if their strength and cunning equalled their malice. . . . When a creature pretending to reason could be capable of such enormities, he dreaded lest the corruption of that faculty might be worse than brutality itself. He seemed therefore confident that, instead of reason, we were only possessed of some quality fitted to increase our natural vices."

According to Augustine, it is not man's nature but his sinfulness which degrades him below the beasts "devoid of rational will," who "live more securely and peaceably with their own kind than men. . . . For not even lions or dragons have ever waged with their kind such wars as men have waged with one another." Calling it "the greatest and most pompous of human actions," Montaigne asks whether war is not "the testimony of our weakness and imperfection; for, in truth the science of undoing and killing one another, and of ruining and destroying our own kind, has nothing in it so tempting as to make it coveted by beasts who have it not."

But in his essay *Of Ill Means Employed to a Good End*, Montaigne also quotes Juvenal's remark that "we suffer the ills of a long peace; luxury is more pernicious than war." He seems to approve the Roman policy of maintaining wars "not only to keep their own men in action, for fear lest idleness, the mother of corruption, should bring upon them some worse inconvenience; but also to serve for a bloodletting to their Republic, and a little to evaporate the too vehement heat of their youth." War as a purgative is a familiar theme. Hobbes, like Malthus later, suggests that "when all the world is overcharged with inhabitants, then the last remedy of all is war; which provideth for every man, by victory or death."

Many writers seem to be ambivalent about war. Plato, for example, seems to see both sides of the question though he does not give them equal weight. In the *Republic*, Socrates proclaims the discovery that war is "derived from causes which are also the causes of almost all the evils in states, private as well as public." In the *Laws*, the Athenian Stranger admits to Cleinias the Cretan that the laws of his city, devised

primarily with a view to war, can be justified insofar as they aim at courage; but he reminds him later that insofar as such laws "regarded a part only, and not the whole of virtue, I disapproved of them."

That he regards permanent peace as the ideal toward which the moral law commands us to strive, does not prevent Kant from saying that "a prolonged peace favours the predominance of a mere commercial spirit, and with it a debasing self-interest, cowardice, and effeminacy, and tends to degrade the character of the nation." Nor is war to be absolutely condemned. "Provided it is conducted with order and a sacred respect for the rights of civilians," war itself, says Kant, "has something sublime about it, and gives nations that carry it on in such a manner a stamp of mind only the more sublime the more numerous the dangers to which they are exposed, and which they are able to meet with fortitude." Yet even while thinking that war can be a "spur for developing to the highest pitch all talents that minister to culture," Kant reflects that the underlying purpose of war may be "to prepare the way for a rule of law governing the freedom of states, and thus bring about their unity in a system established on a moral basis."

Hegel alone is not ambivalent. Not only is war not "to be regarded as an absolute evil," but it is, according to Hegel, a necessary corrective for the corrosive influence of peace. "War is a state of affairs," he writes, "which deals in earnest with the vanity of temporal goods and concerns—a vanity at other times the common theme of edifying sermonizing. . . . War has the higher significance that by its agency, as I have remarked elsewhere, 'the ethical health of peoples is preserved in their indifference to the stabilization of finite institutions; just as the blowing of the winds preserves the sea from foulness which would be the result of a prolonged calm, so also the corruption in nations would be the product of prolonged, let alone "perpetual," peace.'"

Far from agreeing with those who advocate "perpetual peace . . . as an ideal towards which humanity should strive," Hegel points out that "in peace civil life continually expands; all its departments wall themselves in, and in the long run men stagnate. . . . As a result of war, nations are strengthened, and people involved in civil strife also acquire peace at home through making wars abroad."

To Prince Andrew in *War and Peace* who says that "the aim of war is murder; the methods of war are spying, treachery, and their encouragement"; or to Freud who says that "the warring state permits itself every such misdeed, every such act of violence, as would disgrace the individual man," Hegel has an answer. "States are not private persons," he says, "but completely autonomous totalities in themselves, and so the relation between them differs from a moral relation and a relation involving private rights. . . . The relation between states is a relation between autonomous entities which make mutual stipulations, but which at the same time are superior to these stipulations."

Self-interest, or "a will for its own welfare pure and simple," is, according to Hegel, "the highest law governing the relation of one state to another." Therefore, "when politics is alleged to clash with morals . . . the doctrine propounded rests on superficial ideas about morality, the nature of the state, and the state's relation to the moral point of view."

IN HEGEL'S VIEW, "wars occur when the necessity of the case requires." He is not alone in thinking war inevitable, but others who think the same do not do so in the same mood, or with the same opinion of the reason for its inevitability. "Drain the blood from men's veins," declares Prince Andrew's father, "and put in water instead, then there will be no more war!" It is an illusion, Freud thinks, to suppose that civilization so transforms human nature as to lift it above the impulses of war. In war, he says, "our fellow-citizens have not sunk so low as we feared, because they have never risen so high as we believed." The sad fact, he concludes, is that "war is not to be abolished; so long as the conditions of existence among the nations are so varied, and the repulsions between peoples so intense, there will be, there must be, wars."

William James finds the human race as bellicose as its individual members are instinctively pugnacious; and Alexander Hamilton says that if we "judge from the history of mankind, we shall be compelled to conclude that the fiery

and destructive passions of war reign in the human breast with much more powerful sway than the mild and beneficent sentiments of peace; and that to model our political systems upon speculations of lasting tranquility, is to calculate on the weaker springs of human character."

To the extent that even those who deplore war despair of lasting peace, Machiavelli may not be too cynical a realist when he advises the prince that he "ought to have no other aim or thought, nor select anything else for his study, than war and its rules and discipline. . . . When princes have thought more of ease than of arms, they have lost their states." The prince "ought never, therefore, to have out of his thoughts this subject of war, and in peace he should addict himself more to its exercise than in war." The prince who delays in order to save himself from war makes a serious mistake. War, Machiavelli tells him, "is not to be avoided, but is only deferred to your disadvantage."

Like Machiavelli, Cleinias the Cretan in Plato's *Laws* justifies his city's constant preoccupation with war or preparation for war. The world is foolish, he thinks, "in not understanding that all men are always at war with one another. . . . For what men in general term peace [is] only a name; in reality every city is in a natural state of war with every other, not indeed proclaimed by heralds, but everlasting."

Both Plato and Aristotle seem to agree that war is somehow rooted in the nature of things —in the nature of men and the nature of cities. Yet both also look upon war as transitory, even if recurrent. "No one can be a true statesman," the Athenian Stranger tells Cleinias, "who looks only, or first of all, to external warfare; nor will he ever be a sound legislator who orders peace for the sake of war, and not war for the sake of peace." The whole of life, according to Aristotle, is "divided into two parts, business and leisure, war and peace. . . . There must be war for the sake of peace, business for the sake of leisure, things useful and necessary for the sake of things honorable. . . . Men must be able to engage in business and go to war, but leisure and peace are better; they must do what is necessary and indeed what is useful, but what is honorable is better."

But how does war produce peace? One answer may be Tristram Shandy's, that "as war begets poverty, poverty peace." Another may be Virgil's. In the opening book of his *Aeneid*, Jove predicts the coming of a Caesar "destined to bound with ocean his domain, as with the stars his glory." When at last Rome has conquered the world, the golden age of peace—or at least the *pax Romana*—will supplant war's age of iron. "Then war shall be laid aside, and the harsh world soften to peace . . . the accursed gates of Battle shall be shut with iron bar and clenching bolt; and godless Frenzy shall sit within upon the weapons of savagery."

In accordance with this heaven-laid destiny, Anchises bids his son Aeneas to make war for the sake of peace. "Roman, be this thy care—these thine arts—to bear dominion over the nations and to impose the law of peace, to spare the humbled and to war down the proud!" But some of the proud who are subjugated by Rome's legions take a different view of the peace that is imposed by force of arms. Tacitus reports the speech of the British chieftain Galgacus, in which he refers to those "terrible Romans, from whose oppression escape is vainly sought by obedience and submission. . . .To robbery, slaughter, plunder, they give the lying name of empire; they create a wilderness and call it peace."

Augustine more soberly reflects on the inevitable frustration of the Roman kind of peace. "The imperial city," he writes, "has endeavored to impose on subject nations not only her yoke, but her language, as a bond of peace. . . . How many great wars, how much slaughter and bloodshed, have provided this unity. And though these are past, the end of these miseries has not yet come. For though there have never been wanting, nor are yet wanting, hostile nations beyond the empire, against whom wars have been and are waged, yet supposing there were no such nations, the very extent of the empire itself has produced wars of a more obnoxious description—social and civil wars—and with these the whole race has been agitated, either by the actual conflict or the fear of a renewed outbreak."

DESPITE HIS PERCEPTION of war's failures, despite his enjoining the wise men, not merely to wage, but "to lament the necessity of just wars," Augustine holds that it is "with the desire for

peace that wars are waged. . . . Every man seeks peace by waging war, but no man seeks war by making peace. For even they who intentionally interrupt the peace in which they are living have no hatred of peace, but only wish it changed into a peace that suits them better. . . . Even those whom they make war against they wish to make their own, and impose on them the laws of their own peace."

Peace, according to Augustine, consists in harmony and concord. "Peace between man and man is well-ordered concord. Domestic peace is the well-ordered concord between those of the family who rule and those who obey. Civil peace is a similar concord among the citizens. . . . The peace of all things is the tranquillity of order." Without disagreeing essentially, Aquinas explains that peace involves more than concord. "Wherever peace is," he says, "there is concord, but there is not peace wherever there is concord, if we give peace its proper meaning." The peace between men may consist in concord, "not indeed any kind of concord, but that which is well-ordered, through one man agreeing with another in respect of something befitting to them both. For if one man agree with another, not of his own accord, but through being forced . . . such concord is not really peace."

For men to be at peace with one another, Aquinas believes, each must be at peace with himself, but "man's heart is not at peace, so long as he has not what he wants, or if, having what he wants, there still remains something for him to want." This, according to Aquinas, explains why Augustine defined peace not simply as concord, but as *the tranquillity of order*, for by "tranquillity" is meant all the desires of each individual man "being set at rest together." It also explains why "those who seek war and dissension, desire nothing but peace, which they deem themselves not to have. For," Aquinas reminds us, "there is no peace when a man enters into concord with another counter to what he would prefer. Consequently men seek by means of war to break this concord, because it is a defective peace, in order that they may obtain peace, where nothing is contrary to their will. Hence all wars are waged that men may find a more perfect peace than that which they had heretofore."

The fundamental insight here seems to be that, though charity or love produces the unity of peace, peace is also "the work of justice"—indirectly, as Aquinas says, "insofar as justice removes the obstacles to peace." Thucydides gives us an historian's confirmation of the theologian's point. He tells us why he considers the long truce or armistice—a period of no actual fighting—to be a part of the war. "Only a mistaken judgment," he writes, "can object to including the interval of treaty in the war. Looked at by the light of facts it cannot, it will be found, be rationally considered a state of peace, where neither party either gave or got back all that they had agreed upon."

To the same effect is the speech of Hermocrates the Syracusan, which Thucydides reports. "That war is an evil is a proposition so familiar to everyone that it would be tedious to develop it. No one," he declares, "is forced to engage in it by ignorance, or kept out of it by fear, if he fancies there is anything to be gained by it. . . . I suppose that no one will dispute that we went to war at first, in order to serve our several interests; that we are now, in view of the same interests, debating how we can make peace; and that if we separate without having as we think our rights, we shall go to war again."

THUCYDIDES' OBSERVATION THAT periods of armistice or truce are part of war, and the remark of Clemias in Plato's *Laws* that "every city is in a natural state of war with every other," may anticipate Hobbes, but full clarity on the point is not reached until Hobbes explicitly distinguishes between war as battle and the state of war which always prevails between men or nations when they do not live together under a common government.

"War consisteth not in battle only," Hobbes explains, "or in the act of fighting; but in a tract of time, wherein the will to contend by battle is sufficiently known; and therefore the notion of time is to be considered in the nature of war, as it is in the nature of weather. For as the nature of foul weather lyeth not in a shower or two of rain, but in an inclination thereto of many days together, so the nature of War consisteth not in actual fighting but in the known disposition thereto, during all the time there

is no assurance to the contrary. All other time is Peace."

Hobbes does not exclude from the condition of peace differences between men or even discord, but only fighting or the need to resort to fighting as a way of settling differences or resolving conflicts. He is cognizant of the distinction which Machiavelli paraphrases from Cicero. "There are two ways of contesting," Machiavelli writes, "the one by law, the other by force; the first method is proper to men, the second to beasts." Here Machiavelli adds the comment that "because the first is frequently not sufficient, it is necessary to have recourse to the second." But Hobbes does not think it is always necessary. At least there is a cure for "the war of every man against every man." That cure is the formation of a commonwealth and the institution of government with sufficient coercive force to maintain law and secure peace. "Anarchy and the condition of war," according to Hobbes, are one and the same, a condition in which each man, being a law unto himself and judge in his own case, must of necessity resort to force if he would impose his will upon, or resist the will of, another.

Since men are everywhere found in societies, living under law and government, it might seem that the universal state of war to which Hobbes refers is now abolished. Not so, according to Hobbes, for "though there had never been a time wherein particular men were in a condition of war one against another; yet," in his opinion, "in all times, kings and persons of sovereign authority, because of their independency, are in continual jealousies, and in the state and posture of gladiators; having their weapons pointing, and their eyes fixed on one another; that is, their forts, garrisons, and guns upon the frontiers of their kingdoms, and continual spies upon their neighbors; which is a posture of War."

This notion that sovereigns are always in a state of war with one another—because being sovereigns they are autonomous, *i.e.*, not subject to any superior government—seems to be accepted by most of the great political writers who come after Hobbes. The point is sometimes differently formulated, but the basic insight remains essentially the same.

Locke, for example, makes a threefold distinction between the state of nature, which is anarchy or complete independence; the state of war, in which force without authority is resorted to by men to settle their differences; and the state of civil society which provides law and government for the arbitration of disputes. "Civil society," he writes, is "a state of peace amongst those who are of it, from whom the state of war is excluded by the umpirage which they have provided in their legislative for the ending all differences that may rise amongst any of them."

Since Locke holds that "want of a common judge with authority puts all men in a state of nature," it follows for him that, though the state of nature and the state of war may not be identical, the state of nature, unlike that of civil society, inevitably lapses into the state of war. If in a state of nature men fail to settle their differences by reason, they enter into the state of war which is the realm of force "or a declared design of force . . . where there is no common superior on earth to appeal to for relief."

With these qualifications, Locke not only agrees with Hobbes that "all princes and rulers of independent governments all through the world are in a state of nature," but also draws from this the same implication for war and peace. Since "the whole community is one body in the state of nature in respect of all other states or persons out of its community," Locke argues that the government of each state must have "the power of war and peace, leagues and alliances," in relation to everything external to itself.

Montesquieu and Rousseau slightly alter Hobbes' point by attributing the origin of war itself to the existence of separate societies. War, writes Rousseau, "is a relation, not between man and man, but between State and State." Because they are "in a state of nature among themselves," bodies politic experience, in his opinion, "the inconveniences which had obliged individuals to forsake it. . . . Hence arose national wars, battles, murders and reprisals, which shock nature and outrage reason."

Hegel's ultimate reason for thinking that war is ineradicable seems to be not merely that sovereign states are "in a state of nature in relation to each other," but that they must always re-

main so. "There is no Praetor to judge between states," he writes; "at best there may be an arbitrator or a mediator, and even he exercises his functions contingently only, *i.e.*, in dependence on the particular wills of the disputants."

That is why Hegel dismisses Kant's idea "for securing 'perpetual peace' by a League of Nations to adjust every dispute. . . . This idea," Hegel writes, "presupposes an accord between states; this would rest on moral and religious or other grounds and considerations, but in any case would always depend ultimately on a particular sovereign will and for that reason would remain infected with contingency." Hence, he concludes, "if states disagree and their particular wills cannot be harmonized, the matter can only be settled by war."

KANT AGREES THAT, in the absence of what he calls a "cosmo-political constitution" or world state, "*war* is inevitable." In their external relations to one another, states, "like lawless savages, are naturally in a non-juridical condition," and this, according to Kant, "is a state of war, in which the right of the stronger prevails; and although it may not in fact be always found as a state of actual war and incessant hostility . . . yet the condition is wrong in itself in the highest degree, and the nations which form States contiguous to each other are bound mutually to pass out of it."

How shall this be accomplished? Is Kant's idea the one Hegel attributes to him? Is the "alliance of nations," of which he speaks, to be a "league of nations" or does he have something more than that in mind when he says that "this mutual connection by alliance" must "take the form of a Federation"?

On the one hand, he calls for "a universal Union of States analogous to that by which a Nation becomes a State," and argues that "it is only thus that a real *state of Peace* could be established." But on the other, he explains that he means "only a voluntary combination of different States that would be *dissoluble* at any time, and not such a union as is embodied in the United States of America, founded upon a political constitution, and therefore indissoluble."

The arguments for the federal constitution of the United States help to make this issue clear. The authors of the Constitution regard it as providing "a more perfect union" than the Articles of Confederation under which the thirteen separate colonies are banded together by little more than treaties or alliances. To the writers of *The Federalist*, who advocate the adoption of a federal union to replace the loose confederacy or league of states, there is no middle ground between the establishment of peace through federal union and the continuation of the state of war between separate states.

"A man must be far gone in Utopian speculations," Hamilton declares, "who can seriously doubt that, if these States should either be wholly disunited, or only united in partial confederacies, the subdivisions into which they might be thrown would have frequent and violent contests with each other. . . . To look for a continuation of harmony between a number of independent, unconnected sovereignties in the same neighborhood, would be to disregard the uniform course of events, and to set at defiance the accumulated experience of ages." In another paper, Hamilton admits that "there is nothing absurd or impracticable in the idea of a league or alliance between independent nations for certain defined purposes precisely stated in a treaty," but he thinks that Europe has taught "an instructive but afflicting lesson to mankind, how little dependence is to be placed on treaties which have no other sanction than the obligations of good faith."

He returns therefore to attack the "visionary or designing men, who stand ready to advocate the paradox of perpetual peace between the States, though dismembered and alienated from each other." What reason have we to expect, he asks, "peace and cordiality between the members of the present confederation, in a state of separation"? It seems to him "an established truth that the several states, in the case of disunion . . . would be subject to those vicissitudes of peace and war, of friendship and enmity with each other, which have fallen to the lot of all neighboring nations not united under one government."

The Federalists do not seriously recommend their prescription for peace as a plan for the whole world. Yet they see the generalization that is implicit in all their reasoning. "Happy would it be," Madison says, "if such a remedy

for its infirmities could be enjoyed by all free governments; if a project equally effectual could be established for the universal peace of mankind!"

John Stuart Mill, writing somewhat later and in the light of the experience of American federation as a peace plan, seems to be even less ready to propose world federal government as the indispensable condition of world peace. He has no doubt that federal union "puts an end to war and diplomatic quarrels." But he does not think that abrogating the distinction between fellow countrymen and foreigners by making them all fellow citizens of an encompassing state—an object which is "one of the worthiest to which human endeavor can be directed"—can, "in the present state of civilization, be promoted by keeping different nationalities of anything like equivalent strength under the same government."

Not only does Kant definitely dismiss the notion of a world union formed along American lines, but even that less perfect union of states which would have the form of a "*Permanent Congress of Nations*," seems to him an impracticable idea in the world as it is at the end of the eighteenth century. "With the too great extension of such a Union of States over vast regions," he writes, "any government of it, and consequently the protection of its individual members, must at last become impossible; and thus a multitude of such corporations would again bring round a state of war."

Nevertheless, Kant refuses to yield completely to this conclusion. "The morally practical reason," he affirms, "utters within us its irrevocable *Veto*: '*There shall be no War.*'... Hence the question no longer is as to whether Perpetual Peace is a real thing or not a real thing, or as to whether we may not be deceiving ourselves when we adopt the former alternative, but we must *act* on the supposition of its being real. We must work for what may perhaps not be realized ... and thus we may put an end to the evil of wars, which have been the chief interest of the internal arrangements of all States without exception."

And in his *Idea of a Universal History on a Cosmo-Political Plan*, Kant does more than urge upon us our moral duty to work for perpetual peace as prerequisite to "the highest political good." He engages in prophecy. He pictures the nations of the world "after many devastations, overthrows, and even complete internal exhaustion of their powers" as "driven forward to the goal which Reason might well have impressed upon them, even without so much sad experience. This is none other than the advance out of the lawless state of savages and the entering into a Federation of Nations. ... However visionary this idea may appear to be ... it is nevertheless the inevitable issue of the necessity in which men involve one another."

THE ARGUMENT FOR WORLD GOVERNMENT as the means to world peace is nowhere made in the great books as explicitly as in Dante's *De Monarchia*. "Wherever there can be contention," Dante writes, "there judgment should exist; otherwise things should exist imperfectly, without their own means of adjustment or correction. ... Between any two governments, neither of which is in any way subordinate to the other, contention can arise either through their own fault or that of their subjects. This is evident. Therefore there should be judication between them. And since neither can know the affairs of the other, not being subordinate (for among equals there is no authority), there must be a third and wider power which rules both within its own jurisdiction.

"This third power," Dante continues, "is either the world-government, or it is not. If it is, we have reached our conclusion; if it is not, it must in turn have its equal outside its jurisdiction, and then it will need a third party as a judge, and so *ad infinitum*, which is impossible. So we must arrive at a first and supreme judge for whom all contentions are judicable either directly or indirectly. ... Therefore, world-government is necessary for the world." Aristotle, according to Dante, "saw this argument when he said, 'Things hate to be in disorder, but a plurality of authorities is disorder; therefore authority is single." But Aristotle certainly did not draw the conclusion that a single government embracing all mankind should be instituted so that "by common law it might lead all toward peace." Nor, with the exception of Kant, does any other great author argue to this conclusion. But, as we have seen, Kant, unlike

Dante, reaches this conclusion only to qualify his acceptance of it and his advocacy of world government.

Nevertheless, several of the great books do contain the nerve of the argument. It is contained in one fundamental proposition that is variously enunciated by Hobbes and Locke, Rousseau and the Federalists. That proposition is: *As anarchy leads to war, government establishes peace, and just laws preserve it.* By inductive generalization, it seems to follow that, if local peace depends on local government, world peace depends on world government.

But if, except for Dante and Kant, no one until the present made this inference, the tradition of western thought does include, not only the essential premise for making the inference, but also the controlling vision of a politically united humanity—all men as fellow citizens in a single political society embracing the earth.

Kant speaks of "the right of man as a citizen of the world to *attempt* to enter into communion with all others." Epictetus says, "there is but one course open to men, to do as Socrates did: never to reply to one who asks his country, 'I am an Athenian,' or 'I am a Corinthian,' but 'I am a citizen of the universe.'"

Reflecting on the fact that man's "nature is rational and social," Marcus Aurelius declares: "My city and my country, so far as I am Antoninus, is Rome, but so far as I am a man, it is the world." If we look at "what value everything has with reference to the whole," we will perceive that man "is a citizen of the highest city, of which all other cities are like families." The reason which is common to all men dictates a common law of human life. "If this is so," Aurelius argues, "we are fellow citizens; if this is so, we are members of one political community; if this is so, the world is in a manner a state."

Aristotle describes how the family is formed by the union of man and wife, parents and children; and from this first of all social units, the tribe or village is formed by a union of families, and the city or state by a union of villages. He does not carry this series on to its natural terminus, but Augustine does. "After the state or city," Augustine says, "comes the world, the third circle of human society—the first being the family, the second the city."

Yet Augustine, who orders earthly peace to the peace of heaven, does not prophesy a single political community of all men living together under one government. The heavenly city, he says, "while it sojourns on earth, calls citizens out of all nations, and gathers together a society of pilgrims of all languages, not scrupling about diversities in the manners, laws, and institutions whereby earthly peace is secured and maintained, but recognizing that, however various these are, they all tend to one and the same end of earthly peace."

One and the same end of earthly peace may require one city of man as well as one city of God. That, according to Dostoevsky, seems to be implied in the fact that "the craving for universal unity is the third and last anguish of men. Mankind as a whole," he writes, "has always striven to organize a universal state. There have been many great nations with great histories, but the more highly developed the more unhappy they were, for they felt more acutely than other people the craving for world-wide union."

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PAGE SECTIONS: When the text is printed in one column, the letters a and b refer to the upper and lower halves of the page. For example, in 53 JAMES: *Psychology*, 116a-119b, the passage begins in the upper half of page 116 and ends in the lower half of page 119. When the text is printed in two columns, the letters a and b refer to the upper and lower halves of the left-hand side of the page, the letters c and d to the upper and lower halves of the right-hand side of the page. For example, in 7 PLATO: *Symposium*, 163b-164c, the passage begins in the lower half of the left-hand side of page 163 and ends in the upper half of the right-hand side of page 164.

AUTHOR'S DIVISIONS: One or more of the main divisions of a work (such as PART, BK, CH, SECT) are sometimes included in the reference; line numbers, in brackets, are given in certain cases; *e.g.*, *Iliad*, BK II [265–283] 12d.

BIBLE REFERENCES: The references are to book, chapter, and verse. When the King James and Douay versions differ in title of books or in the numbering of chapters or verses, the King James version is cited first and the Douay, indicated by a (*D*), follows; *e.g.*, OLD TESTAMENT: *Nehemiah*, 7:45—(*D*) *II Esdras*, 7:46.

SYMBOLS: The abbreviation "esp" calls the reader's attention to one or more especially relevant parts of a whole reference; "passim" signifies that the topic is discussed intermittently rather than continuously in the work or passage cited.

For additional information concerning the style of the references, see the Explanation of Reference Style; for general guidance in the use of *The Great Ideas*, consult the Preface.

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38 ROUSSEAU: *Social Contract*, BK I, 389d-390d; BK II, 395d
40 GIBBON: *Decline and Fall*, 404a-b; 409b-d; 509b-c; 543c; 549d-550b
41 GIBBON: *Decline and Fall*, 5d-6a; 7d-8a; 17d-18c; 27b-28b; 130b-c; 373d-374d; 445a; 532d-533a; 729a [n 86]
42 KANT: *Science of Right*, 434d; 452c-455c esp 454a-c / *Judgement*, 504a-b
43 DECLARATION OF INDEPENDENCE: [84-94] 2b-3a
43 ARTICLES OF CONFEDERATION: VI [124-146] 6c-d; IX [186-191] 7b
43 CONSTITUTION OF THE U.S.: ARTICLE I, SECT 8 [220-225] 13b; SECT 10 [296-298] 14a; [314-320] 14b
43 FEDERALIST: NUMBER 6, 40a-b; NUMBER 11, 54c
46 HEGEL: *Philosophy of Right*, PART III, par 338-339 110a-b; ADDITIONS, 193 150c
51 TOLSTOY: *War and Peace*, BK IX, 344b-355c; BK X, 442c-443b; BK XII, 547a-551c; BK XIV, 589a-c; 598b-599b
54 FREUD: *War and Death*, 756c-757c

4. The causes or occasions of war

4a. The precipitation of war between states: remote and proximate causes; real and apparent causes

4 HOMER: *Iliad*, BK II [155-182] 11c-d; BK VII [344-378] 49c-d; BK XIII [345-360] 91d-92a
5 AESCHYLUS: *Suppliant Maidens* [333-479] 5a-7a; [825-953] 11d-13a / *Agamemnon* [399-455] 56b-57a; [681-749] 59b-60a
5 EURIPIDES: *Suppliants* 258a-269a,c esp [399-597] 261d-263c / *Phoenician Maidens* [357-637] 381a-383d / *Iphigenia at Aulis* [49-88] 425c-d
5 ARISTOPHANES: *Acharnians* [480-565] 460d-461c / *Peace* [195-222] 528a-c; [601-692] 532d-534a / *Plutus* [144-197] 630d-631b
6 HERODOTUS: *History*, BK I, 1a-2c; 10a; 11b-c; 16b-c; BK II, 71a-73b; BK III, 89a-d; 99c-100a; 118a-c; 119c-120b; BK IV, 146a-b; 152b-c; 154a-b; BK V, 165a-166a; 174b-175b; 175d-177b; 180c-d; 182b; BK VI, 202c-203d; 211a-b; 212a-c; BK VII, 214d-220b; BK VIII, 280b-d; 283a-b
6 THUCYDIDES: *Peloponnesian War*, BK I 349a-386d esp 349b-d, 353c-d, 354d-355a, 362d-363a, 365a-b, 371b; BK III, 418d-419d; BK V, 491c-492b; 493c-496b; 497b; BK VI, 510c-511a
7 PLATO: *Phaedo*, 224d / *Republic*, BK II, 318c-319a; BK VIII, 413d-414d esp 414c / *Statesman*, 605d-608d
8 ARISTOTLE: *Posterior Analytics*, BK II, CH 11 [94^a36-$^b8$] 129a-b
13 VIRGIL: *Aeneid*, BK VII 236a-258b
14 PLUTARCH: *Numa Pompilius*, 57d-60b / *Camillus*, 108b-109c / *Pericles*, 130d-137c / *Coriolanus*, 179c-180b / *Pyrrhus*, 319b-d / *Lysander*, 366b-c / *Demetrius*, 727d
15 TACITUS: *Annals*, BK VI, 94a-d; BK XII, 122a-c; BK XIII, 134a; BK XV, 157d-158b; 163c-164a / *Histories*, BK I, 207b-c
18 AUGUSTINE: *City of God*, BK III, CH 10 172d-173c; CH 13-14 174c-176d; BK V, CH 12, 216d-218a; BK XIX, CH 7 515a-c
20 AQUINAS: *Summa Theologica*, PART II-II, Q 29, A 2, REP 2 531a-d; Q 40, A 1, ANS 578a-579b
23 MACHIAVELLI: *Prince*, CH XXI, 31d-32d
23 HOBBES: *Leviathan*, PART I, 76d-77a; PART II, 157a
24 RABELAIS: *Gargantua and Pantagruel*, BK I, 30d-32c
25 MONTAIGNE: *Essays*, 299d-300c; 330b-331a
26 SHAKESPEARE: *King John*, ACT III, SC I 386a-389d esp [253-297] 388d-389b / *Henry V*, ACT I 533a-537b
27 SHAKESPEARE: *Troilus and Cressida*, ACT II, SC II 113c-115d
29 CERVANTES: *Don Quixote*, PART II, 290a-d
32 MILTON: *Paradise Lost*, BK XI [634-707] 313a-314b

35 LOCKE: *Toleration*, 13c-d
36 SWIFT: *Gulliver*, PART IV, 150a-151b
38 MONTESQUIEU: *Spirit of Laws*, BK X, 61b,d-62a
38 ROUSSEAU: *Political Economy*, 380a / *Social Contract*, BK II, 403c-404b
40 GIBBON: *Decline and Fall*, 95b; 98d-100c; 101b-c; 103a-110c passim; 119d; 148b-149d passim; 261c; 264d-265a; 558a-572a passim, esp 558a-c, 571b,d-572a
41 GIBBON: *Decline and Fall*, 1a-2d passim; 46c-47a; 380b-384b; 531d-534a passim, esp 531d-532b; 539d-541c
43 ARTICLES OF CONFEDERATION: III 5b; VI [124-146] 6c-d
43 FEDERALIST: NUMBER 3-7 33b-44c passim; NUMBER 18-20 71a-78b passim; NUMBER 24, 88d-89a; NUMBER 34, 110b-d; NUMBER 80, 235b-236a
46 HEGEL: *Philosophy of Right*, PART III, par 334-335 109c-d / *Philosophy of History*, PART I, 232b-c; PART II, 262c-263a; 274a-275b; 278c-281b; PART IV, 357a-358b
51 TOLSTOY: *War and Peace*, BK IX, 342a-355c; BK X, 389a-391c; BK XI, 469a-472b; BK XIII, 563a-b; EPILOGUE I, 645a-650c; EPILOGUE II 675a-696d passim
54 FREUD: *War and Death*, 755c; 761a-c; 766b-d / *Civilization and Its Discontents*, 788b-d

4b. The factors responsible for civil strife

5 AESCHYLUS: *Eumenides* [848-869] 89d-90a
6 HERODOTUS: *History*, BK I, 29d-30b; BK IV, 124a-d; 126a-b
6 THUCYDIDES: *Peloponnesian War*, BK III, 434c-438b; BK IV, 460c-d; BK V, 482d-483a; BK VIII, 568d-569a
7 PLATO: *Republic*, BK IV, 342d-344a; BK VIII, 408b-409b / *Statesman*, 605d-608d / *Laws*, BK III, 668d-676b / *Seventh Letter*, 814b-c
9 ARISTOTLE: *Politics*, BK II, CH 6 [1265^b6-12] 461a; CH 7 461d-463c passim; CH 9 [1269^a 37-$^b13$] 465c-d; BK IV, CH 11 [1295^b2-1296^b2] 495c-496c; BK V 502a-519d passim
12 LUCRETIUS: *Nature of Things*, BK III [68-73] 31a
14 PLUTARCH: *Theseus*, 13a-14c / *Solon*, 68d-69d / *Camillus*, 117c-121a,c / *Pericles*, 124a-130b esp 126d-127a / *Coriolanus*, 176b-184c / *Sulla*, 369a-374a / *Caesar*, 581d-582a / *Agis* 648b,d-656d / *Cleomenes*, 657a-663c / *Tiberius Gracchus* 671b,d-681a,c esp 680b-d / *Caius Gracchus* 681b,d-689a,c / *Cicero*, 708a-713b / *Antony*, 750a-b / *Galba*, 859a-c
15 TACITUS: *Annals*, BK I, 4a-d; 10d-11b / *Histories*, BK I, 190a-191a; 195a-196b; 198d-199c; 202c-205a; BK II, 215d-216b; 224d-225a
18 AUGUSTINE: *City of God*, BK XIX, CH 7 515a-c
21 DANTE: *Divine Comedy*, HELL, VI [58-75] 9a; PURGATORY, XIV [16-126] 73d-75a
23 MACHIAVELLI: *Prince*, CH III, 3c-5a; CH IV-V 7a-8c; CH VI, 9b-d; CH VIII-IX, 14a-16a; CH XVII 23d-24d; CH XIX, 26a-27a; CH XX, 31a
23 HOBBES: *Leviathan*, PART I, 77a; 78c-d; PART II, 102d-103a; 103c-104a; 114d-115a; 116c-d; 148c-153a; 157d-158a; 159a-c; PART III, 240a-b; PART IV, 247a-248d; 270c-d; 273a-c; 276c-277a; 278c; CONCLUSION, 280c-281a
25 MONTAIGNE: *Essays*, 48b-51a
26 SHAKESPEARE: *1st Henry VI* 1a-32a,c esp ACT II, SC IV-ACT III, SC I 11b-16b, ACT IV, SC I [111-194] 21a-d / *2nd Henry VI* 33a-68d esp ACT I, SC I 33b,d-36b, ACT II, SC II 43c-44c / *3rd Henry VI* 69a-104d esp ACT V, SC VI-VII 103b-104d / *Richard III*, ACT V, SC III [237-270] 146b-c / *Richard II* 320a-351d esp ACT I, SC III [123-138] 324d-325a, ACT IV, SC I [107-157] 342c-343a / *King John*, ACT IV, SC III [140]-ACT V, SC I [79] 399a-400a / *1st Henry IV* 434a-466d esp ACT IV, SC III [41-113] 459d-460b, ACT V, SC I [1-120] 460d-462a / *2nd Henry IV*, ACT I, SC III [85-110] 473d-474a; ACT IV, SC I [30]-SC II [42] 487c-490a / *Julius Caesar* 568a-596a,c esp ACT II, SC I [112-183] 575d-576b, ACT III, SC I [78-110] 581b-c, [253-275] 583b
27 SHAKESPEARE: *Troilus and Cressida*, ACT I, SC III [75-137] 108d-109c / *Macbeth*, ACT IV, SC III [1-135] 303b-304d / *Antony and Cleopatra*, ACT I, SC III [41-53] 315a-b; ACT III, SC IV 329b-d / *Coriolanus*, ACT I, SC I [1-226] 351a-353d / *Cymbeline*, ACT III, SC I 463c-464c
30 BACON: *Advancement of Learning*, 7a
35 LOCKE: *Toleration*, 7b; 18c-19d; 20c-21c / *Civil Government*, CH XVIII, SECT 203-210 72a-73c; CH XIX, SECT 224-243 76d-81d
36 STERNE: *Tristram Shandy*, 338a-339a
38 MONTESQUIEU: *Spirit of Laws*, BK V, 28b-29a; BK VIII, 54b-c; BK X, 65b; BK XV, 112d-113a; BK XIX, 137c; 139b-c
38 ROUSSEAU: *Inequality*, 361b-362a / *Social Contract*, BK III, 411b-c; 417b-c
39 SMITH: *Wealth of Nations*, BK IV, 269d-271a; BK V, 308b-c; 348a-352a
40 GIBBON: *Decline and Fall*, 35a; 48d-49a; 69a-76a esp 69a-b, 71c-d, 73b-c; 111b-112c passim, esp 112b; 113c; 116b-c; 127a-c; 159b,d-178d passim, esp 159b,d; 267a-272a,c passim; 324d-326b esp 326b; 330a-335c esp 334b-d; 420b-422d esp 420c-d; 446b-447d; 449d-450a; 453c-454c; 652d-654c
41 GIBBON: *Decline and Fall*, 51a-53a; 113d-115a; 466a-b
43 DECLARATION OF INDEPENDENCE: 1a-3b
43 FEDERALIST: NUMBER 9-10 47a-53a; NUMBER 16 66c-68d; NUMBER 27, 95b-c; NUMBER 58, 181d-182a; NUMBER 60, 184b-d
43 MILL: *Liberty*, 321b / *Representative Government*, 425b-426b; 428b-431a passim
46 HEGEL: *Philosophy of History*, PART III, 295d-296c; PART IV, 345a-b
50 MARX: *Capital*, 7b; 377c-378d esp 378c

(4. The causes or occasions of war. 4b. The factors responsible for civil strife.)

50 MARX-ENGELS: *Communist Manifesto*, 416c-d
51 TOLSTOY: *War and Peace*, EPILOGUE II, 680b-683b
54 FREUD: *Civilization and Its Discontents*, 787c-788d esp 787d-788a

5. The effects of war

5a. The moral consequences of war: its effects on the happiness and virtue of men and on the welfare of women and children

OLD TESTAMENT: *II Kings*, 25—(*D*) *IV Kings*, 25 / *II Chronicles*, 36:17-21—(*D*) *II Paralipomenon*, 36:17-21 / *Jeremiah*, 39-40; 52—(*D*) *Jeremias*, 39-40; 52
APOCRYPHA: *I Maccabees*, 1:20-64—(*D*) OT, *I Machabees*, 1:21-67
4 HOMER: *Iliad*, BK VI [369-502] 43d-45a; BK XVIII [1-137] 130a-131c; BK XXIV 171a-179d esp [689-781] 178c-179c
5 AESCHYLUS: *Persians* [101-124] 16c-d; [515-597] 20c-21b / *Seven Against Thebes* [78-368] 28a-31b / *Agamemnon* [183-257] 54a-d; [320-350] 55c-d; [399-474] 56b-57b; [855-905] 61b-c
5 SOPHOCLES: *Ajax* [1185-1222] 153b-c
5 EURIPIDES: *Suppliants* 258a-269a,c / *Trojan Women* 270a-281a,c / *Andromache* [91-116] 316a-b / *Hecuba* 353a-364a,c
5 ARISTOPHANES: *Peace* [601-656] 532d-533c / *Lysistrata* 583a-599a,c esp [587-599] 590d-591a
6 HERODOTUS: *History*, BK I, 20d-21a; BK III, 121c-d
6 THUCYDIDES: *Peloponnesian War*, BK II, 392a-b; 398c-d; BK III, 436d-438b; BK VII, 545d 546a; 559b-d; 562c-563a,c
7 PLATO: *Laws*, BK I, 648b-c; BK IV, 677d-678c
9 ARISTOTLE: *Politics*, BK VII, CH 15 [1334^{a}12-^{b}7] 539a-b
13 VIRGIL: *Aeneid*, BK II [268-804] 131b-146b
14 PLUTARCH: *Caesar*, 590d-591a; 592a-c; 598c
15 TACITUS: *Annals*, BK I, 12b-13b; 18a-c / *Histories*, BK I, 202b-c; BK II, 217c-218a; 226c-d; 229b-c; BK III, 248c-d; 250a-251a; 255b-c; 265a-b; BK IV, 266b-c
18 AUGUSTINE: *City of God*, BK III, CH 13 174c-175b; BK XIX, CH 7 515a-c
20 AQUINAS: *Summa Theologica*, PART II-II, Q 40, A 2, ANS 579b-580c
21 DANTE: *Divine Comedy*, PURGATORY, VI [58-151] 61b-62c
22 CHAUCER: *Knight's Tale* [859-1004] 174a-176b / *Tale of Melibeus*, par 12 404a-b
24 RABELAIS: *Gargantua and Pantagruel*, BK III, 140c-141c; 143a-144c
25 MONTAIGNE: *Essays*, 95a-97a; 504c-509a
26 SHAKESPEARE: *1st Henry VI*, ACT IV, SC V-VII 23d-26a / *2nd Henry VI*, ACT V, SC II [31-65] 67d-68a / *3rd Henry VI*, ACT I, SC IV 74c-76b; ACT II, SC V 81d-83a / *Richard III*, ACT V, SC V [16-41] 148a,c / *Henry V*, ACT III, SC III 545d-546b; ACT IV, SC I [95-246] 552c-554a; ACT V, SC II [24-67] 563c-564a / *Julius Caesar*, ACT III, SC I [262-275] 583b
35 LOCKE: *Civil Government*, CH XVI, SECT 180-189 67b-69b passim
36 STERNE: *Tristram Shandy*, 448b-451a
38 ROUSSEAU: *Inequality*, 355c; 364c-d / *Political Economy*, 380a-d / *Social Contract*, BK III, 418a-b [fn 1]
39 SMITH: *Wealth of Nations*, BK V, 301b-c
40 GIBBON: *Decline and Fall*, 35a; 112d-113a; 409b-d; 509b-510c; 511c-512a; 573b-574a; 627d-628a
41 GIBBON: *Decline and Fall*, 397c-398a; 437b-440a,c passim; 551d-553a
42 KANT: *Science of Right*, 454a-c / *Judgement*, 504a-b
43 DECLARATION OF INDEPENDENCE: [80-94] 2b-3a
46 HEGEL: *Philosophy of Right*, PART III, par 324 107a-d; ADDITIONS, 193 150c
51 TOLSTOY: *War and Peace*, BK I, 12b-14b; 50d; 55c-59d; BK II, 76a-b; 90c-91a; 102d-104a; 109d-110a,c; BK III, 128d-131c; 141d-142a; 155b-156d; 162b-164a,c; BK IV, 179b-180d; BK V, 221d-222b; 225c-228b; 232a-234a; BK VII, 275a-276b; BK IX, 342a; BK X, 410c-421c; 442c-443b; 467a-468a,c; BK XI, 475b-476c; 485a-496a; 497c-513d; 527b-532a,c; BK XII, 537b-562d; EPILOGUE II, 675d-676a
52 DOSTOEVSKY: *Brothers Karamazov*, BK VI, 166c-167b
54 FREUD: *War and Death*, 756d-761a esp 756d-757a, 757c, 760d-761a; 764c-d; 766c

5b. The political consequences of war: its effects on different forms of government

5 ARISTOPHANES: *Knights* [790-809] 479c-480a / *Peace* [601-656] 532d-533c
6 HERODOTUS: *History*, BK III, 118a-c
6 THUCYDIDES: *Peloponnesian War*, BK VIII 564a-593a,c esp 575c-576c, 577b-d, 579c-581c, 582a-c
9 ARISTOTLE: *Politics*, BK V, CH 3 [1303^{a}2-12] 504b-c; CH 7 [1306^{b}32-1307^{a}2] 508d; CH 11 [1313^{b}28-29] 516c / *Athenian Constitution*, CH 29 566b-d
14 PLUTARCH: *Camillus*, 106b; 119a-120c / *Coriolanus*, 179c-d; 186d / *Flamininus*, 307d-308a / *Caius Marius* 332b,d-354a,c / *Sulla* 368a-387a,c / *Caesar*, 590d-591a
15 TACITUS: *Annals*, BK I, 1b-c
35 LOCKE: *Civil Government*, CH XVI 65d-70c esp SECT 175 65d; CH XIX, SECT 211 73d-74a
38 MONTESQUIEU: *Spirit of Laws*, BK IX, 60b-61a; 61b-c; BK X, 64a-65b
38 ROUSSEAU: *Political Economy*, 380a-d / *Social Contract*, BK II, 403c-404a; BK III, 418a-b [fn 1]

41 GIBBON: *Decline and Fall*, 452d-453a,c
43 DECLARATION OF INDEPENDENCE: [80–81] 2b
43 CONSTITUTION OF THE U.S.: ARTICLE I, SECT 9 [267–270] 13d; AMENDMENTS, XIV, SECT 2–4 18d-19a
43 FEDERALIST: NUMBER 8, 45a-47a; NUMBER 16, 68d; NUMBER 18–20 71a-78b passim; NUMBER 41, 133b-d; NUMBER 58, 181d-182a
54 FREUD: *New Introductory Lectures*, 882d

5c. The economic consequences of war: the cost of war and the by-products of war

5 ARISTOPHANES: *Peace* [601–656] 532d-533c; [1197–1264] 540a-d
6 HERODOTUS: *History*, BK VII, 235c-236a; 249d
6 THUCYDIDES: *Peloponnesian War*, BK I, 349b-d; 354d-355a; BK II, 390c-391c; 399b-401b; BK III, 420d; BK VII, 551b-d; BK VIII, 564a-c
9 ARISTOTLE: *Politics*, BK V, CH 7 [1306^{b}32–1307^{a}2] 508d
14 PLUTARCH: *Coriolanus*, 179c-180b
15 TACITUS: *Histories*, BK I, 213d-214a; BK II, 229b-c; 236d-237a; BK III, 250b-c
25 MONTAIGNE: *Essays*, 504c-509a
26 SHAKESPEARE: *Henry V*, ACT V, SC II [23–67] 563c-564a
35 LOCKE: *Civil Government*, CH XVI, SECT 180–184 67b-68d
36 STERNE: *Tristram Shandy*, 225a
38 MONTESQUIEU: *Spirit of Laws*, BK XIII, 100d-101a
38 ROUSSEAU: *Political Economy*, 380a-d / *Social Contract*, BK III, 418a-b [fn 1]
39 SMITH: *Wealth of Nations*, BK III, 181a,c; BK IV, 262a-c
40 GIBBON: *Decline and Fall*, 114a,c; 409c-d; 428b-d; 503d-504c; 510d-511c passim; 541d-542a; 584d
41 GIBBON: *Decline and Fall*, 2b-c; 133c-d; 437c-438c; 452d-453a,c
42 KANT: *Judgement*, 586c-d
43 DECLARATION OF INDEPENDENCE: [80–94] 2b-3a
43 ARTICLES OF CONFEDERATION: VIII [155–167] 6d-7a
43 CONSTITUTION OF THE U.S.: AMENDMENTS, XIV, SECT 4 19a
43 FEDERALIST: NUMBER 11, 54b-c; NUMBER 25, 91a-b; NUMBER 30, 102d-103a; NUMBER 34, 110d-111b
51 TOLSTOY: *War and Peace*, BK XI, 490a; 500d-502a; BK XV, 634a-635a; EPILOGUE II, 675d-676a

6. The conception of war as a political means or instrument

6a. Conquest, empire, political expansion as ends of war

OLD TESTAMENT: *Joshua*, 6–12—(*D*) *Josue*, 6–12 / *Judges*, 18
APOCRYPHA: *Judith*, 1–2—(*D*) OT, *Judith*, 1–2 / *I Maccabees*, 1:16–24—(*D*) OT, *I Machabees*, 1:17–25
5 AESCHYLUS: *Persians* 15a-26d esp [852–908] 24b-d
6 HERODOTUS: *History*, BK I, 16b-c; 46a; BK III, 118a-c; BK IV, 138d-159d passim; BK V, 161c-162b; 165a-166a; 169a-c; BK VI, 211a-b; BK VII-IX 214a-314a,c passim, esp BK VII, 214a-b, 214d-216b, BK IX, 305d-306a, 314a,c
6 THUCYDIDES: *Peloponnesian War*, BK I, 368a-371b esp 370d-371b; 384c-386c; BK II, 396b-c, 402d-404a; BK IV, 461d-462a; BK V, 504c-508a; BK VI, 510c-516b; 529b-c; 530d-532b, 533c
7 PLATO: *Republic*, BK II, 318c-319a
9 ARISTOTLE: *Politics*, BK I, CH 7 [1255^{b}38–39] 449c; CH 8 [1256^{b}20–26] 450c; BK VII, CH 2 [1324^{b}2–1325^{a}7] 528c-529a; CH 14 [1333^{a}41–1334^{a}11] 538b-d
13 VIRGIL: *Aeneid*, BK I [283–296] 110b-111a; BK VI [81–97] 213a-b; [845–853] 233b-234a; BK VIII [608–731] 275a-278b
14 PLUTARCH: *Camillus*, 108b-d / *Pyrrhus*, 319b-d; 320d-321a / *Caesar*, 599b-d
15 TACITUS: *Histories*, BK IV, 290a-c
18 AUGUSTINE: *City of God*, BK IV, CH 14–15 196b-197a; BK V, CH 12, 216d-218a
23 MACHIAVELLI: *Prince*, CH XXI, 31d-32d
25 MONTAIGNE: *Essays*, 91c; 440b-442d
26 SHAKESPEARE: *1st Henry VI* 1a-32a,c / *2nd Henry VI* 33a-68d / *3rd Henry VI* 69a-104d / *Henry V* 532a-567a,c esp ACT I 533a-537b
27 SHAKESPEARE: *Hamlet*, ACT IV, SC IV 58d-59c / *Cymbeline*, ACT III, SC I 463c-464c
30 BACON: *New Atlantis*, 204d-205a
35 LOCKE: *Civil Government*, CH XVI 65d-70c
36 SWIFT: *Gulliver*, PART I, 23a-26a
38 MONTESQUIEU: *Spirit of Laws*, BK I, 3a; BK X 61b,d-68d
38 ROUSSEAU: *Inequality*, 359b; 364a-b / *Political Economy*, 380a-d / *Social Contract*, BK I, 389d-390d; BK II, 403c-404b; BK IV, 437d-438c
39 SMITH: *Wealth of Nations*, BK IV, 245c-d
40 GIBBON: *Decline and Fall*, 2a-3c; 84d-86a; 98d-99d; 109b-110b; 121c-125d passim; 134a-b; 176b-c; 264d-265a; 398d; 414a-418c; 446b-c; 540b; 558a-c; 571b,d-572a
41 GIBBON: *Decline and Fall*, 46d; 212c-d; 255a-288a,c passim, esp 255a-b, 288a,c; 343b; 347b,d-451c passim; 494b,d-505c passim, esp 496a, 505b-c; 539d-540d
42 KANT: *Science of Right*, 413d; 454a-455a esp 454b, 454d-455a
43 ARTICLES OF CONFEDERATION: III 5b
43 FEDERALIST: NUMBER 4–6 35a-41c passim; NUMBER 16, 66c-67a
43 MILL: *Representative Government*, 425b-426b
46 HEGEL: *Philosophy of History*, PART I, 242d-243b; PART II, 275a-b; 276d-277a; 281d-282d;

(6. The conception of war as a political means or instrument. 6a. Conquest, empire, political expansion as ends of war.)

PART III, 297a-d; 299a-c; PART IV, 339d-340a; 357a-358b

48 MELVILLE: *Moby Dick*, 292a-295a esp 294a-295a

6b. Liberty, justice, honor, peace as ends of war

OLD TESTAMENT: *Numbers*, 31:1-10 / *Judges*, 3-7; 14-16; 19-20 / *II Samuel*, 10—(*D*) *II Kings*, 10 / *I Chronicles*, 19—(*D*) *I Paralipomenon*, 19 / *II Chronicles*, 32:1-22—(*D*) *II Paralipomenon*, 32:1-22

APOCRYPHA: *Judith*—(*D*) OT, *Judith* / *I Maccabees*, 1-9; 14:29-37—(*D*) OT, *I Machabees*, 1-9; 14:29-37 / *II Maccabees*, 6-10—(*D*) OT, *II Machabees*, 6-10

4 HOMER: *Iliad* 3a-179d passim, esp BK II [155-368] 11c-13d, BK VI [390-465] 44a-d

5 EURIPIDES: *Suppliants* 258a-269a,c esp [286-358] 260d-261c, [513-565] 262d-263b

5 ARISTOPHANES: *Knights* [547-610] 476d-477d

6 HERODOTUS: *History*, BK I, 1a-2b; BK III, 99c-100a; BK VII, 214a-216d; 218a-b; 239a-c; BK VIII, 287c-d

6 THUCYDIDES: *Peloponnesian War*, BK I 349a-386d esp 378a-380a; BK II, 402c-404a; BK III, 430b-431b; 432a-434a; BK IV, 468a-469b; BK V, 504c-508a; BK VIII, 564c-d

9 ARISTOTLE: *Ethics*, BK X, CH 7 [$1177^{b}5$-25] 432a-c / *Politics*, BK VII, CH 2 [$1324^{b}2$-$1325^{a}7$] 528c-529a; CH 14 [$1333^{a}30$]-CH 15 [$1334^{b}7$] 538a-539b

13 VIRGIL: *Aeneid*, BK VI [845-853] 233b-234a

14 PLUTARCH: *Flamininus* 302b,d-313a,c

15 TACITUS: *Annals*, BK II, 34d-35c / *Histories*, BK IV, 290a-c

18 AUGUSTINE: *City of God*, BK V, CH 12, 216d-218a; BK XV, CH 4 399c-400a; BK XIX, CH 12, 517c-d

20 AQUINAS: *Summa Theologica*, PART II-II, Q 29, A 2, REP 2 531a-d; Q 40, A 1, ANS and REP 1,3 578a-579b

23 MACHIAVELLI: *Prince*, CH V 8a-c

24 RABELAIS: *Gargantua and Pantagruel*, BK I, 35a-36c; 58a-59d; BK III, 131b,d-133b

25 MONTAIGNE: *Essays*, 95a-97b

26 SHAKESPEARE: *Richard III*, ACT V, SC III [237-270] 146b-c / *King John*, ACT V, SC II [1-39] 400a-c / *2nd Henry IV*, ACT IV, SC I 487b-489d / *Henry V*, ACT I 533a-537b

27 SHAKESPEARE: *Troilus and Cressida*, ACT II, SC II [188-213] 115c-d / *Cymbeline*, ACT III, SC I 463c-464c

29 CERVANTES: *Don Quixote*, PART I, 145d-146a; PART II, 290c

35 LOCKE: *Civil Government*, CH III 28d-29d; CH XVI 65d-70c; CH XIX, SECT 224-243 76d-81d

36 STERNE: *Tristram Shandy*, 225a; 448b-451a

38 MONTESQUIEU: *Spirit of Laws*, BK X, 61b,d-63d

38 ROUSSEAU: *Social Contract*, BK IV, 437d-438c

39 SMITH: *Wealth of Nations*, BK IV, 269d-271a

40 GIBBON: *Decline and Fall*, 48d-49a; 71b-76a esp 73c; 144a-d; 420b-422d esp 420c-d; 535d-536b

41 GIBBON: *Decline and Fall*, 113d-115a; 127d-128a; 383c-384b; 443b-444a

42 KANT: *Science of Right*, 452a-455a esp 454d-455a

43 FEDERALIST: NUMBER 28, 97c; NUMBER 46, 152b-153a

46 HEGEL: *Philosophy of Right*, PART III, par 334 109c / *Philosophy of History*, PART II, 274a-275a; 282d-283b; PART IV, 345a-b

47 GOETHE: *Faust*, PART II [6956-6963] 170b; [9855-9862] 239b

50 MARX-ENGELS: *Communist Manifesto*, 416c-d

51 TOLSTOY: *War and Peace*, BK I, 33d-34c

7. The inevitability of war: the political necessity of military preparations

5 ARISTOPHANES: *Peace* [195-222] 528a-c; [1061-1086] 538b-c

6 HERODOTUS: *History*, BK I, 41c-d; BK IV, 132a-b; BK VI, 192a-b

6 THUCYDIDES: *Peloponnesian War*, BK I, 384c-386c; BK II, 389a-c; 396d-397a; 402c; 403c; BK III, 436d-437d; BK VI, 514b-c; 518a-520d

7 PLATO: *Republic*, BK II, 318c-319a; BK IV, 343b-c / *Laws*, BK I, 640d-641a; BK VI, 701b-702a; BK VIII, 732b-733b

9 ARISTOTLE: *Politics*, BK II, CH 6 [$1265^{a}19$-27] 460c; CH 7 [$1267^{a}17$-36] 462d-463a; BK IV, CH 4 [$1291^{a}7$-33] 490b-c; BK VII, CH 2 [$1324^{b}2$-$1325^{a}15$] 528c-529a; CH 4 [$1326^{a}22$-24] 530b; CH 5 [$1326^{b}38$]-CH 6 [$1327^{b}17$] 531a-d; CH 11 [$1330^{b}1$-$1331^{a}18$] 535a-d; CH 14 [$1333^{a}41$-1334^{a} 11] 538b-d / *Rhetoric*, BK I, CH 4 [$1359^{b}33$-$1360^{a}12$] 600a-b

14 PLUTARCH: *Numa Pompilius*, 59d-60b / *Themistocles*, 89b-d

15 TACITUS: *Annals*, BK IV, 64d-65a

23 MACHIAVELLI: *Prince*, CH III, 5c; CH XII, 18a; CH XIV 21b-22a; CH XVIII, 25a-b; CH XXI, 32a-d

23 HOBBES: *Leviathan*, PART I, 76d; 84c-86b; PART II, 114b-c; 157a

26 SHAKESPEARE: *Henry V*, ACT II, SC IV [1-64] 541d-542c

29 CERVANTES: *Don Quixote*, PART I, 40d

32 MILTON: *Paradise Lost*, BK II [496-505] 122a

38 MONTESQUIEU: *Spirit of Laws*, BK I, 2d-3a; BK X, 61b,d-62a; BK XIII, 100d-101a

38 ROUSSEAU: *Inequality*, 324c; 355b-c / *Social Contract*, BK II, 403c-404a

39 SMITH: *Wealth of Nations*, BK V, 304a-b

40 GIBBON: *Decline and Fall*, 4b; 558a-b

41 GIBBON: *Decline and Fall*, 321b

42 KANT: *Science of Right*, 452c-d; 457a-458a,c / *Judgement*, 586a-587a

43 DECLARATION OF INDEPENDENCE: [43–47] 2a
43 ARTICLES OF CONFEDERATION: III 5b; VI–VII 6a-d; IX [173–177] 7a; [318–367] 8b-d
43 CONSTITUTION OF THE U.S.: ARTICLE I, SECT 8 [192–196] 13a; [220–242] 13b-c; SECT 10 [314–320] 14b
43 FEDERALIST: NUMBER 3–8 33b-47a passim, esp NUMBER 6, 39a; NUMBER 16, 68d; NUMBER 23–24 85a-89c passim, esp NUMBER 23, 85b; NUMBER 25, 90b-91d; NUMBER 28, 96c; NUMBER 34, 110a-d; NUMBER 41, 132c-135a passim; NUMBER 43, 141d
46 HEGEL: *Philosophy of Right*, PART III, par 326 107d-108a; par 333–334 109b-c / *Philosophy of History*, PART II, 278c-279b; PART III, 288c
50 MARX-ENGELS: *Communist Manifesto*, 428a-b
51 TOLSTOY: *War and Peace*, BK I, 12d-13a; 33d-34c; BK V, 220c-d; BK IX, 342a-344b
53 JAMES: *Psychology*, 717a-b
54 FREUD: *War and Death*, 755b-757a passim, esp 755c, 756c; 766c-d / *Civilization and Its Discontents*, 787a-788c esp 787b, 788b

8. The desirability of war: its moral and political benefits

4 HOMER: *Iliad*, BK XII [290–328] 85b-c
5 EURIPIDES: *Trojan Women* [386–405] 273b-c / *Helen* [36–41] 298b
6 HERODOTUS: *History*, BK III, 118a-c; BK VII, 215c-216b
6 THUCYDIDES: *Peloponnesian War*, BK I, 378a-380a; 384c-386c; BK II, 403c-404a; BK VI, 514d; BK VIII, 564c-d
9 ARISTOTLE: *Politics*, BK VII, CH 2 [$1324^{b}2$–$1325^{a}7$] 528c-529a; CH 14 [$1333^{a}41$]–CH 15 [$1334^{b}7$] 538b-539b
14 PLUTARCH: *Lycurgus*, 38d-45b / *Lycurgus-Numa*, 62b-c; 64a,c / *Camillus*, 108b-c
15 TACITUS: *Annals*, BK II, 26b-c
23 MACHIAVELLI: *Prince*, CH XXI, 31d-32d
24 RABELAIS: *Gargantua and Pantagruel*, BK III, 129a-b
25 MONTAIGNE: *Essays*, 330b-331a
26 SHAKESPEARE: *2nd Henry IV*, ACT IV, SC I [59–87] 487d-488a / *Henry V*, ACT IV, SC III [1–78] 555c-556c
27 SHAKESPEARE: *Coriolanus*, ACT IV, SC V [233]–SC VI [9] 381d-382a
32 MILTON: *Paradise Lost*, BK II [43–108] 112a-113b
36 STERNE: *Tristram Shandy*, 448b-451a; 535a-b
41 GIBBON: *Decline and Fall*, 451c-453a,c esp 452c-453a,c; 505a-c
42 KANT: *Judgement*, 504a-b; 586a-587a
46 HEGEL: *Philosophy of Right*, PART III, par 324 107a-d; ADDITIONS, 188 149b-c / *Philosophy of History*, PART II, 281d-282d; PART IV, 318a
47 GOETHE: *Faust*, PART I [860–867] 22b; [884–902] 23a; PART II [9835–9850] 239a
51 TOLSTOY: *War and Peace*, BK XI, 517d-518a

9. The folly and futility of war

5 SOPHOCLES: *Ajax* [1185–1222] 153b-c
5 EURIPIDES: *Suppliants* [734–749] 264d; [949–954] 266d / *Helen* [1151–1164] 309a-b
5 ARISTOPHANES: *Acharnians* 455a-469a,c / *Peace* 526a-541d / *Lysistrata* 583a-599a,c
6 HERODOTUS: *History*, BK I, 16b-c; 20d-21a; BK VII, 216d-218a; 219d-220a; BK IX, 305d-306a
6 THUCYDIDES: *Peloponnesian War*, BK II, 402c; BK IV, 461b-c
7 PLATO: *Seventh Letter*, 813d-814b
13 VIRGIL: *Aeneid*, BK XI [242–375] 334b-338a; BK XII [1–53] 354a-355b
14 PLUTARCH: *Marcellus*, 254d-256b
15 TACITUS: *Annals*, BK I, 17b
18 AUGUSTINE: *City of God*, BK III, CH 10 172d-173c; BK IV, CH 3 190a-c; BK XV, CH 4 399c-400a
22 CHAUCER: *Tale of Melibeus*, par 53–54 425b-426a
24 RABELAIS: *Gargantua and Pantagruel*, BK I, 54a-b; BK II, 113d
25 MONTAIGNE: *Essays*, 225c-227a; 504c-508a
27 SHAKESPEARE: *Hamlet*, ACT IV, SC IV 58d-59c
32 MILTON: *Lord Gen. Fairfax* 68b-69a / *Paradise Lost*, BK II [496–505] 122a; BK XI [634–707] 313a-314b; [759–803] 315b-316b
36 SWIFT: *Gulliver*, PART II, 77a-78a; PART IV, 149b-152a
38 ROUSSEAU: *Inequality*, 355c; 364c-d / *Political Economy*, 380a-d
40 GIBBON: *Decline and Fall*, 615a-b
41 GIBBON: *Decline and Fall*, 133a; 509d-510a,c
42 KANT: *Science of Right*, 457a-458a,c / *Judgement*, 586a-d
49 DARWIN: *Descent of Man*, 324a
51 TOLSTOY: *War and Peace*, BK I, 12b-14b; 50d; BK II, 80b-c; 83d-86a; 88a-89b; 95d-96c; 109d-110a,c; BK III, 141d-142a; 155b-156d; 157d-158b; 161b-164a,c; BK IV, 179b-180d; BK V, 208c-210b; 225c-228b; 232a-234a; BK IX, 342a; BK X, 401d-402b; 464b
54 FREUD: *War and Death* 755a-766d esp 756d-757d, 759d-760a, 766c-d

10. The military arts and the military profession: their role in the state

6 HERODOTUS: *History*, BK II, 85a-b; BK IV, 132a-b
6 THUCYDIDES: *Peloponnesian War*, BK II, 395d-399a
7 PLATO: *Laches*, 27d-29a esp 28a-c / *Protagoras*, 44c-d / *Euthydemus*, 75a-b / *Republic*, BK II, 319a-320c; BK III, 339b-341d; BK V, 366c-367b; BK VII, 391b-392b / *Critias*, 480a; 481a-b / *Sophist*, 552d-553a; 554c / *Laws*, BK I, 640d-643d; BK IV, 677d-678c; BK VI, 699a-c; BK XII, 784d-786b / *Seventh Letter*, 812d

(10. ***The military arts and the military profession: their role in the state.***)

9 ARISTOTLE: *Ethics*, BK I, CH 2 339b-d / *Politics*, BK I, CH 8 [1256^{b}20–26] 450c; BK II, CH 9 [1271^{b}1–7] 467c-d; BK IV, CH 3 [1289^{b}33–40] 488d-489a; BK VI, CH 7 [1321^{a}5–27] 524c-525a; CH 8 [1322^{a}29–^{b}6] 526a-b; BK VII, CH 6 [1327^{a}40–^{b}16] 531c-d; CH 9 [1329^{a}3–17] 533b-c; CH 10 533d-534d passim; CH 14 [1333^{a}41–1334^{a}11] 538b-d / *Athenian Constitution*, CH 61 580d-581b

14 PLUTARCH: *Fabius*, 142c-d / *Aemilius Paulus*, 214d / *Pompey*, 509d-510a / *Galba*, 859a-b

15 TACITUS: *Annals*, BK I, 6b-15a / *Histories*, BK I, 190b-c; 191b-c; 194a-c; 195c-197d; 198c-201b; 210d-212d; BK II, 215c; 239c-240a

23 MACHIAVELLI: *Prince*, CH XIV 21b-22a

23 HOBBES: *Leviathan*, PART II, 115d

29 CERVANTES: *Don Quixote*, PART I, 145b-147d; PART II, 280b-c

30 BACON: *Advancement of Learning*, 54a-b

35 LOCKE: *Civil Government*, CH XI, SECT 139 57c-58a

36 STERNE: *Tristram Shandy*, 237b-238a; 448b-451a

38 MONTESQUIEU: *Spirit of Laws*, BK V, 31c-32b; BK XI, 74b-d; 82d-83a; BK XIII, 100d-101a; BK XIX, 143c

38 ROUSSEAU: *Inequality*, 324c; 361a-b / *Political Economy*, 380a-d / *Social Contract*, BK IV, 437d-438c

39 SMITH: *Wealth of Nations*, BK V, 301a-309a,c esp 303d-305c, 308c-309a,c

40 GIBBON: *Decline and Fall*, 4b-8b esp 4b-5a; 42b,d; 86a-d; 193c-194a; 226a-b; 246d-248b; 284a-c; 633b-c; 639a

41 GIBBON: *Decline and Fall*, 120a; 311d-312a; 321b-325a esp 324b; 389b-390b; 508c-510a,c

42 KANT: *Judgement*, 504a-b

43 DECLARATION OF INDEPENDENCE: [58–68] 2a-b

43 ARTICLES OF CONFEDERATION: VI [107–123] 6b-c; VII 6d; IX [290–349] 8a-c passim

43 CONSTITUTION OF THE U.S.: ARTICLE I, SECT 8 [226–253] 13b-c; ARTICLE II, SECT 2 [409–413] 15a; AMENDMENTS, II–III, V [636–641] 17b

43 FEDERALIST: NUMBER 4, 36a-b; NUMBER 8 44c-47a; NUMBER 22, 81c-d; NUMBER 24–26 87b-94d passim; NUMBER 28–29 96c-101a; NUMBER 41, 132c-135a passim; NUMBER 46, 152b-153a

43 MILL: *Representative Government*, 425c-d

46 HEGEL: *Philosophy of History*, PART I, 242d-243b; PART III, 288c

48 MELVILLE: *Moby Dick*, 79a-b

51 TOLSTOY: *War and Peace*, BK III, 137c-140c; BK V, 221b-d; BK VII, 275a-276b; BK IX, 358b-365c; BK X, 440c-443b; 449c; EPILOGUE II, 685d-686a

54 FREUD: *Group Psychology*, 674b-676b passim, esp 674d-675a

10*a*. The formation of military policy: the relation between the military and the statesman or prince

6 HERODOTUS: *History*, BK II, 79a-c; BK VII, 225c-d

6 THUCYDIDES: *Peloponnesian War*, BK I, 353b; 369a-370d; BK II, 390c-391b; 396d-397a; 402a-404d; BK III, 419b-c; BK V, 500c; BK VI, 518a-520d; 528b-c; 533a-534d; BK VII, 545b-c

7 PLATO: *Republic*, BK III, 339b-341d / *Statesman*, 604c-605d

9 ARISTOTLE: *Politics*, BK III, CH 14 [1285^{a}3–16] 483a-b; [1285^{b}4–28] 483d-484a; CH 15 [1285^{b}34–1286^{a}5] 484b; BK V, CH 7 [1307^{a}2–4] 508d-509a; CH 9 [1309^{a}33–^{b}9] 511c-d; BK VII, CH 9 [1329^{a}3–17] 533b-c; CH 14 [1333^{a}41–1334^{a}11] 538b-d / *Athenian Constitution*, CH 26, par 1–2 564d-565a; CH 61 580d-581b / *Rhetoric*, BK I, CH 4 [1359^{b}19–1360^{a}11] 599d-600b

14 PLUTARCH: *Caius Marius*, 344c-345a / *Phocion*, 607b-d / *Demetrius*, 742d-743b

15 TACITUS: *Histories*, BK II, 223c-d; 233d-234b; BK III, 256d-257a

23 MACHIAVELLI: *Prince*, CH XII–XIV 17d-22a; CH XVIII, 25a-b; CH XIX–XX, 27b-31c; CH XXI, 32a-d; CH XXIV 34c-35a

23 HOBBES: *Leviathan*, PART II, 103b; 159a-c

25 MONTAIGNE: *Essays*, 327d-329d

26 SHAKESPEARE: *Henry V*, ACT I, SC II [136–220] 535b-536b

35 LOCKE: *Civil Government*, CH VIII, SECT 107–110 49b-50d; CH XII, SECT 145–148 58d-59b

38 MONTESQUIEU: *Spirit of Laws*, BK V, 31c-32b; BK XI, 74b-d; 80b-c; BK XIII, 100d-101a

38 ROUSSEAU: *Political Economy*, 380a-d

39 SMITH: *Wealth of Nations*, BK V, 307a-b; 308b-c

40 GIBBON: *Decline and Fall*, 25d-26d; 30a-b; 42b,d-43c; 50b-c; 56a; 63a-64c; 76c-77b; 78c-79a; 242c-244a; 245d-247c

42 KANT: *Judgement*, 504a-b

43 DECLARATION OF INDEPENDENCE: [58–61] 2a; [65–67] 2b

43 ARTICLES OF CONFEDERATION: VII 6d; IX [290–349] 8a-c

43 CONSTITUTION OF THE U.S.: ARTICLE II, SECT 2 [409–413] 15a

43 FEDERALIST: NUMBER 4, 36a-b; NUMBER 8, 45b-c; NUMBER 74, 221c-d

46 HEGEL: *Philosophy of Right*, PART III, par 329 108c; ADDITIONS, 163 144c / *Philosophy of History*, PART II, 281d-282a; PART III, 301c-302a; PART IV, 324b; 325a-b; 359a-b; 366b

51 TOLSTOY: *War and Peace*, BK III, 144c; 146d 153d-155a; BK V, 208c-210b; BK VIII, 309b-c BK IX, 346a-365c passim, esp 352d-353a, 355b 361b-d; BK X, 404c-405a; BK XII, 534d-537b

BK XIII, 565c-566d; BK XIV, 610d-611a; BK XV, 627d-630a

10*b*. Different types of soldiery: mercenaries, volunteers, conscripts, militia

4 HOMER: *Iliad*, BK II [183–277] 11d-12d
5 ARISTOPHANES: *Peace* [1172–1190] 539c-540a
6 HERODOTUS: *History*, BK VI, 187d-188b; BK VII, 227c-230d; 249b-d; 252b; 253d-254b; BK VIII, 280d-281a; BK IX, 294c-295c; 302d-303a
6 THUCYDIDES: *Peloponnesian War*, BK IV, 478d-479b
7 PLATO: *Critias*, 480a; 484b-c / *Laws*, BK I, 642c-643a; BK III, 674c
9 ARISTOTLE: *Ethics*, BK III, CH 8 [1116^{a}15–^{b}23] 362b-363a / *Politics*, BK VI, CH 7 [1321^{a}5–9] 524c-d; CH 8 [1322^{b}1–6] 526b; BK VII, CH 6 [1327^{a}40–^{b}18] 531c-d / *Athenian Constitution*, CH 26, par 1 564d; CH 42 572b-d; CH 61 580d-581b
14 PLUTARCH: *Pelopidas*, 238b-239c / *Agesilaus*, 484b-c; 498a-b / *Galba* 859a-869d / *Otho* 869b,d-876d
15 TACITUS: *Histories*, BK II, 232d-233a; BK IV, 271d-272c
20 AQUINAS: *Summa Theologica*, PART II-II, Q 188, A 3 677a-678b
23 MACHIAVELLI: *Prince*, CH XII–XIII 17d-21a; CH XX, 30a-c
26 SHAKESPEARE: *1st Henry IV*, ACT IV, SC II [12–52] 458c-d / *2nd Henry IV*, ACT III, SC II [101–311] 484d-486d
36 SWIFT: *Gulliver*, PART II, 80a-b
38 MONTESQUIEU: *Spirit of Laws*, BK XI, 82d-83a; BK XV, 112d-113a
38 ROUSSEAU: *Inequality*, 324c; 361b / *Political Economy*, 380b-d / *Social Contract*, BK IV, 437d-438c
39 SMITH: *Wealth of Nations*, BK V, 301a-309a,c
40 GIBBON: *Decline and Fall*, 4b-5a; 6b-d; 94d-95a; 247d-248c; 480a-b
41 GIBBON: *Decline and Fall*, 324b-c; 389b; 488a-b; 490d-491a
43 DECLARATION OF INDEPENDENCE: [84–87] 2b
43 ARTICLES OF CONFEDERATION: VI [117–123] 6c
43 CONSTITUTION OF THE U.S.: ARTICLE I, SECT 8 [232–242] 13c; AMENDMENTS, II–III 17b
43 FEDERALIST: NUMBER 8, 45b-46d; NUMBER 22, 81c-d; NUMBER 24, 89a-b; NUMBER 25, 91a-b; NUMBER 28–29 96c-101a; NUMBER 46, 152b-153a
44 BOSWELL: *Johnson*, 281d-282a
46 HEGEL: *Philosophy of History*, PART III, 298a; PART IV, 325a-b
51 TOLSTOY: *War and Peace*, BK I, 31a-32a; BK II, 77b-c; 94a-96c; BK III, 131c-135c; BK V, 228b-230b; 233b-234a; BK IX, 366b-c; BK XIV, 590d-596c; BK XV, 621b-626d; EPILOGUE II, 685d-686a

10*c*. The military virtues: the qualities of the professional soldier; education for war

4 HOMER: *Iliad* 3a-179d esp BK IV [422–445] 28a-b, BK XIII [46–154] 88c-89d, [206–327] 90b-91c, [723–820] 95d-96d
5 EURIPIDES: *Suppliants* [860–917] 266a-b / *Heracles Mad* [140–205] 366b-d / *Phoenician Maidens* [697–753] 384a-d
5 ARISTOPHANES: *Acharnians* [566–622] 461c-462a; [1071–1233] 467d-469a,c / *Knights* [547–610] 476d-477d / *Wasps* [1060–1121] 520c-521b / *Peace* [1172–1190] 539c-540a
6 HERODOTUS: *History*, BK V, 175b; BK VI, 187d; BK VII, 232d-233d; BK VIII, 264c; BK IX, 314a,c
6 THUCYDIDES: *Peloponnesian War*, BK I, 370a-c; 379b-c; BK II, 389d-390b; 395d-396a; 396d-397a; 397d-398c; 411b-412c; BK IV, 449b-c; 457b-c; 478d-479b; BK V, 501a-b; BK VI, 527b-528a; BK VII, 555b; BK VIII, 589d-590a
7 PLATO: *Laches* 26a-37d / *Apology*, 205d-206a / *Republic*, BK II–IV, 319a-345a; BK IV, 347a-d; BK V, 366a-367b; BK VII, 391b-392b / *Critias*, 481a-b / *Statesman*, 605d-608d / *Laws*, BK I, 642c-643a; 644b-c; 648b-c; BK III, 674c; BK VII, 716b-717c; BK VIII, 732b-735a; BK XII, 784d-786b
9 ARISTOTLE: *Ethics*, BK III, CH 6 361a-c; CH 8 [1116^{a}15–^{b}23] 362b-363a / *Politics*, BK V, CH 9 [1309^{a}33–^{b}9] 511c-d; BK VI, CH 7 [1321^{a}22–26] 524d-525a; BK VII, CH 11 [1330^{b}33–1331^{a}9] 535c
13 VIRGIL: *Aeneid*, BK VIII [508–519] 272b-273a; BK IX [590–620] 295a-b
14 PLUTARCH: *Lycurgus*, 41a-45b / *Fabius* 141a-154a,c / *Coriolanus* 174b,d-193a,c esp 175b / *Pelopidas*, 232a-233a; 238b-239c; 244c-245a / *Marcellus* 246b,d-261a,c / *Marcellus-Pelopidas* 261a-262d / *Aristides-Marcus Cato* 290b,d-292d / *Philopoemen* 293a-302a,c / *Flamininus*, 303a-310d passim / *Flamininus-Philopoemen* 313a-314a,c / *Caius Marius*, 334d-335a / *Sulla*, 374d-375b / *Lucullus* 400a-421a,c passim / *Sertorius* 457b,d-470d / *Alexander* 540b,d-576d / *Caesar*, 583a-584b / *Cato the Younger*, 623a-b / *Antony* 748a-779d esp 749b, 753d-754a, 764a-b / *Aratus* 826a-846a,c / *Galba*, 859a-b
15 TACITUS: *Annals*, BK I, 6b-9d; BK III, 49d-50a; BK XI, 104d-105a; BK XIII, 134a-c / *Histories*, BK I, 190b-c; 194a-c; 201a-b; 202c-203a; 210d-211a; 211c-212b; BK II, 216a-b; 219b-c; 232d-233a; 239c-240a; BK III, 246d-247c; 248b-c; 254d; BK IV, 266c-d
20 AQUINAS: *Summa Theologica*, PART I-II, Q 105, A 3, REP 5-6 316a-318b; PART II-II, Q 40, A 2 579b-580c; Q 188, A 3, REP 1 677a-678b
23 MACHIAVELLI: *Prince*, CH XIV 21b-22a; CH XVIII, 25a-b
23 HOBBES: *Leviathan*, PART I, 77a; 86b; PART II, 115d; 159a-b

(10. *The military arts and the military profession: their role in the state.* 10c. *The military virtues: the qualities of the professional soldier; education for war.*)

24 RABELAIS: *Gargantua and Pantagruel*, BK II, 83a

25 MONTAIGNE: *Essays*, 20d-22a; 22d-24a; 25c-26d; 95d-97b; 302b-306a; 327d-329d; 336c-337b; 532d-533a

26 SHAKESPEARE: *1st Henry VI*, ACT IV, SC V-VI 23d-25a / *3rd Henry VI*, ACT V, SC IV 101a-d / *King John*, ACT V, SC I [44-76] 399d-400a / *Henry V*, ACT III, SC I 543d-544b

27 SHAKESPEARE: *Troilus and Cressida*, ACT II, SC II [33-50] 113d-114a / *Antony and Cleopatra*, ACT I, SC IV [55-80] 316c-d; ACT III, SC I 327b-c; ACT IV, SC VIII 340a-c / *Coriolanus*, ACT II, SC II [86-133] 365a-c / *Cymbeline*, ACT V, SC III [1-63] 479d-480c

29 CERVANTES: *Don Quixote*, PART I, 147b-c; PART II, 203a-b; 280b-c

30 BACON: *Advancement of Learning*, 23a

32 MILTON: *Lord Gen. Fairfax* 68b-69a

36 STERNE: *Tristram Shandy*, 449b-451a

38 MONTESQUIEU: *Spirit of Laws*, BK VI, 39a; BK XVI, 117b-c

38 ROUSSEAU: *Inequality*, 324c; 335a-b; 366a-b / *Political Economy*, 375a; 376c-377a; 380b-d / *Social Contract*, BK IV, 437d-438c

39 SMITH: *Wealth of Nations*, BK V, 303d-304b

40 GIBBON: *Decline and Fall*, 4d-5c; 50b-c; 86c; 94d; 116b-c; 118d; 136b-137a; 246d-247d; 369d-376a passim, esp 370a-c, 375b-c; 457a,c; 639a

41 GIBBON: *Decline and Fall*, 28c-29a; 120a-c; 127d-128a; 223a-c; 311d-312a; 323a-325a; 389d-390a; 509a-d; 543d-545c; 548d-550b passim

42 KANT: *Judgement*, 504a-b

43 FEDERALIST: NUMBER 25, 91a-b; NUMBER 29, 99b-100a

44 BOSWELL: *Johnson*, 384b-c

46 HEGEL: *Philosophy of Right*, PART III, par 328 108b-c / *Philosophy of History*, PART II, 276d-277a; PART IV, 343d-344a

47 GOETHE: *Faust*, PART II [9482-9505] 230a-b; [10,407-422] 253b

51 TOLSTOY: *War and Peace*, BK I, 21d-22b; 31a-32a; 33d-34c; BK II, 67d-68c; 77b-c; 78c-79a; 94a-96c; BK III, 131c-135c; 137c-140c; 150c; BK IV, 171c-173d; BK V, 208c-210b; 221b-d; 228b-230b; 232a-234a; BK VII, 275a-276b; BK IX, 365b-c; 366b-c; 369a-372a; BK X, 400b-c; 421c-426a; 440c-443b; 451c-456a; 457a-c; 459d-461d; 467a-468a,c; BK XI, 481a-482b; 512b-513b; BK XII, 554b-d; BK XIII, 569d-570a; 582a-584b; BK XIV, 589c-596c; BK XV, 621b-626d

52 DOSTOEVSKY: *Brothers Karamazov*, BK VI, 153d-157b

10*d*. The principles of strategy and tactics: the military genius

OLD TESTAMENT: *Judges*, 7

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4 HOMER: *Iliad*, BK IV [292-325] 26d-27b; BK VII [433-463] 50b-c; BK VIII [489-565] 56a-d; BK XII 82a-87a,c passim; BK XIII [125-154] 89c-d; [295-327] 91b-c / *Odyssey*, BK VIII [499-520] 227b

5 EURIPIDES: *Rhesus* 203a-211d / *Suppliants* [647-730] 264a-d / *Trojan Women* [511-567] 274b-d / *Heracles Mad* [140-205] 366b-d / *Phoenician Maidens* [697-753] 384a-d; [1086-1199] 387d-388c

6 HERODOTUS: *History*, BK I, 4b-c; 6a-b; 13d-14a; 18c-19a; 19d-20a; 37a; 39c-d; 41c-42b; 43a-b; 46a-d; BK III, 122a-123c; BK IV, 124b-d; 141c; 144d-148d; 158d-159b; BK V, 162b; 166d-167b; 176c-d; 184b-c; BK VI, 200a-b; 207c-208a; BK VII, 216b-d; 225a-c; 237b-c; 239a-c; 247d-248b; 253a-258d passim; BK VIII, 264d-265a; 276d-287d passim; BK IX, 288b-291a; 293b-c; 294c-295c; 297a-d; 298c-299d; 308d-309c

6 THUCYDIDES: *Peloponnesian War*, BK I, 352a-b; 361b-c; 363d-365a; 374a-378a passim; 378d-379a; 384d-386b; BK II, 387a-388b; 389d-391b; 392b-393c; 402a-404d; 407b-409a; 409d-410c; 411d-412c; BK III, 423c-424a; 429b-c; 439d-440d; 444c-445a; BK IV, 447c-d; 448b-450c; 454a-456d; 465a-c; 478d-479b; BK V, 483c-485b; 500a-c; BK VI, 509a-b; 515a-516b; 518c-519b; 519d-520b; 520d-521a; 522a-523a; 526b-528c; BK VII 538a-563a,c esp 540c-541d, 551a-552a; BK VIII, 570c-d

7 PLATO: *Laches*, 32a-c

9 ARISTOTLE: *Ethics*, BK I, CH I 339a-b passim / *Politics*, BK V, CH 9 [1309^{a}33-^{b}9] 511c-d; BK VI, CH 7 [1321^{a}5-27] 524c-525a; BK VII, CH 5 [1326^{b}38]-CH 6 [1327^{b}18] 531a-d; CH II 535a-d

13 VIRGIL: *Aeneid*, BK II [13-198] 124b-129b; BK IX [25-76] 279b-281a

14 PLUTARCH: *Themistocles*, 93a-95a / *Camillus* 102b,d-121a,c / *Pericles*, 130d-139a / *Fabius* 141a-154a,c / *Fabius-Pericles*, 154a-d / *Alcibiades* 155b,d-174d passim / *Coriolanus*, 186b-187d / *Timoleon* 195a-213d / *Aemilius Paulus* 214a-230d / *Marcellus* 246b,d-261a,c / *Aristides*, 266b-273c / *Philopoemen* 293a-302a,c / *Flamininus*, 303a-310d passim / *Caius Marius*, 336b-344c / *Lysander*, 357c-358d / *Sulla*, 374a-385b passim / *Lucullus* 400a-421a,c / *Nicias* 423a-438d / *Sertorius* 457b,d-470d esp 464c-d / *Eumenes* 470b,d-479d / *Agesilaus*, 498a-d / *Pompey*, 528c-534d / *Agesilaus-Pompey*, 539b-540c / *Alexander*, 547b-548a; 549c-d; 555d-556b / *Caesar* 577a-604d / *Cleomenes*, 663c-667d / *Antony*, 770a-773c / *Marcus Brutus*, 816d-824a,c / *Artaxerxes*, 848b-849b / *Otho* 869b,d-876d

15 TACITUS: *Annals*, BK I, 15a-c; BK II, 26b-28c esp 26c-27a; BK III, 63a-b; BK XIII, 134a-136c / *Histories*, BK I, 210b-d; BK III, 247a-c; 249a; 258a-b; BK IV, 275a-c
20 AQUINAS: *Summa Theologica*, PART II-II, Q 40, A 3 580d-581b
23 MACHIAVELLI: *Prince*, CH X 16a-d; CH XII-XIV 17d-22a; CH XX 30a-31c
24 RABELAIS: *Gargantua and Pantagruel*, BK I, 31d-35a; 39c-44a; 50c-52d; 56b-57c; BK IV, 276d-277d; 280a-282d
25 MONTAIGNE: *Essays*, 11b-13c; 20d-22a; 53a-c; 133b-d; 136b-143c; 354b-358b
26 SHAKESPEARE: *1st Henry VI*, ACT II, SC I [50-77] 9b-d; ACT IV, SC IV 23b-d / *1st Henry IV*, ACT IV, SC III [1-29] 459b-c / *2nd Henry IV*, ACT I, SC III 472d-474a / *Henry V*, ACT III, SC II [59-149] 544d-545c / *Julius Caesar*, ACT IV, SC III [196-225] 590c-d; ACT V 591d-596a,c
27 SHAKESPEARE: *Troilus and Cressida*, ACT I, SC III [197-210] 110a-b / *Antony and Cleopatra*, ACT III, SC VII [21]-SC X [37] 331c-333a
30 BACON: *Advancement of Learning*, 23a-26a
36 STERNE: *Tristram Shandy*, 236b-238a; 440a-447a; 451b-453a
37 FIELDING: *Tom Jones*, 241a
38 MONTESQUIEU: *Spirit of Laws*, BK IX, 58b,d-61a; 61b-d; BK X, 65d-68d
40 GIBBON: *Decline and Fall*, 5c-6b; 47c-d; 75a-c; 85a-d; 94d; 116d-121c passim; 168b-174d passim; 176d-178b; 265c-271b passim; 281b-287d passim; 334a-338a; 364d-378d passim; 420d-427a passim, esp 426b-427a; 431a-d; 471c-489d passim; 563a-566b esp 564d; 584b-585d esp 585a
41 GIBBON: *Decline and Fall*, 2d-26a passim; 53b-66c passim, esp 55a-c, 60a-62b, 64b-65a; 126d-131d; 256a; 290b-291c; 293d-294d; 311d-312a; 356c-360b passim; 372d-373d esp 373c-d; 394b-401d passim; 432a-433c; 496a-501c esp 500c-d; 545c-551b passim, esp 547d-548d
42 KANT: *Science of Right*, 454a-c
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51 TOLSTOY: *War and Peace*, BK I, 52c-53c; 54c-55c; BK II, 74a-81b; 83d-86a; 88a-89b; 96c-110a,c; BK III, 142d-164a,c; BK V, 208b-210b; BK IX, 358b-365c; BK X, 389a-391c; 405a-406c; 421c-426a; 430b-432c; 438b-439a; 440c-450a; 456a-461d; BK XI, 470d-475a; BK XII, 536b; BK XIII, 563a-575a; BK XIII-XIV, 582a-590c; BK XIV, 609a-613d; BK XV, 618b-622c; 626d-630a; EPILOGUE II, 685d-686b

10e. The rise of naval power and its role in war

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6 HERODOTUS: *History*, BK I, 6a-b; BK VII, 239a-240d; 247d-251b; BK VIII, 260a-276d
6 THUCYDIDES: *Peloponnesian War*, BK I, 350a-353b; 355b-c; 356b-357a; 360d-363a; 367c-368a; 369b-370a; 372c-d; 377c-378a; 385b-386b; BK II, 402d-403b; 409d-410c; 411d-412c; BK III, 420d; 435d-436b; BK IV, 452d-453c; BK VI, 517b-d; 520d-521c; BK VII, 547d-548b
7 PLATO: *Laws*, BK IV, 677a-678c
9 ARISTOTLE: *Politics*, BK II, CH 12 [1274^{a}13-14] 470d; BK V, CH 4 [1304^{a}22-24] 505d; BK VI, CH 7 [1321^{a}5-16] 524c-d; CH 8 [1322^{b}1-6] 526b; BK VII, CH 6 531b-d esp [1327^{a}40-^{b}18] 531c-d / *Athenian Constitution*, CH 26, par 1 564d
14 PLUTARCH: *Themistocles* 88a-102a,c / *Alcibiades*, 166c-173c / *Lysander*, 357c-358d / *Antony*, 770a-773c
38 MONTESQUIEU: *Spirit of Laws*, BK XIX, 144b; BK XXI, 165d-166a
40 GIBBON: *Decline and Fall*, 7d-8b; 176d-178a; 396d-397a
41 GIBBON: *Decline and Fall*, 4b-c; 321c-322b; 343b-344a; 430d-433b; 547d-548c
43 ARTICLES OF CONFEDERATION: IX [275-367] 8a-d passim
43 CONSTITUTION OF THE U.S.: ARTICLE I, SECT 8 [229] 13c
43 FEDERALIST: NUMBER 4, 36b-c; NUMBER 11, 54b-55c; NUMBER 24, 89c; NUMBER 41, 134c-135a
46 HEGEL: *Philosophy of History*, PART II, 262c-d; 275a-b; 277b-c; PART III, 298a

10f. The development of weapons: their kinds and uses

6 HERODOTUS: *History*, BK VII, 227c-232b; BK VIII, 268c-d; BK IX, 301d-302a
6 THUCYDIDES: *Peloponnesian War*, BK II, 407c-d; BK IV, 472a-b
9 ARISTOTLE: *Politics*, BK IV, CH 3 [1289^{b}26-40] 488d-489a; BK VI, CH 7 [1321^{a}5-27] 524c-525a; CH 8 [1322^{b}1-6] 526b; BK VII, CH 11 [1330^{b}32-1331^{a}18] 535c-d
12 LUCRETIUS: *Nature of Things*, BK III [642-653] 38b-c; BK V [1241-1251] 77b; [1281-1349] 77d-78c
14 PLUTARCH: *Camillus*, 119c-120b / *Marcellus*, 252a-255a / *Philopoemen*, 296b-d / *Caius Marius*, 343a-344c / *Crassus*, 449a-451a / *Demetrius*, 733b-734a; 743b-c
15 TACITUS: *Annals*, BK II, 26c-27a; BK III, 56a-b; BK XII, 113c; 120a / *Histories*, BK I, 210b-d; BK III, 247a-c; BK IV, 273a-275c
23 MACHIAVELLI: *Prince*, CH XXVI, 37b-c
24 RABELAIS: *Gargantua and Pantagruel*, BK I, 32a-b; BK III, 127d-128b; BK IV, 304a-305a
25 MONTAIGNE: *Essays*, 140c-141c; 193a-194b; 436a-b
29 CERVANTES: *Don Quixote*, PART I, 147a-d
32 MILTON: *Paradise Lost*, BK VI [482-506] 206b-207a
36 SWIFT: *Gulliver*, PART II, 77a-78a

(10. *The military arts and the military profession: their role in the state.* 10*f. The development of weapons: their kinds and uses.*)

36 STERNE: *Tristram Shandy*, 304a-b; 509a-510b
39 SMITH: *Wealth of Nations*, BK V, 304d-305b; 308c-309a,c
40 GIBBON: *Decline and Fall*, 5d-6a; 6c-d; 94c; 260d-261a; 368c-d; 661c-662a
41 GIBBON: *Decline and Fall*, 4a-b; 20d; 64d; 291d-292c; 322b-d; 394d-395c; 482d-483a; 509d-510a,c; 515c; 542b-543a; 545d-546c
46 HEGEL: *Philosophy of History*, PART IV, 343d-344a
51 TOLSTOY: *War and Peace*, BK X, 429b
54 FREUD: *New Introductory Lectures*, 882d-883a

10*g*. The making of truces or alliances as a military device

OLD TESTAMENT: *Joshua*, 9—(*D*) *Josue*, 9
APOCRYPHA: *I Maccabees*, 8—(*D*) OT, *I Machabees*, 8
6 HERODOTUS: *History*, BK I, 6a-c; 15d-16a; BK IV, 144b-d; BK V, 180c-d; BK VI, 187b-c; BK VII, 240d-247b; BK IX, 289a-290b; 310d-311a
6 THUCYDIDES: *Peloponnesian War*, BK I, 356d-360d; 371b-372d; 378a-380d; BK III, 418d-420c; BK IV, 450d-452d; 457c-d: 461b-463a; 476a-477a; BK V, 485d-508a,c passim, esp 489a-b; BK VI, 522d-523a; 528a-b
15 TACITUS: *Histories*, BK IV, 286c-287c
23 MACHIAVELLI: *Prince*, CH XXI, 32a-d
25 MONTAIGNE: *Essays*, 11b-13c
26 SHAKESPEARE: *2nd Henry IV*, ACT IV, SC II 489d-491b
36 SWIFT: *Gulliver*, PART I, 24b-25b
36 STERNE: *Tristram Shandy*, 448b-453a
40 GIBBON: *Decline and Fall*, 95c-96a; 495d-496b; 504d-507a; 543b-c
41 GIBBON: *Decline and Fall*, 428a-d
46 HEGEL: *Philosophy of History*, PART III, 297b-c
51 TOLSTOY: *War and Peace*, BK II, 83d-86a; 92c-93d; BK V, 208d-209a; BK VIII, 307d-309c; BK IX, 350d-354a; BK XIII, 565a-b; 582a

11. The nature, causes, and conditions of peace

OLD TESTAMENT: *Leviticus*, 26:3-6 / *Numbers*, 6:22-26 / *Deuteronomy*, 20:10-11 / *I Kings*, 4:20-25—(*D*) *III Kings*, 4:20-25 / *I Chronicles*, 22:9—(*D*) *I Paralipomenon*, 22:9 / *Psalms*, 29:11; 37:11; 72:1-7; 119:165; 147:14—(*D*) *Psalms*, 28:10; 36:11; 71:1-7; 118:165; 147:14 / *Proverbs*, 16:7 / *Ecclesiastes*, 3:8 / *Isaiah*, 2:4; 9:6-7; 26:12; 32:17; 45:7; 48:18,22; 54:13; 59:8—(*D*) *Isaias*, 2:4; 9:6-7; 26:12; 32:17; 45:7; 48:18,22; 54:13; 59:8 / *Jeremiah*, 33:6—(*D*) *Jeremias*, 33:6 / *Ezekiel*, 34:25; 37:26—(*D*) *Ezechiel*, 34:25; 37:26 / *Micah*, 4:3—(*D*) *Micheas*, 4:3 / *Zechariah*, 9:10—(*D*) *Zacharias*, 9:10
NEW TESTAMENT: *Matthew*, 5:9 / *Luke*, 2:13-14
5 AESCHYLUS: *Eumenides* [976-987] 91a
5 ARISTOPHANES: *Acharnians* 455a-469a,c passim / *Peace* 526a-541d esp [289-520] 529b-531d, [974-1016] 537b-c / *Lysistrata* 583a-599a,c
6 HERODOTUS: *History*, BK I, 6a-b; BK IV, 138b-c
6 THUCYDIDES: *Peloponnesian War*, BK I, 366d-367a; BK IV, 451d; 462a-b; BK V, 485d-486a; 488d-489b
7 PLATO: *Laws*, BK I, 640d-644a
12 EPICTETUS: *Discourses*, BK IV, CH 5, 230a-b
13 VIRGIL: *Aeneid*, BK I [283-296] 110b-111a; BK VI [845-853] 233b-234a; BK VIII [608-731] 275a-278b; BK XII [172-211] 358b-359b; [830-840] 376a-b
14 PLUTARCH: *Numa Pompilius* 49a-61d esp 59c-60b / *Nicias*, 427c-d
18 AUGUSTINE: *City of God*, BK III, CH 9-10 172b-173c; BK V, CH 12, 216d-218a; BK XIV, CH 1 376b,d-377a; BK XV, CH 4 399c-400a; BK XIX, CH 11-17 516d-523a; CH 26 528d-529a
20 AQUINAS: *Summa Theologica*, PART II-II, Q 29 530b-533a; Q 45, A 6 602b-603c
22 CHAUCER: *Tale of Melibeus*, par 53-60 425b-427b
23 HOBBES: *Leviathan*, PART I, 85b-c; 86b-87b; 91a-96b esp 95c-96b; PART II, 102d
25 MONTAIGNE: *Essays*, 299d-300c
26 SHAKESPEARE: *Richard III*, ACT V, SC V [15-41] 148a,c / *Henry V*, ACT V, SC II [23-67] 563c-564a
29 CERVANTES: *Don Quixote*, PART I, 145d-146a
35 LOCKE: *Civil Government*, CH XIX, SECT 228 77d-78a
38 MONTESQUIEU: *Spirit of Laws*, BK XX, 146b
38 ROUSSEAU: *Social Contract*, BK II, 403c-404a
39 SMITH: *Wealth of Nations*, BK IV, 267c-d
40 GIBBON: *Decline and Fall*, 4a-b
41 GIBBON: *Decline and Fall*, 338c
42 KANT: *Science of Right*, 454c-458a,c esp 454c, 455a-456a, 457a-458a,c
43 FEDERALIST: NUMBER 43, 142c
43 MILL: *Representative Government*, 426a-b
50 MARX-ENGELS: *Communist Manifesto*, 428a-b
51 TOLSTOY: *War and Peace*, BK I, 12d-13a; BK V, 220c-d
54 FREUD: *War and Death*, 761b-c

11*a*. Law and government as indispensable conditions of civil peace: the political community as the unit of peace

5 AESCHYLUS: *Eumenides* [681-710] 88b-c
7 PLATO: *Seventh Letter*, 806d-807b
9 ARISTOTLE: *Politics*, BK I, CH 2 [1253a29-39] 446d
13 VIRGIL: *Aeneid*, BK I [254-296] 110a-111a; BK VI [845-853] 233b-234a; BK VIII [306-336] 267a-268a; BK XII [172-211] 358b-359b
18 AUGUSTINE: *City of God*, BK XIX, CH 17 522b-523a; CH 26 528d-529a

20 AQUINAS: *Summa Theologica*, PART I-II, Q 95, A 1, ANS 226c-227c
23 HOBBES: *Leviathan*, PART I, 84c-86b; PART II, 99a-101a; 104b-d; 112b-d; 131b-c; PART IV, 267d
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31 SPINOZA: *Ethics*, PART IV, PROP 37, SCHOL 2 435b-436a; PROP 40 437a
35 LOCKE: *Toleration*, 16a-c; 17b-c / *Civil Government*, CH VIII, SECT 107-110 49b-50d; CH XIX, SECT 212 74a-b
38 ROUSSEAU: *Inequality*, 353d-356a / *Political Economy*, 370b-d / *Social Contract*, BK I, 391b-392a; 393b-c; BK II, 398a-b; 399b-c
42 KANT: *Science of Right*, 402c; 405d; 412c-414c; 433c-434d; 435a-436b
43 DECLARATION OF INDEPENDENCE: [43-47] 2a
43 CONSTITUTION OF THE U.S.: ARTICLE IV, SECT 4 16b-c
43 FEDERALIST: NUMBER 41, 132c; NUMBER 43, 141d
43 MILL: *Utilitarianism*, 469d-470a
46 HEGEL: *Philosophy of History*, PART IV, 343b-c
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11b. Justice and fraternity as principles of peace among men

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APOCRYPHA: *Ecclesiasticus*, 1:18—(*D*) OT, *Ecclesiasticus*, 1:22
NEW TESTAMENT: *Romans*, 2:10 / *James*, 3:18
6 HERODOTUS: *History*, BK I, 17a-b; BK IV, 137a-138c
6 THUCYDIDES: *Peloponnesian War*, BK IV, 451d
7 PLATO: *Republic*, BK I, 308b-309b; BK V, 363b-365d
12 EPICTETUS: *Discourses*, BK II, CH 20, 164d-166a; BK III, CH 24 203c-210a; BK IV, CH 5 228a-230b
12 AURELIUS: *Meditations*, BK III, SECT 11 262a-b; BK IX, SECT 1 291a-c
13 VIRGIL: *Aeneid*, BK I [283-296] 110b-111a; BK VI [845-853] 233b-234a
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15 TACITUS: *Histories*, BK II, 224c-d; BK IV, 266b-c
18 AUGUSTINE: *City of God*, BK XII, CH 22 357c; BK XIV, CH 1 376b,d-377a; BK XIX, CH 12-17 517b-523a; CH 23-24, 528a-c; CH 26 528d-529a
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21 DANTE: *Divine Comedy*, HELL, VI [58-75] 9a; PURGATORY, VI [58-151] 61b-62c; XI [46-72] 69b-c; XV [40-81] 75d-76a
23 HOBBES: *Leviathan*, PART I, 91a-94a; 96a-b
24 RABELAIS: *Gargantua and Pantagruel*, BK I, 54a-c; 58a-59d; BK III, 131b,d-133b
30 BACON: *New Atlantis*, 204d-205a
31 SPINOZA: *Ethics*, PART IV, PROP 37, SCHOL 2 435b-436a; PROP 40 437a; APPENDIX X-XVII 448a-d
35 LOCKE: *Toleration*, 19a-d / *Civil Government*, CH VIII, SECT 107-108 49b-d
38 ROUSSEAU: *Inequality*, 355b-c
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42 KANT: *Pref. Metaphysical Elements of Ethics*, 375d-376b / *Science of Right*, 454d-458a,c esp 455c-456a, 457a-458a,c
43 DECLARATION OF INDEPENDENCE: [99-108] 3a
43 MILL: *Representative Government*, 425b-426b / *Utilitarianism*, 473d-474b
50 MARX-ENGELS: *Communist Manifesto*, 428a-b
51 TOLSTOY: *War and Peace*, BK VI, 244d-245d
52 DOSTOEVSKY: *Brothers Karamazov*, BK VI, 166c-167b
54 FREUD: *War and Death*, 761b-c

11c. International law and international peace: treaties, alliances, and leagues as instrumentalities of international peace

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APOCRYPHA: *I Maccabees*, 8; 10:51-58; 12:1-23; 13:34-40; 14:16-24—(*D*) OT, *I Machabees*, 8; 10:51-58; 12:1-23; 13:34-40; 14:16-24
6 HERODOTUS: *History*, BK VI, 193b; 206b-d
6 THUCYDIDES: *Peloponnesian War*, BK V, 485d-488d
13 VIRGIL: *Aeneid*, BK XII [172-211] 358b-359b
14 PLUTARCH: *Numa Pompilius*, 55c-56a / *Camillus*, 108b-109a / *Nicias*, 427a-428c
23 HOBBES: *Leviathan*, PART II, 159c
26 SHAKESPEARE: *1st Henry VI*, ACT V, SC IV [94-175] 30c-31b / *King John*, ACT II, SC I [416-560] 384a-385c / *Henry V*, ACT V, SC II [358-396] 566d-567a
35 LOCKE: *Civil Government*, CH XII, SECT 145-146 58d-59a
36 STERNE: *Tristram Shandy*, 448b-453a
38 MONTESQUIEU: *Spirit of Laws*, BK I, 2d-3b; BK IX, 58b,d-60a; BK X, 63d-64a
38 ROUSSEAU: *Inequality*, 355b-c / *Political Economy*, 369a-b
40 GIBBON: *Decline and Fall*, 103d; 119a-c; 150d-152c; 174d-175b; 378b-381a esp 378b-d; 402b-403b; 431d-432d; 433d-435a,c; 491d-492b; 535d-536c
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42 KANT: *Science of Right*, 452a-456a esp 452a-d, 455a-b
43 ARTICLES OF CONFEDERATION: 5a-9d esp III 5b
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(11. *The nature, causes, and conditions of peace.* 11c. *International law and international peace: treaties, alliances, and leagues as instrumentalities of international peace.*)

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46 HEGEL: *Philosophy of Right*, PART III, par 333 109b-c; par 338 110a-b / *Philosophy of History*, PART IV, 343b-c
48 MELVILLE: *Moby Dick*, 292a-295a
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11*d*. World government and world peace

12 EPICTETUS: *Discourses*, BK I, CH 9, 114c-d; BK II, CH 10, 148c-d; CH 20, 164d-165a; BK III, CH 22, 199d; CH 24, 204a-b
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49 DARWIN: *Descent of Man*, 317c-d
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54 FREUD: *War and Death*, 755a-761c esp 755b-757c / *Civilization and Its Discontents*, 785d-788d

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For: The psychological meanings of war and peace as conflict and harmony in the individual life, *see* EMOTION 4a; JUSTICE 1b; MAN 5-5a; MEDICINE 4, 5e; OPPOSITION 4-4a; and for the theological meaning of peace as heavenly rest, *see* HAPPINESS 7c(1); IMMORTALITY 5f; LOVE 5a(2); WILL 7d.

Other discussions of the state of nature and the state of war, *see* GOVERNMENT 5; LAW 4g; LIBERTY 1b; NATURE 2b; STATE 3c.

The general theory of revolution or civil war, *see* REVOLUTION 1-1b; and for the distinction between civil and international war, *see* REVOLUTION 1c.

Various considerations of the class war, *see* LABOR 7c-7c(3); OLIGARCHY 5c; OPPOSITION 5b; REVOLUTION 5a; STATE 5d(2); WEALTH 9h.

The issue concerning the justice of making war, *see* JUSTICE 9f.

Another discussion of the effect of war upon women and children, *see* FAMILY 5c.

The weakness or strength of democracy in the sphere of war, *see* DEMOCRACY 7c.

The costs of war, *see* WEALTH 9g.

Other discussions of imperialism which have a bearing on wars of conquest and rebellions against the conquerors, *see* LIBERTY 6c; MONARCHY 5-5b; SLAVERY 6d; STATE 9f.

Other discussions of the inevitability of war and the necessity of military preparedness, *see* NECESSITY AND CONTINGENCY 5d; OPPOSITION 5c; STATE 9e(1).

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The consideration of treaties, alliances, and international law in relation to war and peace, *see* GOVERNMENT 5a; LAW 4g; STATE 9e(2).

The conception of law and government as indispensable to civil peace, *see* GOVERNMENT 1a; LAW 1a; and for the conception of lawlessness or crime as breaching the peace of a society, *see* LAW 6e-6e(1).

The consideration of justice and law as principles of civil peace, *see* JUSTICE 9b; LOVE 4a-4b; STATE 3e.

Discussions bearing on the idea of world government and its relation to world peace, *see* CITIZEN 8; LOVE 4c; STATE 10f.

ADDITIONAL READINGS

Listed below are works not included in *Great Books of the Western World*, but relevant to the idea and topics with which this chapter deals. These works are divided into two groups:

I. Works by authors represented in this collection.
II. Works by authors not represented in this collection.

For the date, place, and other facts concerning the publication of the works cited, consult the Bibliography of Additional Readings which follows the last chapter of *The Great Ideas.*

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——. *The Art of War*
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KANT. *The Idea of a Universal History on a Cosmo-Political Plan*
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——. *Christianity and Patriotism*
——. *Notes for Soldiers*
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T. MORE. *Utopia*, BK II
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——. *Antipolemus*
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Chapter 99: WEALTH

INTRODUCTION

IF the only questions about wealth concerned the means of getting and keeping it, the causes of its increase and decrease, the idea of wealth would be confined to economics. "The end of the medical art is health," writes Aristotle in the *Ethics*, and "that of economics, wealth." But as the *Ethics* indicates, the moralist and the statesman are also concerned with health and wealth—not simply as things to get and keep, but in relation to all other goods and as constituents of the good life and the good society. What is regarded as the end in economics may be only a means in ethics and politics; in which case, Aristotle suggests, the latter sciences subordinate economics, even as politics subordinates military strategy, and military strategy the making and use of armaments.

The discussion of riches in the tradition of the great books exhibits these two ways of considering wealth. The Bible, the poets, historians, and philosophers deal with wealth as a factor in the life of men and societies. They scrutinize the desire for wealth or the love of money in relation to sin and virtue. They raise questions of justice concerning the distribution of wealth, the rights of property, and fairness in exchange —in buying and selling, borrowing and lending, and in compensating the laborer. They describe the effect of poverty and prosperity or opulence upon states, and prescribe the attitude which individual men as well as societies should take toward wealth and poverty.

Throughout it seems to be assumed that wealth is merely a means, however important or indispensable. Though wealth may also be viewed as an end when the problem is one of how to acquire, produce, or increase it, the fact that, when possessed, it should be treated as a means, leads the moralist to condemn not only the miser, the hoarder, or the man who devotes his whole life to making money, but also those who elevate wealth into the sort of end which justifies any means that can advance its pursuit.

The other approach is that of the economist. Two of the great books—Smith's *Wealth of Nations* and Marx's *Capital*—deal not with wealth as a means, but with the means to wealth. A third, though by title *A Discourse on Political Economy*, is concerned with the principles of government, and with wealth only insofar as, in Rousseau's conception, government includes "the administration of property" as well as the protection of persons. "Provision for the public wants," he writes, is "the third essential duty of government."

Rousseau explains the title of his treatise by reference to the etymology of the word "economy," which "meant originally only the wise and legitimate government of the household for the common good of the whole family." It is in this sense that Aristotle employs the word and that a work sometimes attributed to him bears it as the title. "The meaning of the term," Rousseau goes on, "was then extended to the government of that great family, the State. To distinguish these two senses of the word, the latter is called *general* or *political* economy, the former domestic or particular economy."

Adam Smith uses the term more narrowly. Not only does he limit his inquiry to the nature and causes of wealth, but by specifying "the wealth of nations," he restricts himself to political economy which, he says, has "two distinct objects: first, to provide a plentiful revenue or subsistence for the people, or more properly to enable them to provide such a revenue or subsistence for themselves; and secondly, to supply the state or commonwealth with a revenue sufficient for the public services." In saying that the political economist aims "to enrich

both the people and the sovereign," and that "the great object of the political economy of every country is to increase the riches and power of that country," Smith takes wealth as an end (though it may also be a means, "so far as power depends upon riches") and tries to formulate the natural laws of wealth-making.

Nowhere does he define the quantity of wealth which should satisfy a nation. The natural resources of a country, the size and industry of its population, and various unfavorable contingencies, may set certain bounds to the maximization of wealth. Within these bounds the country which adopts and follows a sound system of political economy—one which accords with the right conception of wealth and its causes—can (and deserves to) become as wealthy as possible.

Yet Smith, in treating wealth as an end and its increase without limit as a good, does not make economics absolutely autonomous. He regards political economy as a part of politics—"a branch of the science of a statesman or legislator"—and to that extent implies that other considerations than wealth may control the policies of a nation in its regulation of agriculture, industry, domestic commerce, and foreign trade.

Furthermore, the larger moral questions which accompany Smith's economic speculations in his *Lectures on Jurisprudence* and his earlier treatise *Of the Moral Sentiments* are not entirely absent from the *Wealth of Nations.* But to the extent that he writes purely as an economist concerned with securing "cheapness or plenty" or, what for him is the same, "wealth and abundance," he adheres to considerations of expediency and only infrequently permits himself *obiter dicta* on justice or questions of right and wrong.

Karl Marx also writes as an economist. He details the factors which govern the production and distribution of wealth as these manifest themselves in the great historic systems of production—the slave economy, the feudal economy, and the bourgeois or capitalist economy. So far he is a scientist and, even more than Adam Smith, an historian who describes how wealth is acquired and how it multiplies by reproducing itself. But Marx is much less content than Smith to stop there. Smith tries to describe the economic process scientifically in order to prescribe the means a nation should use to become increasingly prosperous, but Marx undertakes to describe it in order to criticize the way in which some men get richer than they need be while others become poorer than they should be.

His critical purpose makes inevitable the expression of moral judgments concerning such inequities; and by implication they are everywhere present. For example, a descriptive phrase like "surplus value" connotes "unearned increment"; an apparently neutral economic term like "profit" is given the invidious moral significance traditionally attached to "usury." Nor does Marx rest with criticism. He has an economic program to propose, a program he reveals more clearly in the *Communist Manifesto* than in *Capital.* The aim is not primarily to increase the production of wealth, but to remedy its inequitable distribution under all past economic systems. This program looks forward to the final revolution which will bring the necessary historic motion of progress to its culmination when socialism replaces capitalism.

SMITH AND MARX, IT APPEARS, are not economists in the same sense. But it may be supposed that, in spite of their different purposes, they would as scientists agree in their description of economic phenomena. To some extent they do, yet the difference in their point of view and aim leads to a quarrel about facts, or at least about their interpretation.

Classical economists in the tradition of Adam Smith dispute the consequences which Marx draws from the labor theory of value, especially with regard to the origin of profit from the surplus product of unpaid labor time. Profit seems to them as much a part of the natural price of commodities as the wages paid to labor and the rent paid to the landlord.

"In exchanging the complete manufacture either for money, for labor, or for other goods, over and above what may be sufficient to pay the price of the materials, and the wages of the workmen, something," writes Smith, "must be given for the profits of the undertaker of the work who hazards his stock in this adventure. The value which the workmen add to the materials, therefore, resolves itself in this case into

two parts, of which the one pays their wages, the other the profits of their employer upon the whole stock of materials and wages which he advanced. He could have no interest to employ them, unless he expected from the sale of their work something more than what was sufficient to replace his stock to him; and he could have no interest to employ a great stock rather than a small one, unless his profits were to bear some proportion to the extent of his stock."

It is precisely on this point of profit as a return for risking one's capital stock that Marx charges Smith, and after him, Ricardo and J. S. Mill, with being apologists for the capitalistic system. He quotes Mill's statement that "the cause of profit is that labor produces more than is required for its support." The fact that Mill does not question the validity of this surplus value, which accrues as profit to the *entrepreneur*; the fact that Ricardo treats surplus value, according to Marx, "as a thing inherent in the capitalist mode of production, which mode, in his eyes, is the natural form of social production," is explicable, in Marx's view, only if we recognize that their economic theories mix special pleading with science. "These bourgeois economists instinctively saw, and rightly so," he says, "that it is very dangerous to stir too deeply the burning question of the origin of surplus value."

Though he distinguishes between its classical and vulgar forms, political economy for Marx is a bourgeois science, which "first sprang into being during the period of manufacture." Political economy "has generally been content to take, just as they were, the terms of commercial and industrial life," Engels remarks in a prefatory note to *Capital*, and so it "never went beyond the received notions of profit and rent, never examined this unpaid part of the product (called by Marx surplus-product) in its integrity as a whole, and therefore never arrived at a clear comprehension, either of its origin and nature, or of the laws that regulate the subsequent distribution of its value."

Marx's work is, in his own conception of it, at one and the same time a criticism of the capitalist economy and of the science of economics which accepts and defends that economic system. In his own preface to *Capital*, Marx tells the reader that the "volume which I now submit to the public forms the continuation" of an earlier work—*A Contribution to the Critique of Political Economy*. Within the sphere of political economy as defined by the problem of augmenting a nation's wealth, the author of the *Wealth of Nations* similarly finds a critique of prevalent economic fallacies—those of the physiocrats and the mercantilists—inseparable from the constructive statement of his own theory.

Economists engage in controversy over technical points in the analysis of production, exchange, and distribution, or in the development of theories of value and price, money and capital, property and poverty. Such controversy tends to become complicated both by the larger questions in which the economic issues are imbedded, and also by the different points of departure and the different objectives of the economists. What at first may look like a simple issue of fact often fails on closer examination to be capable of resolution by scientific inquiry, or simply by an accurate description of the phenomena.

Even when all relevant matters of fact are determined, conflicting interpretations of their significance remain. Behind these lie divergent presuppositions, often unexpressed. Those who start with different conceptions of the problem, and from different principles assumed rather than argued, tend to reach conclusions which may appear to be opposed but which do not really exclude one another—at least not totally. Each from its own point of view may be true, and from that point of view the other is not so much false as irrelevant.

Smith may be right, for example, when he says that "the consideration of his own private profit is the sole motive which determines the owner of any capital to employ it either in agriculture, in manufactures, or in some particular branch of the wholesale or retail trade. The different quantities of productive labor which it may put into motion, and the different values which it may add to the annual produce of the land and labor of the society, according as it is employed in one or other of those different ways, never enter his thoughts." Smith may be right, not only as to the fact asserted, but also with regard to its implication for the increase

of the nation's wealth: that the wealth of a society increases as owners of capital act from self-interest in a system of free enterprise which permits the possibility of profits to indemnify them against the risk of losses and to reward them for the thrift whereby they accumulated capital to invest productively.

But Marx may also be right when he says that the system of free enterprise and capitalistic production could not have started simply through the thrift of individuals, but required a primitive accumulation of capital. "The accumulation of capital," he says, "presupposes surplus-value; surplus-value presupposes capitalistic production; capitalistic production presupposes the existence of considerable masses of capital and labor-power in the hands of producers of commodities. The whole movement, therefore, seems to turn in a vicious circle, out of which we can only get by supposing a primitive accumulation (previous accumulation of Adam Smith) preceding capitalistic accumulation," a primitive accumulation which is "nothing else than the historical process of divorcing the producer from the means of production." He may be right, furthermore, when he goes on to say that "the economic structure of capitalistic society has grown out of the economic structure of feudal society. . . . The historical movement which changes the producers into wage-workers appears, on the one hand, as their emancipation from serfdom and from the fetters of the guilds . . . but, on the other hand, these new freedmen became sellers of themselves only after they had been robbed of all their own means of production, and of all the guarantees of existence afforded by the old feudal arrangements."

It may be true that a capitalist who privately owns means of production would not invest them without the possibility of gaining a profit. It may be true, as Smith would insist, that he would not be justified in doing so. This, however, does not invalidate—as it is not invalidated by—Marx's theory of the "original expropriation" which, in his opinion, initiated capitalistic enterprise; nor does it conflict with Marx's insistence that the capitalist must exploit labor in order to make profits, since he can derive them only from the surplus value created by wage-laborers who produce more than is returned to them for their own needs or subsistence.

THE FOREGOING POINT AND counter-point in economic theory must serve as one example of the way in which Smith and Marx pass each other, rather than meet, on many of the basic economic issues. It would be impossible, within the compass of this Introduction, to chart the intricate relationship of their thought, including their agreements and clear oppositions as well as the matters on which they simply diverge because they are discussing the same problem from different viewpoints. The reader can discover for himself in greater detail the pattern of conversation between these two great economists by studying the passages from their works which are cited in the References.

As a glance at the Outline of Topics will show, many of the headings represent technical problems or issues in economic theory, as that is narrowly conceived in modern times. Some, however, are more general. They state themes which place the discussion of wealth in the larger context of moral and political questions and which, throughout the whole tradition, engage poets, historians, and philosophers—not merely the economists of the eighteenth and nineteenth centuries.

To some extent the more general themes are treated in other chapters, such as LABOR, JUSTICE, OLIGARCHY, VIRTUE and HAPPINESS, FAMILY and STATE. Here we shall consider them for their bearing on the nature and kinds, the sources and uses, of wealth, and also its goodness and evil.

THE ANCIENTS CONCEIVE WEALTH as consisting in the variety of external goods which sustain life —food, clothing, and shelter. But wealth may include more than the bare necessities. When Socrates in the *Republic* outlines a simple economy which aims to satisfy only basic needs, Glaucon tells him that he is "providing for a city of pigs." More is required, he says, for "the ordinary conveniences of life. People who are to be comfortable are accustomed to lie on sofas, and dine off tables, and they should have sauces and sweets in the modern style." Socrates replies by projecting "a luxurious State"—"a State at fever heat"—which goes beyond the

necessaries, "such as houses and clothes and shoes. The arts of the painter and the embroiderer," he says, "will have to be set in motion, and gold and ivory and all sorts of materials procured"; and the city will "have to fill and swell with a multitude of callings which are not required by any natural want."

This distinction between necessities and luxuries, which has many implications for ethics and economics as well as for politics, does not draw the line between natural and artificial wealth. Nor is natural wealth identified exclusively with natural resources in their pure state, unconverted by labor for use or consumption. Wealth is generally thought to comprise all consumable goods, whether necessities or luxuries, whether products of hunting, agriculture, or manufacture, and all the means of producing them. Only money is excluded. Only money is declared to be either not wealth at all or artificial wealth.

Yet the confusion of money with wealth seems to be prevalent at all times, as repeated attempts to correct the fallacy indicate. The use of money originates, according to Aristotle, with retail trade, which is "not a natural part of the art of getting wealth"; for, he goes on, "had it been so, men would have ceased to exchange when they had enough." What Aristotle calls retail trade replaces "the barter of necessary articles." Made possible by the use of coin, retail trade, he says, comes to be thought of as "the art which produces riches and wealth.

"Indeed," Aristotle continues, "riches is assumed by many to be only a quantity of coin." But he agrees with those who maintain, to the contrary, that "coined money is a mere sham, a thing not natural, but conventional only . . . because it is not useful as a means to any of the necessities of life, and he who is rich in coin may often be in want of necessary food. But how can that be wealth of which a man may have a great abundance and yet perish with hunger, like Midas in the fable, whose insatiable prayer turned everything that was set before him into gold?"

To say that money in itself cannot satisfy any natural need does not imply that it serves no economic purpose. Plato and Aristotle, Hobbes, Locke, and Kant, as well as Smith and Marx, understand the utility of money as a medium of exchange, indispensable for "the circulation of commodities"—to use Marx's phrase—beyond the stage of barter. Money is not only a medium of exchange, according to Plato; it "reduces the inequalities and incommensurabilities of goods to equality and common measure"; and Aristotle seems to anticipate Marx's conception of money as the universal form in which all economic values can be expressed when he defines "wealth" to mean "all things whose value is measured by money."

The economic utility of money in exchange and as a measure of value, or even the fact that gold and silver coin may have some intrinsic value because of the labor involved in mining and minting the metals, does not alter the distinction between natural and artificial wealth. "Natural wealth," Aquinas explains, "is that which serves man as a remedy for his natural wants, such as food, drink, clothing, cars, dwellings, and such like; while artificial wealth, such as money, is that which is not a direct help to nature, but is invented by man for the convenience of exchange and as a measure of all things saleable."

The same point is restated by Locke in the seventeenth century, but it is still necessary for Smith a century later to argue against the mercantilist theory of national prosperity, on the ground that it confuses wealth with money. "It would be too ridiculous to go about seriously to prove," Smith writes, "that wealth does not consist in money, or in gold or silver; but what money purchases, and is valuable only for purchasing. . . . Goods can serve many other purposes besides purchasing money, but money can serve no other purpose besides purchasing goods. Money, therefore, necessarily runs after goods, but goods do not always or necessarily run after money. The man who buys, does not always mean to sell again, but frequently to use or consume; whereas he who sells, always means to buy again."

Nevertheless, that "wealth consists in money, or in gold and silver, is a popular notion which naturally arises from the double function of money, as the instrument of commerce, and as the measure of value." The notion is so familiar that, Smith observes, "even they, who are convinced of its absurdity, are very apt to forget their own principles, and in the course of their

reasonings to take it for granted as a certain and undeniable truth. Some of the best English writers on commerce set out with observing that the wealth of a country consists, not in its gold and silver only, but in its lands, houses, and consumable goods of all different kinds. In the course of their reasonings, however, the land, houses, and consumable goods seem to slip out of their memory, and the strain of their argument frequently supposes that all wealth consists in gold and silver, and to multiply these metals is the great object of national industry and commerce."

The two principles of the mercantilist policy are, according to Smith, that "wealth consisted in gold and silver, and that those metals could be brought into a country which had no mines only by the balance of trade, or by exporting to a greater value than it imported." A favorable balance of trade thus necessarily became the sole object of the mercantilists; and, Smith adds, "its two great engines for enriching the country, therefore, were restraints upon importation, and encouragements to exportation."

Since in his opinion the wealth of a nation consists in "the whole annual produce of its land and labor," Smith opposes all such restraints, and with them the protection of monopolies. He advocates free trade and the free competition of producers, within a country as well as between domestic and foreign producers, on the ground that "consumption is the sole end and purpose of all production; and the interest of the producer ought to be attended to, only so far as it may be necessary for promoting that of the consumer. But in the mercantile system," Smith claims, "the interest of the consumer is almost constantly sacrificed to that of the producer." A *laissez-faire* economy, he thinks, not only reverses this situation, but also, by preferring more consumable commodities to more gold and silver, tends to increase the real, not the artificial wealth of a nation.

Marx also criticizes the mercantilist error, but in terms of his theory that "since the production of surplus-value is the chief end and aim of capitalist production . . . the greatness of a man's or a nation's wealth should be measured, not by the absolute quantity produced, but by the relative magnitude of the surplus-value."

Surplus value cannot be produced by exchange. Against the mercantilists who "derived the excess of the price over the cost of production of the product, from the act of exchange, from the product being sold above its value," Marx quotes Mill's statement that "profit arises, not from the incident of exchange, but from the productive power of labor; and the general profit of the country is always what the productive power of labor makes it, whether any exchange takes place or not."

But this is not the whole picture, according to Marx. Although it is impossible for capital or surplus value "to be produced by circulation," or the exchange of commodities, he also thinks it is "impossible that outside the sphere of circulation, a producer of commodities can, without coming into contact with other commodity owners, expand value, and consequently convert money or commodities into capital." The two sides of the picture are brought together, in Marx's view, by the treatment of labor itself as a commodity, and the buying and selling of labor power in the open market.

THE DISTINCTION BETWEEN REAL wealth and money and the distinction between necessities and luxuries have more than economic significance. They are basic to the moralist's strictures concerning the desire for wealth, its place in the order of goods, and the way it can be put to good use.

It is not only St. Paul who says that "the love of money is the root of all evil." It is not only Christian theologians like Augustine and Aquinas who explain how "lust of the eyes" or covetousness is a capital sin and as such the principle of many other transgressions. As Marx points out, the Greeks also "denounced money as subversive of the economical and moral order of things." In the passage in Sophocles' *Antigone* which he quotes, Creon declares: "Nothing so evil as money ever grew to be current among men. This lays cities low, this drives men from their homes, this trains and warps honest souls till they set themselves to works of shame; this still teaches folk to practice villainies, and to know every godless deed."

Plato condemns the oligarchical state by

comparing it to the miser and money-maker among men. "Such a State," he says, "aims to become as rich as possible, a desire which is insatiable." In the *Laws*, the Athenian Stranger explains why the reasonable statesman should not aim to make "the state for the true interests of which he is advising . . . as great and as rich as possible," if he also "desires to have the city the best and happiest possible"; for though each may be possible alone, they are not possible together. It is impossible, he holds, to be "good in a high degree and rich in a high degree at the same time."

What Plato says of the oligarch, Marx says of the capitalist: "He shares with the miser the passion for wealth as wealth." But, Marx adds, "that which in the miser is a mere idiosyncrasy is, in the capitalist, the effect of the social mechanism, of which he is but one of the wheels." Involved as he is by the system in "the restless never-ending process of profit-making," the individual capitalist, like the miser, exhibits "this boundless greed after riches, this passionate chase after exchange-value."

The root of the evil in the love of money—of "gold, yellow, glittering, precious gold," which Shakespeare calls the "common whore of mankind"—is the boundlessness of the lust. The hoarding of anything springs from an insatiable desire, but because money can be converted into every sort of commodity, it is, according to Marx, the ideal object of hoarding. "The antagonism between the quantitative limits of money and its qualitative boundlessness," he writes, "continually acts as a spur to the hoarder in his Sisyphus-like labor of accumulating."

In the light of such observations, Marx cites with approval Aristotle's distinction between "economic" and "chrematistic" or what Aristotle differentiates as the two arts of wealth-getting. Considering economics as the management of a household, Aristotle says that the art of acquisition which is a natural part of it "must either find ready to hand, or itself provide, such things necessary to life, and useful for the community of the family or state, as can be stored. They are the elements of true riches; for the amount of property which is needed for a good life is not unlimited." But "there is another variety of the art of acquisition which is commonly and rightly called an art of wealth-getting, and has in fact suggested that riches and property have no limit."

The two arts tend to become confused in men's minds. "Some persons are led to believe," Aristotle observes, "that getting wealth is the object of household management, and the whole idea of their lives is that they ought either to increase their money without limit, or at any rate not to lose it. The origin of this disposition in men is that they are intent upon living only, and not upon living well; and as their desires are unlimited, they also desire that the means of gratifying them should be without limit." Even "those who do aim at a good life seek the means of obtaining bodily pleasures; and, since the enjoyment of these appears to depend upon property, they are absorbed in getting wealth; and thus there arises the second kind of wealth-getting."

Plato, like Aristotle, while admitting the service of retail trade in effecting the exchange of commodities, condemns the tendency of its practitioners to make "gains without limit." In the *Laws*, furthermore, he prohibits interest on loans; and in the *Republic*, he describes this form of money-making as a process in which "men of business . . . insert their sting—that is, their money—into someone else who is not on his guard against them, and recover the parent sum many times over multiplied into a family of children." This biological metaphor for making money out of money appears also in Aristotle. The term "interest," he says, "means the birth of money from money." Of all forms of money-making, this "breeding of money" is, in his opinion, the most unnatural. "Usury, which makes a gain out of money itself," Aristotle writes, violates the natural object of money—"intended to be used in exchange, but not to increase at interest."

INTEREST AND USURY are not distinguished in the Old Testament. "Take thou no usury of him, or increase," is the command in Leviticus. But this rule does not apply to the stranger. "Unto a stranger thou mayst lend upon usury," Deuteronomy says, "but unto thy brother thou shalt not lend upon usury."

A theologian like Aquinas, following both Scripture and Aristotle, condemns, for Chris-

tians, all interest as usury; and Luther also appeals to pagan precept as well as to Scriptural warrant. "The heathen were able, by the light of reason, to conclude that a usurer is a double-dyed thief and murderer," Luther says in a passage which Marx quotes under the comment that the usurer is "that old-fashioned but ever renewed specimen of the capitalist." Castigating his fellow-Christians for holding usurers "in such honor that we fairly worship them for the sake of their money," Luther declares that "whoever eats up, robs, and steals the nourishment of another, that man commits as great a murder (so far as in him lies) as he who starves a man or utterly undoes him. Such does a usurer."

It seems to be a later consequence of the Protestant reformation, as Weber and Tawney point out, that the exaction of interest for the loan of money or goods is defended, and only exorbitant rates of interest are denounced as usurious. The signs of the change may be seen in Pascal's diatribe against the specious casuistry which tries to exempt some forms of interest-taking from the charge of usury; and also in the fact that Montesquieu attributes to the schoolmen, "who adopted from Aristotle, a great many notions on lending upon interest," the mistake of condemning it "absolutely and in all cases." In his own opinion, "to lend money without interest is certainly an action laudable and extremely good; but is is obvious that it is only a counsel of religion, and not a civil law."

Montesquieu thinks a price for the use of money is necessary for the carrying on of trade. If a fair rate of interest is not allowed, nobody will lend money; or rather, Montesquieu says, because "the affairs of society will ever make it necessary," moneylending will inevitably take the form of usury. "Usury increases in Mohammedan countries," he points out, "in proportion to the severity of the prohibition. The lender indemnifies himself for the danger he undergoes of suffering the penalty."

Smith agrees that prohibition, "instead of preventing, has been found from experience to increase the evil of usury." A fair rate of interest is justified, he thinks, because "as something can everywhere be made by the use of money, something ought everywhere to be paid for the use of it. . . . In countries where interest is permitted, the law, in order to prevent the extortion of usury, generally fixes the highest rate which can be taken without incurring a penalty. This rate ought always to be somewhat above the lowest market price, or the price which is commonly paid for the use of money by those who can give the most undoubted security." Smith offers the British practice as a good example. "Where money is lent to government at three per cent, and to private people upon good security at four, and four and a half, the present legal rate, five per cent, is perhaps as proper as any."

Interest and profit, while not the same in Smith's view, are closely connected. As the revenue from land is rent, from labor wages, and "that derived from stock, by the person who manages or employs it, is called profit," interest is "the compensation which the borrower pays to the lender, for the profit which he has an opportunity of making by the use of the money. Part of that profit naturally belongs to the borrower, who runs the risk and takes the trouble of employing it; and part to the lender, who affords him an opportunity of making this profit." Conceiving interest as a derivative revenue, Smith holds it to be a maxim that "wherever a great deal can be made by the use of money, a great deal will be commonly given for the use of it," so that we may expect to find "the usual market rate of interest" to vary with "the ordinary profits of stock."

THE THEORY WHICH PLACES wealth lowest in the order of goods determines its contribution to human happiness accordingly, and leads to a disapproval of luxuries, on the part of both the individual and society.

"Riches are for the sake of the body, as the body is for the sake of the soul. The latter are good," writes Plato, "and wealth is intended by nature to be for the sake of them, and is therefore inferior to them both, and third in the order of excellence." Aristotle similarly orders wealth, or external goods, to health and other goods of the body, as these in turn are subordinate to the virtues, or goods of the soul; and Hobbes, in somewhat different terms, holds that, of all goods, "those that are dearest to a man are his own life and limbs; and in the next degree (in most men), those that concern con-

jugal affection; and after them riches and means of living."

While Aristotle admits that happiness requires some external prosperity, he always adds that only a moderate amount of external goods is needed. "Happiness, whether consisting in pleasure or virtue, or both," he writes, "is more often found with those who are most highly cultivated in their mind and in their character, and have only a moderate share of external goods, than among those who possess external goods to a useless extent, but are deficient in higher qualities." Aristotle praises Solon for telling Croesus, one of the world's wealthiest men, that happiness requires more than riches. The conversation is narrated by Herodotus.

"What, stranger of Athens," Herodotus reports Croesus as saying, "is my happiness, then, valued so little by you, that you do not even put me on a level with private men?" To which, Solon replies: "Croesus, I see that you are wonderfully rich, and the lord of many nations," but "he who possesses a great store of riches is no nearer happiness than he who has what suffices for his daily needs, unless luck attends him, and so he continue in the enjoyment of all his good things to the end of his life." Aristotle adds the further observation that "one can with but moderate possessions do what one ought" and that "a good life requires a supply of external goods in a less degree when men are in a good state and in a greater degree when they are in a lower state."

Aquinas agrees with Aristotle so far as the happiness of the active life is concerned, but he holds that wealth "does not conduce to the happiness of the contemplative life; rather is it an obstacle thereto." With regard to achieving "the happiness of heaven" in the life hereafter, Aquinas not only thinks wealth an obstacle, but he also explains why the religious orders take the vow of voluntary poverty. "Man is directed to future happiness by charity," he writes; and "in the attainment of the perfection of charity the first foundation is voluntary poverty, whereby a man lives without property of his own."

The opinion that wealth is an obstacle or that it should be sought in moderation does not seem to be universally shared. As Herodotus, Plato, and Aristotle report the prevalence in the ancient world of the notion that "external goods are the cause of happiness," so Melville reflects that in modern society "the urbane activity with which a man receives money is really marvellous, considering that we so earnestly believe money to be the root of all earthly ills, and that on no account can a monied man enter heaven. Ah! how cheerfully we consign ourselves to perdition!" Marx quotes a still more extravagant claim. In a letter from Jamaica in 1503, Christopher Columbus exclaims: "Gold is a wonderful thing! Whoever possesses it is lord of all he wants. By means of gold one can even get souls into Paradise."

Against Rousseau's attack upon opulence as the cause of civilization with all its miseries, Dr. Johnson rises in the defense of luxuries and the advantages of wealth. "Rousseau's treatise on the inequality of mankind," Boswell writes, "was at this time a fashionable topick. It gave rise to an observation by Mr. Dempster that the advantages of fortune and rank were nothing to a wise man." To this, Dr. Johnson replies: "If a man were a savage, living in the woods by himself, this might be true," but "in civilized society, external advantages make us more respected. . . . Sir, you may make the experiment. Go into the street, and give one man a lecture on morality, and another a shilling, and see which will respect you the most . . .

"And, Sir," he continues, "if six hundred pounds a year procure a man more consequence, and, of course, more happiness than six pounds, the same proportion will hold as to six thousand, and so on as far as opulence can be carried. Perhaps he who has a large fortune may not be so happy as he who has a small one; but that must proceed from other causes than from his having the large fortune; for, *ceteris paribus*, he who is rich in a civilized society, must be happier than he who is poor."

On one occasion, Dr. Johnson seems to share Solon's view. When Boswell suggests that the proprietor of a great estate "must be happy," he exclaims: "Nay, Sir, all this excludes but one evil—poverty." But for the most part, his opinion is that "it is in refinement and elegance that the civilized man differs from the savage," and that it is right for every society to be as luxurious as it can be.

"Many things which are false are transmitted from book to book," he says to General Oglethorpe, "and gain credit in the world. One of these is the cry against the evil of luxury. Now the truth is that luxury produces much good. You will hear it said, very gravely, Why was not the half-guinea, thus spent in luxury, given to the poor? To how many might it have afforded a good meal. Alas! has it not gone to the *industrious* poor, whom it is better to support than the *idle* poor? You are much surer that you are doing good when you *pay* money to those who work as the recompense of their labor, than when you *give* money in charity. . . . And as to the rout that is made about people who are ruined by extravagance, it is no matter to the nation that some individuals suffer. When so much general productive exertion is the consequence of luxury, the nation does not care though there are debtors in gaol."

Dr. Johnson's pronouncements may silence Mr. Dempster and General Oglethorpe, but not Smith or Marx. To Smith, spendthrift extravagance squanders wealth which might have been capitalized for productive purposes; to Marx, the multiplication of luxury products diverts labor power that is socially necessary for producing the means of subsistence into what Veblen later calls forms of "conspicuous waste." Not only, in Marx's view, can the capitalistic system be charged with indifference as to whether its profits are made out of the production of luxuries or necessities; but the workers on starvation wages engaged in the luxury trades constitute a signal indictment of the inequitable distribution of wealth.

AS THE NEEDS OF THE individual are thought to set a natural limit to his acquisition of wealth, or at least to provide him with a rational standard for stopping short of wanton luxuries when he seeks the decencies or amenities of life, so the needs of society as a whole are thought to establish a criterion of justice in the distribution of wealth.

"God gave the world to men in common," says Locke, and "the measure of property nature has well set by the extent of man's labor and the convenience of life. . . . No man's labor could subdue or appropriate all; nor could his enjoyment consume more than a small part; so that it was impossible for any man, this way, to intrench upon the right of another, who would still have room for as good and as large a possession (after the other had taken out his) as before it was appropriated. Which measure did confine every man's possession to a very moderate proportion, and such as he might appropriate to himself without injury to anybody, in the first age of the world."

This rule of property—"that every man should have as much as he could make use of" without prejudice or injury to others—worked well in the beginning when, as Locke puts it, "all the world was America." It "would still hold in the world without straitening anybody," Locke thinks, "since there is land enough in the world to suffice double the inhabitants, had not the invention of money . . . introduced (by consent) larger possessions and a right to them"; for gold and silver being relatively imperishable, men can hoard excesses of them without appearing to waste them, as they would if they amassed perishable commodities which they could not consume or use.

It is not money but property itself which Rousseau claims to be the origin of inequality among men and of the inequitable distribution of wealth. "The first man who, having enclosed a piece of ground, bethought himself of saying *This is mine*, and found people simple enough to believe him, was the real founder of civil society." Once established as a right, property tends to expand. The larger proprietors avoid the question, "Do you not know that numbers of your fellow-creatures are starving, for want of what you have too much of?" Instead, according to Rousseau, they conceive "the profoundest plan that ever entered the mind of man" to protect their possessions against invasion or plunder. They institute civil government, ostensibly for the security of all, but really to secure for themselves their property and power.

"Such was, or may well have been," Rousseau writes, "the origin of society and law, which bound new fetters on the poor, and gave new powers to the rich; which irretrievably destroyed natural liberty, eternally fixed the law of property and inequality, converted clever usurpation into unalterable right, and, for the advantage of a few ambitious individuals,

subjected all mankind to perpetual labor, slavery, and wretchedness." Adam Smith seems to agree. "Where there is no property," he says, "or at least none that exceeds the value of two or three days labor, civil government is not so necessary. . . . Civil government, so far as it is instituted for the security of property, is in reality for the defense of the rich against the poor, or of those who have some property against those who have none at all."

But, unlike Smith, Rousseau has an alternative to propose. "Since it is plainly contrary to the law of nature . . . that the privileged few should gorge themselves with superfluities while the starving multitude are in want of the bare necessities of life," he thinks it is "one of the most important functions of government to prevent extreme inequalities of fortunes; not by taking away wealth from its possessors, but by depriving all men of means to accumulate it; not by building asylums for the poor, but by securing the citizens from becoming poor."

THIS STATES AN END, but not the means for achieving it. The problem of poverty is not so easily solved, if it can be solved at all, once the right of property is admitted. Rousseau, for example, no less than Locke and others before him, affirms this right which, for Kant and Hegel later, is almost the whole substance of private or abstract right. "The right of property," says Rousseau, "is the most sacred of all the rights of citizenship, and even more important in some respects than liberty itself." Yet it is difficult, he admits, "to secure the property of individuals on one side, without attacking it on another; and it is impossible that all the regulations which govern the order of succession, wills, contracts, etc., should not lay individuals under some constraint as to the disposition of their goods, and should not consequently restrict the right of property."

To Hegel, poverty seems to be an inevitable consequence of property, as war is an inevitable consequence of sovereignty, and in neither case can the cause be abolished. "When the masses begin to decline into poverty," as they must, they can be supported from public funds and private charities, thus receiving "subsistence directly, not by means of their work," or as an alternative, "they might be given subsistence indirectly through being given work." But, Hegel adds, "in this event the volume of production would be increased, but the evil consists precisely in an excess of production and in the lack of a proportionate number of consumers who are themselves also producers, and thus it is simply intensified by both of the methods by which it is sought to alleviate it." Hence, Hegel concludes, it "becomes apparent that despite an excess of wealth civil society is not rich enough . . . to check excessive poverty and the creation of a penurious rabble. This inner dialectic of civil society thus drives it—or at any rate a specific civil society—to push beyond its own limits and seek markets, and . . . its necessary means of subsistence, in other lands which are either deficient in the goods it has over-produced, or else generally backward in industry."

Imperialism, according to Marx, will not long work as a cure for what Tawney later calls "the sickness of an acquisitive society"—the inner frustration which Marx sees manifested in recurring economic crises and depressions of greater and greater magnitude. Nor does he propose the abolition of all private property as the remedy for poverty, when he calls for "the expropriation of the expropriators." On the contrary, only the possession by each individual of an adequate supply of consumer's goods can abolish poverty. Differentiating between individual and capitalist property, according as its owners are or are not laborers, and according as it consists in consumable goods or the means of production, Marx would transfer the latter from private property to public ownership.

The socialist economy he outlines also includes "abolition of property in land, and application of all rents of land to public purposes; a heavy progressive or graduated income tax; abolition of all right of inheritance." It includes "centralization of credit in the hands of the state, by means of a national bank with State capital and an exclusive monopoly," and also "centralization of the means of communication and transport." Last but not least, it includes "equal liability of all to labor."

More radical than Marx's socialism is the communism Plato proposes in the *Republic*. Plato's aim is not to solve the problem of poverty or economic injustice. By abolishing

for his guardian class *all* private property, he hopes that his guardians through sharing common possessions (including wives and children) will have no cause for rivalry, dissension, or personal ambition. Common possessions should mould them into a fraternity and free them from private interests to work for the common good. In this matter of property, the condition of Plato's imagined guardians was not so different from that of Jesus' disciples as recounted in the Book of Acts, or of the monastic orders whose vows include that of voluntary poverty.

Aristotle's criticisms of the arrangements for the guardian class in the *Republic* are largely directed against the community of women and children and the elimination of private property. "Property," he says, "should be in a certain sense common, but as a general rule private; for, when everyone has a distinct interest, men will not complain of one another, and they will make more progress, because everyone will be attending to his own business." He thinks "it is clearly better that property should be private, but the use of it common," in the sense that its use have the common welfare in mind.

Not only does Aristotle defend private property on many counts, but he objects to schemes for equalizing it, such as Plato sets forth in the *Laws*. For one thing, "the legislator ought not only to aim at the equalization of properties, but at moderation in their amount." Yet if the legislator "prescribe this moderate amount equally to all, he will be no nearer the mark; for it is not the possessions but the desires of mankind which need to be equalized, and this is impossible unless a sufficient education is provided by the laws."

Whether or not communism is desirable, there are those who think it is impossible, not so much on the level of the economic, as on the level of the moral, revolution for which Aristotle looks to education. The skeptic thinks human nature cannot be so transformed. It may be only in the twentieth century that the world is divided into two camps on this subject, but the issue is as old as the western tradition. At its beginning Aristophanes expresses the skeptical position in a form that is still current. His *Ecclesiazusae* simply laughs at the idea that inequalities of property can ever be done away with—by law or by education.

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PAGE SECTIONS: When the text is printed in one column, the letters **a** and **b** refer to the upper and lower halves of the page. For example, in **53** JAMES: *Psychology*, **116a-119b**, the passage begins in the upper half of page 116 and ends in the lower half of page 119. When the text is printed in two columns, the letters **a** and **b** refer to the upper and lower halves of the left-hand side of the page, the letters **c** and **d** to the upper and lower halves of the right-hand side of the page. For example, in **7** PLATO: *Symposium*, **163b-164c**, the passage begins in the lower half of the left-hand side of page 163 and ends in the upper half of the right-hand side of page 164.

AUTHOR'S DIVISIONS: One or more of the main divisions of a work (such as PART, BK, CH, SECT) are sometimes included in the reference; line numbers, in brackets, are given in certain cases; *e.g.*, *Iliad*, BK II [265 283] **12d**.

BIBLE REFERENCES: The references are to book, chapter, and verse. When the King James and Douay versions differ in title of books or in the numbering of chapters or verses, the King James version is cited first and the Douay, indicated by a (*D*), follows; *e.g.*, OLD TESTAMENT: *Nehemiah*, 7:45 –(*D*) *II Esdras*, 7:46.

SYMBOLS: The abbreviation "esp" calls the reader's attention to one or more especially relevant parts of a whole reference; "passim" signifies that the topic is discussed intermittently rather than continuously in the work or passage cited.

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7 PLATO: *Laws*, BK XI, 774a
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51 TOLSTOY: *War and Peace*, BK XIII, 574b; EPILOGUE II, 680a-b

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38 ROUSSEAU: *Political Economy*, 383b-c
39 SMITH: *Wealth of Nations*, BK I, 12b-c; 14d-20b; 77a-109b; BK IV, 203c-204c
42 KANT: *Science of Right*, 424a-425b
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9 ARISTOTLE: *Ethics*, BK IX, CH I [1164^b13–22] 417c
15 TACITUS: *Annals*, BK VI, 90a-c; BK XI, 103c
38 MONTESQUIEU: *Spirit of Laws*, BK XX, 149a-b; BK XXI, 173a; BK XXII, 179c-180c; 182c; 183a-b
39 SMITH: *Wealth of Nations*, BK II, 124d-142d; 151c-155b; BK IV, 204b-209a,c; BK V, 404d-405a
43 FEDERALIST: NUMBER 30, 103a-b
50 MARX: *Capital*, 62d-66c; 309a-310d; 374a-375c

5e. The rate of interest on money: the condemnation of usury

OLD TESTAMENT: *Exodus*, 22:25 / *Leviticus*, 25:35-37 / *Deuteronomy*, 23:19-20; 24:10-13 / *Nehemiah*, 5:1-12—(*D*) *II Esdras*, 5:1-12 / *Psalms*, 15:5—(*D*) *Psalms*, 14:5 / *Proverbs*, 28:8 / *Jeremiah*, 15:10—(*D*) *Jeremias*, 15:10 / *Ezekiel*, 18:4-21 esp 18:8, 18:13, 18:17; 22:12—(*D*) *Ezechiel*, 18:4-21 esp 18:8, 18:13, 18:17; 22:12
7 PLATO: *Republic*, BK VIII, 408c-d / *Laws*, BK V, 694c-d; BK XI, 775c-d

(5. *Money.* 5e. *The rate of interest on money: the condemnation of usury.*)

9 ARISTOTLE: *Politics*, BK I, CH 10 [1258a38-b8] 452d
14 PLUTARCH: *Marcus Cato*, 287c-d / *Lucullus*, 409b-d
15 TACITUS: *Annals*, BK VI, 90a-c; BK XI, 103c
20 AQUINAS: *Summa Theologica*, PART I-II, Q 105, A 2, REP 4 309d-316a; A 3, REP 3 316a-318b
21 DANTE: *Divine Comedy*, HELL, XI [91-115] 16a-b; XVII [34-75] 24b-c
26 SHAKESPEARE: *Merchant of Venice*, ACT I, SC III 409c-411b esp [41-103] 410a-c
33 PASCAL: *Provincial Letters*, 55a-57a
38 MONTESQUIEU: *Spirit of Laws*, BK V, 29c; BK XII, 92d-93c; BK XXI, 169a-170b; BK XXII, 175d-176a; 183a-187a,c
39 SMITH: *Wealth of Nations*, BK I, 22b-d; 37b-41d; BK II, 154c-155a; BK V, 404d-405a
40 GIBBON: *Decline and Fall*, 498c
41 GIBBON: *Decline and Fall*, 90d-91a
44 BOSWELL: *Johnson*, 304b-c; 409a-b
46 HEGEL: *Philosophy of History*, PART IV, 353b-c
50 MARX: *Capital*, 77c-78c; 252b; 293a-d [fn 1]; 371c-372c

6. Capital

6a. Comparison of capitalist production with other systems of production: the social utility of capital

38 MONTESQUIEU: *Spirit of Laws*, BK XIII, 96d-97a
39 SMITH: *Wealth of Nations*, INTRO, 1d; BK II, 148c-149a; 155b-162d; BK III, 165b-181a,c passim; BK IV, 239d-240a
40 GIBBON: *Decline and Fall*, 17b-c; 144b; 619b-620c; 628c-d
46 HEGEL: *Philosophy of Right*, PART III, par 199 67c / *Philosophy of History*, PART IV, 335a-336c
49 DARWIN: *Descent of Man*, 324a-b
50 MARX: *Capital*, 33b-37a; 95a-b [fn 1]; 104d-105a; 113c-115c; 150b; 160d-164a esp 160d-161b, 163a-c; 171d-176a; 239d-240c; 266c; 267c; 281a-b; 295d-296a; 354c-364a passim; 377c-383d
50 MARX-ENGELS: *Communist Manifesto*, 419d-423a; 428d-429c

6b. Theories of the nature, origin, and growth of capital stock: thrift, savings, excesses beyond the needs of consumption, expropriation

35 LOCKE: *Civil Government*, CH V 30b-36a
39 SMITH: *Wealth of Nations*, BK II, 117a-c; 142d-151c
46 HEGEL: *Philosophy of Right*, PART III, par 170 60d; par 199-208 67c-69c
50 MARX: *Capital*, 69b; 74a-79a; 89d-94c esp 93d-94a; 101a-b; 105b [fn 1]; 221c-d; 279a-377a esp 279a-282a, 286a-288a, 289b, 290c-296a, 301b-302d, 319b-d, 354a-355d, 372a-d

6c. Types of capital: fixed and circulating, or constant and variable capital

39 SMITH: *Wealth of Nations*, BK II, 118a-121c; 122b-124c; 151c-162d passim
50 MARX: *Capital*, 96a-102b esp 101a-c; 280d-282a; 291c-d; 302d-303b; 307c-309b; 311c-312c

6d. Capital profits

6d(1) The distinction of profit from rent, interest, and wages

39 SMITH: *Wealth of Nations*, BK I, 20b-23b esp 22d-23b; 28a; 47c-48a; 109d-110d
50 MARX: *Capital*, 255a-256a; 301b-302d

6d(2) The source of profit: marginal or surplus value; unearned increment and the exploitation of labor

39 SMITH: *Wealth of Nations*, BK I, 20b-21c; 27b-28a; 109d-110d
46 HEGEL: *Philosophy of Right*, PART III, par 245 77b-c
50 MARX: *Capital*, 69a-275c esp 71a-79a, 89c-96a, 99d-100b [fn 2], 100a-101b, 104b-105c, 112c, 113c-115c, 117c-129b, 154d-156d, 192d-194b, 197a-200a, 251c-256a, 263c-d, 271b-c; 285c-286a; 314d-315c; 375c-376c

6d(3) Factors determining the variable rate of capital profit

39 SMITH: *Wealth of Nations*, BK I, 6d-8b; 21a-b; 37b-62a; 110b-d; BK II, 151c-155b esp 153a-b, 154b-c; 155b-162d passim
50 MARX: *Capital*, 102b-113c; 146c-151a,c; 255b-263d; 296b-301b

6d(4) The justification of profit: the reward of enterprise and indemnification for risk of losses

25 MONTAIGNE: *Essays*, 42a-b
33 PASCAL: *Provincial Letters*, 55a-57a
39 SMITH: *Wealth of Nations*, BK I, 20d-21c; BK II, 142d-151c passim; 155b-162d passim, esp 162a-b
44 BOSWELL: *Johnson*, 279b-280a

6e. The recurrence of crises in the capitalist economy: depressions, unemployment, the diminishing rate of profit

50 MARX: *Capital*, 11d; 64c-d esp 64d [fn 2-3]; 100a; 116c-d; 222d-225d; 311c-316d esp 312b, 313d-314a, 315c-316a; 319a; 330d-333c
50 MARX-ENGELS: *Communist Manifesto*, 422a-c

7. Property

7a. The right of property: the protection of property as the function of government

20 AQUINAS: *Summa Theologica*, PART I-II, Q 94, A 5, REP 3 224d-225d
35 LOCKE: *Toleration*, 16a-c / *Civil Government*,

CH V 30b-36a esp SECT 26 30d; CH VII, SECT 87-94 44a-46c; CH IX 53c-54d esp SECT 123 53c-d; CH XI, SECT 137-140 56d-58a; CH XV, SECT 173-174 65c-d
36 STERNE: *Tristram Shandy*, 310a-311a
38 MONTESQUIEU: *Spirit of Laws*, BK XII, 86c-d; BK XXVI, 221c-d
38 ROUSSEAU: *Inequality*, 348b; 353a-358c passim / *Political Economy*, 377c-d / *Social Contract*, BK I, 393b-394d
39 SMITH: *Wealth of Nations*, BK V, 309a-311c
40 GIBBON: *Decline and Fall*, 486c-d
41 GIBBON: *Decline and Fall*, 86d-87c
42 KANT: *Science of Right*, 408c-409c; 411c-413b esp 412c-413b; 414a-c; 416a-b; 441d-443b
43 CONSTITUTION OF THE U.S.: AMENDMENTS, V [645-648] 17c; XIV, SECT 1 [748-750] 18d
43 FEDERALIST: NUMBER 10, 50b-d; NUMBER 54, 171b-c
43 MILL: *Representative Government*, 366c-d; 422b
44 BOSWELL: *Johnson*, 124b-c; 204b-c; 222d-223a; 225a-c; 275d
46 HEGEL: *Philosophy of Right*, PART I, par 40 21d-22c; par 44-46 23c-24a; par 50 25a; par 66 29a-c; par 71 31b-c; PART III, par 208 69c; par 230 75c; ADDITIONS, 26-27 121a-b; 30 121c / *Philosophy of History*, PART IV, 364d
50 MARX: *Capital*, 83d-84a,c; 174b-c; 288c-d
50 MARX-ENGELS: *Communist Manifesto*, 425c-427b
51 TOLSTOY: *War and Peace*, BK XIII, 572d-573b
54 FREUD: *Civilization and Its Discontents*, 787d-788b

7b. Kinds of economic property

7b(1) Chattel slaves as property

5 ARISTOPHANES: *Plutus* [507-526] 635a-b
7 PLATO: *Laws*, BK VI, 709a-710a
9 ARISTOTLE: *Politics*, BK I, CH 2 [1252^{a}26-^{b}13] 445c-d; CH 3-4 446d-447c; CH 8 [1256^{a}1-3] 449d; BK VII, CH 8 [1328^{a}35-38] 532c; CH 10 [1330^{a}25-34] 534d / *Rhetoric*, BK I, CH 5 [1361^{a}12-14] 601c
14 PLUTARCH: *Marcus Cato*, 278d-279a; 287b-d / *Crassus*, 439a-c
20 AQUINAS: *Summa Theologica*, PART I-II, Q 105, A 4, ANS and REP 1-4 318b-321a
23 HOBBES: *Leviathan*, PART II, 110b-111a; PART IV, 261d-262a
38 MONTESQUIEU: *Spirit of Laws*, BK XV, 109a-d; 111d-112c
39 SMITH: *Wealth of Nations*, BK III, 167a-d; BK IV, 239c-240a; 253c-254a
40 GIBBON: *Decline and Fall*, 16c-17d; 144b; 620a-b; 628c-d
41 GIBBON: *Decline and Fall*, 404d
43 FEDERALIST: NUMBER 42, 137b-c; NUMBER 54, 170b-171b
44 BOSWELL: *Johnson*, 364a-b
46 HEGEL: *Philosophy of Right*, PART I, par 48 24b-c; par 66 29a-c
50 MARX: *Capital*, 113c-114a; 128d-129a; 266b-c; 267c; 283c-d; 354c-355d

7b(2) Property in land

OLD TESTAMENT: *Leviticus*, 25:23-24 / *Deuteronomy*, 19:14; 27:17
7 PLATO: *Laws*, BK V, 695c-696a
9 ARISTOTLE: *Politics*, BK II, CH 9 [1270^{a}15-^{b}6] 466b-c; BK VI, CH 4 [1319^{a}6-19] 522c-d; BK VII, CH 10 [1329^{b}37-1330^{a}25] 534b-d / *Rhetoric*, BK I, CH 5 [1361^{a}12-14] 601c
15 TACITUS: *Annals*, BK XIII, 140b-c
23 HOBBES: *Leviathan*, PART II, 124d-125b
35 LOCKE: *Civil Government*, CH V, SECT 31-34 31d-32c
38 MONTESQUIEU: *Spirit of Laws*, BK VI, 33b
38 ROUSSEAU: *Inequality*, 353a / *Social Contract*, BK I, 393d-394d
39 SMITH: *Wealth of Nations*, BK III, 163a-170c
40 GIBBON: *Decline and Fall*, 198a-b; 618d-619c
41 GIBBON: *Decline and Fall*, 87a-c
42 KANT: *Science of Right*, 411c-412c
44 BOSWELL: *Johnson*, 274c-278a
46 HEGEL: *Philosophy of History*, INTRO, 195a-b; PART I, 226d-227b; PART II, 277b-c; PART III, 295d-297a
50 MARX: *Capital*, 355d-364a; 368c-369a
51 TOLSTOY: *War and Peace*, BK V, 211a-213a

7b(3) Property in capital goods and in monetary wealth

9 ARISTOTLE: *Politics*, BK I, CH 9-10 450d-452d / *Rhetoric*, BK I, CH 5 [1361^{a}12-14] 601c
38 MONTESQUIEU: *Spirit of Laws*, BK VI, 33b
50 MARX: *Capital*, 60d-62d esp 61d-62a; 69b; 150a-151a,c; 279a-290d esp 279a, 287a-b, 289d-290c; 371c-372b

7c. The uses of property: for production, consumption, or exchange

9 ARISTOTLE: *Politics*, BK I, CH 4 [1254^{a}1-7] 447c; CH 8-11 449d-453d / *Rhetoric*, BK I, CH 5 [1361^{a}12-24] 601c-d
35 LOCKE: *Civil Government*, CH V 30b-36a
39 SMITH: *Wealth of Nations*, BK II, 118a-121c; 142d-151c esp 150b-151c; 155b-162d; BK III, 165c-166a; 176a-177d; BK V, 351a-c
42 KANT: *Science of Right*, 411c-413b esp 412c-413b
46 HEGEL: *Philosophy of Right*, PART I, par 59-61 27a-c; ADDITIONS, 39 122d
50 MARX: *Capital*, 30c-32c; 38c-40a; 70d-72c; 89a-b; 282b-283c; 289d-290d; 291a-296a esp 291a-b, 293c-294a

7d. The ownership of property: possession or title; the legal regulation of property

OLD TESTAMENT: *Exodus*, 20:15; 21:16-19,33-36; 22:1-15; 23:4-5 / *Leviticus*, 6:2-5; 19:11,13; 24:18-21; 25:13-14,25-34,47-54 / *Deuteronomy*, 5:19; 19:14; 22:1-4; 24:7; 27:17 / *Ruth*, 4:1-8/*Jeremiah*,32:6-12—(*D*) *Jeremias*, 32:6-12

(7. *Property.* 7*d. The ownership of property: possession or title; the legal regulation of property.*)

NEW TESTAMENT: *Matthew*, 19:18 / *Mark*, 10:19 / *Luke*, 18:20 / *Romans*, 13:9
7 PLATO: *Laws*, BK VIII, 738d-740d
9 ARISTOTLE: *Politics*, BK II, CH 5 458a-460a; CH 7 461d-463c; BK VI, CH 4 [1319a6-19] 522c-d
15 TACITUS: *Annals*, BK XIII, 140b-c
20 AQUINAS: *Summa Theologica*, PART I-II, Q 94, A 5, REP 3 224d-225d
23 HOBBES: *Leviathan*, PART I, 86b; 91a-b; PART II, 124d-125c
35 LOCKE: *Civil Government*, CH XVI, SECT 176 66a-b; SECT 180-184 67b-68d; SECT 192-194 69c-70a
36 STERNE: *Tristram Shandy*, 210b-213a; 310a-311a
38 MONTESQUIEU: *Spirit of Laws*, BK XII, 86c-d
38 ROUSSEAU: *Inequality*, 348b; 353a-356a / *Political Economy*, 377b-d / *Social Contract*, BK I, 393b-394d
39 SMITH: *Wealth of Nations*, BK III, 165b-175b
41 GIBBON: *Decline and Fall*, 86d-87c; 89d-90c; 404d
42 KANT: *Science of Right*, 404a; 407a-408b; 409d-410d; 412c-415c; 422b,d-425b; 426b-428a; 431a-432a; 441d-443b
43 CONSTITUTION OF THE U.S.: AMENDMENTS, V [645-648] 17c; XIV, SECT 1 [748-750] 18d
43 FEDERALIST: NUMBER 7, 41d-42d; NUMBER 43, 139d-140a
46 HEGEL: *Philosophy of Right*, PART I, par 45 23c-d; par 50 25a; par 55 25d-26a; par 64-65 28c-29a; par 69 30a-31a; par 80, 33d-34a; PART III, par 218 72c-d; par 230 75c; ADDITIONS, 26 121a-b; 30 121c; 34 122a-b / *Philosophy of History*, INTRO, 195a-b; PART I, 226d-227b; PART III, 288c-289a; 310c
48 MELVILLE: *Moby Dick*, 292a-297a
50 MARX: *Capital*, 37c-d; 287b-290a esp 288b-d
50 MARX-ENGELS: *Communist Manifesto*, 425d-427b; 428d-429a
51 TOLSTOY: *War and Peace*, BK XIII, 572d-573b
54 FREUD: *Civilization and Its Discontents*, 787d-788b

7*d*(1) Private ownership: partnerships, joint-stock companies

7 PLATO: *Republic*, BK III, 341c-d; BK V, 364c-365d / *Laws*, BK V, 695a-c
9 ARISTOTLE: *Politics*, BK II, CH 5 458a-460a; CH 7 461d-463c; BK VII, CH 10 [1329b37-1330a33] 534b-d
20 AQUINAS: *Summa Theologica*, PART I-II, Q 94, A 5, REP 3 224d-225d
23 HOBBES: *Leviathan*, PART II, 150a
38 MONTESQUIEU: *Spirit of Laws*, BK XXVI, 221c-222a
38 ROUSSEAU: *Inequality*, 348b
39 SMITH: *Wealth of Nations*, BK V, 319d-331d
42 KANT: *Science of Right*, 441d-443b
43 MILL: *Liberty*, 319d-320a
46 HEGEL: *Philosophy of Right*, PART I, par 46 23d-24a
50 MARX: *Capital*, 89a-b
50 MARX-ENGELS: *Communist Manifesto*, 425d-426a; 426c-d

7*d*(2) Government ownership: eminent domain

7 PLATO: *Laws*, BK V, 691b-696d
9 ARISTOTLE: *Athenian Constitution*, CH 47, par 2 574c
23 HOBBES: *Leviathan*, PART II, 125c-d; 150a
38 MONTESQUIEU: *Spirit of Laws*, BK XXVI, 221c-222b
38 ROUSSEAU: *Political Economy*, 378c-379d
39 SMITH: *Wealth of Nations*, BK V, 357b,d-361d
42 KANT: *Science of Right*, 441d-443b
43 CONSTITUTION OF THE U.S.: AMENDMENTS, V [645-648] 17c; XIV, SECT 1 [748-750] 18d
46 HEGEL: *Philosophy of History*, PART III, 296b-297a; PART IV, 355c-d
50 MARX-ENGELS: *Communist Manifesto*, 428d-429a

7*e*. The inheritance of property: laws regulating inheritance

OLD TESTAMENT: *Numbers*, 27:8-11; 36—(*D*) *Numbers*, 27:7-11; 36 / *Deuteronomy*, 21:15-17 / *Ruth*, 4:1-8 / *Jeremiah*, 32:6-12—(*D*) *Jeremias*, 32:6-12
5 ARISTOPHANES: *Birds* [1641-1670] 562b-c
7 PLATO: *Laws*, BK XI, 775d-779b
9 ARISTOTLE: *Ethics*, BK VIII, CH 10 [1160b33-1161a2] 413a-b / *Politics*, BK II, CH 9 [1270a15-b6] 466b-c
23 MACHIAVELLI: *Prince*, CH XVII, 24b-c
25 MONTAIGNE: *Essays*, 189c-190d
29 CERVANTES: *Don Quixote*, PART I, 148b-149a
30 BACON: *New Atlantis*, 209d
35 LOCKE: *Civil Government*, CH XVI, SECT 182-184 67c-68d; SECT 190-194 69b-70a passim
38 MONTESQUIEU: *Spirit of Laws*, BK V, 19d-20d; 21c; 27d-28a; BK XVIII, 129d-132a; BK XXVI, 216b-c; 217b; BK XXVII 225a-230d
38 ROUSSEAU: *Inequality*, 357b / *Political Economy*, 367b-d; 377d-378a
39 SMITH: *Wealth of Nations*, BK III, 165b-173b; 179b-180c; BK IV, 246d-247c
40 GIBBON: *Decline and Fall*, 66d-67b; 619c
41 GIBBON: *Decline and Fall*, 83a; 87d-89d
42 KANT: *Science of Right*, 426b-428a esp 427c-428a; 441d-443b esp 442c
44 BOSWELL: *Johnson*, 203c-d; 204c-205c; 274b-278a esp 277d [fn 1]; 280c-281a; 282a-b; 289c-d
46 HEGEL: *Philosophy of Right*, PART III, par 178-180 62a-63c / *Philosophy of History*, PART II, 277b; PART III, 289a-b
49 DARWIN: *Descent of Man*, 324a-c

51 TOLSTOY: *War and Peace*, BK I, 26a-30a; 38d-41a; 45b-47b; BK VIII, 306a; 309d-310d; EPILOGUE I, 650d-652a

8. The distribution of wealth: the problem of poverty

7 PLATO: *Laws*, BK V, 691d-696d; BK VIII, 738d-741d
9 ARISTOTLE: *Politics*, BK II, CH 9 [1270a15-b6] 466b-c / *Athenian Constitution*, CH 12 557b-558a
15 TACITUS: *Annals*, BK II, 31a-b
23 HOBBES: *Leviathan*, PART II, 124d-126a
35 LOCKE: *Civil Government*, CH V 30b-36a
36 SWIFT: *Gulliver*, PART IV, 154b-155b
38 ROUSSEAU: *Political Economy*, 375b-d / *Social Contract*, BK II, 405b-c
39 SMITH: *Wealth of Nations*, BK I, 20b-63a,c; BK II, 121c-d; 142d-151c esp 150b-151c
40 GIBBON: *Decline and Fall*, 22c; 89d; 486c-d; 501c
43 MILL: *Liberty*, 309a-c / *Representative Government*, 366c-367a / *Utilitarianism*, 472d-473a
44 BOSWELL: *Johnson*, 124d-125c
46 HEGEL: *Philosophy of Right*, PART I, par 49 24c-25a; PART III, par 244-245 77c-d; ADDITIONS, 29 121c; 149 140d-141a / *Philosophy of History*, INTRO, 193b-c; PART I, 226d-227b; PART II, 263b-d; 277b-c
49 DARWIN: *Descent of Man*, 324a-c
50 MARX: *Capital*, 34d-35c; 218d-219d; 261d-262a; 301b-302d; 319d-321b; 354b-c
50 MARX-ENGELS: *Communist Manifesto*, 425d-426d; 428d-429a
52 DOSTOEVSKY: *Brothers Karamazov*, BK VI, 165b-166a
54 FREUD: *Civilization and Its Discontents*, 787d-788b [fn 3]

8a. The sharing of wealth: goods and lands held in common; public ownership of the means of production

NEW TESTAMENT: *Acts*, 2:44-47; 4:32-5:11
5 ARISTOPHANES: *Ecclesiazusae* 615a-628d esp [395-476] 619b-620a, [553-729] 621b-623c
7 PLATO: *Republic*, BK III, 341c-d; BK V, 364c-365d / *Critias*, 480a; 481a-b
9 ARISTOTLE: *Ethics*, BK VIII, CH 9 411d-412c / *Politics*, BK II, CH 1 [1260b36-1261a7] 455b,d; CH 5 458a-460a; CH 7 461d-463c; CH 10 [1272a12-20] 468b-c; BK III, CH 10 [1281a13-23] 478d-479a; BK V, CH 8 [1309a15-17] 511b; BK VII, CH 10 [1329b37-1330a33] 534b-d / *Athenian Constitution*, CH 11, par 2 557a-b; CH 12, par 3 557c-d
14 PLUTARCH: *Lycurgus*, 36a-37b / *Numa Pompilius*, 58a-d / *Agis* 648b,d-656d / *Cleomenes*, 657a-663c / *Tiberius Gracchus*, 674c-681a,c
15 TACITUS: *Annals*, BK XIII, 140b-c / *Histories*, BK IV, 286c-287a
19 AQUINAS: *Summa Theologica*, PART I, Q 98, A 1, REP 3 516d-517c
20 AQUINAS: *Summa Theologica*, PART I-II, Q 94, A 5, REP 3 224d-225d
23 HOBBES: *Leviathan*, PART I, 94d
26 SHAKESPEARE: *2nd Henry VI*, ACT IV, SC II [68-82] 58c
31 SPINOZA: *Ethics*, PART IV, APPENDIX, XVII 448d
35 LOCKE: *Civil Government*, CH V, SECT 24-29 30b-31c; SECT 34 32b-c
38 MONTESQUIEU: *Spirit of Laws*, BK IV, 16a-17b
40 GIBBON: *Decline and Fall*, 197b-c
44 BOSWELL: *Johnson*, 222d-223a
46 HEGEL: *Philosophy of Right*, PART I, par 46 23d-24a; par 64-65 28c-29a; PART III, par 170-171 60d-61a; ADDITIONS, 27 121b / *Philosophy of History*, PART I, 226d-227b; 240d-241a
50 MARX: *Capital*, 34d-35a; 163a-d; 174d-175c; 377c-378d
50 MARX-ENGELS: *Communist Manifesto*, 425d-426a

8b. The division of common goods into private property: factors influencing the increase and decrease of private property

OLD TESTAMENT: *Numbers*, 26:52-56; 33:50-54
6 HERODOTUS: *History*, BK II, 70b-c; BK III, 101d-102a
9 ARISTOTLE: *Politics*, BK II, CH 5 [1263b5-8] 458c; BK VI, CH 5 [1320a29-b7] 523d-524a
15 TACITUS: *Annals*, BK II, 31a-b
19 AQUINAS: *Summa Theologica*, PART I, Q 98, A 1, REP 3 516d-517c
20 AQUINAS: *Summa Theologica*, PART I-II, Q 94, A 5, REP 3 224d-225d
23 HOBBES: *Leviathan*, PART II, 124d-125b
35 LOCKE: *Civil Government*, CH V 30b-36a
38 MONTESQUIEU: *Spirit of Laws*, BK V, 19d-21d; BK XVIII, 127c
38 ROUSSEAU: *Inequality*, 348b,d; 352a / *Social Contract*, BK I, 393d-394d
39 SMITH: *Wealth of Nations*, BK I, 20b-21c; 27b-28a; BK IV, 239c-d; BK V, 309a-c; 311b-c
41 GIBBON: *Decline and Fall*, 87a
42 KANT: *Science of Right*, 414c-415c; 422b,d-425b; 426b-428a; 431a-432a
46 HEGEL: *Philosophy of Right*, PART I, par 46 23d-24a; par 64-65 28c-29a; PART III, par 178 62a-b; par 237 76c; ADDITIONS, 27 121b
50 MARX: *Capital*, 288b-d; 358a-361d; 368c-369a; 377c-378d; 383d

8c. The causes of poverty: competition, incompetence, indigence, expropriation, unemployment; the poverty of the proletariat as dispossessed of the instruments of production

14 PLUTARCH: *Lycurgus*, 36a-37b / *Lycurgus-Numa*, 62b-c / *Lucullus*, 409b-d
15 TACITUS: *Histories*, BK I, 194d-195a
36 SWIFT: *Gulliver*, PART IV, 154b-155b
38 MONTESQUIEU: *Spirit of Laws*, BK XX, 147a; XXIII, 190a-b; 191b-c; 199b-200a,c

(*8. The distribution of wealth: the problem of poverty. 8c. The causes of poverty: competition, incompetence, indigence, expropriation, unemployment; the poverty of the proletariat as dispossessed of the instruments of production.*)

38 ROUSSEAU: *Inequality*, 365c-366a / *Political Economy*, 375b-d / *Social Contract*, BK III, 415b-d
39 SMITH: *Wealth of Nations*, BK I, 27b-37b esp 28a-d, 30b-31b; BK IV, 239c-240a
40 GIBBON: *Decline and Fall*, 501c-d
44 BOSWELL: *Johnson*, 428b
46 HEGEL: *Philosophy of Right*, PART III, par 195 66d-67a; par 240-241 76d-77a; par 243-244 77b-c; ADDITIONS, 148-149 140c-141a
50 MARX: *Capital*, 150b-c; 160d-162d; 209c-225d esp 211a-d; 280c-286a esp 282b-c, 283b-d, 285c-286a; 288b-d; 303b-305a; 307a-c; 315c-321b esp 319c-d; 325d-327b; 349a-350a; 354a-355d; 357a-358a; 360a-361c; 364a-c; 370a-371c; 375a-b
50 MARX-ENGELS: *Communist Manifesto*, 424d-425a; 426c-d

8*d*. Laws concerning poverty: the poor laws, the dole

OLD TESTAMENT: *Exodus*, 23:11 / *Leviticus*, 19:9-10; 23:22; 25:25,35 54 / *Deuteronomy*, 15:7-11; 24:17 22; 26:12-13
5 ARISTOPHANES: *Ecclesiazusae* [408-426] 619b-c
7 PLATO: *Republic*, BK IV, 342a-344a / *Laws*, BK V, 695a-c; BK XI, 783b
9 ARISTOTLE: *Politics*, BK VI, CH 5 [1320^{a}29-^{b}15] 523d-524b
14 PLUTARCH: *Solon*, 68d-70c / *Poplicola-Solon*, 87a / *Pericles*, 127a-128a / *Lucullus*, 409b-d / *Caesar*, 581c-d
15 TACITUS: *Annals*, BK II, 32b-d
23 HOBBES: *Leviathan*, PART II, 142b-c; 157a
31 SPINOZA: *Ethics*, PART IV, APPENDIX, XVII 448d
38 MONTESQUIEU: *Spirit of Laws*, BK XXIII, 199b-200a,c
38 ROUSSEAU: *Political Economy*, 375b-d
39 SMITH: *Wealth of Nations*, BK I, 59a-61b; BK IV, 200c 201a
40 GIBBON: *Decline and Fall*, 175c-d; 501d-502b
42 KANT: *Science of Right*, 443b-444a
43 MILL: *Liberty*, 322a-d esp 322c-d / *Representative Government*, 383d-384a
44 BOSWELL: *Johnson*, 442d-443a
46 HEGEL: *Philosophy of Right*, PART III, par 245 77c-d
50 MARX: *Capital*, 211d [fn 3]; 358a-b esp 358b-d [fn 5]; 364a-366a

9. Political economy: the nature of the science of economics

9 ARISTOTLE: *Ethics*, BK I, CH 1-2 339a-d passim, esp CH 1 [1094^{a}7-9] 339a / *Politics*, BK I, CH 8 [1256^{b}27-39] 450c-d; CH 10 [1258^{a}19-38] 452b-c
38 ROUSSEAU: *Political Economy* 367a-385a,c
39 SMITH: *Wealth of Nations*, INTRO, 1d-2a,c; BK IV, 182a
44 BOSWELL: *Johnson*, 281b-c
46 HEGEL: *Philosophy of Right*, PART III, par 189 65d-66a; ADDITIONS, 120 136b-c
50 MARX: *Capital*, 6a-d; 8a-11d passim; 33a-37c esp 36a-b [fn 1]; 178d-179c; 305a-c [fn 2]

9*a*. Wealth as an element in the political common good

5 EURIPIDES: *Phoenician Maidens* [528-558] 382c-d
5 ARISTOPHANES: *Plutus* 629a-642d esp [415-618] 633d-636d
6 HERODOTUS: *History*, BK IX, 314a,c
6 THUCYDIDES: *Peloponnesian War*, BK I, 352a-b; BK II, 396d; 397b-c; BK VIII, 569d
7 PLATO: *Republic*, BK III-IV, 341c-344a; BK V, 364c-365d; BK VIII, 405c-408a / *Critias*, 485b-c / *Laws*, BK III, 665b; BK V, 687d-688a; 694a-695c; BK VIII, 733b-d
9 ARISTOTLE: *Politics*, BK I, CH 10 [1258^{a}19-38] 452b-c; BK II, CH 7 [1267^{a}18-36] 462d-463a; CH 9 [1269^{b}13-1270^{b}6] 465d-466c; [1271^{b}1-17] 467d; BK III, CH 12 [1283^{a}12-20] 481a-b; BK VII, CH 2 [1324^{a}8-10] 528a; CH 4 [1325^{b}33-1326^{a}4] 530a; CH 5-6 530d-531d; CH 8 532c-533a / *Rhetoric*, BK I, CH 4 [1359^{b}19-29] 599d-600a
14 PLUTARCH: *Lycurgus*, 36a-37b; 47d / *Lycurgus-Numa*, 62b-c / *Coriolanus*, 180b-d / *Aristides-Marcus Cato*, 291b-292b / *Lysander*, 361a-d / *Agis*, 649b-c
15 TACITUS: *Annals*, BK II, 31a-b; BK III, 57b-58d; BK XIII, 140b-c / *Histories*, BK II, 232d-233a
23 MACHIAVELLI: *Prince*, CH XXI, 32d-33a
23 HOBBES: *Leviathan*, INTRO, 47a-b; PART II, 124b-127a
38 MONTESQUIEU: *Spirit of Laws*, BK V, 19a-21d; 23a-25c; BK VII, 44a-48a; BK XIII, 96c; BK XX, 146b-147d; BK XXI, 153c-d; 154b
38 ROUSSEAU: *Inequality*, 325d; 327c-328a; 352a-355a passim; 365c-366b / *Political Economy*, 375b-d; 377b-385a,c passim / *Social Contract*, BK III, 415b-417a; 421c-d
39 SMITH: *Wealth of Nations*, BK I, 27b-31b; 33c-35c
40 GIBBON: *Decline and Fall*, 89c-d; 456d-457a,c; 498a-501d; 642a-b; 655d-656a
42 KANT: *Science of Right*, 443b-d
43 FEDERALIST: NUMBER 21, 79b-80a
44 BOSWELL: *Johnson*, 124d-125c; 172b-173a; 210d-211b; 281b
46 HEGEL: *Philosophy of Right*, ADDITIONS, 143 139d-140a / *Philosophy of History*, INTRO, 193b-c; PART II, 263b-d
49 DARWIN: *Descent of Man*, 324a-d
50 MARX: *Capital*, 292d; 320b-321b; 374a-c
51 TOLSTOY: *War and Peace*, BK XIII, 572d-573b

9b. Factors determining the prosperity or opulence of states: fluctuations in national prosperity

6 THUCYDIDES: *Peloponnesian War*, BK I, 352c-d
7 PLATO: *Republic*, BK II, 316c-317a / *Laws*, BK IV, 677a-c
9 ARISTOTLE: *Politics*, BK VII, CH 6 531b-d
23 HOBBES: *Leviathan*, PART II, 154b-c
36 STERNE: *Tristram Shandy*, 253a-b
38 MONTESQUIEU: *Spirit of Laws*, BK VII, 44a-47c; BK XIII, 96b-d; BK XVIII, 125d; 127a-b; 132a-b; BK XX, 152a-d; BK XXI, 154b-c; BK XXII, 174c-d; 183b-c; BK XXIII, 191a-c
38 ROUSSEAU: *Inequality*, 352a-353a; 360b-361a; 365c-366a / *Political Economy*, 375b-d; 383b-c / *Social Contract*, BK II, 404a-c; BK III, 415b-417a
39 SMITH: *Wealth of Nations*, BK I-IV 3a-300d esp BK I, 3a-10b, BK II, 142d-151c, 155b-162d, BK IV, 182b-192c, 279b-300d
40 GIBBON: *Decline and Fall*, 21c-22c; 236c-237a; 239b-d; 456d-457a; 501b-d; 642a-c; 655d-658d
41 GIBBON: *Decline and Fall*, 221b-222d; 314c-315d esp 315b-d; 355c-d; 427c-d; 558c-d; 597c-598a
43 FEDERALIST: NUMBER 2, 31c-d; NUMBER 5, 38a; NUMBER 11-12, 53b-56d passim; NUMBER 21, 79c-d
43 MILL: *Representative Government*, 335a-b
44 BOSWELL: *Johnson*, 171a-b
46 HEGEL: *Philosophy of Right*, PART III, par 243-247 77b-78b / *Philosophy of History*, PART I, 243d-244c; PART II, 263b-d; PART III, 299a-c
50 MARX: *Capital*, 31a-37c passim; 111a; 178c-179a; 218c-219a; 253b-254b; 377c-378a
50 MARX-ENGELS: *Communist Manifesto*, 421b-c

9c. Diverse economic programs for securing the wealth of nations: the physiocratic, the mercantilist, and the laissez-faire systems

38 ROUSSEAU: *Inequality*, 365c-366a / *Political Economy*, 377b-385a,c
39 SMITH: *Wealth of Nations*, BK I, 104b-105a; BK IV 182a-300d esp 182b-192c, 279b-300d
40 GIBBON: *Decline and Fall*, 41c; 66b-c; 642b
41 GIBBON: *Decline and Fall*, 87b
43 FEDERALIST: NUMBER 11, 55c-d
43 MILL: *Liberty*, 312c-313a
44 BOSWELL: *Johnson*, 280d-281a
50 MARX: *Capital*, 251c-252a
50 MARX-ENGELS: *Communist Manifesto*, 426b-c

9d. Governmental regulation of production, trade, or other aspects of economic life

7 PLATO: *Republic*, BK IV, 342d-343a; BK VIII, 408b-d / *Laws*, BK VIII, 742a-d; BK XI, 771b-775d
14 PLUTARCH: *Lycurgus*, 36a-37b / *Lycurgus-Numa*, 61b,d-62c / *Pericles*, 127a-128a
15 TACITUS: *Annals*, BK VI, 90a-c
23 HOBBES: *Leviathan*, PART II, 119d-120b; 125d-126a
38 MONTESQUIEU: *Spirit of Laws*, BK XX, 148c-d; 149c-150a; 152a-d; BK XXII, 176a-177a; 183a
38 ROUSSEAU: *Social Contract*, BK II, 405b-c
39 SMITH: *Wealth of Nations*, BK I, 51a-62a; BK II, 161a; BK III, 170b-c; BK IV 182a-300d; BK V, 315a-331d passim
40 GIBBON: *Decline and Fall*, 66b-c; 198a; 249d-250b; 392c-393a; 486c-d; 656c-658b esp 657d
41 GIBBON: *Decline and Fall*, 87b-91a
43 ARTICLES OF CONFEDERATION: IV [24-36] 5b-c; IX [173-185] 7a; [275-285] 8a
43 CONSTITUTION OF THE U.S.: ARTICLE I, SECT 8 [201-203] 13b; SECT 9 [276-282] 13d; SECT 10 [304-313] 14a
43 FEDERALIST: NUMBER 22, 80d-81c; NUMBER 42, 137b-138c; NUMBER 44, 145b-c; NUMBER 45, 149d-150a
43 MILL: *Liberty*, 312c-313a; 319d-320a
46 HEGEL: *Philosophy of Right*, PART III, par 235-236 76a-c; par 240-242 76d-77b; par 248 78b-c; ADDITIONS, 145 140b; 148 140c-d; 150 141a-b
50 MARX: *Capital*, 79d-80b [fn 4]; 108c-111a passim; 115c-122c; 127c-146c esp 146a-c; 174a-c; 193a-194b; 200a; 209a-d [fn 1-3]; 233c-235a; 236c-248d esp 236c-237d, 248c-d; 277d-278a,c; 357a-358a; 366c-368b; 374a-375c
50 MARX-ENGELS: *Communist Manifesto*, 426c

9e. The economic support of government and the services of government

9e(1) The charges of government: the cost of maintaining its services; elements in the national budget

5 ARISTOPHANES: *Knights* [773-835] 479b-480b / *Wasps* [653-724] 515c-516d
9 ARISTOTLE: *Politics*, BK I, CH 11 [1259^{a}33-36] 453d; BK II, CH 9 [1271^{b}10-17] 467d; BK VI, CH 5 [1320^{a}17-^{b}16] 523d-524b; BK VII, CH 8 [1328^{b}11-12] 532d / *Rhetoric*, BK I, CH 4 [1359^{b}23-33] 600a
14 PLUTARCH: *Cato the Younger*, 625b-626d
15 TACITUS: *Histories*, BK IV, 268c-d
35 LOCKE: *Civil Government*, CH XI, SECT 140 58a
38 MONTESQUIEU: *Spirit of Laws*, BK XIII, 96a-b
38 ROUSSEAU: *Political Economy*, 377b-380d / *Social Contract*, BK III, 415b-417a
39 SMITH: *Wealth of Nations*, BK IV, 182b-192c passim; BK V, 301a-357c; 401d-403b
40 GIBBON: *Decline and Fall*, 41b-c; 65a-b; 155d-156a; 249d-250a; 368a-b
41 GIBBON: *Decline and Fall*, 177a-b; 315b-317a
42 KANT: *Science of Right*, 441d-444c; 451d-452a
43 ARTICLES OF CONFEDERATION: VIII 6d-7a; XII 9b

(9e. The economic support of government and the services of government. 9e(1) The charges of government: the cost of maintaining its services; elements in the national budget.)

43 CONSTITUTION OF THE U.S.: ARTICLE I, SECT 6 [132-135] 12c; [143-148] 12c-d; SECT 8 [226-229] 13b-c; [235-253] 13c passim; SECT 9 [283-288] 13d-14a; ARTICLE II, SECT 1 [394-400] 15a; ARTICLE III, SECT 1 [463-468] 15c; ARTICLE VI [578-582] 16d; AMENDMENTS, XIV, SECT 4 19a

43 FEDERALIST: NUMBER 13 59a-60a; NUMBER 30-31 101a-107b esp NUMBER 30, 101a-b; NUMBER 34 109b-111d; NUMBER 43, 142d-143a; NUMBER 73, 218d-219b; NUMBER 79, 233c-234a; NUMBER 84, 254c-256a

44 BOSWELL: *Johnson*, 281d-282a

46 HEGEL: *Philosophy of History*, PART IV, 365c-d

9e(2) Methods of defraying the expenses of government: taxation and other forms of levy or impost; confiscations, seizures, and other abuses of taxation

OLD TESTAMENT: *Genesis*, 41:33-36

APOCRYPHA: *I Maccabees*, 10:25-31—*(D)* OT, *I Machabees*, 10:25-31

5 ARISTOPHANES: *Wasps* [653-724] 515c-516d / *Birds* [27-48] 542c-d

6 HERODOTUS: *History*, BK I, 43c; BK III, 109d-111b; 114b-c

6 THUCYDIDES: *Peloponnesian War*, BK I, 373b-c; BK III, 420d-421b

7 PLATO: *Laws*, BK XII, 791d

9 ARISTOTLE: *Politics*, BK I, CH 11 [1259^{a}23-36 453c-d; BK VI, CH 5 [1320^{a}20-22] 523d / *Athenian Constitution*, CH 47-48 574b-575b

14 PLUTARCH: *Aristides*, 274c-d / *Marcus Cato*, 285c-d / *Lucullus*, 409b-d

15 TACITUS: *Annals*, BK IV, 82d-83a; BK XIII, 139a-c / *Histories*, BK I, 194d-195a; BK II, 236d-237a

23 MACHIAVELLI: *Prince*, CH XVI, 22d-23b

23 HOBBES: *Leviathan*, PART I, 78c-d; PART II, 104b-d; 152a-b; 156c-157a

27 SHAKESPEARE: *Cymbeline*, ACT III, SC I 463c-464c / *Henry VIII*, ACT I, SC II [18-101] 552d-553d

35 LOCKE: *Civil Government*, CH XI, SECT 140 58a

36 SWIFT: *Gulliver*, PART I, 11b-12a; 29b-31a; PART II, 75a-b; PART III, 113b-114a

38 MONTESQUIEU: *Spirit of Laws*, BK V, 23c-24b; BK XIII 96a-102a,c; BK XIX, 143b-c; BK XX, 149d-150a; BK XXII, 183b-184b

38 ROUSSEAU: *Political Economy*, 377b-385a,c / *Social Contract*, BK III, 415b-417a

39 SMITH: *Wealth of Nations*, BK IV, 192c-288c esp 192c-233d, 279b-288c; BK V, 311c-313a; 315a-319d; 356d-421d esp 361b,d-401d

40 GIBBON: *Decline and Fall*, 41b-c; 64d-68a; 86a; 162c; 251d-255c; 368a-b; 413a; 577d-578c; 658c-660c esp 659c-660c

41 GIBBON: *Decline and Fall*, 177a-b; 417b-c

42 KANT: *Science of Right*, 441d-444c

43 DECLARATION OF INDEPENDENCE: [63-70] 2b

43 ARTICLES OF CONFEDERATION: IV [24-36] 5b-c; VI [100-106] 6b; VIII 6d-7a; IX [286-290] 8a; [299-318] 8b; [350-367] 8c-d passim

43 CONSTITUTION OF THE U.S.: ARTICLE I, SECT 2 [17-40] 11b-d; SECT 7 [152-155] 12d; SECT 8 [192-200] 13a; SECT 9 13d-14a passim; SECT 10 [296-313] 14a; AMENDMENTS, V 17b-c; XVI 19b

43 FEDERALIST: NUMBER 7, 43c-44a; NUMBER 12, 56d-58d; NUMBER 21, 79b-80c; NUMBER 30-36 101a-117d; NUMBER 41, 135b-c; NUMBER 44, 145b-c; NUMBER 45, 149b-150b; NUMBER 83, 246b-c; NUMBER 84, 253b [fn 1]

43 MILL: *Liberty*, 315c-d / *Representative Government*, 335a-b; 356c-d; 366d-367a; 383b-d / *Utilitarianism*, 473a-c

46 HEGEL: *Philosophy of Right*, PART III, par 299 99c-100b; ADDITIONS, 177 147d / *Philosophy of History*, PART I, 226d-227b; 243b; PART III, 299a-c; 310c; PART IV, 324b; 325b-c; 335a-336c; 364d

50 MARX: *Capital*, 65c-66a; 375a-b

50 MARX-ENGELS: *Communist Manifesto*, 429a

51 TOLSTOY: *War and Peace*, BK IX, 384c-388a,c

9f. Wealth or property in relation to different forms of government

6 THUCYDIDES: *Peloponnesian War*, BK I, 350d-351a; 352c-d; BK VIII, 575d-576b; 579c-590c

7 PLATO: *Republic*, BK II, 316c-319a; BK VIII 401d-416a / *Laws*, BK V, 695a-c

9 ARISTOTLE: *Ethics*, BK V, CH 3 [1131^{a}24-29] 378d; BK VIII, CH 10 [1160^{b}11-16] 412d; [1160^{b}33-1161^{a}2] 413a-b / *Politics*, BK II, CH 11 [1273^{a}3-^{b}7] 469c-470a; BK III, CH 7 476c-477a esp [1279^{b}4-10] 476d-477a; CH 8-10 477a-479a passim; CH 11 [1282^{a}24-41] 480a-b; CH 13 [1283^{a}23-1284^{a}2] 481b-482a; CH 15 [1286^{b}8-22] 484d-485a; BK IV, CH 3 [1289^{b}28-1290^{a}13] 488d-489a; CH 4 [1290^{a}30-^{b}20] 489b-d; [1291^{b}7-13] 490d; CH 6 [1293^{a}12-34] 492d-493a; CH 9 [1294^{b}19-30] 494c-d; BK V, CH 1 502a-503b; CH 8 [1308^{b}10-1309^{a}30] 510d-511c; CH 12 [1316^{b}15-22] 519c-d; BK VI, CH 3-6 521c-524c / *Athenian Constitution*, CH 2-5 553a-555a; CH 11-12 557a-558a / *Rhetoric*, BK I, CH 8 [1366^{a}3-6] 608b

14 PLUTARCH: *Lycurgus*, 36a-37b; 47a-48a / *Solon*, 68d-71c / *Poplicola-Solon*, 87a / *Pericles*, 125b-130d / *Coriolanus*, 180b-d / *Lysander*, 361a-d / *Lucullus*, 400d-401a / *Agis*, 649c-650d

20 AQUINAS: *Summa Theologica*, PART I-II, Q 95, A 4, ANS 229b-230c; Q 105, A 2, ANS and REP 1-6 309d-316a

23 HOBBES: *Leviathan*, PART II, 124d-125c; 150a; 154b-c

35 LOCKE: *Civil Government*, CH VII, SECT 85 43c-d; SECT 90-94 44d-46c passim; CH XI, SECT 138 57b-c; CH XV, SECT 173-174 65c-d

38 MONTESQUIEU: *Spirit of Laws*, BK I, 3c-d; BK III, 10a; BK IV, 16d-17b; 17d-18a; BK V, 19a-

21d; 23a-25c; 27d-28a; 29b-30a; 32b-c; BK VII, 44d-46c; 50a-b; BK XIII 96a-102a,c; BK XVIII, 125a-c; 126b-d; BK XX, 147a-d; 149a-c; BK XXII, 174c-d

38 ROUSSEAU: *Inequality*, 359a-d / *Social Contract*, BK III, 411a-b; 412b-c; 415b-417a

39 SMITH: *Wealth of Nations*, BK IV, 243b,d-255a,c; BK V, 356b,d; 401d-403a

40 GIBBON: *Decline and Fall*, 90d-91a; 144b; 413a; 619b-c

41 GIBBON: *Decline and Fall*, 73b; 403c-d; 404c-d; 427c-428a

42 KANT: *Science of Right*, 413d; 441d-443b esp 441d-442c

43 FEDERALIST: NUMBER 85, 256b-c

43 MILL: *Liberty*, 309a-c / *Representative Government*, 369b-370a; 384a-386c passim, esp 385a-b; 393c-394d

44 BOSWELL: *Johnson*, 182c-d

46 HEGEL: *Philosophy of History*, INTRO, 193b-c; PART I, 226d-227b; PART IV, 335a-336c; 364d

48 MELVILLE: *Moby Dick*, 295a-297a

9g. Wealth and poverty in relation to crime and to war between states

5 ARISTOPHANES: *Peace* [601-648] 532d-533c; [1191-1264] 540a-d / *Lysistrata* [486-492] 589a

6 HERODOTUS: *History*, BK I, 4b-c; 5a-b; 16b-c; 21b; BK II, 73b 74d; 79a-c; 87a-b; BK III, 115c-116a; BK IV, 146a-b; BK V, 160d-161a; 169a-c; BK VI, 194a; 211a-b; BK VII, 214d-216b; BK VIII, 280b-d; BK IX, 288b; 297b-d; 305d-306a; 314a,c

6 THUCYDIDES: *Peloponnesian War*, BK I, 349b-d; 350d; 352a-b; 369b-370a; 378c-d; 384d-386b; BK II, 390c-391c; 402d-404a; BK III, 419d-420b; 420d-421b; BK IV, 461d-462a; BK V, 482d-483a; BK VII, 545b-546c

7 PLATO: *Republic*, BK II, 318c-319a; BK IV, 342d-344a; BK VIII, 406c-407a / *Laws*, BK XI, 771b-772b / *Seventh Letter*, 814b-c

9 ARISTOTLE: *Politics*, BK II, CH 6 [1265^{b}10-12] 461a; CH 7 [1267^{a}2-8] 462c-d; CH 9 [1270^{a}15-^{b}3] 466b-c; [1271^{b}10-17] 467d; BK V, CH 7 [1306^{b}32-1307^{a}3] 508d-509a

14 PLUTARCH: *Lycurgus*, 36a-c; 47d / *Sulla*, 374d-375b / *Cleomenes*, 667a-c / *Marcus Brutus*, 817d-818a

15 TACITUS: *Annals*, BK VI, 89c / *Histories*, BK I, 195d; 201a-b; BK II, 223b-c

21 DANTE: *Divine Comedy*, HELL, VI [58-75] 9a

23 HOBBES: *Leviathan*, PART I, 76d; PART II, 140c-d; 142b-c; 157a

26 SHAKESPEARE: *Henry V*, ACT V, SC II [23-76] 563c-564a

30 BACON: *New Atlantis*, 204d-205a

35 LOCKE: *Civil Government*, CH XVI, SECT 180-184 67b-68d

36 STERNE: *Tristram Shandy*, 225a

37 FIELDING: *Tom Jones*, 271c-273a,c

38 MONTESQUIEU: *Spirit of Laws*, BK XII, 86c-d; BK XIII, 100d-101a; BK XVIII, 125d; BK XX, 152a-b

38 ROUSSEAU: *Inequality*, 353c-354b; 365d-366b / *Social Contract*, BK I, 389d-390a; BK II, 404c

39 SMITH: *Wealth of Nations*, BK IV, 187c-190b; BK V, 301a-309a,c; 403a-b; 408a-411b

40 GIBBON: *Decline and Fall*, 35a; 175c

41 GIBBON: *Decline and Fall*, 87b; 343b; 593a-c

43 FEDERALIST: NUMBER 4, 35b-d; NUMBER 5, 38b-c; NUMBER 6, 40a-41a; NUMBER 7 41d-44c; NUMBER 8, 45b-46a; NUMBER 28, 98b; NUMBER 30, 102d-103a

46 HEGEL: *Philosophy of Right*, ADDITIONS, 124 137a; 148-149 140c-141a

47 GOETHE: *Faust*, PART II [II,151-287] 271b-274b

49 DARWIN: *Descent of Man*, 325d-326a

51 TOLSTOY: *War and Peace*, BK X, 424b-c; 440d-441a; BK XI, 475b-476c; 490a-b; 500d-502a; BK XIII, 572d-573b; BK XV, 634a-635a

9h. The struggle of economic classes for political power

5 EURIPIDES: *Suppliants* [229-245] 260b-c

6 HERODOTUS: *History*, BK VI, 202c-203b; BK VII, 243b-c

6 THUCYDIDES: *Peloponnesian War*, BK III, 423a-b; 427d-428a; 428c-d; 434c-438c passim; BK IV, 459a-c; 463a-465c; BK V, 482d-483a; 502d-504b; BK VI, 520b-c; BK VIII 564a-593a,c passim

7 PLATO: *Republic*, BK IV, 342d-344a; BK VIII, 405c-406b esp 406b

9 ARISTOTLE: *Politics*, BK III, CH 10 [1281^{a}11-29] 478d-479a; CH 15 [1286^{b}8-22] 484d-485a; BK IV, CH 3 [1289^{b}28-1290^{a}13] 488d-489a; CH 4 [1291^{b}7-13] 490d; CH 6 [1293^{a}12-34] 492d-493a; BK V, CH 1 502a-503b passim; CH 3 [1303^{b}4-8] 505a; [1303^{b}15-18] 505a-b; CH 4 [1304^{a}40-^{b}6] 506a; CH 5-6 506b-508c; CH 7 [1306^{b}32-1307^{a}3] 508d-509a; CH 9 [1310^{a}22-25] 512c; BK VI, CH 3 521c-522a / *Athenian Constitution*, CH 2-5 553a-555a; CH 11-12 557a-558a

14 PLUTARCH: *Solon*, 68d-71c; 75c-76d / *Camillus*, 117c-121a,c / *Coriolanus*, 176b-184c / *Agis* 648b,d-656d / *Cleomenes*, 657a-663c / *Tiberius Gracchus* 671b,d-681a,c / *Caius Gracchus* 681b,d-689a,c / *Caius and Tiberius Gracchus-Agis and Cleomenes* 689b,d-691a,c / *Cicero*, 708a-713b

15 TACITUS: *Annals*, BK VI, 97b

26 SHAKESPEARE: *2nd Henry VI*, ACT IV 56a-64d

27 SHAKESPEARE: *Coriolanus* 351a-392a,c esp ACT I, SC I [1-167] 351a-353a

38 MONTESQUIEU: *Spirit of Laws*, BK XI, 77b-80a

38 ROUSSEAU: *Inequality*, 352a-356a passim, esp 355a-356a

39 SMITH: *Wealth of Nations*, BK I, 109d-110d; BK V, 309a-311c

40 GIBBON: *Decline and Fall*, 144a-d

43 FEDERALIST: NUMBER 10, 50b-51b

43 MILL: *Representative Government*, 345c-346a; 366c-367b; 369b-370a; 393c-394d; 398a-d

44 BOSWELL: *Johnson*, 251a; 255d

(9. Political economy: the nature of the science of economics. 9b. The struggle of economic classes for political power.)

46 HEGEL: *Philosophy of Right*, ADDITIONS, 149 140d-141a / *Philosophy of History*, INTRO, 193b-c; PART II, 263b-d; 275b-276a; PART III, 295d-297a

50 MARX: *Capital*, 6d-7d esp 7b-d; 8a-9c; 63b-c; 113c; 134c-146c esp 145a

50 MARX-ENGELS: *Communist Manifesto* 415a-434d esp 415b-c, 416c-d, 420b-c, 423b-425c, 429b-c, 434c-d

52 DOSTOEVSKY: *Brothers Karamazov*, BK VI, 165b-166a

54 FREUD: *New Introductory Lectures*, 882b-884d

10. The moral aspects of wealth and poverty

10*a*. The nature of wealth as a good: its place in the order of goods and its relation to happiness

OLD TESTAMENT: *I Kings*, 3:6-14—*(D) III Kings*, 3:6-14 / *II Chronicles*, 1:7-12—*(D) II Paralipomenon*, 1:7-12 / *Job*, 21:7-13; 31:24-28; 36:18-19 / *Psalms*, 49; 52:7—*(D) Psalms*, 48; 51:9 / *Proverbs*, 1:19; 8:10-11; 10:2; 11:4,28; 13:7; 14:20; 15:16-17; 16:8; 17:1; 19:4,6-7; 22:1; 23:4-5; 27:24; 28:6,11,20,22 / *Ecclesiastes*, 2:3-11; 4:6-8; 5:9-6:2 esp 5:13-15, 5:19-20, 6:2; 7:12; 10:19—*(D) Ecclesiastes*, 2:3-11; 4:6-8; 5:8-6:2 esp 5:12-14, 5:18-19, 6:2; 7:13; 10:19 / *Jeremiah*, 9:23-24—*(D) Jeremias*, 9:23-24 / *Ezekiel*, 7:19—*(D) Ezechiel*, 7:19 / *Zephaniah*, 1:18—*(D) Sophonias*, 1:18

APOCRYPHA: *Tobit*, 4:21—*(D)* OT, *Tobias*, 4:23 / *Wisdom of Solomon*, 5:8-12; 7:7-11—*(D)* OT, *Book of Wisdom*, 5:8-12; 7:7-11 / *Ecclesiasticus*, 7:18-19; 8:2; 10:30-31; 11:18-27; 12:8; 13 esp 13:1-7, 13:19-24; 20:30; 29:22-23; 30:14-16; 31:1-11; 40:25-26—*(D)* OT, *Ecclesiasticus*, 7:20-21; 8:2-3; 10:33-34; 11:18-29; 12:8; 13 esp 13:1-8, 13:23-30; 20:32; 29:28-29; 30:14-16; 31:1-11; 40:25-27 / *Baruch*, 3:16-19—*(D)* OT, *Baruch*, 3:16-19

NEW TESTAMENT: *Matthew*, 6:19-34; 13:18-23; 19:16-30 / *Mark*, 4:1-20 esp 4:19; 10:17-31 / *Luke*, 6:20-26; 8:5-15 esp 8:14; 12:13-34; 16:19-25; 18:18-30 / *I Timothy*, 6:6-12,17-19 / *James*, 5:1-6

5 AESCHYLUS: *Persians* [161-169] 17a

5 EURIPIDES: *Electra* [361-400] 330b-d; [420-431] 331a; [938-944] 335c / *Hecuba* [1206-1232] 363b / *Phoenician Maidens* [383-442] 381a-d; [528-567] 382c-d / *Cyclops* [316-346] 443b

5 ARISTOPHANES: *Birds* [592-605] 550a-b / *Plutus* [76-197] 630a-631b; [415-618] 633d-636d

6 HERODOTUS: *History*, BK I, 6c-8a; BK III, 121b-c; BK V, 169d-170a; BK VIII, 264c

6 THUCYDIDES: *Peloponnesian War*, BK I, 350d-351a

7 PLATO: *Euthydemus*, 74b-c / *Meno*, 177d-178d / *Apology*, 206b-c / *Gorgias*, 254d-255b / *Republic*, BK I, 296c-297b; BK III, 325b-c; BK III-IV, 341c-343b / *Critias*, 479d; 485b-c / *Laws*, BK IX, 751c

8 ARISTOTLE: *Topics*, BK III, CH 1 [116^{a}1-7] 162a; [116^{b}22-117^{a}4] 163b-c; CH 3 [118^{b}1-9] 165b-c / *Sophistical Refutations*, CH 25 [180^{b}7-11] 248d

9 ARISTOTLE: *Ethics*, BK I, CH 1-2 339a-d passim; CH 3 [1094^{b}17-19] 339d; CH 4 [1095^{a}14-29] 340b-c; CH 5 [1096^{a}5-10] 341a-b; CH 7 [1097^{a}15-^{b}8] 342c-d passim, esp [1097^{a}25-28] 342c; CH 8 [1099^{a}31-^{b}8] 344d-345a; BK IV, CH 3 [1124^{a}13-^{b}6] 371a-b; CH 7 [1127^{b}9-22] 374d-375a; BK V, CH 2 [1130^{a}13-^{b}17] 377c-378a; BK X, CH 3 [1173^{b}25-27] 428a / *Politics*, BK I, CH 9-10 450d-452d; BK III, CH 12 [1283^{a}12-20] 481a-b; BK VII, CH 1 [1323^{a}22]-CH 2 [1324^{a}10] 527a-528a; CH 8 532c-533a / *Rhetoric*, BK I, CH 1 [1355^{b}1-8] 594d; CH 5 [1360^{b}14-30] 601a-b; [1361^{a}12-24] 601c-d; CH 6 [1362^{b}10-28] 603b-c esp [1362^{b}18-19] 603c; BK II, CH 16 638b-c

12 LUCRETIUS: *Nature of Things*, BK II [1-54] 15a-d; BK V [1113-1135] 75c-d; BK VI [1-34] 80a-c

12 EPICTETUS: *Discourses*, BK II, CH 19 162c-164b; BK IV, CH 6 230b-232c

12 AURELIUS: *Meditations*, BK VIII, SECT 33 288a

14 PLUTARCH: *Lycurgus*, 36a-37b / *Pericles*, 130b-c / *Pelopidas*, 233a-b / *Marcus Cato*, 285c-d / *Aristides-Marcus Cato*, 291b-292b / *Lysander*, 361a-d

15 TACITUS: *Annals*, BK VI, 91c; BK XIV, 154a-c / *Histories*, BK II, 232d-233a

18 AUGUSTINE: *City of God*, BK I, CH 8-10 133a-136c

19 AQUINAS: *Summa Theologica*, PART I, Q 26, A 4, ANS and REP 2 151c-152a,c; PART I-II, Q 1, A 7, ANS 614c-615a; Q 2, A 1 615d-616c; A 5, REP 1 618d-619c; Q 4, A 7 635b-636a

21 DANTE: *Divine Comedy*, HELL, VII [1-96] 9c-10c; PURGATORY, XV [40-81] 75d-76a; XVII [127-139] 79d; XIX [70]-XXII [114] 82b-87c

22 CHAUCER: *Prologue of Man of Law's Tale* [4519-4546] 235b-236a / *Tale of Wife of Bath* [6691-6788] 274b-276a / *Tale of Melibeus*, par 49-53, 422a-425b; par 77, 430b-431a

23 MACHIAVELLI: *Prince*, CH XVII, 24b-c; CH XIX, 26a-b; CH XXV, 35c

23 HOBBES: *Leviathan*, PART I, 74d-75a; 90c; PART II, 155b-c

25 MONTAIGNE: *Essays*, 110a-c; 122a-124d; 126b-131a passim

26 SHAKESPEARE: *Romeo and Juliet*, ACT V, SC I [66-86] 315b / *King John*, ACT II, SC I [561-598] 385c-386a / *As You Like It*, ACT II, SC V [40-59] 606d

27 SHAKESPEARE: *Othello*, ACT I, SC III [339-380] 212c-d; ACT III, SC III [154-161] 223d / *Timon of Athens* 393a-420d esp ACT IV, SC II 410a-c, SC III [24-47] 410d-411a, [382-462] 415a-d /

Pericles, ACT I, SC IV 425c-426d / *Cymbeline*, ACT II, SC III [70–95] 460a-b; ACT III, SC VI [1–36] 470d-471b / *Sonnets*, CXLVI 608c

29 CERVANTES: *Don Quixote*, PART II, 222c; 338b-c

30 BACON: *Advancement of Learning*, 86b-c; 92a-b

35 LOCKE: *Human Understanding*, BK II, CH XXI, SECT 55–56 192c-193b

37 FIELDING: *Tom Jones*, 17c-d; 32a-d; 103c-104a; 263c-d; 283a-c

38 MONTESQUIEU: *Spirit of Laws*, BK V, 19a-d; BK XIII, 96c; BK XX, 146b-d; 150b-c

38 ROUSSEAU: *Inequality*, 360b-361a

40 GIBBON: *Decline and Fall*, 22c

41 GIBBON: *Decline and Fall*, 297c-298a

42 KANT: *Fund. Prin. Metaphysic of Morals*, 256a-b / *Practical Reason*, 330d-331a / *Pref. Metaphysical Elements of Ethics*, 370b-d

43 MILL: *Utilitarianism*, 462c-463b

44 BOSWELL: *Johnson*, 102d-103a; 124d-125c; 140b-141a; 189d-190b; 210d-211b; 300a-c; 349a-c; 403a; 491b; 492b-c; 493c; 498d-499a

47 GOETHE: *Faust*, PART I [2796–2804] 68a-b; PART II [5987–6171] 146b-151a

51 TOLSTOY: *War and Peace*, BK I, 30a-31a; 50b; BK III, 111a-113a; BK V, 194d; BK VI, 250a-251d; BK VIII, 311a-313a

52 DOSTOEVSKY: *Brothers Karamazov*, BK IV, 105c-107a; BK V, 110c-111c; 130d-132b; BK VI, 158b-159a; 164b-166a; BK VIII 191b,d-235d; BK XI, 308a-b

53 JAMES: *Psychology*, 188b-189b; 202b-203a; 725b-726a

54 FREUD: *Civilization and Its Discontents*, 777a-779a

10*b*. Natural limits to the acquisition of wealth by individuals: the distinction between necessities and luxuries

5 EURIPIDES: *Helen* [903–908] 306d-307a / *Electra* [420–431] 331a / *Phoenician Maidens* [528–567] 382c-d

7 PLATO: *Republic*, BK II, 316c-319a; BK VIII, 409d-410c / *Timaeus*, 442c-d / *Critias*, 479d

8 ARISTOTLE: *Topics*, BK III, CH 2 [118^{a}6–16] 164d-165a

9 ARISTOTLE: *Politics*, BK I, CH 8 [1256^{b}27–39] 450c-d; CH 9 [1257^{b}17–1258^{a}14] 451d-452b; BK VII, CH 5 [1326^{b}26–38] 530d-531a

12 EPICTETUS: *Discourses*, BK IV, CH 4 225a-228a; CH 9 237d-238d

14 PLUTARCH: *Lycurgus*, 36a-37b / *Marcus Cato*, 285c-d / *Aristides-Marcus Cato*, 291b-292b

15 TACITUS: *Annals*, BK II, 31a-b; BK III, 57b-58d

19 AQUINAS: *Summa Theologica*, PART I-II, Q 2, A 1, ANS and REP 3 615d-616c

20 AQUINAS: *Summa Theologica*, PART II-II, Q 32, AA 5–6 544a-546b

21 DANTE: *Divine Comedy*, HELL, XI [91–115] 16a-b; XVII [34–75] 24b-c

22 CHAUCER: *Tale of Melibeus*, par 49–51 422a-424a

25 MONTAIGNE: *Essays*, 110a-c; 131b-132a; 216d-218a; 489b-490c

27 SHAKESPEARE: *King Lear*, ACT II, SC IV [263–274] 261c; ACT III, SC IV [27–36] 264c

31 SPINOZA: *Ethics*, PART IV, APPENDIX, XXVIII–XXIX 450a

33 PASCAL: *Provincial Letters*, 91a-94a

35 LOCKE: *Civil Government*, CH V, SECT 30–39 31c-33c

38 MONTESQUIEU: *Spirit of Laws*, BK VII, 44a-d; BK XIII, 96a; BK XIX, 145b

38 ROUSSEAU: *Inequality*, 327c-328a; 337b; 350a-c; 352a-353c; 365c-366b / *Social Contract*, BK I, 393c-394b

39 SMITH: *Wealth of Nations*, BK I, 27b-37b passim; 63a-b; 70a-71d; 74d-75b; BK III, 163c-164c; BK V, 383c-d

40 GIBBON: *Decline and Fall*, 22c

41 GIBBON: *Decline and Fall*, 451d-452a

43 FEDERALIST: NUMBER 30, 102a-b

43 MILL: *Utilitarianism*, 462c-463a; 470d-471b

44 BOSWELL: *Johnson*, 124d-125c; 313a-b; 389d-390a

46 HEGEL: *Philosophy of Right*, PART III, par 190–191 66a-b; par 195 66d-67a; par 203 68a-c; ADDITIONS, 120 136b-c / *Philosophy of History*, INTRO, 193b-c; PART II, 267a-b

50 MARX: *Capital*, 16c-17a; 71d-72c; 81a-d; 88c; 112a-c; 147d-148b; 218d-219a; 251a-255a esp 253a-b, 254c; 261c-d; 282d-283c; 292c-296a esp 293c-294a

54 FREUD: *Civilization and Its Discontents*, 787d-788a

10*c*. Temperance and intemperance with respect to wealth: liberality, magnificence, miserliness, avarice

OLD TESTAMENT: *Exodus*, 18:20 21; 20:17 / *Deuteronomy*, 5:21; 17:16–17 / *II Samuel*, 12:1-6—(*D*) *II Kings*, 12:1-6 / *I Kings*, 21—(*D*) *III Kings*, 21 / *II Kings*, 5:20–27—(*D*) *IV Kings*, 5:20-27 / *Job*, 31:16–23 / *Psalms*, 62:10; 112:5; 119:36—(*D*) *Psalms*, 61:11; 111:5; 118:36 / *Proverbs*, 1:10–19; 15:27; 23:4-5; 28:22; 30:8–9 / *Ecclesiastes*, 5:10–6:12—(*D*) *Ecclesiastes*, 5:9-6:11 / *Isaiah*, 33:15–17; 57:17—(*D*) *Isaias*, 33:15–17; 57:17 / *Jeremiah*, 22:13–19—(*D*) *Jeremias*, 22:13–19 / *Ezekiel*, 22:12-13,25–29—(*D*) *Ezechiel*, 22:12-13,25-29 / *Amos*, 2:6–7; 5:11–12 / *Micah*, 3:9–11; 7:2-3—(*D*) *Micheas*, 3:9–11; 7:2-3 / *Habakkuk*, 2:4-5,9—(*D*) *Habacuc*, 2:4-5,9

APOCRYPHA: *Tobit*, 1:1–8; 4:7–11; 5:18–19—(*D*) OT, *Tobias*, 1:1–8; 4:7–12; 5:24–25 / *Wisdom of Solomon*, 15:12—(*D*) OT, *Book of Wisdom*, 15:12 / *Ecclesiasticus*, 10:9; 11:11,18–19; 12:1-6; 14:3–10; 18:32–33; 20:30; 29:1–2,7–13,20-28; 31:1–11,23–24—(*D*) OT, *Ecclesiasticus*, 10:9–10; 11:10,18–20; 12:1–4; 14:3–10; 18:32-33; 20:32; 29:1–2,10–17,26–34; 31:1–11,28–29 / *Baruch*, 3:16–19—(*D*) OT, *Baruch*, 3:16–19 / *II Maccabees*, 3-4—(*D*) OT, *II Machabees*, 3-4

(10. *The moral aspects of wealth and poverty.* 10c. *Temperance and intemperance with respect to wealth: liberality, magnificence, miserliness, avarice.*)

NEW TESTAMENT: *Luke*, 6:34–35; 12:13–21 / *Acts*, 20:33–34 / *I Corinthians*, 5:10–11; 6:10 / *Ephesians*, 5:3 / *I Timothy*, 6:6–12 / *Hebrews*, 13:5 / *James*, 5:1–6

5 EURIPIDES: *Hecuba* [1206–1232] 363b

5 ARISTOPHANES: *Wasps* [653–724] 515c-516d / *Plutus* [144–197] 630d-631b

6 HERODOTUS: *History*, BK III, 105b-c; BK VI, 208d-209c; 211a-b; BK VII, 221c-222a; BK IX, 305d-306a

6 THUCYDIDES: *Peloponnesian War*, BK VI, 512c-513d

7 PLATO: *Republic*, BK VIII, 405c-408a / *Critias*, 485b-c / *Laws*, BK VIII, 733b-734a; BK IX, 751c-d

9 ARISTOTLE: *Ethics*, BK I, CH 3 [1094^{b}17–19] 339d; BK II, CH 7 [1107^{b}9–21] 353a-b; BK IV, CH 1–2 366b,d-370b; CH 3 [1124^{a}13–^{b}6] 371a-b; BK V, CH 2 [1130^{a}24–28] 377d; BK VII, CH 4 [1147^{b}24–1148^{a}4] 398a-b / *Politics*, BK II, CH 5 [1263^{a}22–^{b}26] 458b-d; CH 6 [1265^{a}28–37] 460c-d; CH 7 [1266^{b}24–1267^{b}9] 462b-463b; CH 9 [1269^{b}13–1270^{a}14] 465d-466b; [1271^{b}10–17] 467d; BK V, CH 9 [1310^{a}22–25] 512c; BK VI, CH 7 [1321^{a}35–^{b}2] 525a; BK VII, CH 5 [1326^{b}26–38] 530d-531a / *Athenian Constitution*, CH 5, par 3 554d-555a; CH 12, par 2 557c / *Rhetoric*, BK I, CH 9 [1366^{a}33–^{b}22] 608d-609a

12 LUCRETIUS: *Nature of Things*, BK III [59–78] 30d-31a; BK V [1113–1135] 75c-d

12 EPICTETUS: *Discourses*, BK IV, CH 9, 237d-238a

12 AURELIUS: *Meditations*, BK VII, SECT 27 281d; BK VIII, SECT 33 288a

14 PLUTARCH: *Lycurgus*, 36a-37b / *Lycurgus-Numa*, 62b-c / *Coriolanus*, 178c-179a / *Aemilius Paulus*, 218a-d; 223c-224a / *Pelopidas*, 233a-b / *Marcus Cato* 276b,d-290d esp 287c-d / *Aristides-Marcus Cato*, 291b-292b / *Lysander*, 361a-d / *Lysander-Sulla*, 388b-c / *Cimon*, 394b-395a / *Lucullus*, 419a-420b / *Crassus*, 439a-c / *Demetrius*, 738c / *Antony*, 755d-758c / *Marcus Brutus*, 817d-818a

15 TACITUS: *Annals*, BK II, 31a-b; 35c-d; BK III, 57b-58d / *Histories*, BK I, 194d-195a

18 AUGUSTINE: *Confessions*, BK VI, par 16 40a-c

20 AQUINAS: *Summa Theologica*, PART I-II, Q 60, A 5, ANS 53a-54d; Q 65, A 1, REP 1–2 70b-72a; Q 84, A 1 174b-175a

21 DANTE: *Divine Comedy*, HELL, VII [1–96] 9c-10c; XI 15a-16b esp [91–115] 16a-b; XVII [34–75] 24b-c; XIX 26d-28b; XXIX [121–139] 44b-c; PURGATORY, XIX [70]–XXII [114] 82b-87c

22 CHAUCER: *Tale of Melibeus*, par 52–53 424a-426a / *Parson's Tale*, par 27 512a-514b

23 MACHIAVELLI: *Prince*, CH XVI 22d-23c

23 HOBBES: *Leviathan*, PART I, 73a; 75a

24 RABELAIS: *Gargantua and Pantagruel*, BK I, 62c-d; BK III, 133b-140b

25 MONTAIGNE: *Essays*, 110a-c; 122a-124d; 436c-439c; 462b-c

27 SHAKESPEARE: *Timon of Athens* 393a-420d esp ACT I, SC II [197–211] 399b, ACT II, SC II 400c-403b

29 CERVANTES: *Don Quixote*, PART II, 221d-222c

31 SPINOZA: *Ethics*, PART IV, APPENDIX, XXVIII–XXIX 450a

33 PASCAL: *Provincial Letters*, 91a-94a

35 LOCKE: *Civil Government*, CH V, SECT 30–39 31c-33c

36 SWIFT: *Gulliver*, PART II, 53a-56a

37 FIELDING: *Tom Jones*, 68d; 87b-88a; 291d-292a; 362c-363a

38 MONTESQUIEU: *Spirit of Laws*, BK III, 10a; BK V, 19a-21d; BK VII, 44d-45b; BK XIX, 140c-d; BK XX, 146b-c; 152a-b; BK XXV, 211a-c

38 ROUSSEAU: *Inequality*, 360b-361a / *Social Contract*, BK II, 405b-c; BK III, 411a-b; 412b-c; 421c-d

39 SMITH: *Wealth of Nations*, BK II, 142d-151c; BK IV, 189d-190a; BK V, 346c-347d

40 GIBBON: *Decline and Fall*, 139b-140c passim; 155d-156a; 339d-340c; 510b-c; 660d-661c

44 BOSWELL: *Johnson*, 194c-195a; 295c; 319b; 403a; 447b-c

46 HEGEL: *Philosophy of Right*, PART III, par 240 76d / *Philosophy of History*, PART IV, 353b-c

47 GOETHE: *Faust*, PART II [5646–5665] 139a-b; [5767–5796] 141b-142b

50 MARX: *Capital*, 60d-62b; 72a-c; 292d-295d

51 TOLSTOY: *War and Peace*, BK I, 25a-32a passim; BK V, 197b-c; BK VII, 275a-278c; 291a-292b; BK VII–VIII, 301b-303c; BK VIII, 329c-332a; BK X, 414c-416c; BK XI, 490a-493d; 500d-503a; BK XIII, 569c; 586c; BK XV, 633a-d; EPILOGUE I, 650d-652a; 664c-665a

52 DOSTOEVSKY: *Brothers Karamazov*, BK VI, 164b-165a

53 JAMES: *Psychology*, 725b-726a

10*d*. The principles of justice with respect to wealth and property: fair wages and prices

OLD TESTAMENT: *Exodus*, 20:15,17 / *Leviticus*, 19:11,35–36; 25:35–37 / *Deuteronomy*, 5:19,21; 24:10–15; 25:13–16; 27:17 / *II Samuel*, 12:1–6 —(*D*) *II Kings*, 12:1–6 / *I Kings*, 21—(*D*) *III Kings*, 21 / *II Kings*, 5:20–27—(*D*) *IV Kings*, 5:20–27 / *Nehemiah*, 5:1–12—(*D*) *II Esdras*, 5:1–12 / *Job*, 24 / *Proverbs*, 1:10–19; 6:30–31; 11:1; 14:31; 16:11; 20:10; 21:6–7; 22:16,22–23,28; 23:10–11; 28:8,24; 30:8–9 / *Isaiah*, 3:14–15; 10:1–2—(*D*) *Isaias*, 3:14–15; 10:1–2 / *Jeremiah*, 17:11—(*D*) *Jeremias*, 17:11 / *Ezekiel*, 22:12–13,25–29; 45:9–12—(*D*) *Ezechiel*, 22:12–13,25–29; 45:9–12 / *Amos*, 2:6–7; 5:11–12; 8:1–7 esp 8:4–6 / *Micah*, 6:9–12—(*D*) *Micheas*, 6:9–12 / *Zechariah*, 5:3—(*D*) *Zacharias*, 5:3

APOCRYPHA: *Ecclesiasticus*, 5:8,14; 20:25; 26:29; 27:2; 29:19; 34:18-22—(*D*) OT, *Ecclesiasticus*, 5:10,16-17; 20:27; 26:28; 27:2; 29:25; 34:21-27

NEW TESTAMENT: *Matthew*, 10:10; 19:18 / *Mark*, 10:19 / *Luke*, 3:12-13; 10:7; 18:20 / *Acts*, 2:44-47; 4:31-5:11 / *Romans*, 13:9 / *I Corinthians*, 6:10 / *Ephesians*, 4:28 / *I Timothy*, 5:18 / *II Timothy*, 2:6

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9 ARISTOTLE: *Ethics*, BK V, CH 2 [1130^{a}13-^{b}17] 377c-378a; CH 4 [1132^{b}11]-CH 5 [1133^{b}29] 380b-381c; BK VIII, CH 9 411d-412c; CH 13-14 414d-416d passim; BK IX, CH 1 416b,d-417c / *Politics*, BK I, CH 3-11 446d-453d passim; BK II, CH 5 458a-460a; CH 7 461d-463c; BK V, CH 1 [1301^{a}25-^{b}2] 502b-c / *Athenian Constitution*, CH 12 557b-558a

12 AURELIUS: *Meditations*, BK VIII, SECT 33 288a

14 PLUTARCH: *Lycurgus*, 36a-37b / *Solon*, 68d-70c / *Poplicola-Solon*, 87a / *Crassus-Nicias*, 455b,d

15 TACITUS: *Annals*, BK II, 31a-b / *Histories*, BK II, 236d-237a; BK IV, 286c-287a

19 AQUINAS: *Summa Theologica*, PART I, Q 21, A 1 124b-125b; Q 98, A 1, REP 3 516d-517c

20 AQUINAS: *Summa Theologica*, PART I-II, Q 94, A 5, REP 3 224d-225d; Q 95, A 4, ANS 229b-230c; Q 105, A 2, ANS and REP 3-6 309d-316a

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22 CHAUCER: *Tale of Melibeus*, par 49-51 422a-424a

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30 BACON: *Advancement of Learning*, 30c-d; 86b-c

31 SPINOZA: *Ethics*, PART IV, APPENDIX, XVII 448d

33 PASCAL: *Provincial Letters*, 91a-94a; 97b-98b

35 LOCKE: *Civil Government*, CH V, SECT 30-39 31c-33c; SECT 51 35d-36a

36 SWIFT: *Gulliver*, PART IV, 154b-155b

38 MONTESQUIEU: *Spirit of Laws*, BK V, 19a-d; 23a-b; 29c; BK XII, 86c-d; BK XIII, 96a-b; BK XVIII, 128b; BK XX, 146b-d; BK XXIII, 199b-200a,c

38 ROUSSEAU: *Inequality*, 348b; 353b; 354a-355b; 360b-361a; 365b-366a / *Political Economy*, 375b-d; 377b-385a,c / *Social Contract*, BK III, 415b-417c

39 SMITH: *Wealth of Nations*, BK I, 13a-16a; 20b-23b; 27b-37b esp 33c; 52b-62a; 106c-107a; BK IV, 225d-228a; BK V, 309a-311c

40 GIBBON: *Decline and Fall*, 22c

41 GIBBON: *Decline and Fall*, 86d-87c

42 KANT: *Science of Right*, 424b-425a; 443b-d; 446a-b

43 CONSTITUTION OF THE U.S.: ARTICLE I, SECT 2 [17-29] 11b; SECT 9 [273-275] 13d; ARTICLE VI [578-582] 16d; AMENDMENTS, V [645-648] 17c; VII 17d; XIV, SECT 1 [748-750] 18d; SECT 4 19a; XVI 19b

43 FEDERALIST: NUMBER 73, 218d-219b; NUMBER 79, 233c-d

43 MILL: *Liberty*, 309a-c; 322c-d / *Representative Government*, 335a-b; 366c-367a / *Utilitarianism*, 467b; 470a-471b passim; 472d-473c

44 BOSWELL: *Johnson*, 124d-125c

46 HEGEL: *Philosophy of Right*, PART I, par 49 24c-25a; PART III, par 236 76a-c; par 241 76d-77a; ADDITIONS, 29 121c; 145 140b; 148 140c-d / *Philosophy of History*, PART IV, 353b-c

48 MELVILLE: *Moby Dick*, 292a-297a

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50 MARX-ENGELS: *Communist Manifesto*, 423c-d; 425d-427b; 429b-c

51 TOLSTOY: *War and Peace*, BK V, 197b-c; 211a-213a; BK XIII, 572d-573b; BK XV, 633a-d; EPILOGUE I, 650d-652a

52 DOSTOEVSKY: *Brothers Karamazov*, BK VI, 165b-166a

54 FREUD: *Civilization and Its Discontents*, 787d-788a esp 787d-788b [fn 3]

10*e*. The precepts of charity with respect to wealth

10*e*(1) Almsgiving to the needy and the impoverished

OLD TESTAMENT: *Exodus*, 23:11 / *Leviticus*, 19:9-10; 23:22; 25:35-37 / *Deuteronomy*, 15:7-11; 24:19-22; 26:12-13 / *Ruth*, 2 / *Job*, 29:12-17; 31:16-23 / *Psalms*, 41:1-3—(*D*) *Psalms*, 40:2-4 / *Proverbs*, 14:21,31; 19:17; 21:13; 22:9; 28:27; 29:7 / *Ecclesiastes*, 11:1-2 / *Isaiah*, 58:1-12—(*D*) *Isaias*, 58:1-12 / *Ezekiel*, 18:4-21—(*D*) *Ezechiel*, 18:4-21

APOCRYPHA: *Tobit*, 1:1-8,16-17; 4:7-11; 12:8-10; 14:10-11—(*D*) OT, *Tobias*, 1:1-8,19-20; 4:7-12; 12:8-10; 14:10-11 / *Ecclesiasticus*, 3:30; 4:1-10; 7:10,32-33; 12:1-6; 14:13; 17:22; 29:1-2,7-13,20; 35:2; 40:24—(*D*) OT, *Ecclesiasticus*, 3:33; 4:1-11; 7:10,36-37; 12:1-7; 14:13; 17:18; 29:1-2,10-17,26; 35:4; 40:24

(10e. *The precepts of charity with respect to wealth.* 10e(1) *Almsgiving to the needy and the impoverished.*)

NEW TESTAMENT: *Matthew*, 5:42; 6:1–4; 10:8,40–42; 19:16–22 / *Mark*, 10:17–22 / *Luke*, 3:11; 6:30–38; 11:41; 12:33–34; 14:12–14; 18:18–25 esp 18:22 / *Acts*, 10:1–4; 11:27–30; 20:35 / *I Corinthians*, 13:3 / *II Corinthians*, 8–9 / *Galatians*, 2:10 / *I Timothy*, 6:17–19

20 AQUINAS: *Summa Theologica*, PART II–II, Q 32 540a-550a

22 CHAUCER: *Parson's Tale*, par 91 547a

29 CERVANTES: *Don Quixote*, PART II, 222b

33 PASCAL: *Provincial Letters*, 91a-94a

38 MONTESQUIEU: *Spirit of Laws*, BK XXIII, 199c

40 GIBBON: *Decline and Fall*, 198c-d; 392d-393a

41 GIBBON: *Decline and Fall*, 233c

42 KANT: *Science of Right*, 443b-d

46 HEGEL: *Philosophy of Right*, PART III, par 242 77a-b; par 245 77c-d / *Philosophy of History*, PART III, 307b-308a; PART IV, 322b-c; 353b-c

10e(2) The religious vow of poverty: voluntary poverty

NEW TESTAMENT: *Matthew*, 8:19–20; 10:7–11; 19:16–30 esp 19:21, 19:27–30 / *Mark*, 6:7–11; 10:17–31 esp 10:21, 10:28–31 / *Luke*, 9:1–5; 10:1–8; 12:22–30,33; 18:18–30 esp 18:22, 18:28–30

20 AQUINAS: *Summa Theologica*, PART I–II, Q 64, A 1, REP 3 66d-67c; PART II–II, Q 186, A 3 652d-655b; AA 6–8 657d-661a; PART III SUPPL, Q 89, A 2 1006b-1007c

21 DANTE: *Divine Comedy*, PURGATORY, XX [16–33] 83b-c; PARADISE, XI 122a-123c

24 RABELAIS: *Gargantua and Pantagruel*, BK I, 61b

29 CERVANTES: *Don Quixote*, PART II, 338b

30 BACON: *Advancement of Learning*, 7d

40 GIBBON: *Decline and Fall*, 597a

46 HEGEL: *Philosophy of History*, PART III, 307b-308a; PART IV, 333c; 340d-341a

51 TOLSTOY: *War and Peace*, BK I, 50b

52 DOSTOEVSKY: *Brothers Karamazov*, BK IV, 85b-86b; BK VI, 164d-165a

10e(3) The choice between God and Mammon: the love of money as the root of all evil

OLD TESTAMENT: *Exodus*, 23:8 / *Deuteronomy*, 16:19; 17:15–17 / *Job*, 31:24–28 / *Psalms*, 52:7—(*D*) *Psalms*, 51:9 / *Proverbs*, 17:23; 28:20; 30:8–9 / *Jeremiah*, 6:13; 8:10—(*D*) *Jeremias*, 6:13; 8:10 / *Ezekiel*, 22:25–29; 33:30–31—(*D*) *Ezechiel*, 22:25–29; 33:30–31 / *Micah*, 3:9–11; 7:2–3—(*D*) *Micheas*, 3:9–11; 7:2–3

APOCRYPHA: *Ecclesiasticus*, 8:2; 10:9; 11:10,24–26; 14:1–10; 20:29; 27:1–2; 31:5–11—(*D*) OT, *Ecclesiasticus*, 8:2–3; 10:9–10; 11:10,26–28; 14:1–10; 20:31; 27:1–2; 31:5–11

NEW TESTAMENT: *Matthew*, 6:19–24; 13:8–23; 16:26; 19:16–30 / *Mark*, 4:1–20; 8:36; 10:21–30 / *Luke*, 8:5–15; 9:25; 12:13–21; 16:1–13; 18:22–30 / *I Corinthians*, 6:10 / *Ephesians*, 5:5 / *I Timothy*, 6:6–19 esp 6:10

5 SOPHOCLES: *Antigone* [289–301] 133d

7 PLATO: *Laws*, BK VIII, 733b-d

20 AQUINAS: *Summa Theologica*, PART I–II, Q 84, A 1 174b-175a

21 DANTE: *Divine Comedy*, HELL, VII [1–96] 9c-10c; XIX 26d-28b; PURGATORY, XIX [70]–XXII [114] 82b-87c; PARADISE, XI 122a-123c

22 CHAUCER: *Prologue of Pardoner's Tale* [12,263–268] 372a / *Tale of Melibeus*, par 18, 408a; par 76–77, 430b-431a / *Parson's Tale*, par 62–64 530a-531a

32 MILTON: *Paradise Lost*, BK I [670–692] 108a-b

33 PASCAL: *Provincial Letters*, 94a-97a

37 FIELDING: *Tom Jones*, 178b-d

47 GOETHE: *Faust*, PART II [5471–6171] 135a-151a esp [5987–6171] 146b-151a; [11,151–287] 271b-274b

50 MARX: *Capital*, 61d

51 TOLSTOY: *War and Peace*, BK I, 50b

52 DOSTOEVSKY: *Brothers Karamazov*, BK V, 130b-132b; BK VI, 164b-166a

11. Economic determinism: the economic interpretation of history

50 MARX: *Capital*, 7c; 10b-11d; 25c-d; 35b-36c esp 36c-d [fn 2]; 86d [fn 4]; 181d [fn 3]; 187a-c; 239b-241a; 377c-378d esp 378c-d

50 MARX-ENGELS: *Communist Manifesto*, 416c-d; 421a; 421c-422c; 427a-b; 428b-d; 429b-c

54 FREUD: *New Introductory Lectures*, 834c; 882c-883c

12. Economic progress: advances with respect to both efficiency and justice

6 THUCYDIDES: *Peloponnesian War*, BK I, 350d-351a

14 PLUTARCH: *Lycurgus*, 36a-37b

38 MONTESQUIEU: *Spirit of Laws*, BK XV, 111b-c; BK XVIII, 126c-d; 128a-c

38 ROUSSEAU: *Inequality*, 352a-d

39 SMITH: *Wealth of Nations*, BK II, 142d-151c; BK III 163a-181a,c; BK IV, 190b-191a

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41 GIBBON: *Decline and Fall*, 451d-452a; 452c-453a,c

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43 MILL: *Representative Government*, 335a-b / *Utilitarianism*, 452a-b

46 HEGEL: *Philosophy of History*, PART II, 263b-d; PART IV, 323c-d; 335a-336c; 368c

50 MARX: *Capital*, 377c-378d

50 MARX-ENGELS: *Communist Manifesto*, 421d; 428d-429c; 434c-d

54 FREUD: *Civilization and Its Discontents*, 777a-c; 778b-779a; 787d-788a / *New Introductory Lectures*, 882c-884c esp 883d-884c

CROSS-REFERENCES

For: The treatment of the domestic economy, *see* FAMILY 3a–3b.

Discussions bearing on the factors in productivity, *see* ART 6c, 9b; KNOWLEDGE 8a; SCIENCE 1b(2).

Another consideration of the concept of value, *see* GOOD AND EVIL 4d; and for another discussion of the labor theory of value, *see* LABOR 6d.

The political aspect of commerce between states, *see* STATE 9a.

The issue concerning usury, *see* JUSTICE 8d.

Other comparisons of the capitalist economy with the slave, the feudal, and the socialist economies, *see* LABOR 5a–5d.

The consideration of the nature of wages and of wages in relation to profits, *see* LABOR 6–6c; and for the theory of profit as derived from surplus value, *see* JUSTICE 8c(1)–8c(2).

The theory of property and property rights, *see* JUSTICE 6b, 8a; LABOR 7b; OLIGARCHY 4, 5a; and for the conception of slaves as chattel or property, *see* LABOR 5a; SLAVERY 4a.

The doctrine of common as opposed to individual goods, *see* GOOD AND EVIL 4c.

Another discussion of the problem of poverty, *see* LABOR 7e.

The consideration of economics as a science, *see* PHILOSOPHY 2c; SCIENCE 3a.

The problem of governmental regulation of the economic process, *see* LIBERTY 2c.

The problem of the economic support of government, *see* GOVERNMENT 4.

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The economic causes and effects of war, *see* WAR AND PEACE 5c.

Other discussions of the conflict between economic classes, or the class war, *see* LABOR 7c–7c(3); OPPOSITION 5a; REVOLUTION 5a; STATE 5d(2); WAR AND PEACE 2c.

The general discussion of the order of goods, and for the relation of wealth to happiness and to other types of good, *see* GOOD AND EVIL 5–5d; HAPPINESS 2b(1); TEMPERANCE 2, 5b; VIRTUE AND VICE 6c.

Other discussions of the distinction between necessities and luxuries, *see* NATURE 5b; NECESSITY AND CONTINGENCY 5e.

The consideration of the problems of economic justice, *see* JUSTICE 8–8d.

The discussion of the virtue of charity and the things which flow from charity, *see* LOVE 5b–5b(2); VIRTUE AND VICE 8g.

Another statement of the economic theory of history, *see* HISTORY 4a(2); and for the examination of economic progress, *see* PROGRESS 3a–3c.

ADDITIONAL READINGS

Listed below are works not included in *Great Books of the Western World*, but relevant to the idea and topics with which this chapter deals. These works are divided into two groups:

I. Works by authors represented in this collection.
II. Works by authors not represented in this collection.

For the date, place, and other facts concerning the publication of the works cited, consult the Bibliography of Additional Readings which follows the last chapter of *The Great Ideas*.

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DOSTOEVSKY. *A Raw Youth*
MARX. *The Poverty of Philosophy*, CH 1, 2 (3–4)
——. *A Contribution to the Critique of Political Economy*
——. *Critique of the Gotha Programme*
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——. *The Origin of the Family, Private Property and the State*

II.

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T. WILSON. *A Discourse upon Usury*
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Chapter 100: WILL

INTRODUCTION

THE great controversy over the freedom of the will tends to overshadow the theory of the will itself. For some thinkers the two notions are inseparable. As the word "choice" popularly connotes freedom in choosing between alternatives, so for them liberty belongs to the very nature of the will. But others who affirm that men can act freely or voluntarily also deny that the will itself is ever free.

Still others who distinguish between voluntary and reflex actions—on the part of brute animals as well as men—also distinguish between the voluntary and the free. They reserve freedom to men alone on the ground that men alone have wills. Far from identifying will with free will, they differentiate between those acts of the will which are necessitated and those which are free.

It would appear from this sampling of conflicting opinions that the issue concerning free will presupposes, and often conceals, diverse theories of the will—different conceptions of its nature, its various acts, and its relation to other faculties. Those who affirm and those who deny the will's freedom of action hardly meet on that issue if they proceed from different conceptions of what the will is and how it operates.

The matter is further complicated by different conceptions of freedom. Even those who define will in somewhat similar terms conceive its liberty differently. As the chapter on LIBERTY indicates, freedom has many meanings—theological, metaphysical, psychological, moral, natural, and civil. What is called free in one of these senses may not be so regarded in another. But one thing is clear. If, as Hobbes thinks, the only sense in which freedom can be affirmed is that of natural or political liberty—the sense in which a man can *do* what he *wills* without restraint or compulsion—then the will is not free, for its freedom depends on how its own acts are caused, or how it causes other acts, not on how the acts it causes are affected by outward circumstances beyond its control.

The problem of the freedom of the will seems, therefore, to be primarily psychological and metaphysical. It requires us to consider freedom in terms of *cause* and *necessity*. It appeals to such distinctions as that between the caused, the uncaused, and the self-caused, or to the difference between the predetermined, the contingent, and the spontaneous event. To this extent the problem is metaphysical. But it is psychological insofar as the kind of event with which we are concerned is an interior act of a living thing and, even more specifically, of an intelligent being, a being which has *mind* in some sense of that term. We do not ask whether stones and vegetables have free will because we do not usually suppose that they have will. Even those who, like Aristotle, attribute *desire* to all things or who, like William James, find a striving toward goals in at least all living things, do not refer to volition or the voluntary in the absence of imagination or thought.

The italicized words in the foregoing paragraph indicate ideas which have the most fundamental bearing on the discussion of will, and hence the relation of this to other chapters. The chapters on CAUSE and NECESSITY (and those on FATE and CHANCE) deal with doctrines which both affect and are affected by various theories of the will's freedom. But if we are to postpone the question of free will until the nature of will itself is considered, we must begin with definitions which employ terms discussed in the chapters on MIND and DESIRE.

THE DISTINCTION BETWEEN thought and action sets the stage for the discovery of a factor or faculty which serves to connect them. Acting may follow upon thinking, but not without the

intervention of a determination or a desire to translate thought into deed. Plato, in the *Republic*, divides the soul into three parts, of which one, reason, is the faculty of thought and knowledge, and the other two, spirit and appetite, are principles of action. Both spirit and appetite need to be guided and ruled by reason but, according to Plato, reason depends also upon spirit, for without its support even wisdom must fail to influence conduct. Though he does not use the word, the role he assigns to spirit as the auxiliary of reason corresponds to the function performed by what later writers call "will."

The word "will" appears in the English translation of Aristotle. It is used less frequently than other words—such as "wish," "choice," "purpose," "impulse," "appetite," "desire"—to designate a motivating force, but along with them it signifies the factor which turns thought into action. Unlike Plato, who separates spirit and appetite, Aristotle makes appetite the generic notion, and treats will and desire as modes of appetite. But sometimes "desire" is used as a synonym for "appetite," and sometimes "wish" or "choice" is substituted for "will."

In his treatise *On the Motion of Animals*, we find Aristotle saying that "the living creature is moved by intellect, purpose, wish, and appetite. All these are reducible to mind and desire. For both imagination and sensation have this much in common with mind, that all three are faculties of judgment. However, will, impulse, and appetite are all three forms of desire, while purpose belongs both to intellect and to desire." But in the treatise *On the Soul*, we find him insisting that appetite be considered as the single "faculty of originating local movement," though if the soul were to be divided into a rational and an irrational part, he would assign wish to the calculative or deliberative reason, desire and passion to the irrational part. "Wish," he writes, "is a form of appetite, and when movement is produced according to calculation, it is also according to wish, but appetite can originate movement contrary to calculation, for desire is also a form of appetite."

What is said of purpose and wish is also said of choice. All three somehow combine reason and desire. Giving choice as the cause of specifically human action, and desire combined with deliberation as the origin of choice, Aristotle speaks of choice as "either desiderative reason or ratiocinative desire." Lacking reason, animals do not have choice, according to Aristotle, or for that matter wish or purpose either; but insofar as their appetites are stirred by sensation or imagination, and the desires aroused lead to action, animals behave voluntarily.

When the words "desire" and "appetite" are so used, not to name the generic faculty of originating movement, but to signify a motivation different in kind from wish, purpose, or choice, they correspond to what Aquinas later calls "animal appetite" or "sensitive desire." This is for him the sphere of the emotions or passions. He treats the impulses of fear and anger, for example, as acts of the sensitive appetite.

The kind of desire which, for Aristotle, depends upon practical reason, Aquinas calls "intellectual appetite" or "rational desire." Since "will" is for him just another name for the desire or appetite which is determined by reason rather than sense, he necessarily holds that irrational animals do not have will.

Aristotle says that "the apparent good is the object of appetite, and the real good is the primary object of rational wish." Aquinas distinguishes somewhat differently between the object of the passions and the object of the will. For each sort of appetite or desire, the object takes its special character from the faculty by which it is apprehended. The sensible good, perceived or imagined, stands to the sensitive appetite as the intelligible good, judged by reason, stands to the intellectual appetite or will.

In one place Aristotle differentiates between wish and choice by saying that we can wish for the impossible, whereas choice is always of things within our power. But his more usual distinction is in terms of means and ends. "The end is what we wish for," he writes, "the means what we deliberate about and choose." Aquinas also divides the acts of the will according as they concern means or ends, but where Aristotle mentions only choice and wish, Aquinas enumerates three acts of the will with respect to ends (volition, intention, and enjoyment) and three with respect to means (consent, choice, and use).

According to Aquinas, each of these acts of the

will responds to a distinct act of the practical reason and, except for the will's last acts, each may in turn be followed by further practical thought. This progressive determination of the will by reason goes on until the *use* of means leads to action, and action leads to the enjoyment of the end accomplished. As in practical reasoning ends come before means, so for the will the end comes first in the order of intention; but in the order of execution action begins with the means.

LIKE ARISTOTLE AND Aquinas, Kant and Hegel conceive will as a faculty of desire or activity founded upon reason, and so they attribute will, as they attribute reason, to man alone. But both Kant and Hegel go further and almost identify will in its pure state with reason.

"The faculty of desire," writes Kant, "in so far as its inner principle of determination as the ground of its liking or predilection lies in the reason of the subject, constitutes the will"; and he goes on to say that the will, "in so far as it may determine the voluntary act of choice . . . is the practical reason itself." Only man can claim "possession of a will which takes no account of desires and inclinations, and on the contrary conceives action as possible to him, nay, even necessary, which can only be done by disregarding all desires and sensible inclinations."

In this last statement, Kant seems to use the word "desire" in a sense which is opposed to will. The context indicates that he has in mind something like the distinction made by Aquinas between sensitive and rational desire. This indication is confirmed by his own distinction between brute and human choice. "That act which is determinable only by inclination as a sensuous impulse or stimulus would be irrational brute choice (*arbitrium brutum*). The human act of choice, however, as human, though in fact *affected* by such impulses or stimuli, is not *determined* by them; and it is, therefore, not pure in itself when taken apart from the acquired habit of determination by reason." But, according to Kant, the human act of choice can be determined solely by reason. Only then is it "determined to action by the pure will."

One point must be observed, to which we shall subsequently return. The pure will is for Kant a free will. "The act of choice that is determined by pure reason," he writes, "is the act of free will. . . . The freedom of the act of volitional choice is its independence of being determined by sensuous impulses or stimuli. This forms the negative conception of the free will. The positive conception of freedom is given by the fact that the will is the capability of pure reason to be practical of itself." Insofar as pure reason is able to become practical, that is, to determine choices and direct action, independently of all sensuous impulses or inclinations, that reason is in itself the pure will, and that will is in its very essence free.

For Hegel also, freedom is of the essence of will. "Freedom," he writes, "is just as fundamental a character of the will as weight is of bodies. Heaviness constitutes the body and is the body. The same is the case with freedom and will, since the free entity is the will. Will without freedom is an empty word, while freedom is actual only as will, as subject."

Though the passions enter into the sphere of the subjective will, according to Hegel, will transforms them. "Subjective volition—Passion—is that which sets men in activity, that which effects 'practical' realization." When it is occupied with the passions, the subjective will, Hegel writes, "is dependent and can gratify its desires only within the limits of this dependence." The passions, however, are common to both men and animals. "An animal too has impulses, desires, inclinations," Hegel says, "but it has no will and must obey its impulses if nothing external deters it." Only man, "the wholly undetermined, stands above his impulses and may make them his own, put them into himself as his own. An impulse is something natural, but to put it into my ego depends on my will."

Hegel explains this aspect of the will by reference to that "element of pure indeterminacy or that pure reflection of the ego into itself which involves the dissipation of every restriction and every content either immediately presented by nature, by needs, desires, and impulses, or given and determined by any means whatever." But indeterminacy is only one moment of the will, its negative aspect. The second moment occurs in "the transition from undifferentiated indeterminacy to the differentiation, determination, and positing of a deter-

minacy as a content and object." Both of these moments are partial, each the negation of the other. "The indeterminate will," in Hegel's opinion, is "just as one-sided as the will rooted in sheer determinacy. What is properly called the will includes in itself both the preceding moments."

As the unity of both these moments, the will "is particularity reflected into itself and so brought back to universality, *i.e.*, it is individuality. It is," Hegel continues, "the *self*-determination of the ego, which means that at one and the same time the ego posits itself as its own negative, *i.e.*, as restricted and determinate, and yet remains by itself, *i.e.*, in its self-identity and universality." While the two previous moments of the will are "through and through abstract and one-sided," the third moment gives us the individual will and freedom in the concrete. "Freedom lies neither in indeterminacy nor in determinacy; it is both of these at once. . . . Freedom is to will something determinate, yet in this determinacy to be by oneself and to revert once more to the universal."

IN THE TRADITION OF THE great books, other writers place the essence of the will not in its freedom, but in its being the cause of the voluntary acts performed by animals and men. The students of physiology from Aristotle to William James distinguish the movements of the various bodily organs—the heart, the lungs, the organs of digestion, excretion, and reproduction—from those movements of the whole animal or of its members which are somehow based upon desire and imagination or thought.

Aristotle sometimes calls these physiological changes "non-voluntary" and sometimes "involuntary," though he has another meaning for "involuntary" when he describes the conduct of a man, compelled by fear, to do something contrary to his wishes, *e.g.*, the captain who throws his cargo overboard to save his ship. The completely non-voluntary motion is one which occurs quite apart from any *knowledge* of the end, or without conscious desire, whereas the involuntary involves some conflict of desires. When the involuntary in this special sense is not considered, only a twofold division is made, as in James' distinction between reflex and voluntary movements, Harvey's distinction between natural and animal motions, or Hobbes' distinction between vital and animal motions.

"There be in animals," Hobbes writes, "two sorts of motions peculiar to them: one called vital . . . such as are the course of the blood, the pulse, the breathing, the concoction, nutrition, excretion, etc.; to which motions there needs no help of imagination. The other is *animal motion*, otherwise called *voluntary motion*, as to go, to speak, to move any of our limbs, in such manner as is first fancied in our minds. . . . Because going, speaking, and the like voluntary motions, depend always upon a precedent thought of *whither*, *which way*, and *what*, it is evident that the imagination is the first internal beginning of all voluntary motion."

But the imagination, according to Hobbes, gives rise to voluntary motions through arousing desire or appetite. When desires and aversions, hopes and fears, alternately succeed one another, what Hobbes means by "deliberation" takes place; and, he declares, "in deliberation the last appetite or aversion, immediately adhering to the action, or to the omission thereof, is that which we call Will, the act (not the faculty) of willing. And beasts that have deliberation must necessarily also have will. The definition of the will given commonly by the Schools, that it is a *rational appetite*, is not good. For if it were, then could there be no voluntary act against reason. For a voluntary act is that which proceedeth from the will, and no other."

Locke disagrees with Hobbes' view that willing is an act of desire. "That the will is perfectly distinguished from desire," he thinks, may be seen in the fact that desire "may have a quite contrary tendency from that which our wills set us upon." Desire, according to Locke, "is an uneasiness of the mind for want of some absent good"; whereas will is the "power to begin or forbear, continue or end, the several actions of our minds, and motions of our bodies, barely by a thought or preference of the mind ordering or, as it were, commanding the doing or not doing, such or such a particular action. . . . The actual exercise of that power, by directing any particular action or its forbearance, is that which we call volition or willing."

Though volition is not an act of desire, Locke holds that it is the uneasiness of desire which

"determines the will to the successive voluntary actions." And though Locke speaks of willing as if it were an act of thought, he distinguishes between the mind's power of understanding and of willing. The one is a passive, the other is an active power. Understanding or perceptivity is "a power to receive ideas or thoughts"; will or motivity is the "power to direct the operative faculties to motion or rest."

In this conception of the will as the power the mind has to control the faculties, or the motions of the body, which can be voluntarily exercised, Locke, like Hobbes before him and William James after, explains the will's action in terms of thinking of the motion to be performed or the deed to be done. Discussing the theory of what he calls "ideo-motor action," James says that "a supply of ideas of the various movements that are possible, left in the memory by experiences of their involuntary performance, is thus the first prerequisite of the voluntary life." Reflexive or other innately determined movements do not depend upon consciousness of the movement to be performed. That is why "voluntary movement must be secondary, not primary functions of our organism"; or as he says in another place, the action which is performed voluntarily "must before that, at least once, have been impulsive or reflex."

The kind of idea which initiates a voluntary movement James calls a "kinaesthetic image" —an image of the sensations which will be experienced when the movement takes place. "In perfectly simple voluntary acts," he writes, "there is nothing else in the mind but the kinaesthetic image, thus defined, of what the act is to be." In certain cases, however, there must be "an additional mental antecedent, in the shape of a fiat, decision, consent, volitional mandate . . . before the movement can follow." This becomes necessary when contrary kinaesthetic images vie with one another to initiate antagonistic movements. "The express fiat, or act of mental consent to the movement, comes in when the neutralization of the antagonistic and inhibitory idea is required.

"With the prevalence, once there as a fact, of the motive idea," James goes on, "the *psychology* of volition properly stops. The movements which ensue are exclusively physiological phenomena, following according to physiological laws upon neural events to which the idea corresponds. The *willing* terminates with the prevalence of the idea. . . . We thus find that we reach the heart of our inquiry into volition when we ask by what process it is that the thought of any given object comes to prevail stably in the mind." The answer James gives is that it is "the essential achievement of the will . . . to attend to a difficult object and hold it fast before the mind. The so-doing *is* the *fiat*. . . . Effort of attention is thus the essential phenomenon of the will."

Though Freud does not use the word "will," or analyze voluntary movements in ideo-motor terms, he does attribute to what he calls "the ego" the function which Locke and James ascribe to will. "In popular language," he writes, "we may say that the ego stands for reason and circumspection, while the id stands for the untamed passions." To the ego is given "the task of representing the external world for the id," and so of protecting it from destructive conflicts with reality.

In discharging this function, "on behalf of the id, the ego controls the path of access to motility, but," Freud continues, "it interpolates between desire and action the procrastinating factor of thought, during which it makes use of the residues of experience stored up in memory. In this way it dethrones the pleasure-principle, which exerts undisputed sway over the processes in the id, and substitutes for it the reality-principle, which promises greater security and greater success."

AS THE PROBLEM OF the will's freedom involves the question of whether or how its acts are caused, so the will's action raises a problem concerning how it causes the voluntary effects it produces. In Locke's view, we are equally at a loss to explain how one body moves another and how our own bodies are moved by our will. "The passing of motion out of one body into another," he thinks, "is as obscure and inconceivable as how our minds move or stop our bodies by thought; which we every moment find that they do."

If we could "explain this and make it intelligible," Locke says in another place, "then the next step would be to understand creation."

Hume agrees that "it must forever escape our most diligent inquiry" how "the motion of our body follows upon the command of our will." That it does, he says, "is a matter of common experience, like other natural events. But the power and energy by which this is effected, like that in other natural events, is unknown and inconceivable."

No less mysterious to Hume is the coming into "existence of an idea, consequent to the command of the will," which seems to imply a "creative power, by which it raises from nothing a new idea, and with a kind of *Fiat*, imitates the omnipotence of its Maker." How "this operation is performed, the power by which it is produced," seems to him "entirely beyond our comprehension."

Spinoza and Descartes take a different view of the relation between the will and the intellect or understanding. Neither admits that the human will forms new ideas, or, as Spinoza says, that there are "mere fancies constructed by the free power of the will." Both conceive the will's activity as consisting in assent or dissent to ideas, their affirmation or negation. But beyond this point they part company.

For one thing, Descartes distinguishes between the will as a faculty of choice and the understanding as a faculty of knowledge, where Spinoza holds that "the will and the intellect are one and the same." Since Spinoza denies that will and intellect are anything except "the individual volitions and ideas themselves," it is more precise, he suggests, to say that the individual volition (*i.e.*, the affirmation or negation of *this* idea) and the individual idea affirmed or denied are one and the same.

In consequence, they differ with respect to the power of volition. Spinoza criticizes the supposition he finds in Descartes, that "the will extends itself more widely than the intellect, and is therefore different from it." Whereas Descartes thinks that "the faculty of comprehension which I possess . . . is of very small extent and extremely limited," Spinoza says, "I am conscious of a will so extended as to be subject to no limits." We can affirm or deny much more than we can know with certitude.

This difference between Spinoza and Descartes reveals itself most strikingly in their conception of God's will. According to Descartes, the omnipotence of God lies in the supremacy of his will—in its absolute independence even with respect to the divine intellect. "It is self-contradictory that the will of God should not have been from eternity indifferent to all that has come to pass or ever will occur. . . . Thus, to illustrate, God did not will . . . the three angles of a triangle to be equal to two right angles because he knew that they could not be otherwise. On the contrary . . . it is because he willed the three angles of a triangle to be necessarily equal to two right angles that this is true and cannot be otherwise." Against Descartes' voluntarism, Spinoza declares it absurd to say that "God could bring it about that it should not follow from the nature of a triangle that its three angles should be equal to two right angles."

Such different conceptions of the will or of its power necessarily lead to opposite conclusions concerning free will—in man or God. The human mind, according to Spinoza, "cannot be the free cause of its own actions." In each of its volitions, as in each of its ideas, it is determined by a cause. The supposition of an infinite will in God does not exempt that will from the need to be determined in its acts; nor can God "on this account be said to act from freedom of will." Yet Spinoza also affirms that "God alone is a free cause, for God alone exists and acts from the necessity of his own nature." Freedom does not reside in the will, nor in the absence of necessity or causal determination, but rather in self-determination. It does not consist in choice, but in the absence of compulsion by causes which lie outside one's own nature. Hence only an infinite being—a *causa sui* in Spinoza's sense—can be free.

Descartes, on the other hand, places freedom in the will and identifies it with the power of choice. "The faculty of will," he writes, "consists alone in our having the power of choosing to do a thing or choosing not to do it . . . or rather it consists alone in the fact that in order to affirm or deny, pursue or shun, those things placed before us by the understanding, we act so that we are unconscious that any outside force constrains us in so doing." Descartes seems to conceive the will as cause of itself in its acts of choice. But he does not attribute to the human will the autonomy Spinoza ascribes to God. "The knowledge of the understanding," he

writes, "should always precede the determination of the will"; and in another place he says that "our will impels us neither to follow after nor to flee from anything, except as our understanding represents it as good or evil."

In order to be free, Descartes explains, "it is not necessary that I should be indifferent as to the choice of one or the other of two contraries; but contrariwise the more I lean to the one—whether I recognize clearly that the reasons of the good and the true are to be found in it, or whether God so disposes my inward thought—the more freely do I choose and embrace it." The will always retains "the power of directing itself towards one side or the other apart from any determination by the understanding." The human will is, in this sense, always undetermined from without, though it is not always indifferent to the alternatives confronting it. It is indifferent, Descartes holds, only when a man "does not know what is the more true or the better, or at least when he does not see clearly enough to prevent him from doubting about it. Thus the indifference which attaches to human liberty is very different from that which belongs to the divine."

THE DENIAL OF FREE WILL in the tradition of western thought seems to follow from the principle that every happening must have a cause. In the sphere of human conduct, voluntary acts are no less determined effects of prior causes than involuntary acts. Though both are equally necessitated, the difference between the voluntary and the involuntary, according to Hobbes, Locke, and Hume, consists in the fact that when a man acts voluntarily, he does what he himself has decided to do.

The fact that his decision to act in a certain way is itself caused, does not, in the opinion of these writers, abolish the freedom of his action, but only the freedom of his will. If freedom is attributed not to a man's will, but to the man who can do what he wills, then, these writers think, there is no conflict between freedom and necessity—or between freedom and the universal reign of causality. For them freedom is abridged only by external forces which coerce a man to act contrary to his wishes or constrain him from acting as he wills. Freedom in this sense is incompatible only with exterior compulsion, not with the inner causal determination of every act of the will.

To those who deny free will, it does not seem to be an entirely satisfactory answer to say, as Descartes does, that we are immediately conscious of our freedom of choice. In the Third Set of Objections, urged by Thomas Hobbes against Descartes, Objection XII (which is directed against Meditation IV wherein Descartes discusses free will) contains this statement: "We must note here also that the freedom of the will has been assumed without proof, and in opposition to the opinion of the Calvinists." In replying, Descartes merely repeats his original statement of the evidence for free will.

"I made no assumption concerning freedom," he writes, "which is not a matter of universal experience. Though there are many who, looking to the divine foreordination, cannot conceive how that is compatible with liberty on our part, nevertheless no one, when he considers himself alone, fails to experience that to will and to be free are the same thing (or rather that there is no difference between what is voluntary and what is free)." To Gassendi who, in another set of objections, also denies "the indeterminateness of the will," Descartes replies: "These matters are such that anyone ought to experience them in himself rather than be convinced of them by ratiocination. . . . Refuse then to be free, if freedom does not please you; I at least shall rejoice in my liberty, since I experience it in myself, and you have assailed it not with proof but with bare negations merely."

The experience of free will is no proof either, the opponents reply, for the experience is open to the suspicion that it is illusory rather than real. It may be, Hume suggest, only "a false sensation or seeming experience which we have . . . of liberty or indifference in many of our actions." We suffer this illusion, even foist it upon ourselves, he further suggests, because we are motivated by "the fantastical desire of shewing liberty." In the same vein, Freud later discounts objections to the determinism of psychoanalysis on the part of those who refuse to recognize the hidden causes which control their actions. "You have an illusion of a psychic freedom within you which you do not want to give up," he says. But this "deeply rooted belief in psychic freedom and choice" must be given up

because it "is quite unscientific. . . . It must give way before the claims of a determinism which governs even mental life."

THE DILEMMA OF FREE WILL or determinism does not seem to other writers to be so easily resolvable. "All theory is against the freedom of the will," says Dr. Johnson; "all experience for it." Tolstoy states the dilemma in similar terms. "Regarding man as a subject of observation" by the rational methods of the sciences, Tolstoy writes, "we find a general law of necessity to which he (like all that exists) is subject. But regarding him from within ourselves as what we are conscious of, we feel ourselves to be free. This consciousness is a source of self-cognition quite apart from and independent of reason. Through his reason man observes himself, but only through consciousness does he know himself. . . . You say: I am not free. But I have lifted my hand and let it fall. Everyone understands that this illogical reply is an irrefutable demonstration of freedom. That reply is the expression of a consciousness that is not subject to reason."

The problem cannot be solved, Tolstoy thinks, by ignoring one side of the question. To do that is to put the problem "on a level on which the question itself cannot exist. In our time," Tolstoy continues, "the majority of so-called advanced people—that is, the crowd of ignoramuses—have taken the work of the naturalists who deal with one side of the question for a solution of the whole problem." But to admit that "from the point of view of reason man is subject to the law of necessity . . . does not advance by a hair's breadth the solution of the question, which has another, opposite, side, based on the consciousness of freedom." Not only does this "unshakable, irrefutable consciousness of freedom, uncontrolled by experiment or argument" constitute for Tolstoy "the other side of the question," but it is also for him that "without which no conception of man is possible."

William James takes a somewhat different view of the dilemma of free will or determinism. Conceiving the act of free will in terms of the exertion of an effort on our part which is not determined by its object, James is willing to admit that our consciousness of freedom may be a delusion. "Even in effortless volition we have the consciousness of the alternative being also possible. This is surely a delusion here," he writes; "why is it not a delusion everywhere?" Hence it seems to him that "the question of free will is insoluble on strictly psychological grounds."

But if the existence of free will cannot be proved from experience, neither, in his opinion, can determinism be scientifically demonstrated. "The most that any argument can do for determinism," he says, "is to make it a clear and seductive conception, which a man is foolish not to espouse, so long as he stands by the great scientific postulate that the world must be one unbroken fact, and that prediction of all things without exception must be ideally, if not actually, possible." For those who accept this postulate, "a little fact like effort can form no real exception to the overwhelming reign of deterministic law."

Yet it remains a postulate, and postulation is not proof. Furthermore, there is "a *moral* postulate about the Universe . . . which would lead one to espouse the contrary view . . . the postulate that *what ought to be can be, and that bad acts cannot be fated, but that good ones must be possible in their place.*" As scientific law and prediction seem to call for the postulate of determinism, so moral responsibility and the genuineness of moral options seem to demand free will.

Hume recognizes that "it may be said . . . that, if voluntary actions be subjected to the same laws of necessity with the operations of matter, there is a continued chain of necessary causes, pre-ordained, and pre-determined, reaching from the original cause of all to every single volition of every human creature." But he does not think that the assertion of "no contingency anywhere in the universe; no indifference; no liberty," requires us to give up our notions of moral responsibility, and to abstain from making judgments of praise or blame concerning human actions. "The mind of man is so formed by nature," he writes, "that, upon the appearance of certain characters, dispositions, and actions, it immediately feels the sentiment of approbation or blame. The characters which engage our approbation are chiefly such as contribute to the peace and security of human society; as the characters which excite blame are

chiefly such as tend to public detriment and disturbance."

In Hume's opinion, "remote and uncertain speculations" concerning the causation of human character or conduct, or concerning the general structure of the universe, do not affect "the sentiments which arise from the natural and immediate view of the objects. . . . Why should not the acknowledgement of a real distinction between vice and virtue," he asks, "be reconcileable to all speculative systems of philosophy, as well as that of a real distinction between personal beauty and deformity?" James takes the exactly opposite view. A doctrine of necessity or determinism is for him incompatible with moral responsibility, or with the distinction between virtue and vice. Holding that free will is indispensable to the moral life, James chooses "the alternative of freedom." In doing so he confesses that "the grounds of his opinion are ethical rather than psychological."

He does go one step further into what he calls "the logic of the question." Since postulation is not proof—since a postulate is not an undeniable axiom but an expression of what James elsewhere calls "the will to believe"—the kind of dilemma which is formed by conflicting postulates can be resolved only by the exercise of free choice. The alternatives of free will and determinism constitute that kind of dilemma for James, and so it seems to him quite proper that the first act of free will should be to believe in free will.

"When scientific and moral postulates war thus with each other," he writes, "and objective proof is not to be had, the only course is voluntary choice, for skepticism itself, if systematic, is also voluntary choice." Hence belief in free will "should be voluntarily chosen from amongst other possible beliefs. Freedom's first deed should be to affirm itself. We ought never to hope for any other method of getting at the truth if indeterminism be a fact. Doubt of this particular truth will therefore probably be open to us to the end of time, and the utmost that a believer in free will can *ever* do will be to show that the deterministic arguments are not coercive. That they are seductive," James concludes, "I am the last to deny; nor do I deny that effort may be needed to keep the faith in freedom, when they press upon it, upright in the mind."

IN THE TRADITION OF THE great books, not all who affirm free will think that to do so requires them to deny the universal reign of causality in nature; nor do they base their affirmation on our immediate consciousness of free choice or make it an act of faith—a pragmatic postulate. Kant, for example, explicitly disclaims that freedom is a matter of faith. "It is the only one of all the ideas of pure reason," he says, "whose object is a matter of fact." This means for him that its objective reality can be proved. In contrast, "the existence of God and the immortality of the soul are matters of faith," by which Kant means that they must be postulated by the practical reason as conditions necessary for the conceivability of the *summum bonum* which the moral law commands us to seek.

In order to understand Kant's proof of freedom, it is necessary to remember that he conceives the freedom of the will in terms of its autonomy, and its autonomy in terms of the fact that the practical reason, with which the pure will is identical, legislates for itself in proclaiming, and obeys only itself in upholding, the moral law. "Autonomy of the will," he writes, "is that property of it by which it is a law unto itself. . . . Now the idea of freedom is inseparably connected with the conception of *autonomy*, and this again with the universal principle of morality." The moral law, Kant goes on, "expresses nothing else than the *autonomy* of the pure practical reason," and "this *self-legislation* of the pure and, therefore, practical reason is freedom in the positive sense."

In saying that "a free will and a will subject to moral laws are one and the same," Kant thinks that he may be suspected of circular reasoning, in that he appears to make freedom a condition of morality and at the same time to infer freedom from the existence of the moral law. There is no question that for him freedom "must be the foundation of all moral laws and the consequent responsibility." But, he explains, no inconsistency results from calling "freedom the condition of the moral law" and also maintaining that "the moral law is the condition under which we can first *become conscious* of freedom," if it be understood that "freedom is the *ratio essendi* [ground of being] of the moral law, while the moral law is the *ratio cognoscendi* [ground of knowing] of freedom."

We know that our will is free from knowing the existence of the moral law. We know that the moral law exists, for otherwise reason could never judge, as it does, that we ought to have done what we did not do. It is not freedom but the moral law "of which we become directly conscious (as soon as we trace for ourselves maxims of the will)." This, Kant says, "first presents itself to us, and leads directly to the concept of freedom." Whenever a man judges that "he can do a certain thing because he is conscious that he ought," then, according to Kant, "he recognizes that he is free, a fact which but for the moral law he would never have known."

The freedom which Kant thinks can be directly deduced from the moral law is a very special kind of causality. In the sensible world of nature, each cause is in turn the effect of some prior cause. None is the first or unconditioned cause, an uncaused cause. But for Kant freedom is "a faculty of absolute spontaneity" and consists in "the unconditioned causality of the cause . . . a causality capable of producing effects independently of and even in opposition to the power of natural causes, and capable, consequently, of *spontaneously* originating a series of events."

How are these two modes of causality—which Kant calls "the causality of *nature* and of *freedom*"—compatible with one another? To affirm both would appear to get us into the antinomy in which the thesis that "causality according to the laws of nature is not the only causality . . . a causality of freedom is also necessary," is contradicted by the antithesis that "there is no such thing as freedom, but everything in the world happens solely according to the laws of nature." Yet Kant thinks he can show that "this antinomy is based upon a mere illusion, and that nature and freedom are at least *not opposed*."

It would be impossible, he admits, "to escape this contradiction if the thinking subject, which seems to itself free, conceived itself in *the same sense* or in *the very same relation* when it calls itself free as when in respect to the same action it assumes itself to be subject to the laws of nature." But the contradiction is only apparent or illusory if man belongs to two worlds—the sensible world of natural phenomena and the supersensible world of intelligible beings or noumena. "The notion of a being that has free will," writes Kant, "is the notion of a *causa noumenon*" —of a cause which does not operate under the temporal conditions of natural causality. "The notion of causality as *physical necessity* . . . concerns only the existence of things so far as it is determinable *in time* and, consequently, as phenomena, in opposition to their causality as things in themselves."

To remove "the apparent contradiction between freedom and the mechanism of nature in one and the same action, we must remember . . . that the necessity of nature, which cannot coexist with the freedom of the subject, appertains only to the attributes of the thing that is subject to time-conditions, consequently only to those of the acting subject as a phenomenon. . . . But the very same subject," Kant continues, "being on the other side conscious of himself as a thing in himself, considers his existence also *in so far as it is not subject to time-conditions*, and regards himself as only determinable by laws which he gives himself through reason."

In the latter mode of supersensible existence, man exercises the causality of a free will. He is not in any way subject to the natural necessity which governs all physical things. Yet the two worlds—the moral world of freedom and the physical world of necessity—meet in the same act. "The rational being," Kant explains, "can justly say of every unlawful action that he performs, that he could very well have left it undone; although as appearance it is sufficiently determined in the past, and in this respect is absolutely necessary."

THE APPARENT CONFLICT BETWEEN freedom and nature arises for Kant because he conceives the act of free will to be absolutely spontaneous. It is as uncaused as the swerve of the atoms (discussed in the chapter on CHANCE) on which Lucretius bases the existence of free will. There is another conception of freedom that does not attribute to free will any special character which brings it into conflict with ordinary causality. It does not belong to liberty, Aquinas thinks, that "what is free should be the first cause of itself." Not only is God the ultimate cause of what a man freely chooses to do, as He is the first cause of every natural event, but the will as a natural faculty of man never moves itself to

operation. It is always moved by the reason, even in its acts of choice, and so these acts, wherein the will is free, are also caused.

Where Kant identifies will with free will (which implies that the will is free in all its acts), Aquinas distinguishes between those acts of the will which are necessitated and those which are free. He quotes Augustine to the effect that "natural necessity does not take away the liberty of the will," for that liberty exists only in the will's choice of means, not in its volition of the end. "Just as the intellect naturally and of necessity adheres to first principles," Aquinas explains, "so the will adheres to the last end." And just as the intellect assents of necessity to those "propositions which have a necessary connection with first principles, namely, demonstrable conclusions," so the will adheres of necessity only to those things "which have a necessary connection with happiness." With regard to all else—the whole realm of particular goods which are merely contingent means—the will is not necessitated, and so its choice among them is free.

Although Aquinas says that unless man has free choice, "counsels, exhortations, commands, prohibitions, rewards and punishments would be in vain," he does not postulate free will as an indispensable condition of moral conduct. Rather he shows how reason in causing the will's choices at the same time leaves them free. "The root of liberty," he writes, "is the will as the subject thereof, but it is the reason as its cause. For the will can tend freely towards various objects precisely because the reason can have various perceptions of good." When, for example, "the deliberating reason is indifferently disposed to opposite things, the will can be inclined to either." The freedom of the will's choice with respect to particular means thus lies in the fact that, with respect to all contingent matters, "the judgment of reason may follow opposite courses, and is not determinate to one."

"In all particular goods," Aquinas writes, "the reason can consider an aspect of some good and the lack of some good, which has the aspect of evil; and in this respect it can apprehend any single one of such goods as something to be chosen or to be avoided. The perfect good alone, which is happiness, cannot be apprehended by reason as an evil, or lacking in any way. Consequently man wills happiness of necessity, nor can he will not to be happy, or to be unhappy. Now since choice is not of the end, but of the means, it is not of the perfect good, which is happiness, but of particular goods. Therefore, man chooses not of necessity, but freely."

Like Aquinas, Locke holds that "to be determined by our own judgment is no restraint to liberty." But where Locke thinks the "constant determination to a pursuit of happiness, no abridgment of liberty," Aquinas holds that because "man wills happiness of necessity," his will is not free in the volition of its natural end. Yet Locke does mention the case "wherein a man is at liberty in respect of willing"—the case in which "a man may suspend the act of his choice from being determined for or against the thing proposed, till he has examined whether it be really of a nature in itself and consequences to make him happy or not."

In this type of case Aquinas locates what is peculiar to the causality of freedom. Sometimes the judgment of reason is determined by its object, as when it contemplates the final end of actions. But when it deliberates about alternative means (which are both particular and contingent), reason can judge either way. What determines it to judge this way rather than that? Aquinas' answer is that such judgments of the reason are voluntary, in contrast to reason's involuntary assent to self-evident truths, wherein it is determined entirely by the object being considered. But if a voluntary judgment is one in which the will determines the reason's assent, and if reason's judgments concerning means are voluntary in this sense, then the act of the reason which causes the will's act of choice is itself an act caused by the will. The will's choice is, therefore, not uncaused; but, as Aquinas conceives it, the way in which it is caused makes it self-determining, and to this extent free.

THE GENERAL THEORY OF the will figures most prominently in the theology of Aquinas and in the philosophy of Kant and Hegel. They not only present the most elaborate analyses of its nature and its relation to reason but, in the tradition of the great books, they are the most stalwart defenders of its freedom. Their differ-

ences in principle and in reasoning may, however, obscure the common ground they share.

This may be seen in their conception of freedom. Aquinas does not attribute autonomy or spontaneity to the will. Yet in his view of free choice as a self-determining act of the will, there is something analogous to Kant's autonomy; and where Kant makes the pure will essentially free and spontaneous, Aquinas holds that the will, with respect to willing or not willing, is always free and inviolable. It is absolutely within "the power of the will," he writes, "not to act and not to will." He does not try to explain such freedom of exercise in the same way as freedom of choice.

It is only with regard to the latter that Aquinas appeals to the causal reciprocity between reason and will to show how the will's act of choice can be both free and caused. The kind of causation which Aquinas thinks takes place in free choice—the will determining the reason to make the practical judgment by which it is itself determined—seems to involve a circularity, or perhaps simultaneity, in action and reaction. If this is possible only because reason and will are *spiritual* powers, then here too there is some likeness to Kant's theory of the will's action as belonging to the supersensible world rather than to the domain of physical movement.

On one other point, they tend to agree even more plainly. "Free choice," writes Aquinas, "is part of man's dignity." Man's dignity for Kant—his membership in what Kant calls "the kingdom of ends"—is "rendered possible by the freedom of the will." But though they share this opinion of the source of human dignity in rationality and freedom, they do not draw the same moral consequences from their affirmation of free will as pivotal in human life.

Aquinas, like Aristotle, does not find moral goodness only in the will. On the contrary, the rectitude of the will depends on the goodness of the end it adheres to and the means it chooses. But like the Stoics, Kant makes the will the sole repository of moral goodness.

As Epictetus says that all good and evil lie in man's will, and that the morally neutral sphere is "in the region outside the will's control," so Kant begins his moral philosophy with the statement, "Nothing can possibly be conceived in the world, or even out of it, which can be called good without qualification, except a Good Will." In his view, "a good will is good not because of what it performs or effects, not by its aptness for the attainment of some proposed end, but simply by virtue of the volition; that is, it is good in itself." In another place, he adds that "though not indeed the sole and complete good," the will, *good in itself*, "must be the supreme good and the condition of every other, even of the desire of happiness."

These fundamental issues concerning the will in moral philosophy are more fully treated in the chapter on DUTY. The problems of the will in political theory are considered in the chapters on LAW and STATE—especially those problems which involve the concept of the sovereign will and the distinction of the particular will and the general will, the majority will and the will of all. The strictly theological problems concerning God's freedom and man's freedom in relation to God's will are also reserved for treatment elsewhere.

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PAGE SECTIONS: When the text is printed in one column, the letters a and b refer to the upper and lower halves of the page. For example, in 53 JAMES: *Psychology*, 116a-119b, the passage begins in the upper half of page 116 and ends in the lower half of page 119. When the text is printed in two columns, the letters a and b refer to the upper and lower halves of the left-hand side of the page, the letters c and d to the upper and lower halves of the right-hand side of the page. For example, in 7 PLATO: *Symposium*, 163b-164c, the passage begins in the lower half of the left-hand side of page 163 and ends in the upper half of the right-hand side of page 164.

AUTHOR'S DIVISIONS: One or more of the main divisions of a work (such as PART, BK, CH, SECT) are sometimes included in the reference; line numbers, in brackets, are given in certain cases; *e.g.*, *Iliad*, BK II [265–283] 12d.

BIBLE REFERENCES: The references are to book, chapter, and verse. When the King James and Douay versions differ in title of books or in the numbering of chapters or verses, the King James version is cited first and the Douay, indicated by a (*D*), follows; *e.g.*, OLD TESTAMENT: *Nehemiah*, 7:45—(*D*) *II Esdras*, 7:46.

SYMBOLS: The abbreviation "esp" calls the reader's attention to one or more especially relevant parts of a whole reference; "passim" signifies that the topic is discussed intermittently rather than continuously in the work or passage cited.

For additional information concerning the style of the references, see the Explanation of Reference Style; for general guidance in the use of *The Great Ideas*, consult the Preface.

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23 HOBBES: *Leviathan*, PART I, 64b-c
31 DESCARTES: *Meditations*, IV, 90b-93a / *Objections and Replies*, 126a-b; DEF I 130a; AXIOM VII 132a; 228c
31 SPINOZA: *Ethics*, PART III, PROP 4-11 398d-400b; PART IV, PROP 9-19 426d-429d; PROP 63 443d-444a
35 LOCKE: *Human Understanding*, BK II, CH VII, SECT 3 131d-132a; CH XX, SECT 6 177a-b; CH XXI, SECT 29-57 184d-193c passim; SECT 73 198c-199c
42 KANT: *Pure Reason*, 164a-165c; 236d-237a / / *Fund. Prin. Metaphysic of Morals*, 259a-c; 262a-c; 264d-265b; 279b,d-287d esp 282b-283d, 284d-285a / *Practical Reason*, 298a-300a; 301a; 304a-d; 315c; 318c-d; 327a-329a; 330c-331a; 341c-342a / *Intro. Metaphysic of Morals*, 385c-386b; 389a-390a,c / *Judgement*, 571c-572a; 605d-606b [fn 2]
46 HEGEL: *Philosophy of Right*, INTRO, par 25-26 18a-c; PART I, par 35 21a-b; ADDITIONS, 22 120c-d / *Philosophy of History*, INTRO, 166b; PART IV, 362b-d
49 DARWIN: *Descent of Man*, 310c-d; 592b-d
53 JAMES: *Psychology*, 790a-799b esp 792b-795b, 798b-799b; 807a-814b
54 FREUD: *General Introduction*, 592d-593a

2b(1) The rational determination of the will's acts by judgments concerning good and evil or by the moral law

8 ARISTOTLE: *Topics*, BK VI, CH 8 [146^{b}36-147^{a}11] 200d-201a / *Metaphysics*, BK XII, CH 7 [1072^{a}26-29] 602b / *Soul*, BK III, CH 7 [431^{b}1-12] 664a-b; CH 9 [432^{b}13] CH 10 [433^{b}18] 665a-666c; CH 10 [433^{b}27-30] 666c-d
9 ARISTOTLE: *Motion of Animals*, CH 6 [700^{b}15] -CH 7 [701^{a}39] 235d-236d / *Ethics*, BK III, CH 2 357b-358a; CH 3 [1113^{a}3]-CH 4 [1113^{b}1] 359a-c; BK VI, CH 2 387d-388b; CH 13 394b-d / *Rhetoric*, BK I, CH 10 611c-613a passim
12 LUCRETIUS: *Nature of Things*, BK IV [877-891] 55d
14 PLUTARCH: *Pericles*, 121b / *Timoleon*, 197c-198a
17 PLOTINUS: *Sixth Ennead*, TR VIII, CH 1-4 342d-344d
19 AQUINAS: *Summa Theologica*, PART I, Q 6, A 1, REP 2 28b-d; Q 19, A 7, ANS 114d-115d; Q 21, A 1, REP 2 124b-125b; Q 27, A 3, REP 3 155c-156a; Q 59, A 1, REP 3 306c-307b; Q 82, A 2, ANS and REP 3 432d-433c; A 3, REP 2 433c-434c; A 4 434c-435c; Q 83, A 3 438d-439c; A 4, REP 3 439c-440b; Q 87, A 4 468b-d; PART I-II, Q 1, A 6, REP 3 614a-c; Q 3, A 4, REP 3-4 625a-626b; Q 8, A 1, ANS and REP 3 655b-656a; Q 9, A 1 657d-658d; A 3, REP 3 659c-660a; A 4, ANS 660a-d; A 6, REP 2-3 662a-d; Q 12, A 1, REP 1,3 669c-670b; A 5, ANS 672a-c; Q 13, A 1 672d-673c; A 3, ANS 674c-675a; A 5 675c-676b; Q 14 677b-681a; Q 15, A 3, ANS 682c-683b; A 4 683b-684a; Q 16, A 1, REP 1 684b-d; Q 17, A 5 689c-690b; Q 19, A 3 704c-705a; A 5, ANS 705d-707a; A 10, ANS and REP 1 710b-711d; Q 20, A 1, ANS and REP 1 712a-d
21 DANTE: *Divine Comedy*, HELL, I [1]-III [21] 1a-4b; PURGATORY, XVI [52-84] 77b-d; XVIII [1-75] 79d-80c
27 SHAKESPEARE: *Troilus and Cressida*, ACT II, SC II [51-67] 114a-b; [163-182] 115b-c
30 BACON: *Advancement of Learning*, 66c-d
31 DESCARTES: *Rules*, I, 1d-2a / *Discourse*, PART III, 50b / *Meditations*, IV 89a-93a / *Objections and Replies*, 125b-c; AXIOM VII 132a; 141d; 216b-c; 228c
31 SPINOZA: *Ethics*, PART III, PROP 9, SCHOL 399c; PART IV, PROP 61 443a-b; PROP 63 443d-444a; APPENDIX, III 447b; XXXII 450c-d
35 LOCKE: *Human Understanding*, BK II, CH XXI, SECT 33 186a; SECT 37 187a-b; SECT 48-49 190c-191a
38 ROUSSEAU: *Inequality*, 337d-338a
42 KANT: *Pure Reason*, 169c-170a / *Fund. Prin. Metaphysic of Morals*, 264d-265b esp 265b; 271c-d; 279b,d; 282d-283b / *Practical Reason*, 298a-300a; 306d-307a; 318c-321b esp 319c-d / *Prel. Metaphysical Elements of Ethics*, 367c / *Science of Right*, 397b-398a / *Judgement*, 477b-c; 571c-572a; 605d-606b [fn 2]
46 HEGEL: *Philosophy of Right*, PART II, par 139 48d-49b; ADDITIONS, 90-91 130b-131d
49 DARWIN: *Descent of Man*, 310d
53 JAMES: *Psychology*, 796a-798b; 807a-808a

2b(2) The sensitive determination of the will's acts by estimations of benefit and harm, or pleasure and pain: the impulsion of the passions

8 ARISTOTLE: *Soul*, BK III, CH 10 [433^{a}21-31] 665d-666a; [433^{b}5-13] 666b; CH 11 [434^{a}10-15] 666d-667a
9 ARISTOTLE: *Ethics*, BK III, CH 1 [1111^{a}21]-CH 2 [1111^{b}19] 357a-c; CH 4 359a-c; BK X, CH 1 [1172^{a}18-27] 426a; CH 2 [1172^{b}35-1173^{a}4] 427a / *Rhetoric*, BK I, CH 10 611c-613a passim
12 AURELIUS: *Meditations*, BK VII, SECT 55 283b-c
19 AQUINAS: *Summa Theologica*, PART I-II, Q 6, A 4, REP 3 647b-648a; AA 6-7 649a-650d; Q 9, A 2 658d-659c; A 4, CONTRARY 660a-d; A 5, ANS and REP 2-3 660d-662a; Q 10, A 3 664d-665c
20 AQUINAS: *Summa Theologica*, PART I-II, Q 77, A 1 145a-d
21 DANTE: *Divine Comedy*, HELL, I [1]-III [21]

(2b. The motivation of the will. 2b(2) The sensitive determination of the will's acts by estimations of benefit and harm, or pleasure and pain: the impulsion of the passions.)

1a-4b; PURGATORY, XVIII [1-75] 79d-80c; PARADISE, I [97-142] 107b-d

22 CHAUCER: *Manciple's Tale* [17,097-144] 490a-b

23 HOBBES: *Leviathan*, PART I, 64a-c

31 SPINOZA: *Ethics*, PART IV, PROP 9-18 426d-429d

35 LOCKE: *Human Understanding*, BK II, CH VII, SECT 3 131d-132a; CH XX, SECT 6 177a-b; CH XXI, SECT 12 180d-181a; SECT 31 185c-d; SECT 34-35 186a-d; SECT 40 187d-188b

38 ROUSSEAU: *Inequality*, 337d-338a

42 KANT: *Pure Reason*, 164a-165c; 234c-236a esp 235c-d / *Fund. Prin. Metaphysic of Morals*, 259a-b; 260a-c; 265b; 284d-285a / *Practical Reason*, 298d-300a; 306d-307a; 341c-342a / *Intro. Metaphysic of Morals*, 385c-386b / *Judgement*, 477b-c; 571c-572a; 605d-606b [fn 2]

43 MILL: *Liberty*, 269c-270c passim / *Utilitarianism*, 463c-464d

49 DARWIN: *Descent of Man*, 310c-d; 316a-317a; 592b-d

53 JAMES: *Psychology*, 796b-797b; 799a-b; 808b-814b; 829b-830a

54 FREUD: *Interpretation of Dreams*, 363b-364b; 377c-378b / *Instincts*, 412c-414b passim, esp 413d-414a; 419a-420a / *General Introduction*, 592d-593a / *Beyond the Pleasure Principle*, 639a-640c / *Ego and Id*, 702c-d / *New Introductory Lectures*, 838c-d

2c. The acts of the will

2c(1) The classification and order of the will's acts: means and ends

9 ARISTOTLE: *Ethics*, BK I, CH 2 [1094a18-22] 339b; CH 4 [1095a13-20] 340b; BK III, CH 2 [1111b20-29] 357c-d; CH 3 [1112b13-1113a12] 358c-359a; CH 5 [1113b3-5] 359c; BK VI, CH 2 387d-388b

19 AQUINAS: *Summa Theologica*, PART I, Q 19, A 2, REP 2 109c-110b; A 5, ANS 112d-113c; Q 20, A 1, ANS and REP 3 120a-121b; Q 83, A 4, ANS and REP 1-2 439c-440b; PART I-II, Q 1, A 6 614a-c; Q 6, A 4, ANS 647b-648a; Q 8, A 2, ANS and REP 1 656a-d; A 3 657a-c; Q 9, A 3 659c-660a; A 4, ANS 660a-d; Q 12, A 4 671c-672a; Q 13, A 3 674c-675a; Q 15, A 3 682c-683b; Q 16, A 3 685b-686a; Q 19, AA 7-8 708a-709d

31 DESCARTES: *Discourse*, PART III, 50b

35 LOCKE: *Human Understanding*, BK II, CH XXI, SECT 52-53 191d-192b

42 KANT: *Fund. Prin. Metaphysic of Morals*, 256a-b; 257c-d; 265c-267b; 274d-275b / *Practical Reason*, 327d-329a / *Pref. Metaphysical Elements of Ethics*, 367c

53 JAMES: *Psychology*, 51a-b

2c(2) The several acts of the will with respect to ends: their antecedents and consequences

8 ARISTOTLE: *Soul*, BK III, CH 10 [433a13-31] 665d-666a; [433b5-18] 666b-c

9 ARISTOTLE: *Ethics*, BK III, CH 2 [1111b20-29] 357c-d; CH 3 [1112b13-1113a3] 358c-359a; CH 4 359a-c; BK VI, CH 2 387d-388b

19 AQUINAS: *Summa Theologica*, PART I, Q 20, A 1, ANS and REP 3 120a-121b; PART I-II, QQ 8-12 655a-672c

42 KANT: *Fund. Prin. Metaphysic of Morals*, 256a-b; 265c-267b esp 266a-c; 271d-279d esp 273d-277b / *Practical Reason*, 327d-329a / *Pref. Metaphysical Elements of Ethics*, 367c / *Judgement*, 586a-b; 594b-595d

53 JAMES: *Psychology*, 767a-798a esp 767a-768a, 788a-b, 790a, 791b-792b, 796a-b

2c(3) The several acts of the will with respect to means: their antecedents and consequences

8 ARISTOTLE: *Soul*, BK III, CH 10 [433a13-31] 665d-666a

9 ARISTOTLE: *Ethics*, BK III, CH 2-3 357b-359a; BK VI, CH 2 387d-388b

19 AQUINAS: *Summa Theologica*, PART I, Q 59, A 3, REP 1 308b-309a; Q 60, A 2 311a-d; A 3, ANS 311d-312b; Q 83, A 3 438d-439c; PART I-II, Q 9, A 3, ANS and REP 1 659c-660a; A 4, ANS 660a-d; QQ 13-17 672d-693d

42 KANT: *Fund. Prin. Metaphysic of Morals*, 265c-267d esp 266c-267d / *Judgement*, 586a-b

53 JAMES: *Psychology*, 767a-790a esp 767a-768a; 827a-835a

3. The functioning of will in human conduct and thought

3a. The role of the will in behavior

8 ARISTOTLE: *Metaphysics*, BK VI, CH 1 [1025b 22-25] 547d; BK IX, CH 5 [1047b35-1048a24] 573b-c; CH 7 [1049a5-8] 574c / *Memory and Reminiscence*, CH 2 [453a15-31] 695b-d

9 ARISTOTLE: *Motion of Animals*, CH 6-11 235d-239d / *Ethics*, BK III, CH 1-5 355b,d-361a; BK VI, CH 2 387d-388b

12 LUCRETIUS: *Nature of Things*, BK II [251-293] 18b-d; BK IV [877-891] 55d

12 EPICTETUS: *Discourses*, BK I, CH 11 116d-118d

18 AUGUSTINE: *Confessions*, BK VIII, par 19-27 58b-60c

19 AQUINAS: *Summa Theologica*, PART I, Q 14, A 8, ANS 82c-83b; Q 18, A 3, ANS 106b-107c; Q 19, A 4, ANS and REP 4 111c-112c; Q 20, A 1, REP 1 120a-121b; Q 25, A 1, REP 4 143d-144c; PART I-II, Q 1 609a-615c; Q 3, A 4, REP 3-4 625a-626b; Q 6 644a-651c; Q 9, A 1, ANS and REP 3 657d-658d; Q 11, A 1, REP 2 666b,d-667a; Q 12, A 1, ANS 669c-670b; Q 13, AA 4-5 675a-676b; QQ 16-17 684a-693d; Q 18, A 6,

ANS 697d-698c; A 7, ANS 698c-699c; Q 20 712a-716d; Q 21, A 2 718a-d

23 HOBBES: *Leviathan*, PART I, 64a-c; PART IV, 272a

30 BACON: *Advancement of Learning*, 55b-d; 67a-b

35 LOCKE: *Human Understanding*, BK II, CH XXI, SECT 5, 179c; BK IV, CH X, SECT 19 354a-c

35 HUME: *Human Understanding*, SECT VII, DIV 51-52 472b-473c; DIV 58 476a-b

42 KANT: *Pure Reason*, 169c-170a / *Fund. Prin. Metaphysic of Morals*, 264d-265a; 275b; 279b,d-287d esp 282b-283d / *Practical Reason*, 293d [fn 3]; 296a-d; 307d-314d; 331c-337a,c / *Intro. Metaphysic of Morals*, 383c-d; 385a-c / *Judgement*, 463a-467a; 571c-572a; 587a-588a; 607c

46 HEGEL: *Philosophy of Right*, PART I, par 72 31c; PART II, par 115 42b-c / *Philosophy of History*, INTRO, 165a-166b

53 JAMES: *Psychology*, 291a-295a; 790a-798b esp 792a-b, 794a-795a, 797b-798a; 807a-808a

54 FREUD: *Ego and Id*, 715c-716a / *New Introductory Lectures*, 838b

3a(1) The distinction between the voluntary and the involuntary: the conditions of voluntariness; comparison of men and animals with respect to voluntary behavior

7 PLATO: *Laws*, BK IX, 746a-748d

8 ARISTOTLE: *Metaphysics*, BK V, CH 5 [1015^{a} 27-^{b}3] 535d; BK IX, CH 5 573a-c / *Soul*, BK III, CH 9-11 664d-667a

9 ARISTOTLE: *Motion of Animals*, CH 11 239a-d / *Ethics*, BK III, CH 1 [1109^{b}30]-CH 2 [1111^{b}9] 355b,d-357b; CH 5 359c-361a; BK V, CH 8 [1135^{a}15]-CH 9 [1136^{b}14] 383a-384d; BK VI, CH 2 [1139^{a}17-21] 387d / *Rhetoric*, BK I, CH 10 [1368^{b}7-13] 611d; CH 13 [1373^{b}27-37] 618a

10 GALEN: *Natural Faculties*, BK I, CH 12, 173a-c

12 EPICTETUS: *Discourses*, BK III, CH 7, 183c-184a

17 PLOTINUS: *Sixth Ennead*, TR VIII, CH 1-4 342d-344d

19 AQUINAS: *Summa Theologica*, PART I, Q 18, A 3, ANS 106b-107c; Q 19, A 12, REP 2 118d-119d; Q 41, A 2 218c-219d; Q 47, A 1, REP 1 256a-257b; Q 81, A 3, ANS and REP 2 430c-431d; Q 82, A 1, ANS and REP 1,3 431d-432c; Q 105, A 4, REP 2-3 541c-542a; PART I-II, Q 1, A 2, ANS 610b-611b; Q 6 644a-651c; Q 7, A 2, ANS 652d-653c; Q 9, A 4, REP 1 660a-d; Q 11, A 2, ANS 667b-d; Q 13, A 2 673c-674c; Q 15, A 2 682a-c; Q 16, A 2 684d-685b; Q 18, A 6, ANS 697d-698c; Q 19, A 6, ANS and REP 3 707a-708a; Q 20, A 2, REP 3 712d-713c; Q 21, A 2, ANS 718a-d

20 AQUINAS: *Summa Theologica*, PART I-II, Q 72, A 3, ANS and REP 1-2 113b-114a

23 HOBBES: *Leviathan*, PART I, 61a-b; 64b-c; 87c; 93c

28 HARVEY: *On Animal Generation*, 456c-458a passim

33 PASCAL: *Provincial Letters*, 24b-26b

35 LOCKE: *Human Understanding*, BK II, CH XXI, SECT 5, 179c; SECT 7-11 180a-d

38 ROUSSEAU: *Inequality*, 337d-338a

42 KANT: *Pure Reason*, 164a-165c esp 164b-c; 234c-236a esp 235c-d; 236d-237a / *Fund. Prin. Metaphysic of Morals*, 264d-265a; 279b,d; 282d-283b; 284d-285a; 286c-287d / *Practical Reason*, 296a-d; 307d-314d; 331c-337a,c / *Intro. Metaphysic of Morals*, 386b-d / *Judgement*, 587a-588a

46 HEGEL: *Philosophy of Right*, PART II, par 115 42b-c; par 117 42c-d; par 139 48d-49b; ADDITIONS, 5 116d-117a; 10 117d-118a; 90 130b-d

49 DARWIN: *Origin of Species*, 120b-c / *Descent of Man*, 291b; 292c-294c passim

50 MARX: *Capital*, 85c-d

51 TOLSTOY: *War and Peace*, BK XII, 548d-549d; BK XIII, 578b-579d; EPILOGUE II, 689c-690a

53 JAMES: *Psychology*, 4a-7a; 8a-b; 9a-17b esp 11b-12a, 13a-14b, 17a-b; 47b-52b esp 49a-b, 51a-52a; 71b [fn 1]; 269a-274a esp 272a-273a; 291a-295a esp 293a, 294b-295a; 691a-b; 704a-706b; 767b-790a esp 767b-768a, 790a; 827a-835a esp 827b

54 FREUD: *Origin and Development of Psycho-Analysis*, 13a-c / *General Introduction*, 454b-476a,c passim, esp 473b-d

3a(2) The range of purposive conduct: the relation of habit and instinct to the voluntary

8 ARISTOTLE: *Metaphysics*, BK IX, CH 5 573a-c / *Soul*, BK II, CH 5 [417^{a}21-418^{a}3] 647d-648c; BK III, CH 4 [429^{b}5-9] 661d

9 ARISTOTLE: *Ethics*, BK III, CH 5 359c-361a

18 AUGUSTINE: *Confessions*, BK VIII, par 10-11 55c-56b

19 AQUINAS: *Summa Theologica*, PART I, Q 18, A 3, ANS 106b-107c; Q 83, A 2, ANS 438a-d; Q 115, A 4, ANS 589d-590c; PART I-II, Q 6, A 4, REP 3 647b-648a; Q 12, A 5, ANS and REP 3 672a-c; Q 13, A 2 673c-674c

20 AQUINAS: *Summa Theologica*, PART I-II, Q 50, A 1, REP 1 6a-7b; A 3 8b-9a; A 5, REP 1,3 10b-d; Q 71, A 4, ANS and REP 3 108b-109a; Q 94, A 1, REP TO CONTRARY 221a-d

25 MONTAIGNE: *Essays*, 39a-40a; 179b-c

28 HARVEY: *On Animal Generation*, 456c-458a passim

42 KANT: *Fund. Prin. Metaphysic of Morals*, 256d-257a; 264d-265a; 279b,d-287d esp 282b-283d / *Practical Reason*, 316c-317a / *Pref. Metaphysical Elements of Ethics*, 378a-b

43 MILL: *Utilitarianism*, 463c-464d

44 BOSWELL: *Johnson*, 135c-136a

46 HEGEL: *Philosophy of Right*, INTRO, par 17 16c; PART I, par 41 22c-d; PART II, par 123 44a-b; ADDITIONS, 11 118a; 78 128c-d

49 DARWIN: *Descent of Man*, 288b-d

(3a. The role of the will in behavior. 3a(2) The range of purposive conduct: the relation of habit and instinct to the voluntary.)

51 TOLSTOY: *War and Peace*, EPILOGUE I, 665a-d
53 JAMES: *Psychology*, 8a-9a; 71b [fn 1]; 74b-78b esp 75b, 77a-b; 80a; 90b-93a esp 92a-93a; 691a-b; 704a-706b esp 706a-b; 767b-768a; 774a; 788a-789a; 790b-791a

3b. The role of the will in thought

8 ARISTOTLE: *Soul*, BK II, CH 5 [417^{a}21-^{b}1] 647d-648a; BK III, CH 4 [429^{b}5-9] 661d / *Memory and Reminiscence*, CH 2 [453^{a}15-31] 695b-d
12 LUCRETIUS: *Nature of Things*, BK IV [777-817] 54b-d
18 AUGUSTINE: *Confessions*, BK VIII, par 20-21 58c-59a
19 AQUINAS: *Summa Theologica*, PART I-II, Q 6, A 7, REP 3 650a-d; Q 9, A 1, ANS and REP 3 657d-658d; Q 10, A 2, ANS 663d-664d; Q 11, A 1, REP 1 666b,d-667a; Q 13, A 4, REP 2 675a-c; Q 14, A 1, REP 1 677b-678a; Q 16, A 1, REP 3 684b-d; A 4, ANS 686a-d; Q 17, A 1, ANS 686d-687c; Q 19, A 3, REP 3 704c-705a
31 DESCARTES: *Meditations*, III, 83b-c; IV 89a-93a passim / *Objections and Replies*, 125c-126b; 167a-b; 215d-216c
31 SPINOZA: *Ethics*, PART II, PROP 49, DEMONST-SCHOL, 391c-392c
33 PASCAL: *Pensées*, 99 191a / *Geometrical Demonstration*, 439b-441b
35 LOCKE: *Human Understanding*, BK II, CH XXI, SECT 5, 179c; SECT 12 180d-181a; SECT 17-19 182a-c; SECT 38, 187c; BK IV, CH XIII 363c-364b; CH XX, SECT 15-16 393a-394a
35 HUME: *Human Understanding*, SECT VII, DIV 53 473c-474b
42 KANT: *Pure Reason*, 240b-243c
46 HEGEL: *Philosophy of Right*, INTRO, par 5-9 13a-14d; par 13 15c-d
53 JAMES: *Psychology*, 381b-385b; 666b-667a; 818b-820b esp 820a

3b(1) The distinction between knowledge and opinion in relation to the willful in thought: the will to believe and wishful thinking

12 LUCRETIUS: *Nature of Things*, BK IV [777-817] 54b-d
19 AQUINAS: *Summa Theologica*, PART I-II, Q 13, A 4, REP 2 675a-c; Q 17, A 6, ANS 690b-d
20 AQUINAS: *Summa Theologica*, PART I-II, Q 67, A 3, ANS 83b-84d; PART II-II, Q 2, A 1 391a-392a
24 RABELAIS: *Gargantua and Pantagruel*, BK III, 148a-150d; 154a-156c; 159d-163c; 166a-171a; 175c-178a
28 HARVEY: *Motion of the Heart*, 283b
30 BACON: *Advancement of Learning*, 27a-c; 38d-39a
31 DESCARTES: *Objections and Replies*, 125c-126b
31 SPINOZA: *Ethics*, PART I, APPENDIX 369b-372d
35 LOCKE: *Human Understanding*, BK IV, CH XIII 363c-364b; CH XX, SECT 15-16 393a-394a
42 KANT: *Pure Reason*, 240b-243c / *Judgement*, 601d
43 MILL: *Liberty*, 269c-270c
51 TOLSTOY: *War and Peace*, BK XIII, 585b
53 JAMES: *Psychology*, 636a-b; 644a-b; 652a-659a passim, esp 653a-654a, 659b [fn 1]; 660b-661b; 820a-b
54 FREUD: *War and Death*, 760d-761a / *New Introductory Lectures*, 819b-c; 874c-d; 882a-b

3b(2) The will as cause of error

31 DESCARTES: *Meditations*, IV 89a-93a esp 90b-91b / *Objections and Replies*, 167a-b; 215d-216c
31 SPINOZA: *Ethics*, PART II, PROP 49, SCHOL, 392c-393c

3b(3) Religious faith as dependent on an act of will or practical reason

18 AUGUSTINE: *Confessions*, BK I, par 1 1a-b; BK VI, par 6-8 36c-37c; BK VIII, par 10-12 55c-56b; par 18-25 57d-60a; par 28-29 60d-61a
20 AQUINAS: *Summa Theologica*, PART II-II, Q 2, A 1, REP 3 391a-392a; AA 9-10 398c-400b; Q 4, A 2 403d-404c
30 BACON: *Advancement of Learning*, 41b-d
31 DESCARTES: *Rules*, III, 4d-5a / *Objections and Replies*, 125c-126b
33 PASCAL: *Pensées*, 252 219a-220a; 268-282 222a-223b; 284 223b-224a; 287 224a-b / *Geometrical Demonstration*, 440a-b
35 LOCKE: *Toleration*, 15b
40 GIBBON: *Decline and Fall*, 296b-c
42 KANT: *Judgement*, 604d-606d esp 606a-d; 607c-610a esp 607c
46 HEGEL: *Philosophy of History*, PART IV, 350a-b
51 TOLSTOY: *War and Peace*, BK V, 196a-198b
53 JAMES: *Psychology*, 652b-653a; 661b; 826b-827a

4. The divine will

NEW TESTAMENT: *Romans*, 12:1-2 / *Ephesians*, 1:9-11 / *II Timothy*, 1:8-10
12 EPICTETUS: *Discourses*, BK IV, CH 1, 218b-219a; CH 3, 224d
18 AUGUSTINE: *Confessions*, BK VII, par 6 44d-45a; BK XI, par 12 92b; BK XII, par 18, 103a-b; BK XIII, par 5 111d / *City of God*, BK X, CH 7, 303a; BK XII, CH 14 350d-351b; CH 17, 354a; BK XXII, CH 2 587b-588a
19 AQUINAS: *Summa Theologica*, PART I, QQ 19-21 108d-127c; Q 59, A 1, ANS 306c-307b; A 2, ANS 307c-308b; Q 60, A 1, REP 2 310b-311a; Q 61, A 2, REP 1 315c-316a; Q 62, A 6, REP 1 322a-d; Q 63, A 1, ANS 325c-326c; Q 66, A 2, ANS 345d-347b; PART I-II, Q 1, A 2, REP 3 610b-611b; Q 10, A 1, REP 2 662d-663d; Q 19, AA 9-10 709d-711d; Q 39, A 2, REP 3 790d-791b

20 AQUINAS: *Summa Theologica*, PART I–II, Q 93, A 4, REP 1 218b-d; Q 97, A 3, REP 1 237b-238b; PART III, Q 18 810a-815d; Q 21, A 1, ANS 823d-824d; A 4, ANS 826b-827c; PART III SUPPL, Q 72, A 3, ANS and REP 5 920c-922b
21 DANTE: *Divine Comedy*, PARADISE, III [64–90] 110a-b; XIX [86–90] 135d-136a
23 HOBBES: *Leviathan*, PART II, 113b-c; 162c
30 BACON: *Advancement of Learning*, 38a
31 DESCARTES: *Objections and Replies*, 228a-c
31 SPINOZA: *Ethics*, PART I, DEF 7 355b; PROP 16–17 362a-363c; PROP 32–35 367a-369a; APPENDIX 369b-372d; PART II, PROP 3, SCHOL 374b-c; PART IV, PREF 422b,d-424a
32 MILTON: *Paradise Lost*, BK III [80–134] 137a-138a; BK VII [139–173] 220a-221a
35 BERKELEY: *Human Knowledge*, SECT 29–33 418c-419a
41 GIBBON: *Decline and Fall*, 150c-151b
42 KANT: *Fund. Prin. Metaphysic of Morals*, 265b-c; 276b-277a / *Practical Reason*, 303b-304a; 321b-c; 324b-325a; 325d-326a; 328b
51 TOLSTOY: *War and Peace*, EPILOGUE II, 675a-677b; 680b-c; 684b-d

4a. The relation of the divine will and intellect

18 AUGUSTINE: *Confessions*, BK XIII, par 19 115c-d / *City of God*, BK XII, CH 18 354a-d
19 AQUINAS: *Summa Theologica*, PART I, Q 14, A 8, ANS and REP 1 82c-83b; Q 19, A 1, ANS 108d-109c; A 2, REP 2–4 109c-110b; A 3, REP 6 110b-111c; A 4, ANS and REP 4 111c-112c; A 6, REP 2 113c-114d; A 11, REP 1 118b-d; Q 21, A 1, REP 2 124b-125b; A 2 125c-d; QQ 22–24 127c-143c; Q 25, A 1, REP 4 143d-144c; Q 26, A 2, REP 2 150c-151a; Q 27, AA 3-5 155c-157c; Q 50, A 1, ANS 269b-270a; Q 54, A 2, ANS 285d-286c; Q 59, A 2, ANS 307c-308b; Q 105, A 1, REP 2 538d-539c; PART I–II, Q 1, A 4, REP 1 612a-613a
23 HOBBES: *Leviathan*, PART IV, 271b
31 DESCARTES: *Objections and Replies*, 228a-c; 229c-d
31 SPINOZA: *Ethics*, PART I, PROP 17 362b-363c; PROP 32–33 367a-369a esp PROP 33, SCHOL 1–2 367c-369a
42 KANT: *Fund. Prin. Metaphysic of Morals*, 265a-c / *Practical Reason*, 303b-304a; 321b-c; 324b-325a

4b. The freedom of the divine will: the divine will in relation to the possible and the impossible

OLD TESTAMENT: *Exodus*, 33:19 / *Psalms*, 135:6 —(*D*) *Psalms*, 134:6 / *Isaiah*, 14:24–27; 46:9–13—(*D*) *Isaias*, 14:24–27; 46:9–12 / *Jeremiah*, 51:29—(*D*) *Jeremias*, 51:29 / *Daniel*, 4:34–35 —(*D*) *Daniel*, 4:31–32
NEW TESTAMENT: *Matthew*, 20:1–16 / *John*, 5:21 / *Romans*, 8:28–39; 9:15–26 / *I Corinthians*, 12:18 / *Ephesians*, 1:3–11 esp 1:9, 1:11 / *James*, 1:18
9 ARISTOTLE: *Ethics*, BK VI, CH 2 [1139^{b}5–11] 388a-b
17 PLOTINUS: *Sixth Ennead*, TR VIII 342d-353d
18 AUGUSTINE: *Confessions*, BK VII, par 6 44d-45a; BK XIII, par 45 123a / *City of God*, BK V, CH 10 215c-216c; BK XXI, CH 7–8 565d-568d; BK XXII, CH 30, 617d-618a
19 AQUINAS: *Summa Theologica*, PART I, Q 19, AA 3–4 110b-112c; A 10 117d-118b; Q 22, A 3, REP 3 130d-131c; Q 23, A 5, REP 3 135d-137d; A 6, REP 3 137d-138c; Q 25, AA 3–6 145b-150a; Q 41, A 2 218c-219d; Q 46, A 1, REP 9–10 250a-252d; Q 47, A 1, REP 1 256a-257b; Q 59, A 2, ANS 307c-308b; Q 60, A 1, REP 2 310b-311a; Q 61, A 2, REP 1 315c-316a; Q 76, A 5, REP 1 394c-396a; Q 104, AA 3–4 537b-538c; PART I–II, PROLOGUE 609a,c
20 AQUINAS: *Summa Theologica*, PART III SUPPL, Q 91, A 1, REP 2 1016b-1017c
31 DESCARTES: *Meditations*, IV, 90b / *Objections and Replies*, 228a-c; 229c-d
31 SPINOZA: *Ethics*, PART I, DEF 7 355b; PROP 16–17 362a-363c esp PROP 17, SCHOL 362c-363c; PROP 32–35 367a-369a; APPENDIX 369b-372d; PART II, PROP 3, SCHOL 374b-c; PART IV, PREF 422b,d-424a
32 MILTON: *Paradise Lost*, BK VII [139–173] 220a-221a / *Samson Agonistes* [300–329] 346a-b
35 LOCKE: *Human Understanding*, BK II, CH XXI, SECT 50–51 191b-c
35 BERKELEY: *Human Knowledge*, SECT 106 433c-d
42 KANT: *Practical Reason*, 303b-304b / *Intro. Metaphysic of Morals*, 393c / *Judgement*, 594d [fn 1]
51 TOLSTOY: *War and Peace*, EPILOGUE II, 684c-d; 685c; 693b

5. The freedom of the will

5a. Interpretations of the meaning of free will

5a(1) The freedom of the will as consisting in a freely determined choice or a free judgment of the reason

18 AUGUSTINE: *Confessions*, BK IX, par 1 61c-d / *City of God*, BK XXII, CH 30, 617c-618a
19 AQUINAS: *Summa Theologica*, PART I, Q 19, A 10 117d-118b; Q 59, A 3 308b-309a; Q 62, A 3, REP 2 319c-320b; A 8, REP 2-3 323c-324a; Q 82, A 1, REP 3 431d-432c; Q 83 436c-440b; PART I–II, Q 1, A 1, ANS 609b-610b; A 2, ANS 610b-611b; Q 6, A 2, ANS and REP 2 646a-c; Q 13, A 6 676c-677b; Q 17, A 1, REP 2 686d-687c
21 DANTE: *Divine Comedy*, PURGATORY, XVI [52–84] 77b-d; XVIII [1–75] 79d-80c
31 DESCARTES: *Discourse*, PART III, 49b-d; 50b / *Meditations*, IV, 90b-91b / *Objections and Replies*, AXIOM VII 132a; 141b; 141d; 228c
32 MILTON: *Paradise Lost*, BK III [80–134] 137a-138a

(*5a. Interpretations of the meaning of free will. 5a(1) The freedom of the will as consisting in a freely determined choice or a free judgment of the reason.*)

33 PASCAL: *Provincial Letters*, 154b-159a
35 LOCKE: *Human Understanding*, BK II, CH XXI, SECT 48-54 190c-192c passim; SECT 57 193b-c; SECT 73 198c-199c
38 ROUSSEAU: *Inequality*, 337d-338a
44 BOSWELL: *Johnson*, 392d-393a
53 JAMES: *Psychology*, 388a; 787a; 820b-822a esp 821b-822a; 825a-826a

5a(2) The freedom of the will as consisting in the freedom of a man to act or not to act: freedom from external constraints or coercions

23 HOBBES: *Leviathan*, PART I, 59b; 86c; PART II, 112d-113a
35 LOCKE: *Human Understanding*, BK II, CH XXI, SECT 7-27 180a-184c; SECT 57 193b-c; SECT 73 198c-199c; CH XXIII, SECT 18 209a
35 HUME: *Human Understanding*, SECT VIII, DIV 73 483c-484a

5a(3) The freedom of the will as consisting in a totally uncaused or spontaneous act

12 LUCRETIUS: *Nature of Things*, BK II [251-293] 18b-d
31 SPINOZA: *Ethics*, PART I, DEF 7 355b; PROP 17, COROL 1-2 and SCHOL 362b-363c; PROP 32 367a-b; PART II, PROP 48 391a-c
42 KANT: *Pure Reason*, 140b,d-143a esp 141b,d-142d; 164a-165c; 167d-171a; 237a-b / *Fund. Prin. Metaphysic of Morals*, 279b,d-280a; 281c-283b; 285a d / *Practical Reason*, 292a-293b; 296a-b; 301d-302a; 304a-b; 307d-308c; 311a-b; 327d-328a / *Intro. Metaphysic of Morals*, 383c-d; 386b-d; 392d-393c / *Judgement*, 463a-465c; 571c-572a
51 TOLSTOY: *War and Peace*, EPILOGUE II, 692c-694d
53 JAMES: *Psychology*, 223a-b; 388a; 787a

5a(4) The freedom of the will as the autonomy of the reason legislating for itself: the identity of pure will and free will

42 KANT: *Pure Reason*, 236d-237a / *Fund. Prin. Metaphysic of Morals*, 264d-265a; 279b,d-287d esp 280b-c, 283d-285a / *Practical Reason*, 291a-293c; 296a-d; 297a-314d esp 302a-d, 307d-311d, 314a-d; 326a-b; 327d-329a / *Intro. Metaphysic of Morals*, 386d-387a,c; 390b,d-391a; 392d-393c / *Judgement*, 463a-465c; 571c-572a; 587c-d
46 HEGEL: *Philosophy of Right*, INTRO, par 4-17 12d-16c passim, esp par 4 12d-13a, par 7 14a-c, par 14-15 15d-16b; par 22 17c-d; par 29 19a-b; PART II, par 106-107 40a-c; PART III, par 142 55a; par 149 56b; ADDITIONS, 4 116a-d; 7 117b-c; 12 118a-c; 17 119a; 67-68 126d-127a; 95 132b

5b. Arguments for the freedom of the will

5b(1) Man's immediate consciousness of his freedom of choice: reason's reflexive knowledge of its autonomy

18 AUGUSTINE: *Confessions*, BK VII, par 5 44c-d
31 DESCARTES: *Objections and Replies*, 141a-b; 216a
35 HUME: *Human Understanding*, SECT VIII, DIV 72, 483c-d [fn 1]
38 ROUSSEAU: *Inequality*, 338a
42 KANT: *Fund. Prin. Metaphysic of Morals*, 283b-d / *Practical Reason*, 291b-c; 302a-303b; 310b-311d / *Judgement*, 604c-d; 606c-607c
44 BOSWELL: *Johnson*, 392d-393a
51 TOLSTOY: *War and Peace*, EPILOGUE II, 688a-689b
53 JAMES: *Psychology*, 661a; 797b-798b; 820b-823a esp 821b-822a; 848b-849a

5b(2) The freedom of the will as deriving from the indetermination of practical reason judging particular goods

9 ARISTOTLE: *Ethics*, BK III, CH 2-3 357b-359a
19 AQUINAS: *Summa Theologica*, PART I, Q 19, A 3, ANS 110b-111c; Q 22, A 2, REP 4-5 128d-130d; Q 59, A 3, ANS 308b-309a; Q 82, A 2 432d-433c; Q 83, A 1 436d-438a; PART I-II, Q 6, A 2, REP 2 646a-c; Q 10, A 1, REP 3 662d-663d; AA 2-4 663d-666a,c; Q 13, A 6 676c-677b; Q 17, A 1, REP 2 686d-687c; A 6, ANS 690b-d
20 AQUINAS: *Summa Theologica*, PART I-II, Q 109, A 2, REP 1 339c-340b
35 LOCKE: *Human Understanding*, BK II, CH XXI, SECT 52-53 191d-192b; SECT 57 193b-c; SECT 73 198c-199c

5b(3) The deduction of free will from the moral law or from the fact of pure practical reason

42 KANT: *Pure Reason*, 164a-171a; 236d-237a / *Fund. Prin. Metaphysic of Morals*, 279b,d-287d esp 280b-c, 282b-283d / *Practical Reason*, 291a-d; 302a-303b; 304a-d; 307d-314d esp 310b-311d; 331a-337a,c; 348b-349b / *Intro. Metaphysic of Morals*, 390b,d-391a

5b(4) Free will as a pragmatic option: the postulation of free will as an indispensable condition of moral responsibility and action

42 KANT: *Practical Reason*, 291b-d; 348b-349b
43 MILL: *Utilitarianism*, 471d-472a
51 TOLSTOY: *War and Peace*, EPILOGUE II, 688a-694d
53 JAMES: *Psychology*, 294a-295a; 820b-827a esp 822b-823a

5c. Arguments against the freedom of the will: free will as a violation of the course of nature or the reign of causality; the impossibility of proving free will

12 LUCRETIUS: *Nature of Things*, BK II [251–293] 18b-d
17 PLOTINUS: *Third Ennead*, TR I 78a-82b
18 AUGUSTINE: *City of God*, BK V, CH 9–10 213b-216c
19 AQUINAS: *Summa Theologica*, PART I, Q 83, A 1, REP 1–5 436d-438a; PART I–II, Q 13, A 6, REP 1–3 676c-677b
21 DANTE: *Divine Comedy*, PURGATORY, XVI [52–84] 77b-d
22 CHAUCER: *Nun's Priest's Tale* [15,238–256] 456b-457a
23 HOBBES: *Leviathan*, PART II, 113b
25 MONTAIGNE: *Essays*, 218c-219a
31 SPINOZA: *Ethics*, PART I, DEF 7 355b; PROP 16–17 362a-363c; PROP 26–APPENDIX 365b-372d; PART II, PROP 48–49 391a-394d; PART III, 395a-d; PART IV, PREF, 422b,d-423b
35 LOCKE: *Human Understanding*, BK I, CH II, SECT 14, 108d-109a; BK II, CH XXI, SECT 22–25 183b-184b; SECT 48–52 190c-191d passim, esp SECT 49 190d-191a
35 HUME: *Human Understanding*, SECT VIII 478b-487a
42 KANT: *Pure Reason*, 140b,d-143a; 164a-171a / *Fund. Prin. Metaphysic of Morals*, 279b,d-287d esp 282b-284d, 285c-287b / *Practical Reason*, 291a-293b; 296a-d; 301d-302d; 307d-314d esp 310b-311d; 331c-337a,c; 340a-342d / *Intro. Metaphysic of Morals*, 390b,d-391a / *Judgement*, 571c-572a
44 BOSWELL: *Johnson*, 392d-393a
51 TOLSTOY: *War and Peace*, EPILOGUE II, 692c-696d
53 JAMES: *Psychology*, 291a-295b esp 293a-294a, 295a-b; 822b-826a; 848b-849a
54 FREUD: *Origin and Development of Psycho-Analysis*, 13c / *General Introduction*, 454b-c; 462d; 486d

6. The analysis of the will's range of freedom

6a. The limitations on the freedom of the will: the distinction between acts of the will which are necessitated and acts of the will which are free

9 ARISTOTLE: *Ethics*, BK III, CH 2 357b-358a; CH 4–5 359a-361a passim, esp CH 5 [1114^a31–$^b25$] 360c-d; BK VI, CH 2 [1139^b5–11] 388a-b
12 EPICTETUS: *Discourses* 105a-245a,c esp BK I, CH I 105a-106c, CH 18 124a-125a, CH 29 134d-138a, BK II, CH 5 142c-144a, CH 10 148c-150a, CH 23 170a-172d, BK III, CH 2 177c-178d, CH 10 185d-187a, CH 14 189c-190a, CH 18 192a-c, BK IV, CH I 213a-223d
12 AURELIUS: *Meditations* 253a-310d esp BK II, SECT 16 259a, BK V, SECT 19 272a, BK VI, SECT 16 275b-d, SECT 22 276a, BK VII, SECT 16 280d, BK VIII, SECT 16–17 286d, SECT 28 287c, SECT 48 289c, BK X, SECT 34–35 301a-b, BK XII, SECT 3 307b-d
18 AUGUSTINE: *City of God*, BK V, CH 9–10 213b-216c
19 AQUINAS: *Summa Theologica*, PART I, Q 18, A 3, ANS 106b-107c; Q 19, A 3, ANS 110b-111c; A 10, ANS 117d-118b; Q 60, AA 2–3 311a-312b; Q 62, A 8 323c-324a; Q 82, AA 1–2 431d-433c; Q 83, A 1, REP 5 436d-438a; A 2, ANS 438a-d; PART I–II, Q 1, A 5 613a-614a; A 7 614c-615a; Q 5, A 4, ANS and REP 2 639a-640b; A 8, ANS and REP 2 642d-643d; Q 10 662d-666a,c; Q 13, AA 5–6 675c-677b; Q 17, A 5, REP 3 689c-690b; A 6, ANS 690b-d; AA 7–9 690d-693d
20 AQUINAS: *Summa Theologica*, PART I–II, Q 50, A 5, REP 3 10b-d
21 DANTE: *Divine Comedy*, PURGATORY, XVIII [1–75] 79d-80c; XXI [34–72] 85b-d
23 HOBBES: *Leviathan*, PART III, 165c
31 DESCARTES: *Discourse*, PART III, 50b / *Objections and Replies*, AXIOM VII 132a; 141b; 141d; 228c
35 LOCKE: *Human Understanding*, BK II, CH XXI, SECT 12 180d-181a; SECT 52–53 191d-192b; SECT 57 193b-c; SECT 59 193d-194a
42 KANT: *Pure Reason*, 164a-165c esp 164b-c; 234c-236a esp 235c-d; 236d-237a / *Fund. Prin. Metaphysic of Morals*, 259c-260c; 264d-265b / *Practical Reason*, 325d-326b
44 BOSWELL: *Johnson*, 407b
46 HEGEL: *Philosophy of Right*, INTRO, par 8–21 14c-17c; PART II, par 118 42d-43b; ADDITIONS, 90 130b-d
48 MELVILLE: *Moby Dick*, 159a
51 TOLSTOY: *War and Peace*, BK XIII, 577a-582a esp 578d-579a; BK XIV, 605b-d; BK XV, 630c-631a; EPILOGUE II, 688a-694d
53 JAMES: *Psychology*, 291a-295a esp 291a-b, 293a; 388a; 821b-822b; 830a

6b. The distinction between the will's freedom of exercise and the will's freedom of choice

19 AQUINAS: *Summa Theologica*, PART I–II, Q 6, A 3 646d-647b; A 7, REP 3 650a-d; Q 9, A 3 659c-660a; Q 10, A 2, ANS 663d-664d; Q 13, A 6, ANS 676c-677b
35 LOCKE: *Human Understanding*, BK II, CH XXI, SECT 12 180d-181a

6c. The distinction between voluntary behavior and behavior resulting from free choice: comparison of men and animals with respect to freedom

9 ARISTOTLE: *Ethics*, BK III, CH 2 [1111^b6–9] 357b
17 PLOTINUS: *Third Ennead*, TR III, CH 3 93d-94c
19 AQUINAS: *Summa Theologica*, PART I, Q 19, A 10, ANS 117d-118b; A 12, REP 3 118d-119d; Q 59, A 3, ANS 308b-309a; Q 115, A 4, ANS 589d-590c; PART I–II, Q 6, A 2 646a-c; Q 10,

(6. The analysis of the will's range of freedom. 6c. The distinction between voluntary behavior and behavior resulting from free choice: comparison of men and animals with respect to freedom.)

A 3, ANS 664d-665c; Q 11, A 2 667b-d; Q 12, A 5 672a-c; Q 13, A 2 673c-674c; Q 15, A 2 682a-c; Q 16, A 2 684d-685b; Q 17, A 2 687d-688b

25 MONTAIGNE: *Essays*, 218c-219b

31 DESCARTES: *Discourse*, PART V, 59c-60b / *Objections and Replies*, 156a-d

35 LOCKE: *Human Understanding*, BK II, CH XXI, SECT 8-11 180a-d

38 ROUSSEAU: *Inequality*, 337d-338a

42 KANT: *Pure Reason*, 164a-165c / *Practical Reason*, 316c-317a / *Pref. Metaphysical Elements of Ethics*, 372a-b / *Intro. Metaphysic of Morals*, 386b-d; 393c-d / *Judgement*, 584d-585d; 587a-588a

46 HEGEL: *Philosophy of Right*, INTRO, par 11 15a-b; PART I, par 47 24a-b; ADDITIONS, 4 116a-d; 10 117d-118a; 28 121b / *Philosophy of History*, INTRO, 168d; PART III, 304d-305b

49 DARWIN: *Descent of Man*, 311b-d

51 TOLSTOY: *War and Peace*, EPILOGUE II, 689c-690a

7. The implications of free will

7a. Free will as a source of human dignity: its relation to slavery and civil liberty

19 AQUINAS: *Summa Theologica*, PART I, Q 59, A 3, CONTRARY 308b-309a; Q 62, A 8, REP 3 323c-324a; Q 96, A 4 512d-513c; PART I-II, PROLOGUE 609a,c; Q 20, A 6, REP 3 716b-d; Q 21, A 3, REP 2 718d-719c

21 DANTE: *Divine Comedy*, PARADISE, V [19-84] 112b-113a

24 RABELAIS: *Gargantua and Pantagruel*, BK I, 65c-d

26 SHAKESPEARE: *Julius Caesar*, ACT I, SC II [135-161] 570d-571a

31 SPINOZA: *Ethics*, PART II, PROP 49, SCHOL, 394c-d

32 MILTON: *Areopagitica*, 394b-395b

38 MONTESQUIEU: *Spirit of Laws*, BK XII, 85a

38 ROUSSEAU: *Inequality*, 338a / *Social Contract*, BK I, 389a-d; 393b-c

42 KANT: *Fund. Prin. Metaphysic of Morals*, 271d-279d esp 273d-277b / *Practical Reason*, 325d-326b; 327d-329a; 341b-342c; 344a; 346b-348b esp 348a-b; 355a-d / *Judgement*, 594b-595c

43 MILL: *Liberty*, 316b-d

46 HEGEL: *Philosophy of Right*, INTRO, par 18 16c-d; par 21 17a-c; PART I, par 36 21b-c; par 48 24b-c; par 57 26b-27a; ADDITIONS, 14 118c-d; 36 122b-c; 62 126a; 67 126d / *Philosophy of History*, INTRO, 161a-c; PART I, 230a-c; 236a-c; PART IV, 350b-c

51 TOLSTOY: *War and Peace*, BK XIII, 577a-578b; 581c-582a; BK XIV, 605b-d; BK XV, 630c-631a; EPILOGUE II, 688a-690a

52 DOSTOEVSKY: *Brothers Karamazov*, BK V, 127b-137c passim

7b. The factors of freedom and necessity in the philosophy of history

15 TACITUS: *Annals*, BK III, 49c; BK IV, 69a; BK VI, 91b-d / *Histories*, BK I, 194b

18 AUGUSTINE: *City of God*, BK I, CH 36 149c-d; BK IV, CH 33 206c-d; BK V, CH 1 207d-208c

21 DANTE: *Divine Comedy*, PURGATORY, XVI [52-105] 77b-d

43 MILL: *Representative Government*, 332a-d

46 HEGEL: *Philosophy of Right*, PART III, par 340-347 110b-111c; par 352-360 112b-114a,c / *Philosophy of History*, INTRO, 160b-164d; 168b-d; 170a-172b; 175c-176c; 179b-c; 182d; 186a-c; 203c-206a,c; PART IV, 315a; 348a; 368d-369a,c

50 MARX: *Capital*, 7c; 10b-11b

51 TOLSTOY: *War and Peace*, BK III, 140b; 143a-c; 144d; BK IX, 342a-344b; BK X, 389a-391c; 405a-b; 430d-431a; 447c-448c; 465c-467a; BK XI, 469a-472b; BK XIII, 563a-571a; BK XV, 618b-621b; EPILOGUE I, 645a-650c; EPILOGUE II 675a-696d

7c. Human freedom in relation to the will of God: fate, predestination, and providence

OLD TESTAMENT: *Genesis*, 3 / *Exodus*, 4:21; 7-14 esp 7:3, 9:12, 10:1, 14:17 / *Deuteronomy*, 11:26-28; 30:15-20 / *Joshua*, 11:19-20; 24:14-24—(*D*) *Josue*, 11:19-20; 24:14-24 / *Judges*, 9:23 / *I Kings*, 8:57-58—(*D*) *III Kings*, 8:57-58 / *Job*, 3:23; 12:14-25; 34:29 / *Psalms*, 119:36; 139:15-16; 141:4—(*D*) *Psalms*, 118:36; 138:15-16; 140:4 / *Proverbs*, 21:1 / *Ecclesiastes*, 1:2-4,14-15; 3:14-15; 6:10; 7:13-15; 9:1-2; 11:5-6 / *Isaiah*, 14:24-27; 63:17; 64:8—(*D*) *Isaias*, 14:24-27; 63:17; 64:8 / *Malachi*, 4:6—(*D*) *Malachias*, 4:6

APOCRYPHA: *Wisdom of Solomon*, 7:16; 19:4—(*D*) OT, *Book of Wisdom*, 7:16; 19:4 / *Ecclesiasticus*, 15:11-20—(*D*) OT, *Ecclesiasticus*, 15:11-21

NEW TESTAMENT: *Matthew*, 6:10; 20:1-16 esp 20:15-16; 23:37; 26:39 / *Luke*, 22:3-4 / *John*, 5:21; 6:22-71 esp 6:37, 6:40, 6:44-45, 6:64-65, 6:70-71; 10:26-29; 12:37-40; 13:18-27—(*D*) *John*, 5:21; 6:22-72 esp 6:37, 6:40, 6:44-45, 6:65-66, 6:71-72; 10:26-29; 12:37-40; 13:18-27 / *Acts*, 4:27-28; 7:51; 13:48; 17:24-27 esp 17:26 / *Romans*, 8:28-9:26 esp 8:28-30, 9:18-21; 11:1-10 / *I Corinthians*, 7:21-23; 9:16-17; 12 / *Ephesians*, 1:3-12; 2:8-10; 4:7-14 / *Philippians*, 2:12-13 / *I Thessalonians*, 5:18 / *II Thessalonians*, 2:11-14—(*D*) *II Thessalonians*, 2:10-13 / *II Timothy*, 1:8-9 / *James*, 4:13-15 / *I Peter*, 1:1-5

4 HOMER: *Iliad*, BK VI [342-358] 43c-d; BK XIX

[74–144] 137d-138c; BK XXIV [507–551] 176c-177a / *Odyssey*, BK XIV [441–445] 264c; BK XVIII [117–150] 285b-c

5 AESCHYLUS: *Agamemnon* [160–254] 53d-54d / *Choephoroe* 70a-80d esp [269–314] 72d-73b, [885–1076] 78d-80d / *Eumenides* 81a-91d

5 SOPHOCLES: *Oedipus the King* 99a-113a,c esp [1297–1415] 111b-112b / *Oedipus at Colonus* 114a-130a,c esp [258–291] 116c-d, [939–1015] 123a-d / *Philoctetes* [169–200] 183d-184a; [1316–1347] 193d-194a

5 EURIPIDES: *Helen* [711–721] 304d-305a / *Electra* 327a-339a,c esp [1168–1359] 337d-339a,c / *Heracles Mad* [1255–1357] 376a-d / *Orestes* 394a-410d esp [478–629] 398d-400b

6 HERODOTUS: *History*, BK I, 7b-8a; 20a-22a; 46c-d; BK III, 98b-99a; BK VII, 218b-220b; BK IX, 291b-c

7 PLATO: *Republic*, BK X, 439b-441a,c / *Laws*, BK I, 650a-b; BK IV, 679a-b; BK X, 765d-769c esp 767c-768b

12 EPICTETUS: *Discourses*, BK I, CH 1, 106a-b; CH 12 118d-120b; CH 17, 123c-d; BK III, CH 22, 197c-198b; CH 24, 208d-210a; BK IV, CH 1, 218b-219c; CH 3, 224d; CH 7, 233d-234a

12 AURELIUS: *Meditations*, BK II, SECT 11 258a-b; BK III, SECT 11 262a-b; BK VI, SECT 44 278b-c

13 VIRGIL: *Aeneid*, BK IV [332–361] 176a-177a

14 PLUTARCH: *Coriolanus*, 188d-189c / *Sulla*, 370c-371b

15 TACITUS: *Annals*, BK III, 49b-c; BK IV, 69a; BK VI, 91b-d

17 PLOTINUS: *Third Ennead*, TR II-III 82c-97b passim

18 AUGUSTINE: *Confessions*, BK II, par 14 12a-b / *City of God*, BK I, CH 36 149c-d; BK IV, CH 33 206c-d; BK V, CH 1 207d-208c; CH 9–10 213b-216c; BK XVIII, CH 2, 472d-473a

19 AQUINAS: *Summa Theologica*, PART I, Q 17, A 1, ANS 100d-101d; Q 19, A 8 116a-d; Q 22, A 2, REP 4–5 128d-130d; Q 23 132b-141a; Q 83, A 1, REP 2–4 436d-438a; Q 100, A 2, REP 1 521c-522b; Q 103, A 5, REP 3 531b-532b; Q 105, A 4 541c-542a; Q 116 592d-595c passim; PART I-II, Q 6, A 1, REP 3 644d-646a; A 4, REP 1 647b-648a; Q 9, A 6 662a-d; Q 10, A 4 665d-666a,c; Q 21, A 4, REP 2 719d-720a,c

21 DANTE: *Divine Comedy*, HELL, VII [61–96] 10b-c; PURGATORY, XVI [52–105] 77b-d; PARADISE, I [94–142] 107b-d; III [64–90] 110a-b; XX [31–148] 137a-138b

22 CHAUCER: *Troilus and Cressida*, BK IV, STANZA 150–154 108a-b / *Nun's Priest's Tale* [15,236–256] 456b-457a / *Canon's Yeoman's Tale* [16,940–949] 487a

23 MACHIAVELLI: *Prince*, CH XXV, 35a-b

23 HOBBES: *Leviathan*, PART II, 113b-c; PART IV, 272b-c

25 MONTAIGNE: *Essays*, 250a; 342a-b

27 SHAKESPEARE: *Hamlet*, ACT III, SC II [220–223] 51b / *King Lear*, ACT I, SC II [128–164] 249a-b

29 CERVANTES: *Don Quixote*, PART II, 408c

31 DESCARTES: *Objections and Replies*, 141b

31 SPINOZA: *Ethics*, PART I, APPENDIX 369b-372d passim

32 MILTON: *Paradise Lost*, BK III [80–134] 137a-138a; [167–216] 139a-140a; BK V [224–245] 180a-b; [506–543] 186a-187a; BK VI [168–188] 200a; BK VII [139–173] 220a-221a; BK IX [342–375] 254b-255b; BK X [1–62] 274b-275b; [615–640] 287b-288b / *Areopagitica*, 394b-395b

35 HUME: *Human Understanding*, SECT VIII, DIV 78–81 485c-487a

41 GIBBON: *Decline and Fall*, 230b

42 KANT: *Practical Reason*, 334a-335c

44 BOSWELL: *Johnson*, 173c; 392d-393a; 549c

46 HEGEL: *Philosophy of History*, INTRO, 158c-160b; 161d-162a; 182d-184d

48 MELVILLE: *Moby Dick*, 158b-159a; 396b; 409b-410b

51 TOLSTOY: *War and Peace*, BK IX, 342a-344b; 357b-358b; BK X, 447d; BK XI, 481d; BK XII, 553b; BK XV, 619d-620a; 630d-631c; EPILOGUE I, 650b-c; EPILOGUE II, 675a-677b; 680b-c; 684b-d

52 DOSTOEVSKY: *Brothers Karamazov*, BK V, 121d-137c passim

54 FREUD: *Interpretation of Dreams*, 246c-247d / *General Introduction*, 582a-b

7*d*. God as the object of the human will: the quiescence of the will in the beatific vision

OLD TESTAMENT: *Exodus*, 33:18-23 / *Deuteronomy*, 4:29 / *I Chronicles*, 16:11; 28:9–(*D*) *I Paralipomenon*, 16:11; 28:9 / *II Chronicles*, 15:2-4,12-15–(*D*) *II Paralipomenon*, 15:2-4,12-15 / *Psalms*, 27:8; 42:1-6; 63:1-6; 70:4; 73:25,28; 84:2-3; 119:10–(*D*) *Psalms*, 26:8; 41:1-6; 62:1-6; 69:4; 72:25,28; 83:2-3; 118:10 / *Isaiah*, 26:8-9–(*D*) *Isaias*, 26:8-9 / *Jeremiah*, 29:13–(*D*) *Jeremias*, 29:13 / *Amos*, 5:4-8

APOCRYPHA: *Wisdom of Solomon*, 1:1; 13:1-9–(*D*) OT, *Book of Wisdom*, 1:1; 13:1-9

NEW TESTAMENT: *Philippians*, 3:7-10

18 AUGUSTINE: *Confessions*, BK I, par 1 1a-b; BK VII, par 22 50a; BK XII, par 11 101d / *City of God*, BK XIV, CH 11 385d-387a; BK XV, CH 21-22 415b-416c; BK XXII, CH 30, 617c-618a / *Christian Doctrine*, BK I, CH 4 625b-c; CH 15 628b-c

19 AQUINAS: *Summa Theologica*, PART I, Q 12, A 1, ANS 50c-51c; A 8, REP 4 57b-58b; Q 59, A 4, REP 3 309a-310a; Q 60, A 5 313b-314c; Q 82, A 2, ANS 432d-433c; A 3, ANS and REP 3 433c-434c; Q 95 506b-510a; Q 100 520d-522b; Q 105, A 4, ANS 541c-542a; Q 111, A 2, ANS 569c-570b; PART I-II, Q 1, A 8 615a-c; Q 2, A 8 621c-622b; Q 3, A 1 622c-623a; A 4 625a-626b; Q 4, AA 1-4 629d-632c; Q 5, A 1, ANS 636d-637c; A 4, ANS and REP 2 639a-640b; A 5, REP 1 640b-641a; Q 9, A 6 662a-d; Q 11, A 1, REP 1

(7. *The implications of free will.* 7d. *God as the object of the human will: the quiescence of the will in the beatific vision.*)

666b,d-667a; AA 3-4 667d-669b; Q 12, A 2 670b-c; A 3, REP 1 670d-671b; Q 13, A 1, ANS 672d-673c; Q 16, A 3, CONTRARY and REP 3 685b-686a; Q 19, A 9, ANS 709d-710b; A 10 710b-711d

20 AQUINAS: *Summa Theologica*, PART I-II, Q 62 59d-63a; PART II-II, Q 25, A 1 501b-502a; A 12 509c-510b; Q 26, AA 2-3 511a-512c; Q 27, AA 3-8 522c-527b; PART III, Q 9, A 2, REP 3 764c-765a

21 DANTE: *Divine Comedy*, PURGATORY, XXI [34-78] 85b-d; PARADISE, I [97-142] 107b-d; III [43-90] 109d-110b; XX [130-141] 138a; XXI [64-75] 138d-139a; XXVI [25-36] 146a

42 KANT: *Practical Reason*, 325a-327d esp 326b-327a; 337a-355d esp 346b-347c

52 DOSTOEVSKY: *Brothers Karamazov*, BK V, 127b-137c passim

7e. Free will in relation to sin and salvation

7e(1) The freedom to sin: Adam's freedom and the freedom of fallen human nature

OLD TESTAMENT: *Genesis*, 3 / *Deuteronomy*, 11:26-28; 30:15-20 / *Joshua*, 24:14-24—(*D*) *Josue*, 24:14-24 / *Isaiah*, 5:1-7—(*D*) *Isaias*, 5:1-7

APOCRYPHA: *Ecclesiasticus*, 15:11-20—(*D*) OT, *Ecclesiasticus*, 15:11-21

NEW TESTAMENT: *Romans*, 5:12-8:21 / *Hebrews*, 10:26-31

18 AUGUSTINE: *Confessions*, BK VII, par 5 44c-d / *City of God*, BK V, CH 9-10 213b-216c; BK XII, CH 21 357a-b; BK XIV, CH 11-12 385d-387b; CH 15 388d-390a; BK XXII, CH 1, 587a-b; CH 30, 617c-618a

19 AQUINAS: *Summa Theologica*, PART I, Q 17, A 1, ANS 100d-101d; Q 22, A 2, REP 4 128d-130d; A 3, REP 3 130d-131c; Q 23, A 1, REP 1 132c-133b; A 3, REP 3 134b-135a; Q 24, A 3 142d-143c; Q 47, A 2, ANS 257b-258c; Q 62, A 3, REP 2 319c-320b; A 8 323c-324a; Q 63, A 1, REP 4 325c-326c; AA 5-7 329a-332b; A 9, REP 3 333b-d; Q 83, A 2, ANS and REP 3 438a-d; Q 100, A 2 521c-522b; PART I-II, Q 1, A 7, REP 1 614c-615a; Q 6, A 8 650d-651c; Q 9, A 6, REP 3 662a-d; Q 21, A 2 718a-d

20 AQUINAS: *Summa Theologica*, PART I-II, Q 74, AA 1-2 129a-130a; Q 109, A 2 339c-340b; AA 7-10 344a-347d

21 DANTE: *Divine Comedy*, PURGATORY, XVI [52-105] 77b-d; XVII [82]-XVIII [75] 79b-80c; PARADISE, I [94-142] 107b-d; IV [64-114] 111b-d; V [19-30] 112b; VII [25-33] 115c

30 BACON: *Advancement of Learning*, 17d-18a

32 MILTON: *Paradise Lost*, BK III [80-134] 137a-138a; [167-216] 139a-140a; BK V [224-245] 180a-b; [506-543] 186a-187a; BK IX [342-375] 254b-255b; BK X [1-16] 274b / *Samson Agonistes* [373-419] 347b-348b / *Areopagitica*, 394b-395b

35 LOCKE: *Toleration*, 8c-d; 10c-d; 15d-16a

46 HEGEL: *Philosophy of History*, PART III, 304d-305b

51 TOLSTOY: *War and Peace*, EPILOGUE II, 689b

52 DOSTOEVSKY: *Brothers Karamazov*, BK V, 127b-137c passim

7e(2) The relation of freedom to grace

OLD TESTAMENT: *Psalms*, 95:7-9—(*D*) *Psalms*, 94:7-9 / *Proverbs*, 1:20-33 / *Isaiah*, 5:1-7—(*D*) *Isaias*, 5:1-7

NEW TESTAMENT: *John*, 1:1-18 esp 1:5, 1:10-13; 5:21; 6:37,64-66; 8:31-36; 10:26-29; 12:37-40; 13:18-27 / *Acts*, 7:51; 13:38-48; 15:1-11 / *Romans*, 4-8; 9:9-18; 11:5-10,26-32 / *I Corinthians*, 7:21-23; 9:1,19-21 / *II Corinthians*, 3:17; 6:1-2 / *Galatians*, 4; 5:1-4,13, 18,22-24 / *Ephesians*, 1:3-12; 2:4-10 / *Philippians*, 2:12-13 / *Titus*, 3:3-7 / *James*, 1:25; 2:10-12 / *I Peter*, 2:15-16 / *Revelation*, 3:20—(*D*) *Apocalypse*, 3:20

18 AUGUSTINE: *Confessions*, BK IX, par 1 61c-d / *City of God*, BK X, CH 32 319d-322a,c; BK XV, CH 1, 398a-c; BK XXII, CH 1, 587a-b; CH 30, 617c-618a

19 AQUINAS: *Summa Theologica*, PART I, Q 23, A 3, REP 3 134b-135a; AA 5-6 135d-138c; A 8 140a-141a; Q 62, A 3, REP 2 319c-320b; A 4, ANS 320b-321b; Q 83, A 2, CONTRARY 438a-d; Q 95, A 1, REP 3,5 506b-507c; Q 100, A 2, REP 1 521c-522b; PART I-II, Q 5, A 5, REP 1 640b-641a; Q 9, A 6, REP 3 662a-d

20 AQUINAS: *Summa Theologica*, PART I-II, Q 108, A 1, ANS and REP 2 331a-332b; Q 109, A 2 339c-340b; Q 110, A 4 350d-351d; Q 111, A 2 352d-353d; Q 113, A 3 362c-363c; A 5 364b-365a; PART II-II, Q 183, A 4, REP 1 627d-628d

21 DANTE: *Divine Comedy*, PURGATORY, I [22-84] 53b-54a; V [58-66] 59c; VII [37-60] 62d-63a; XI [25-45] 69a-b; XII [115-136] 71c-d; XXI [34-72] 85b-d; XXVII [124-142] 95d-96a; PARADISE, III [64-90] 110a-b; VII [64-84] 115d-116a; XX [31-148] 137a-138b; XXI [52-75] 138d-139a

31 DESCARTES: *Meditations*, IV, 91a-b / *Objections and Replies*, 125c-126b

32 MILTON: *Paradise Lost*, BK II [1027-1033] 133b; BK III [56-415] 136b-144b esp [130-134] 138a, [227-238] 140b; BK XI [251-262] 304b-305a; BK XII [576-605] 331b-332a

33 PASCAL: *Provincial Letters*, 141a-166b esp 154b-159a

42 KANT: *Pure Reason*, 238b

43 MILL: *Liberty*, 296b-297b

46 HEGEL: *Philosophy of Right*, PART II, par 140, 50a / *Philosophy of History*, PART III, 310d-311a

52 DOSTOEVSKY: *Brothers Karamazov*, BK V, 127b-137c passim

8. The will as a factor in morality and in society

8*a*. The inviolability of the will: its freedom from external compulsions or constraints

7 PLATO: *Gorgias*, 285c-d
12 EPICTETUS: *Discourses* 105a-245a,c esp BK I, CH 1 105a-106c, CH 17-29, 123b-138a, BK II, CH 5 142c-144a, CH 10 148c-150a, CH 23 170a-172d, BK IV, CH 1 213a-223d
12 AURELIUS: *Meditations* 253a-310d esp BK II, SECT 9 257d, SECT 11 258a-b, SECT 16 259a, BK V, SECT 8 269d-270b, SECT 19 272a, SECT 34 273c, BK VI, SECT 16 275b-d, SECT 22 276a, BK VII, SECT 16 280d, BK VIII, SECT 16-17 286d, SECT 28 287c, SECT 48 289c, BK IX, SECT 7 292b, BK X, SECT 34-35 301a-b, BK XI, SECT 36 306c, BK XII, SECT 3 307b-d
18 AUGUSTINE: *City of God*, BK V, CH 10, 216a-b; BK IX, CH 4 287a-288b
19 AQUINAS: *Summa Theologica*, PART I, Q 82, A 1, ANS and REP 1 431d-432c; Q 83, A 1, REP 1-5 436d-438a; Q 105, A 4, REP 1 541c-542a; PART I-II, Q 6, A 4 647b-648a; A 5, REP 1 648b-649a; Q 9, A 4, REP 2 660a-d
21 DANTE: *Divine Comedy*, PARADISE, IV [64-114] 111b-d
25 MONTAIGNE: *Essays*, 14a
32 MILTON: *Paradise Lost*, BK IX [342-350] 254b-255a / *Samson Agonistes* [1348-1379] 369a-b
35 LOCKE: *Toleration*, 3c-4a / *Human Understanding*, BK II, CH XXI, SECT 59 193d-194a
42 KANT: *Pure Reason*, 164a-b; 168d-170d; 235c-d / *Fund. Prin. Metaphysic of Morals*, 279b,d-280a; 281c-283b; 284d-285a / *Practical Reason*, 301d-302d; 304a-d; 307d-308c; 316a-b; 327d-328b / *Intro. Metaphysic of Morals*, 386b-d; 392d-393a / *Judgement*, 605d [fn 2]
43 FEDERALIST: NUMBER 73, 218d-219a; NUMBER 79, 233c-d
44 BOSWELL: *Johnson*, 407b
46 HEGEL: *Philosophy of Right*, PART I, par 91-92 35d-36a
48 MELVILLE: *Moby Dick*, 370b-371a; 408b-409a
51 TOLSTOY: *War and Peace*, BK XIII, 577a-582a esp 578d-579a, 581d-582a; BK XIV, 605c-d; BK XV, 630c-631a

8*b*. The goodness or malice of the will

9 ARISTOTLE: *Ethics*, BK IV, CH 9 [1128^{b}20-30] 376a,c
17 PLOTINUS: *Fourth Ennead*, TR IV, CH 35, 177d-178a
18 AUGUSTINE: *Confessions*, BK VIII, par 19-24 58b-60a / *City of God*, BK XII, CH 3-9 343d-348b; BK XIV, CH 6-9 380b-385b
19 AQUINAS: *Summa Theologica*, PART I, Q 48, AA 5-6 263a-264d; Q 49, A 1, REP 1 264d-265d; PART I-II, Q 4, A 4 631d-632c; Q 9, A 6, REP 3 662a-d; QQ 18-21 693b,d-720a,c esp Q 19 703a-711d
21 DANTE: *Divine Comedy*, PURGATORY, XVII [82]-XVIII [75] 79b-80c
42 KANT: *Fund. Prin. Metaphysic of Morals*, 256a-261d esp 256a-b, 257c-d; 265c / *Practical Reason*, 304a-307d; 314d-319b esp 316a-317d; 321b-329a; 356a-360d / *Intro. Metaphysic of Morals*, 389a-390a,c / *Judgement*, 591b-592d; 595a-d
46 HEGEL: *Philosophy of Right*, PART II, par 114 42a-b; PART III, par 142-157 55a-57d; ADDITIONS, 92-100 131d-133a
53 JAMES: *Psychology*, 826a-827a

8*b*(1) The conditions of the will's rectitude or disorder

9 ARISTOTLE: *Ethics*, BK I, CH 13 [1102^{b}13-1103^{a}4] 348a-c; BK VI, CH 2 387d-388b
12 EPICTETUS: *Discourses*, BK I, CH 17 122d-124a
14 PLUTARCH: *Pericles*, 121b / *Timoleon*, 197c-198a
17 PLOTINUS: *Fourth Ennead*, TR IV, CH 35, 177d-178a
18 AUGUSTINE: *Confessions*, BK VII, par 22 50a; BK XII, par 11 101d / *City of God*, BK IX, CH 4-5 287a-289a; BK XII, CH 3 343d-344b; CH 6-8 345b-347b; BK XIV, CH 6-9 380b-385b; CH 11 385d-387a; CH 15 388d-390a; BK XV, CH 21-22 415b-416c
19 AQUINAS: *Summa Theologica*, PART I, Q 49, A 1, REP 3 264d-265d; PART I-II, Q 4, A 4 631d-632c; Q 5, A 7, ANS 642a-d; Q 6, A 4, REP 3 647b-648a; Q 19 703a-711d
20 AQUINAS: *Summa Theologica*, PART I-II, Q 50, A 5, ANS and REP 3 10b-d; Q 55, A 1, REP 2 26b-27a
21 DANTE: *Divine Comedy*, HELL, XI [22-66] 15b-d; PURGATORY, I-XXVII 53a-96a esp I [22-84] 53b-54a, V [58-66] 59c, VII [37-60] 62d-63a, XI [25-45] 69a-b, XII [115-136] 71c-d, XVI [52-105] 77b-d, XVII [82]-XVIII [75] 79b-80c, XXI [34-78] 85b-d, XXVII [124-142] 95d-96a; PARADISE, XV [1-6] 128b-c
25 MONTAIGNE: *Essays*, 159a-162c
30 BACON: *Advancement of Learning*, 72a
31 DESCARTES: *Meditations*, IV 89a-93a
32 MILTON: *Paradise Lost*, BK IX [342-375] 254b-255b / *Samson Agonistes* [1334-1379] 368b-369b
33 PASCAL: *Provincial Letters*, 24b-26b; 44a-53a
42 KANT: *Practical Reason*, 321b-329a / *Pref. Metaphysical Elements of Ethics*, 365b-d
46 HEGEL: *Philosophy of Right*, PART I, par 81 34c-d; ADDITIONS, 51 124c-d / *Philosophy of History*, INTRO, 166b; PART III, 312d-313a; PART IV, 365c
52 DOSTOEVSKY: *Brothers Karamazov*, BK V, 127b-137c passim

(8b. The goodness or malice of the will.)

8b(2) A good will as the exclusive or principal human good

12 EPICTETUS: *Discourses*, BK I, CH 11 116d-118d; CH 22 127c-128c; CH 25 129d-131b; CH 29 134d-138a; BK II, CH 16 156b-158d; BK III, CH 10 185d-187a
18 AUGUSTINE: *City of God*, BK IX, CH 4 287a-288b
19 AQUINAS: *Summa Theologica*, PART I-II, Q 1, A 1, REP 2 609b-610b; Q 3, A 4 625a-626b; Q 19, A 1, REP 2 703b-d
30 BACON: *Advancement of Learning*, 72a
42 KANT: *Fund. Prin. Metaphysic of Morals*, 256a-261d esp 256a-b, 257c-d / *Practical Reason*, 314d-319b esp 316a-317d; 321b-329a / *Intro. Metaphysic of Morals*, 389a-390a,c / *Judgement*, 591b-592a
43 MILL: *Utilitarianism*, 453c-454a; 463c-464d

8c. The will and virtue: justice and charity as habits of the will

9 ARISTOTLE: *Ethics*, BK I, CH 13 [1102b13-1103a4] 348a-c; BK II, CH 6 [1106b36-1107a3] 352c; BK III, CH 1-5 355b,d-361a; BK V, CH 8-11 383a 387a,c; BK VI, CH 2 387d-388b; CH 13 [1145a3-5] 394d; BK VII, CH 1-10 395a-403c
18 AUGUSTINE: *City of God*, BK IX, CH 4-5 287a-289a; BK XII, CH 8-9 346d-348b; BK XIV, CH 6 9 380b-385b; BK XV, CH 21-22 415b-416c
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43 MILL: *Utilitarianism*, 463c-464d
53 JAMES: *Psychology*, 81b-83b; 186b-187a; 807a-808a; 816a-819a esp 818a

8d. The will and duty: the categorical imperative

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19 AQUINAS: *Summa Theologica*, PART I, Q 25, A 3, REP 3 145b-147a; PART I-II, Q 19, AA 3-6 704c-708a; AA 9-10 709d-711d
21 DANTE: *Divine Comedy*, PARADISE, V [13-84] 112b-113a
25 MONTAIGNE: *Essays*, 13d-14c
38 ROUSSEAU: *Political Economy*, 372b-373b / *Social Contract*, BK I, 393b-c
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46 HEGEL: *Philosophy of Right*, INTRO, par 29 19a-b; PART I, par 79 33a-c; PART II, par 133 47a; par 135 47b-d; par 140 49b-54a passim; PART III, par 148-149 56a-b; ADDITIONS, 84 129b; 86 129c; 95 132b / *Philosophy of History*, PART IV, 362c-d
53 JAMES: *Psychology*, 272b-273a; 797b-798a; 807a-808a

8e. The will and right: the harmony of individual wills in external practical relations

42 KANT: *Pure Reason*, 114a-115a / *Pref. Metaphysical Elements of Ethics*, 371b-372a / *Intro. Metaphysic of Morals*, 386d-387a,c / *Science of Right* 397a-458a,c esp 397b-398a, 400b,d-402a, 416b-417a, 435a-b, 448b-d
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50 MARX: *Capital*, 37c-d; 83d-84a

9. Differences among men in the sphere of will

9a. The distinction between men of strong and weak will: cultivation of will power

5 SOPHOCLES: *Antigone* [1-99] 131a-132a / *Electra* [328-471] 158c-159d
5 EURIPIDES: *Hippolytus* [373-430] 228b-d / *Electra* [907-956] 335b-d; [959-987] 335d-336a
8 ARISTOTLE: *Soul*, BK III, CH 9 [432b11-433a8] 665a-c; CH 11 [434a5-15] 666d-667a
9 ARISTOTLE: *Ethics*, BK VII, CH 1-10 395a-403c / *Rhetoric*, BK I, CH 12 [1372b11-16] 616b
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22 CHAUCER: *Clerk's Tale* [8572–8583] 308a / *Second Nun's Prologue* [15,469–489] 461a / *Parson's Tale*, par 53–61 526b-530a
25 MONTAIGNE: *Essays*, 115b-121c; 124c-125a; 159a-162c; 200d-205b; 492b-493a
26 SHAKESPEARE: *3rd Henry VI*, ACT III, SC II [123–195] 87c-88a / *Richard III* 105a-148a,c / *Taming of the Shrew*, ACT IV, SC I [191–214] 218b-c / *Richard II* 320a-351d / *Julius Caesar*, ACT IV, SC III [145–195] 589d-590c
27 SHAKESPEARE: *Othello*, ACT I, SC III [302–410] 212b-213a; ACT II, SC III [29–270] 217b-219d / *King Lear*, ACT V, SC II 278d-279a / *Macbeth*, ACT I, SC VII [28–82] 289c-290b
30 BACON: *Advancement of Learning*, 76d-77c
42 KANT: *Fund. Prin. Metaphysic of Morals*, 258b-c / *Practical Reason*, 326b-327d; 356a-360d / *Pref. Metaphysical Elements of Ethics*, 368d-369a; 369c-370c
43 MILL: *Liberty*, 295b-296b; 300c / *Representative Government*, 346c-350a passim / *Utilitarianism*, 463c-464d
48 MELVILLE: *Moby Dick*, 123a-124a; 137b-138a; 409b-410b
51 TOLSTOY: *War and Peace*, BK I, 15a-16a; BK IV, 177d; BK VI, 235a; BK X, 441c-442a; BK XIII, 575b-c; 578b; BK XIV, 589c-590c; 605b-d
53 JAMES: *Psychology*, 80a-83b esp 81b-83a; 274a-275a; 795b; 798b-801a; 817a-819a; 826a-827a
54 FREUD: *New Introductory Lectures*, 884b-c

9b. The pathology of the will: indecision, obsession, compulsion, inhibition

23 HOBBES: *Leviathan*, PART I, 77d
44 BOSWELL: *Johnson*, 38a-c; 138c-139a; 481d
48 MELVILLE: *Moby Dick* esp 123a-b, 135a-138a, 404b-411a
51 TOLSTOY: *War and Peace*, BK III, 115d-116a; BK V, 203a-d; BK VI, 235a-238c; 245d-246a; 266c-267c; BK VII, 291b; BK VIII, 304b-305a; BK XI, 519a-c; 527b-528b
53 JAMES: *Psychology*, 799b-807a; 828b-829a
54 FREUD: *Hysteria*, 81c-86a esp 82b-d, 83d-84c; 90a-b; 99c-102a / *Interpretation of Dreams*, 247d-248b / *General Introduction*, 550d-556d esp 551b-552a; 572b-c; 612a-b / *Ego and Id*, 713c-716c passim / *Inhibitions, Symptoms, and Anxiety*, 719b-d; 729a-733c esp 731c-d

10. Will as a term in political theory

10a. The sovereign will: the will of the people; the will of the majority

6 THUCYDIDES: *Peloponnesian War*, BK III, 432b-c
9 ARISTOTLE: *Politics*, BK IV, CH 4 [1291^{b}30-38] 491a-b; CH 9 [1294^{b}35-39] 494d
14 PLUTARCH: *Tiberius Gracchus*, 678b-d
23 HOBBES: *Leviathan*, PART II, 100c-101a; 117c-d; 130b-131a; 131d-132a; PART IV, 272c
35 LOCKE: *Civil Government*, CH VII, SECT 87–94 44a-46c passim; CH VIII, SECT 95–99 46c-47c; CH XIV, SECT 163–168 63a-64c passim; CH XIX, SECT 240–243 81b-d
38 MONTESQUIEU: *Spirit of Laws*, BK I, 3c; BK II, 4b; BK III, 12d-13a; BK IV, 15a-b; BK V, 30b-c
38 ROUSSEAU: *Political Economy*, 369a-370d / *Social Contract*, BK I, 392d-393b; BK II, 395a-396d; 399b-400c; BK III, 409b-c; BK III-IV, 419c-427a
42 KANT: *Science of Right*, 436c; 437c-d; 439a-441d; 445a-c; 448b-d; 450a-b
43 FEDERALIST: NUMBER 39, 126c-127a; NUMBER 51, 164a-165a; NUMBER 71, 214d-215a; NUMBER 78, 230d-232a
43 MILL: *Liberty*, 268b-271d
46 HEGEL: *Philosophy of Right*, PART III, par 281 95b-d; par 320 106c / *Philosophy of History*, INTRO, 172d-173a; 175b-c; PART III, 302a-d
51 TOLSTOY: *War and Peace*, EPILOGUE II, 680b-684a

10b. The relation of law to will

7 PLATO: *Laws*, BK III, 669b-670c; BK IV, 681b-682c; BK IX, 754a-b
9 ARISTOTLE: *Ethics*, BK X, CH 9 [1180^{a}14-24] 434d-435a / *Politics*, BK III, CH 16 485b-486c; BK VI, CH 3 521c-522a
19 AQUINAS: *Summa Theologica*, PART I, Q 21, A 2, REP 1 125c-d
20 AQUINAS: *Summa Theologica*, PART I-II, Q 90, A 1, RLP 3 205b-206b; Q 96, A 5, ANS and REP 3 233d-234d
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35 LOCKE: *Civil Government*, CH IV, SECT 21 29d; CH VI, SECT 57-63 36d-38c; CH XI 55b-58b esp SECT 137 56d-57b; CH XIII, SECT 151 59d-60a; CH XIX, SECT 212 74a-b
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42 KANT: *Pure Reason*, 110c / *Fund. Prin. Metaphysic of Morals*, 273d-274a / *Science of Right*, 401c-402a; 412c-d; 416b-417a; 435a-437c; 438d-439a; 448b-d; 450a; 450d-452a
43 FEDERALIST: NUMBER 78, 230d-232a
43 MILL: *Liberty*, 316b-d / *Representative Government*, 327b,d-332d esp 328d
46 HEGEL: *Philosophy of Right*, PART III, par 219 72d-73a / *Philosophy of History*, INTRO, 170c-178a; PART IV, 327d-328a; 350b-c; 361c-d; 364d-365a
50 MARX-ENGELS: *Communist Manifesto*, 427a-b

(10. *Will as a term in political theory.*)

10c. The general will, particular wills, the will of each, and the will of all

23 HOBBES: *Leviathan*, PART II, 100c-101a

35 LOCKE: *Civil Government*, CH IV, SECT 21 29d; CH XIII, SECT 151 59d-60a; CH XIX, SECT 212 74a-b

38 ROUSSEAU: *Political Economy*, 369a-370d; 372b-c / *Social Contract*, BK I, 392d-393b; BK II, 395a-398b; 399b-400c; BK III, 409b-410a; 418a; BK IV, 425a-427a

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CROSS-REFERENCES

For: The general consideration of the will in relation to desire, emotion, and mind or reason, *see* DESIRE 3b(1); EMOTION 1; MIND 1b(2), 1d, 1e(3)-1g; PRUDENCE 4a, 5b; REASONING 5e(3); SENSE 3e.

Other discussions of the voluntary, the involuntary, and the nonvoluntary, *see* ANIMAL 1a(3), 4b; HABIT 6c; KNOWLEDGE 8b(2); MAN 1a; NECESSITY AND CONTINGENCY 5a; VIRTUE AND VICE 4e(1).

The bearing of the voluntary on the distinction between knowledge and opinion, *see* KNOWLEDGE 4b; OPINION 2b.

The discussion of rationalization or wishful thinking, *see* DESIRE 5b; EMOTION 3b; OPINION 2a; REASONING 5a.

The theory of error which attributes error to free will, *see* MIND 5a; TRUTH 3d(2).

The conception of faith as dependent on an act of the will or practical reason, *see* GOD 6c(2); KNOWLEDGE 6c(5); METAPHYSICS 2d; OPINION 4a; RELIGION 1a.

The understanding of the divine will and its relation to the divine intellect, and for the problem of God's freedom, *see* GOD 4e, 4g, 5c, 5g; LIBERTY 5d; MIND 10g.

Discussions relevant to the various doctrines of, and the many-sided controversy over, the freedom of the will, *see* CAUSE 3; CHANCE 1b; FATE 3, 5; LIBERTY 1c, 3c, 4a-4b, 5a-5c; MAN 1a; METAPHYSICS 2d; MIND 1e(3); NATURE 2f; NECESSITY AND CONTINGENCY 5a-5a(1), 5a(3); PRUDENCE 4a; PUNISHMENT 2a; VIRTUE AND VICE 5c.

Other discussions which have a bearing on the implications of free will, *see* GOD 7d; HISTORY 4a(1); LIBERTY 1c, 5a, 5c; LOVE 5a, 5a(2); NATURE 6b; SIN 3b-3c, 6a; SLAVERY 2d, 3d; VIRTUE AND VICE 8b.

The ethical doctrine which makes a good will the exclusive or principal good, *see* GOOD AND EVIL 3b-3b(2); and for the relation of the will to duty, the moral law, and the categorical imperative, *see* DUTY 1, 5; JUSTICE 1e; LAW 4c; LIBERTY 3c; NECESSITY AND CONTINGENCY 5a(2); PRINCIPLE 4b.

The moral theory which judges the rectitude of the will by the ends it adheres to and by the means it chooses, *see* HAPPINESS 3; LIBERTY 3c; PRUDENCE 3a; VIRTUE AND VICE 4e(2)-4e(3); and for the consideration of the will in relation to virtue, especially prudence, justice, and charity, *see* HABIT 5b; JUSTICE 1c, 1e; LOVE 1a, 5b; PRUDENCE 4a; VIRTUE AND VICE 2a(1), 5c, 8d(3).

Another treatment of the pathology of the will, *see* DESIRE 6b; EMOTION 3c(2).

The will as a concept in political theory, and especially in relation to law and sovereignty, *see* DEMOCRACY 5b; GOVERNMENT 1h; LAW 1b; MONARCHY 1a(2).

ADDITIONAL READINGS

Listed below are works not included in *Great Books of the Western World*, but relevant to the idea and topics with which this chapter deals. These works are divided into two groups:

I. Works by authors represented in this collection.
II. Works by authors not represented in this collection.

For the date, place, and other facts concerning the publication of the works cited, consult the Bibliography of Additional Readings which follows the last chapter of *The Great Ideas*.

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Chapter 101: WISDOM

INTRODUCTION

THE special character of wisdom among the attainments of the mind shows itself in the things which everyone will agree can be said about wisdom—things which cannot be said about art and science, or knowledge and learning generally. We believe that, with the centuries, knowledge can be steadily increased and learning advanced, but we do not suppose that the same progress can be achieved in wisdom. The individual may grow in wisdom. The race does not seem to.

In the tradition of the great books, the moderns usually assert their superiority over the ancients in all the arts and sciences. They seldom claim superiority in wisdom. The phrase "modern science" needs no elucidation, but if anyone were to speak of modern wisdom, he would have to explain his meaning. As "modern" seems to have an immediately acceptable significance when it qualifies "science," so "ancient" seems to go with "wisdom," and to suggest that, with the centuries, far from increasing, wisdom may be lost.

Wisdom is more frequently and extensively the subject of discussion in the ancient and mediaeval than in the modern books. The ancients seem to have not only a greater yearning for wisdom, but also a greater interest in understanding what wisdom is and how it can be gained. The traditional discussion of wisdom, furthermore, has its foundations in the literature of the Old and the New Testament, as well as in the books of pagan antiquity.

This is not true of other forms of knowledge. The teachings of revealed religion open a path to the "heart of wisdom." They do not propose methods of scientific research. Again and again the Scriptures proclaim that "fear of the Lord is the beginning of wisdom"—a wisdom which develops with piety and worship, as science develops with experiment and proof.

Still another distinctive mark of wisdom is that it cannot be misused. We recognize that bad men as well as good may possess other kinds of knowledge. We have seen artistic skill and scientific truth put to evil use. But we do not ordinarily think a man wise unless he acts wisely. To act wisely is to act well, even as to have wisdom is to use it. The satirist's praise of folly condemns a useless wisdom. The theologian's condemnation of "worldly wisdom" dismisses it as the worst of folly—a counterfeit of wisdom.

Other forms of learning may separate knowledge from action; wisdom tends to unite them. Other forms of inquiry may be content with knowing and understanding the facts; the pursuit of wisdom aspires to a knowledge of good and evil. Plato, for example, makes the vision of the good the goal of a dialectic which ascends to wisdom, yet which does not rest there, but returns enlightened to the realm of action. This conception of wisdom is hinted at whenever we refrain from calling a man wise simply because he is learned—a scholar, scientist, or philosopher.

Again it is Plato who respects wisdom so highly that he will not call the philosopher wise, but only a lover of wisdom. "No god is a philosopher or seeker after wisdom, for he is wise already," Socrates says in the *Symposium*; "nor does any man who is wise seek after wisdom. Neither do the ignorant seek after wisdom." The lovers of wisdom are neither the wise nor the ignorant and foolish. As Socrates points out, they are "in a mean between the wise and the ignorant."

Aristotle would seem to disagree, not from a lower regard for wisdom, but because he identifies wisdom with philosophical knowledge, and especially with that highest branch of speculative science which is called "theology," "first philosophy," or "metaphysics." His use

of the phrase "philosophical wisdom" to distinguish speculative from practical or political wisdom suggests that the philosopher may attain the wisdom he pursues. Yet Aristotle, like Plato, speaks of "philosophers or lovers of wisdom"; and Plato, like Aristotle, treats wisdom as one of the basic human virtues.

WE SHALL RETURN TO THE distinction which both Aristotle and Aquinas make between practical and speculative wisdom; they often call the latter simply "wisdom," in contrast to "prudence," which is their name for practical wisdom. Other writers, who treat wisdom as one, sometimes emphasize its speculative, and sometimes its practical, aspect. But for all of them, this double aspect remains part of wisdom's special character.

Lucretius, for example, finds nothing "more gladdening than to dwell in the calm high places, firmly embattled on the heights by the teaching of the wise, whence you can look down on others, and see them wandering hither and thither, going astray as they seek the way of life." The way of life, free from pain, the distress of fear, and futile struggle, is known only to the wise. Calm and repose are here suggested as attributes of the wise man. That also seems to be the implication of Dr. Johnson's "approbation of one who had attained to the state of the philosophical wise man, that is, to have no want of anything." When Boswell observes that then "the savage is a wise man," Johnson retorts: "Sir, I do not mean simply being without —but not having a want."

For Plotinus, wisdom seems to be purely speculative, and its repose a condition of the reasoning mind at rest. "Wisdom," he writes, "is a condition in a being that possesses repose. Think what happens when one has accomplished the reasoning process; as soon as we have discovered the right course, we cease to reason. We rest because we have come to wisdom." Still wisdom has a moral or, for Plotinus, an aesthetic aspect. "One Soul," he says, is "wise and lovely, another foolish and ugly. Soul-beauty is constituted by wisdom."

The practical or moral aspect of wisdom predominates in Milton, Rabelais, and Tolstoy. In *Paradise Lost*, Adam communicates his reflections on human knowledge to Raphael.

> But apte the Mind or Fancie is to roave
> Uncheckt, and of her roaving is no end;
> Till warn'd, or by experience taught, she learn
> That not to know at large of things remote
> From use, obscure and suttle, but to know
> That which before us lies in daily life,
> Is the prime Wisdom; what is more, is fume,
> Or emptiness, or fond impertinence,
> And renders us in things that most concerne
> Unpractis'd, unprepar'd, and still to seek.

Gargantua, writing a letter to his son Pantagruel while the latter is a student in Paris, admonishes him in the words of Solomon that "Wisdom entereth not into a malicious mind, and that knowledge without conscience is but the ruin of the soul." In *War and Peace*, Pierre, after reiterating that "All we can know is that we know nothing. And that's the height of human wisdom," learns from the Mason that "the highest wisdom is not founded on reason alone, nor on those worldly sciences of physics, chemistry, and the like, into which intellectual knowledge is divided." The highest wisdom, the Mason continues, is "but one science—the science of the whole—the science explaining the whole creation and man's place in it. To receive that science it is necessary to purify and renew one's inner self. . . . And to attain this end, we have the light called conscience that God has implanted in our souls."

Though Plato defines wisdom as the virtue of reason—that part of the soul which is for him the faculty of knowledge—he gives it the function of directing conduct as well as contemplating truth. "Him we call wise," Socrates declares in the *Republic*, "who has in him that little part which rules" and which has "a knowledge of what is for the interest of each of the three parts and of the whole." In the state as in the soul, "how can there be the least shadow of wisdom," the Athenian Stranger asks in the *Laws*, "where there is no harmony?"

There is no harmony or wisdom "when fair reasonings have their habitation in the soul, and yet do no good, but rather the reverse of good" because reason fails to rule or be obeyed. "When the soul is opposed to knowledge, or opinion, or reason, which are her natural lords," the Athenian Stranger goes on, "that I call folly, just as it is in the state, when the multitude refuses to obey their rulers or the laws."

The four virtues which Plato enumerates

in both the *Republic* and the *Laws* are wisdom, temperance, courage, justice. Justice is given a certain preeminence in the *Republic* as somehow embracing the other three, but in the *Laws*, the ruling virtue is wisdom. Calling the virtues "divine goods" to distinguish them from such things as health, beauty, strength, and wealth, the Athenian Stranger makes wisdom "chief and leader of the divine class of goods. . . . Next," he says, "follows temperance; and from the union of these two with courage springs justice, and fourth in the scale of virtue is courage." As the principle of these other virtues, wisdom like them engages in the life of action. It does not move solely in the realm of thought.

WHEN HE REFERS TO WISDOM as one of the four virtues, Aristotle uses the word "wisdom" as if it named a single virtue. In the passage in the *Politics* in which he says that "the courage, justice, and wisdom of a state have the same form and nature as the qualities which give the individual who possesses them the name of just, wise or temperate," he does not divide wisdom into the speculative and the practical. But he seldom overlooks that separation. The passage just cited, for instance, begins with the statement that "each one has just so much happiness as he has of virtue and wisdom, and of virtuous and wise action."

Here the reference to virtue *and* wisdom places wisdom outside the virtues, when the latter are conceived exclusively as *moral* virtues. Wisdom for Aristotle is a virtue only in the order of intellectual excellence, not of moral excellence or character. As an intellectual virtue, wisdom is not even involved in the growth or exercise of the moral virtues. It is as possible, Aquinas says, following Aristotle, to have the cardinal moral virtues without wisdom, as it is to have them without art or science. But for both Aquinas and Aristotle this is neither true nor intelligible unless we bear in mind the distinction between philosophical and practical wisdom, or between wisdom and prudence.

Though prudence is, no less than wisdom, an intellectual virtue—a quality of mind rather than of character—it belongs with the moral virtues. As the chapter on VIRTUE indicates, the cardinal virtues according to Aquinas include prudence, not wisdom. Similarly, as may be seen in the chapter on PRUDENCE, Aristotle's theory holds it impossible to be good "without practical wisdom," just as it is impossible to be "practically wise without moral virtue."

Practical wisdom, Aristotle writes, "is concerned with things human and things about which it is possible to deliberate." Philosophic wisdom, on the other hand, "will contemplate none of the things that make a man happy." To explain the difference, Aristotle uses the example of the early Greek sages. "We say Anaxagoras, Thales, and men like them have philosophic but not practical wisdom, when we see them ignorant of what is to their own advantage. . . . They know things that are remarkable, admirable, difficult, and divine, but useless; *viz.*, because it is not human goods they seek."

If "wisdom" connotes the highest form of knowledge, then the name, according to Aristotle, is more properly applied to speculative than to practical wisdom. The highest form of knowledge, in his view, is concerned with the highest objects. Hence, he says, "it would be strange to think that . . . practical wisdom is the best knowledge, since man is not the best thing in the world. . . . But if the argument be that man is the best of the animals, this makes no difference; for there are other things much more divine in their nature than man," and wisdom is knowledge "of the things that are highest by nature."

When Hobbes distinguishes between prudence and sapience, he does not assign a special object to wisdom. "As much experience is *Prudence*," he writes, "so is much science, *Sapience*." It is the amount of science a man possesses, not his possession of a particular kind of knowledge, which makes him wise. Descartes seems to take a similar view when he says that "the sciences taken all together are identical with human wisdom." But for Aristotle and Aquinas, philosophical wisdom can be differentiated from the other speculative virtues, such as the understanding of first principles or the scientific knowledge of the conclusions which can be demonstrated from them. It involves them, but it is distinct from them insofar as it uses principles to demonstrate conclusions concerning the highest causes. Wisdom can be

called a science if it is understood that by reason of its object it stands at the apex of the sciences, crowning and perfecting them.

In the opening pages of his *Metaphysics*, Aristotle identifies wisdom with the supreme philosophical science—the science which investigates first principles and causes. He calls it a "divine science" or "theology," for, as he says, "God is thought to be among the causes of all things and to be a first principle." It is not the most useful science, but the most "desirable on its own account and for the sake of knowing. . . . It alone exists for its own sake. . . . All the sciences, indeed, are more necessary than this, but none is better."

While adopting Aristotle's conception of wisdom, Aquinas finds it most eminently represented among the sciences, not by metaphysics or the theology of the philosophers, but by sacred doctrine or the theology based on revelation. "Since it is the part of a wise man to order and to judge," he writes, "and since lesser matters can be judged in the light of some higher cause . . . therefore, he who considers absolutely the highest cause of the whole universe, namely God, is most of all called wise. . . . But sacred doctrine essentially treats of God viewed as the highest cause, for it treats of Him not only so far as He can be known through creatures just as the philosophers know Him . . . but also so far as He is known to Himself alone and revealed to others. Hence," Aquinas concludes, "sacred doctrine is especially called wisdom."

THE CONTRAST BETWEEN THE wisdom of the philosopher and the wisdom of the theologian is more fully discussed in the chapters on METAPHYSICS and THEOLOGY. But we are concerned here with the further implications of the difference between natural and supernatural wisdom, or the wisdom of man and of God.

The Greeks insistently raise the question whether man can have wisdom. In the *Apology*, Socrates tells his accusers that his "cross-examination of the pretenders to wisdom" was a duty imposed upon him by the oracle which declared that there was no man wiser than himself. To understand the oracle's meaning, he tried to seek out wisdom in other men but, he says at his trial, "I found that the men most in repute were all but the most foolish." This gave him an insight into the kind of wisdom which he himself possessed.

"My hearers always imagine," Socrates declares, "that I myself possess the wisdom which I find wanting in others; but the truth is, O men of Athens, that God only is wise; and by his answer he intends to show that the wisdom of men is worth little or nothing; he is not speaking of Socrates, he is only using my name by way of illustration, as if he said, He, O men, is the wisest, who, like Socrates, knows that his wisdom is in truth worth nothing." Again in the *Phaedrus*, Socrates refuses to call any man wise, "for that is a great name which belongs to God alone." For men, "lovers of wisdom or philosophers is the modest and befitting title."

Aristotle also says of the science which most deserves the name of wisdom, because it is a science of divine things, that "such a science either God alone can have, or God above all others." He does not think that the divine power can be jealous, but if there were any truth in what the poets say about the jealousy of the gods, "it would probably occur in this case above all, and all who excelled in this knowledge would be unfortunate." To whatever extent the possession of wisdom "might be justly regarded as beyond human power," it would be unfitting, in Aristotle's opinion, "for man not to be content to seek the knowledge that is suited to him."

This is even more typically a Christian than a pagan sentiment. "Christians have a special knowledge," writes Montaigne, "how natural and original an evil curiosity is in man: the thirst of knowledge, and the desire to become more wise, was the first ruin of human kind, and the way by which it precipitated itself in eternal damnation." In *Paradise Lost*, as he is about to leave the Garden of Eden, Adam says to the angel Michael:

> Greatly instructed I shall hence depart.
> Greatly in peace of thought, and have my fill
> Of knowledge, what this vessel can containe;
> Beyond which was my folly to aspire.

To which the angel replies:

> This having learnt, thou hast attained the summe
> Of wisdom . . .

But Sacred Scripture does more than enjoin man to humble himself before the chasm be-

tween human wisdom at its best and the infinite wisdom of God. It does more than say in the words of Jeremiah: "Let not the wise man glory in his wisdom," for it also says that "fools despise wisdom." In the Epistle of James we find true wisdom set apart from false. If the knowledge of the wise man is not accompanied by the "meekness of wisdom," if instead there is "bitter envying and strife in your hearts," then "this wisdom descendeth not from above, but is earthly, sensual, devilish. . . . But the wisdom that is from above is first pure, then peaceable, gentle, and easy to be intreated, full of mercy and good fruits, without partiality, and without hypocrisy."

St. Paul asks: "Hath not God made foolish the wisdom of this world? When

> . . . the world by wisdom knew not God, it pleased God by the foolishness of preaching to save them that believe.
>
> For the Jews require a sign, and the Greeks seek after wisdom:
>
> But we preach Christ crucified, unto the Jews a stumbling-block, and unto the Greeks foolishness;
>
> But unto them which are called both Jews and Greeks, Christ the power of God, and the wisdom of God.
>
> Because the foolishness of God is wiser than men; and the weakness of God is stronger than men.

"My speech and my preaching," St. Paul continues to the Corinthians,

> . . . was not with enticing words of man's wisdom, but in demonstration of the Spirit and of power:
>
> That your faith should not stand in the wisdom of men, but in the power of God.
>
> Howbeit we speak wisdom among them that are perfect; yet not the wisdom of this world, nor of the princes of this world, that come to nought:
>
> But we speak the wisdom of God in a mystery, even the hidden mystery, which God ordained before the world unto our glory.

Wonder is the beginning of the kind of natural wisdom which a philosopher like Aristotle regards as the ultimate goal of human inquiry. But the supernatural wisdom of which Scripture speaks begins with the fear of God and comes to man not through his efforts at learning, but only as a divine gift. "If any of you lack wisdom," St. James declares, "let him ask God, that giveth to all men liberally and upbraideth not; and it shall be given him." It is wrong for a man to take pride in his own learning but, according to Pascal, "the proper place for pride if in wisdom, for it cannot be granted to a man that he has made himself wise. . . . God alone gives wisdom, and that is why *Qui gloriatur, in Domino glorietur.*"

The theologians dwell at length on the text of the Psalmist that "the fear of the Lord is the beginning of wisdom." Enumerating seven steps to wisdom, Augustine writes: "First of all, it is necessary that we should be led by the *fear of God* to seek the knowledge of His will, what He commands us to desire and what to avoid. Now this fear will of necessity excite in us the thought of our mortality and of the death that is before us, and crucify all the motions of pride as if our flesh were nailed to the tree." Then in succession come the steps of piety, knowledge, resolution, counsel, purification of heart; and, finally, the "holy man will be so single and so pure in heart that he will not step aside from the truth, either for the sake of pleasing men or with a view to avoid any of the annoyances which beset this life. Such a man ascends to *wisdom*, which is the seventh and the last step, and which he enjoys in peace and tranquility."

Only the wisdom which begins with faith, according to Aquinas, also begins with fear. "A thing may be called the beginning of wisdom in two ways," he explains; "in one way, because it is the beginning of wisdom itself as to its essence; in another way, as to its effect. Thus the beginning of an art as to its essence consists in the principles from which that art proceeds, while the beginning of an art as to its effect is that wherefrom it begins to operate." Aquinas then points out that wisdom is considered by theologians "in one way, and in another way by philosophers." As the wisdom of the philosophers does not begin with articles of faith but with axioms of reason, so it does not begin with fear but with wonder.

The wisdom of the philosophers and the wisdom of the religious both consist in knowledge of divine things, but "wisdom, as we look at it," Aquinas writes, "is considered not only as being cognizant of God, as it is with the philosophers, but also as directing human conduct, since this is directed not only by the human law, but by the divine law. . . . Accordingly the beginning of wisdom as to its essence consists in the first principles of wisdom, *i.e.*, the articles of faith,

and in this sense faith is said to be the beginning of wisdom. But as regards the effect, the beginning of wisdom is the point where wisdom begins to work, and in this way fear is the beginning of wisdom, yet servile fear in one way and filial fear in another.

"For servile fear," Aquinas explains, "is like a principle disposing a man to wisdom from without, in so far as he refrains from sin through fear of punishment, and is thus fashioned for the effect of wisdom. . . . On the other hand, chaste or filial fear is the beginning of wisdom, as being the first effect of wisdom. For since the regulation of human conduct by the divine law belongs to wisdom, in order to make a beginning, man must first of all fear God and submit himself to Him."

The special character of wisdom which we noted earlier—that it is at once speculative and practical knowledge, that it is concerned both with the ultimate nature of things and the ultimate good for man—seems to be strikingly exemplified in what the theologian calls "the gift of wisdom." Wisdom as Plato conceives it may have this double character, but for Aristotle, as we have seen, wisdom, as opposed to prudence, is purely speculative. It remains speculative even when it deals with the end which is the good of each thing "and in general with the supreme good in the whole of nature." It considers the end or the good, as Aristotle indicates, only under the aspect of investigating "the first principles and causes; for the good, *i.e.*, the end, is one of the causes." It does not thereby direct man to his own end, or lay down the rules of a good life.

The supernatural gift of wisdom, Aquinas tells us, "is not merely speculative but also practical. . . . It belongs to wisdom as a gift, not only to contemplate divine things, but also to regulate human acts." Such infused wisdom not only extends "to the hidden mysteries of divine things," which are beyond the greatest wisdom man can acquire by his natural efforts, but this wisdom also directs man's actions to "the sovereign good which is the last end, by knowing which man is said to be truly wise."

CHRISTIAN THEOLOGIANS LIKE Augustine and Aquinas do not hold the wisdom of the philosophers in contempt because they fail to penetrate the divine mysteries, or to guide man to his salvation. Augustine finds in Plato's teaching a marvellous foreshadowing of Christian wisdom. "It is evident that none come nearer to us than the Platonists," he says, when he attributes to Plato the conception of "the wise man as one who imitates, knows, loves this God, and who is rendered blessed through fellowship with Him in His own blessedness." Though Aquinas holds that "wisdom as a gift is more excellent than wisdom as an intellectual virtue, since it attains to God more intimately by a kind of union of the soul with Him," he certainly regards Aristotle as the epitome of natural wisdom when he refers to him as "*the* philosopher."

The admonition of St. Paul, "to beware lest any man spoil you through philosophy and vain deceit, after the tradition of men, after the rudiments of the world," does not seem to be interpreted by Augustine and Aquinas to mean, as Montaigne later suggests, that "the plague of man is the opinion of wisdom; and for this reason it is that ignorance is so recommended to us by our religion." But the theologians do condemn the counterfeits of wisdom to which men are susceptible. These are false wisdoms; the wisdom of the philosophers is not false, but imperfect.

We find three types of false worldly wisdom listed by Aquinas. If a man "fixes his end in external earthly things," he writes, "his wisdom is called *earthly*; if in the goods of the body, it is called *sensual* wisdom; if in some excellence, it is called *devilish* wisdom, because it imitates the devil's pride." These worldly wisdoms constitute for him the sin of folly. "It is the wisdom of the world," Aquinas says, "which deceives and makes us foolish in God's sight. . . . Though no man wishes to be a fool," he adds, "yet he wishes those things of which folly is a consequence, *viz.* to withdraw his sense from spiritual things and to plunge it into earthly things." The essence of such folly, according to the Psalmist, lies in denial: "The fool hath said in his heart, There is no God."

But there is another meaning of folly, in which it is neither a sin nor the opposite of wisdom. "If any man among you seem to be wise in this world," St. Paul declares, "let him become a fool, that he may be wise." Commenting on this text, Aquinas explains that "just as there

is an evil wisdom called *worldly wisdom* . . . so too there is a good folly opposed to this evil wisdom, whereby man despises worldly things." If there is wisdom in such folly, so also, according to Aquinas, there can be wisdom in those whom the world regards as natural fools or innocents. If they have grace, he writes, "baptized idiots, like little children, have the habit of wisdom, which is a gift of the Holy Ghost, but they have not the act, on account of the bodily impediment which hinders the use of reason in them."

Throughout the tradition of the great books those who praise folly do not take exception to the Psalmist's remark that only "fools despise wisdom." Rather they find wisdom in the appearances of folly, and use the wisdom of fools to expose the folly of those who pretend to be wise. "I every day hear fools say things that are not foolish," Montaigne declares; and echoing him, Touchstone, the clown in *As You Like It*, complains: "The more pity that fools may not speak wisely what wise men do foolishly." To which Celia replies: "By my troth, thou sayest true; for, since the little wit that fools have was silenced, the little foolery that wise men have makes a great show." And later, after a conversation with Touchstone about the passing of time, Jacques observes: "When I did hear the motley fool thus moral on the time, my lungs began to crow like chanticleer that fools should be so deep contemplative."

The jesters and clowns in Shakespeare's comedies have a kind of wisdom. In *Twelfth Night*, the clown who banters with Viola denies that he is the Lady Olivia's fool, but says he is simply "her corrupter of words." The trouble, he explains, is not that he lacks reason, but that "words are grown so false that I am loath to prove reason with them"; and he ends by telling Viola: "Foolery, sir, does walk about the orb like the sun; it shines everywhere. I would be sorry, sir, but the fool should be as oft with your master as with my mistress. I think I saw your wisdom there."

Pantagruel persuades Panurge to take counsel of a fool. "The wise may be instructed by a fool," he says. "You know how by the advice and counsel and prediction of fools, many kings, princes, states, and commonwealths have been preserved, battles gained, and diverse doubts of a most perplexed intricacy resolved." As he who "is called a worldly wise man," Pantagruel goes on to remark, may "in the second judgment of the intelligences which are above . . . be esteemed a fool," so he may be thought a sage who lays "quite aside those cares which are conducible to his body or his fortunes. . . . All which neglects of sublunary things are vulgarly imputed folly."

To the same general effect are Pierre's reflections in *War and Peace* on the period of his blissful insanity after the burning of Moscow. When he recalls the views he formed of men and circumstances at the time of his madness, he always finds them correct. "I may have appeared strange and queer then," he says to himself, "but I was not so mad as I seemed. On the contrary, I was wiser and had more insight than at any other time, and understood all that is worth understanding in life, because . . . because I was happy."

FOLLY IS NOT ALWAYS PRAISED in paradox, nor is it seriously condemned only by the Christian theologian who equates it with denying or turning away from God. "Folly, eldest of Jove's daughters," says Agamemnon in the *Iliad*, "shuts men's eyes to their destruction. She walks delicately, not on the solid earth, but hovers over the heads of men to make them stumble or to ensnare them. Time was when she fooled Jove himself." Agamemnon concludes the story of Jove's befuddlement by relating how in his rage Jove "caught Folly by the hair and swore a great oath that never should she again invade starry heaven and Olympus, for she was the bane of all. Then he whirled her round with a twist of his hand, and flung her down from heaven so that she fell on the fields of mortal men."

On the earthly plane, folly takes many forms, of which, in Montaigne's judgment, the most exasperating are dullness of wit, the boldness of stupidity, and contentiousness in argument. "Obstinacy of opinion and heat in argument are the surest proofs of folly," he observes. "Is there anything so assured, resolute, disdainful, contemplative, serious, and grave as the ass?"

Whatever the forms or aspects of folly, and however the wisdom it implies or opposes be conceived, one thing is clear throughout the

tradition of western thought. No one who can separate true wisdom from folly in disguise places anything but the highest value on it in the order of human goods.

The final utterance of the Chorus in *Antigone*, that "wisdom is the supreme part of happiness"; the Aristotelian doctrine that "the activity of philosophic wisdom is admittedly the pleasantest of virtuous activities" and "all the other attributes ascribed to the supremely happy man are evidently those connected with this activity"; the statement by Plato in his *Seventh Letter*, in which he demands that his myth of the philosopher-king be taken seriously, for "the human race will not see better days until either the stock of those who rightly and genuinely follow philosophy acquire political authority, or else the class who have political control be led by some dispensation of providence to become real philosophers"—all these express the tribute which pagan antiquity pays to wisdom in human life and society.

To the Christian—theologian, mystic, or poet—it is in Heaven with the saints who dwell in God's presence that wisdom, like love, reigns supreme. Nor are these two unconnected. As charity is the perfection of the will, so wisdom is the perfection of the intellect. In the *Divine Comedy*, Aquinas explains to Dante when they meet in Paradise how lack of wisdom's order in the mind goes hand in hand with love's disorder. "He is very low down among the fools," the spirit says, "who affirms or denies without distinction, alike in the one and in the other case: because it happens that oftentimes the rash judgment bends in false directions, and then self-love binds the intelligence."

With the accent on earth rather than on heaven, with reliance upon reason rather than upon faith, Spinoza voices a comparable insight that to have wisdom is to love wisely, for to know wisely is to love God. "It is therefore most profitable to us in this life," he writes, "to make perfect the intellect or reason as far as possible, and in this one thing consists the highest happiness or blessedness of man; for blessedness is nothing but the peace of mind which springs from the intuitive knowledge of God." Not only does "the highest possible peace of mind" arise from this kind of knowledge but, he adds, from it also "necessarily springs the intellectual love of God."

OUTLINE OF TOPICS

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REFERENCES

To find the passages cited, use the numbers in heavy type, which are the volume and page numbers of the passages referred to. For example, in **4** HOMER: *Iliad*, BK II [265-283] **12d**, the number **4** is the number of the volume in the set; the number **12d** indicates that the passage is in section d of page 12.

PAGE SECTIONS: When the text is printed in one column, the letters **a** and **b** refer to the upper and lower halves of the page. For example, in **53** JAMES: *Psychology*, **116a-119b**, the passage begins in the upper half of page 116 and ends in the lower half of page 119. When the text is printed in two columns, the letters **a** and **b** refer to the upper and lower halves of the left-hand side of the page, the letters **c** and **d** to the upper and lower halves of the right-hand side of the page. For example, in **7** PLATO: *Symposium*, **163b-164c**, the passage begins in the lower half of the left-hand side of page 163 and ends in the upper half of the right-hand side of page 164.

AUTHOR'S DIVISIONS: One or more of the main divisions of a work (such as PART, BK, CH, SECT) are sometimes included in the reference; line numbers, in brackets, are given in certain cases; *e.g.*, *Iliad*, BK II [265-283] **12d**.

BIBLE REFERENCES: The references are to book, chapter, and verse. When the King James and Douay versions differ in title of books or in the numbering of chapters or verses, the King James version is cited first and the Douay, indicated by a (*D*), follows; *e.g.*, OLD TESTAMENT: *Nehemiah*, 7:45—(*D*) *II Esdras*, 7:46.

SYMBOLS: The abbreviation "esp" calls the reader's attention to one or more especially relevant parts of a whole reference; "passim" signifies that the topic is discussed intermittently rather than continuously in the work or passage cited.

For additional information concerning the style of the references, see the Explanation of Reference Style; for general guidance in the use of *The Great Ideas*, consult the Preface.

1. The nature, origins, and kinds of wisdom

1*a*. Diverse conceptions of natural wisdom: the supreme form of human knowledge

7 PLATO: *Charmides*, 7d-9d; 11b-c; 12d-13d / *Phaedrus*, 125a-126c / *Symposium*, 166c-167c / *Apology*, 201b-203a / *Phaedo*, 232a / *Republic*, BK IV, 346a-347a; BK VI-VII, 383d-398c / *Timaeus*, 476a-b / *Parmenides*, 491c-d / *Sophist*, 571a-c / *Philebus*, 634b-635b / *Laws*, BK III, 670b-c / *Seventh Letter*, 809c-810d

8 ARISTOTLE: *Physics*, BK I, CH 9 [$192^{a}33$-$^{b}2$] 268c-d; BK II, CH 2 [$194^{b}9$-15] 271a; CH 7 [$198^{a}22$-31] 275b-c / *Heavens*, BK III, CH 1 [$298^{b}13$-24] 390a-b / *Metaphysics*, BK I, CH 1-2 499a-501c; BK II, CH 1 511b,d-512b; BK III, CH 1 [$995^{a}23$-$^{b}27$] 513b,d-514b; CH 2 [$996^{a}18$-$997^{a}34$] 514d-516a; BK IV, CH 1-3 522a-525a; BK VI, CH 1 547b,d-548c; BK XI, CH 1-4 587a-590a; CH 7 592b-593a / *Soul*, BK I, CH 1 [$403^{b}10$-17] 632d

9 ARISTOTLE: *Ethics*, BK VI, CH 7 390a-d; CH 13 [$1145^{a}7$-12] 394d

11 NICOMACHUS: *Arithmetic*, BK I, 811a-813a

12 LUCRETIUS: *Nature of Things*, BK V [1-54] 61a-d; BK VI [1-42] 80a-d

12 EPICTETUS: *Discourses*, BK II, CH 22, 167d-168a; BK III, CH 2 177c-178d; BK IV, CH 5 228a-230b

12 AURELIUS: *Meditations*, BK V, SECT 9 270b-c

16 PTOLEMY: *Almagest*, BK I, 5a-b

17 PLOTINUS: *First Ennead*, TR II, CH 6-TR III, CH 6 9a-12b / *Fifth Ennead*, TR III, CH 2-4 216b-217d

18 AUGUSTINE: *City of God*, BK VIII, CH 1-10 264b,d-271d

19 AQUINAS: *Summa Theologica*, PART I, Q 1, A 1 3b-4a; A 6 6b-7a; A 8, ANS 7c-8d; Q 14, A 1, REP 2 75d-76c; Q 79, A 10, REP 3 423d-424d

20 AQUINAS: *Summa Theologica*, PART I-II, Q 57, A 2 36a-37b; PART II-II, Q 9, A 2, ANS 424b-425a; Q 19, A 7, ANS 469d-470c; Q 45, A 1, ANS 598d-599d

23 HOBBES: *Leviathan*, PART I, 60c-61a; 72a-d; PART IV, 267a-b; 269b-c

25 MONTAIGNE: *Essays*, 308c-d; 520b-522a; 522c

28 HARVEY: *On Animal Generation*, 443b

30 BACON: *Advancement of Learning*, 15d; 17b-c; 40a-48d esp 40a-41b, 43a-c, 44c-45a / *Novum Organum*, BK II, APH 9 140b-c

31 DESCARTES: *Rules*, I 1a-2a / *Meditations*, 70c-d

31 SPINOZA: *Ethics*, PART II, PROP 40, SCHOL 2-PROP 42 388a-c; PROP 47 390c-391a; PART V, PROP 25-42 458d-463d

35 HUME: *Human Understanding*, SECT I, DIV 7 453c-454a

37 FIELDING: *Tom Jones*, 182a-b

42 KANT: *Pure Reason*, 1a-4a,c; 19a; 115d-117d; 120b [fn 1]; 172d-174a esp 173d; 243c-248d esp 246a-248d / *Fund. Prin. Metaphysic of Morals*, 270c-d / *Practical Reason*, 337a-338c; 360d-361d / *Pref. Metaphysical Elements of Ethics*, 365a-b; 368c-d; 377b-c
46 HEGEL: *Philosophy of Right*, PREF, 6a-7a / *Philosophy of History*, INTRO, 158c-160b; 165a-b
51 TOLSTOY: *War and Peace*, BK V, 197b
53 JAMES: *Psychology*, 758a

1b. The distinction between speculative and practical wisdom, or between philosophical and political wisdom

7 PLATO: *Apology*, 202d / *Philebus*, 633a-635b
9 ARISTOTLE: *Ethics*, BK I, CH 8 [1098b24-26] 344b; BK VI, CH 3 [1139b14-18] 388b; CH 7-8 390a-391c esp CH 7 [1141a20-35] 390a-b; CH 11 [1143b14]-CH 12 [1144a10] 393b-d; CH 13 [1145a6-12] 394d / *Rhetoric*, BK I, CH 11 [1371b26-28] 615b
18 AUGUSTINE: *City of God*, BK VIII, CH 4 266d-267c
19 AQUINAS: *Summa Theologica*, PART I, Q 1, A 6, ANS 6b-7a
20 AQUINAS: *Summa Theologica*, PART I-II, Q 66, A 5, REP 1-2 79b-80c; PART II-II, Q 19, A 7 469d-470c; Q 45, A 3 600c-601a
21 DANTE: *Divine Comedy*, PARADISE, XIII [88-111] 126b-c
23 HOBBES: *Leviathan*, PART I, 60c-61a; 84c-d; PART IV, 267a-b
25 MONTAIGNE: *Essays*, 327b-d
30 BACON: *Advancement of Learning*, 4c-6c passim; 16d-17a; 42a-c; 65d-66a
42 KANT: *Pure Reason*, 245a-248d passim / *Fund. Prin. Metaphysic of Morals*, 260d-261d / *Pref. Metaphysical Elements of Ethics*, 365b [fn 1]; 377b-c
46 HEGEL: *Philosophy of History*, PART II, 271d-272a
47 GOETHE: *Faust*, PART I [2038-2039] 48a

1c. Theological and mystical wisdom: the supernatural wisdom of faith and vision; the gift of wisdom

OLD TESTAMENT: *I Kings*, 3:5-14; 4:29—(*D*) *III Kings*, 3:5-14; 4:29 / *I Chronicles*, 22:12—(*D*) *I Paralipomenon*, 22:12 / *II Chronicles*, 1:7-12—(*D*) *II Paralipomenon*, 1:7-12 / *Job*, 28; 32:8 / *Psalms*, 19:7; 111:10; 119:34-40,73, 97-104,125,130,144,169—(*D*) *Psalms*, 18:8; 110:10; 118:34-40,73,97-104,125,130,144,169 / *Proverbs*, 1:7; 2:1-11; 3:5-6; 8; 9:10; 15:33 / *Ecclesiastes*, 2:26 / *Isaiah*, 11:1-5—(*D*) *Isaias*, 11:1-5 / *Daniel*, 1 esp 1:17; 2 esp 2:17-23; 4-5 esp 4:8-9, 4:18, 5:10-16—(*D*) *Daniel*, 1 esp 1:17; 2 esp 2:17-23; 3:98-5:31 esp 4:5-6, 4:15, 5:10-16
APOCRYPHA: *Wisdom of Solomon*, 6-9 esp 7:7, 7:15-16, 7:24-26, 8:21-9:18—(*D*) OT, *Book of Wisdom*, 6-9 esp 7:7, 7:15-16, 7:24-26, 8:21-9:19 / *Ecclesiasticus*, 1; 6:18-37; 11:15; 17:1,6-14; 19:20; 21:11; 24; 43:33; 45:26; 50:28-29; 51:17—(*D*) OT, *Ecclesiasticus*, 1; 6:18-37; 11:15; 17:1,6-14; 19:18; 21:13; 24; 43:37; 45:31; 50:30-31; 51:22-23
NEW TESTAMENT: *Matthew*, 11:25-27 / *Luke*, 10:21-22 / *John*, 1:4-5,9; 3:19-21; 8:32; 16:12-14 / *I Corinthians*, 1:17-2:16; 3:16-20; 4:10; 8:2-3 / *Ephesians*, 1:15-18; 3:1-12; 5:15-17 / *Colossians*, 1:9-10; 2:2-3 / *II Thessalonians*, 2:10-14—(*D*) *II Thessalonians*, 2:10-13 / *James*, 1:5; 3:13-18
18 AUGUSTINE: *Confessions*, BK IX, par 23-25 68a-c; BK XII, par 20 103c-d / *City of God*, BK VIII, CH 10 271a-d; BK XI, CH 2 323a-c; BK XIX, CH 20 523d-524a / *Christian Doctrine*, BK II, CH 7 638d-639c; CH 40 655b-656a; CH 42 656c-d
19 AQUINAS: *Summa Theologica*, PART I, Q 1, A 1 3b-4a; AA 5-6 5c-7a; Q 12, AA 12-13 60d-62b; Q 32, A 1 175d-178a; Q 64, A 1, ANS 334a-335c
20 AQUINAS: *Summa Theologica*, PART II-II, QQ 8-9 416d-426c passim; Q 19, A 7 469d-470c; Q 45 598c-603c; PART III SUPPL, Q 92 1025b-1037c
21 DANTE: *Divine Comedy*, PARADISE, V [1-12] 112a-b
23 HOBBES: *Leviathan*, PART I, 83b; PART IV, 270c-d
25 MONTAIGNE: *Essays*, 208a-209c; 212a-d; 238d-239c
30 BACON: *Advancement of Learning*, 17b-c; 19b-c; 39d-40a; 95d-96c
31 DESCARTES: *Discourse*, PART I, 43c
32 MILTON: *Paradise Lost*, BK VII [109-130] 219b-220a; BK XII [552-587] 331a-332a
33 PASCAL: *Pensées*, 425-555 243b-270a; 793, 326b
35 HUME: *Human Understanding*, SECT XII, DIV 132, 509c
37 FIELDING: *Tom Jones*, 182b-c
40 GIBBON: *Decline and Fall*, 308d-309a
42 KANT: *Practical Reason*, 346b-347c
46 HEGEL: *Philosophy of History*, INTRO, 157c-d
51 TOLSTOY: *War and Peace*, BK V, 196a-198b; BK VI, 248d-249a
52 DOSTOEVSKY: *Brothers Karamazov*, BK VI 146b,d-170d esp 168b-c; BK VII, 189a-191a,c; BK XI, 313c-314d
54 FREUD: *Civilization and Its Discontents*, 770d-771a

1d. The wisdom of God: the defect of human wisdom compared with divine wisdom; the folly or vanity of worldly wisdom

OLD TESTAMENT: *Job* passim, esp 9:1-4, 11:1-12, 12:12-16, 26:1-14, 28:1-28, 38:1-41:34—(*D*) *Job* passim, esp 9:1-4, 11:1-12, 12:12-16, 26:1-14, 28:1-28, 38:1-41:25 / *Psalms*, 92:5-6; 94:11; 104:24; 119:97-104; 139; 147:4-5—(*D*) *Psalms*, 91:6-7; 93:11; 103:24; 118:97-104; 138; 146:4-5 / *Proverbs*, 3:5-8,19-20; 8:22-31; 20:24; 21:30; 23:4; 28:26 / *Ecclesiastes* passim,

(1. *The nature, origins, and kinds of wisdom.* 1d. *The wisdom of God: the defect of human wisdom compared with divine wisdom; the folly or vanity of worldly wisdom.*)

esp 1:12–18, 2:12–26, 3:11, 6:8, 7:16–17, 7:23–25, 8:16–17, 11:5, 12:8–12 / *Isaiah*, 29:14–16; 33:18–19; 40:12–31 esp 40:28; 44:24–25—(*D*) *Isaias*, 29:14–16; 33:18–19; 40:12–31 esp 40:28; 44:24–25 / *Jeremiah*, 8:8–9; 9:23–24; 10:7–8, 12–15; 51:15–18—(*D*) *Jeremias*, 8:8–9; 9:23–24; 10:7–8,12–15; 51:15–18 / *Ezekiel*, 28:1–7—(*D*) *Ezechiel*, 28:1–7 / *Daniel*, 2:20–23

APOCRYPHA: *Wisdom of Solomon*, 7:15–16; 8:1–4; 9:1–4,13–17; 17:7–8—(*D*) OT, *Book of Wisdom*, 7:15–16; 8:1–4; 9:1–4,13–17; 17:7–8 / *Ecclesiasticus*, 1:1–10; 3:20–25; 11:15; 15:18–19; 19:24–25; 21:12; 23:19–20; 24:1–9,24–29; 37:19–21; 39:19–20; 42:17–25—(*D*) OT, *Ecclesiasticus*, 1:1–10; 3:21–26; 11:15; 15:19–20; 19:21–22; 21:14–15; 23:27–29; 24:1–14,35–39; 37:22–24; 39:24–25; 42:17–26

NEW TESTAMENT: *Matthew*, 11:16–19 / *Luke*, 7:31–35; 16:8 / *John*, 1:1,4–5,9 / *Romans*, 11:33–36 / *I Corinthians*, 1:17–2:16; 3:16–20; 8:1–3 / *Colossians*, 2:2–3,8 / *James*, 3:13–18

5 AESCHYLUS: *Suppliant Maidens* [86–103] **2a-b**

5 EURIPIDES: *Bacchantes* [386–433] **343a-b** / *Iphigenia Among the Tauri* [570–575] **416a**

7 PLATO: *Apology*, **203a**

8 ARISTOTLE: *Metaphysics*, BK I, CH 2 [982^{b}28–983^{a}11] **501a-b**; BK XII, CH 7 [1072^{b}13–29] **602d-603a**; CH 9 **605a-d**; CH 10 [1075^{b}20–24] **606c**

9 ARISTOTLE: *Ethics*, BK X, CH 8 [1178^{b}20–23] **433b-c** / *Politics*, BK VII, CH 1 [1323^{b}21–25] **527c**

12 EPICTETUS: *Discourses*, BK I, CH 14 **120d-121c**

17 PLOTINUS: *Fourth Ennead*, TR IV, CH 11–13 **163c-165b** / *Fifth Ennead*, TR VIII, CH 4–6 **241b-242d**

18 AUGUSTINE: *Confessions*, BK III, par 8 **14d-15a**; BK V, par 5 **28b-c**; BK XII, par 20 **103c-d** / *City of God*, BK IX, CH 22 **296d-297a**; BK XI, CH 10, **328c-d** / *Christian Doctrine*, BK I, CH 8–14 **626c-628b**

19 AQUINAS: *Summa Theologica*, PART I, Q 1, A 6, ANS and REP 1 **6b-7a**; Q 3, A 6, REP 1 **18c-19a**; Q 4, A 2, REP 3 **21b-22b**; Q 14, A 1, REP 2 **75d-76c**; Q 15, A 2, REP 2 **92a-93b**; Q 21, A 2, ANS **125c-d**; A 4, ANS and REP 4 **126c-127c**; Q 27, A 2, REP 2 **154c-155b**; Q 34, A 1, REP 2,4 **185b-187b**; Q 39, A 8 **210a-213a**; Q 44, A 3, ANS **240b-241a**; Q 45, A 6, REP 2–3 **247a-248b**; Q 47, A 1, ANS **256a-257b**; A 2, ANS **257b-258c**; Q 62, A 6, ANS **322a-d**; Q 65, A 2, REP 3 **340b-341b**

20 AQUINAS: *Summa Theologica*, PART I-II, Q 51, A 1, REP 2 **12b-13c**; Q 91, A 3, REP 1 **209d-210c**; PART II-II, Q 45, A 1, REP 1 **598d-599d**; A 4, REP 1 **601a-c**; A 6, REP 1–2 **602b-603c**; Q 46 **603c-605a,c** passim, esp A 1, REP 2–3 **603c-604b**, A 3, REP 2 **604d-605a,c**; PART III, Q 12, A 2, CONTRARY and REP 3 **777b-778b**; A 3, REP 2 **778b-779a**

25 MONTAIGNE: *Essays*, **212a-215a**; **238c-239c**; **251c-252b**

30 BACON: *Advancement of Learning*, **17b-c**; **19b-c**; **98d-99b**

32 MILTON: *Paradise Lost*, BK II [188–193] **115b**; BK VII [109–130] **219b-220a**; BK VIII [179–214] **236a-b**; BK XII [561–573] **331b**

33 PASCAL: *Pensées*, 425–555 **243b-270a**

35 LOCKE: *Human Understanding*, BK II, CH XXIII, SECT 34 **213a-b**; BK III, CH VI, SECT 11, **271c**; SECT 12, **272b**; BK IV, CH X, SECT 5–6 **350a-c**

35 BERKELEY: *Human Knowledge*, SECT 32 **418d-419a**

37 FIELDING: *Tom Jones*, **182b-c**; **379c-380a**

42 KANT: *Pure Reason*, **242a-b** / *Practical Reason*, **303b-304b**; **324b-325a**; **344a-c**; **346a-c**; **354d-355d** / *Judgement*, **592a-c**

43 MILL: *Utilitarianism*, **455b**

46 HEGEL: *Philosophy of Right*, ADDITIONS, 164, **144c-d** / *Philosophy of History*, INTRO, **158c-160b**

48 MELVILLE: *Moby Dick*, **313b-314a**

52 DOSTOEVSKY: *Brothers Karamazov*, BK V, **130b-c**

2. Wisdom, virtue, and happiness

2a. Wisdom as an intellectual virtue: its relation to other intellectual virtues, especially science and understanding; the vice or sin of folly

OLD TESTAMENT: *Psalms*, 14:1–4; 53:1–4—(*D*) *Psalms*, 13:1–4; 52:1–4 / *Proverbs*, 8:12; 10:14; 12:15–16; 14:8,33; 15:2; 16:21–23; 17:24; 18:15; 21:11; 24:9 / *Ecclesiastes*, 2:13; 4:5; 7:4–7,25–26; 8:5; 9:13–18; 10:1–3,12–15 / *Jeremiah*, 8:8–9—(*D*) *Jeremias*, 8:8–9

APOCRYPHA: *Wisdom of Solomon*, 7:15–22; 8:5–8; 12:23–14:31 esp 13:1–2, 14:11–14, 14:22—(*D*) OT, *Book of Wisdom*, 7:15–22; 8:5–8; 12:23–14:31 esp 13:1–2, 14:11–14, 14:22 / *Ecclesiasticus*, 1:4,19,25; 10:1–3; 18:28–29; 21:12–19; 22:7–8,11–15; 33:5; 34:1; 38:24–25; 39:1–3—(*D*) OT, *Ecclesiasticus*, 1:4,24,31; 10:1–3; 18:28–29; 21:14–22; 22:7–18; 33:5; 34:1; 38:25–26; 39:1–3

NEW TESTAMENT: *Matthew*, 7:26–27 / *Romans*, 1:18–25

4 HOMER: *Iliad*, BK XIX [74–144] **137d-138c**

7 PLATO: *Cratylus*, **86c-d** / *Republic*, BK IV, **346a-355a** esp **346c-347a**, **353d-354b**; BK VI–VII, **383b-398c**; BK IX, **423c-d** / *Laws*, BK III, **670b-c**

8 ARISTOTLE: *Topics*, BK V, CH 6 [136^{b}7–14] **188b-c**; CH 8 [138^{a}37–^{b}5] **191a**; BK VI, CH 6 [145^{a}27–32] **199a**

9 ARISTOTLE: *Ethics*, BK I, CH 4 [1095^{b}10–13] **340c-d**; CH 13 [1103^{a}3–10] **348c-d**; BK VI, CH 3 [1139^{b}14–18] **388b**; CH 6–11 **389d-393b**

11 NICOMACHUS: *Arithmetic*, BK I, 811a-813a
12 EPICTETUS: *Discourses*, BK II, CH 15, 156a-b
17 PLOTINUS: *Fourth Ennead*, TR IV, CH 12, 164b / *Fifth Ennead*, TR VIII, CH 4-6 241b-242d
18 AUGUSTINE: *Confessions*, BK VII, par 14, 48a-b / *City of God*, BK VIII, CH 10, 271b-c; BK XIV, CH 28 397a-d; BK XIX, CH 20 523d-524a
19 AQUINAS: *Summa Theologica*, PART I, Q 14, A 1, REP 2 75d-76c; Q 79, A 9, ANS 422b-423d; A 10, REP 3 423d-424d; PART I-II, Q 2, A 1, REP 1-2 615d-616c
20 AQUINAS: *Summa Theologica*, PART I-II, Q 57, A 2 36a-37b; Q 66, A 5 79b-80c; PART II-II, Q 9, A 2, ANS 424b-425a; Q 45, A 1, ANS and REP 2 598d-599d; A 2, ANS and REP 3 599d-600c; A 3, ANS and REP 1 600c-601a; A 4, REP 1-2 601a-c; Q 46 603c-605a,c
23 HOBBES: *Leviathan*, PART I, 56d; 60c-d
25 MONTAIGNE: *Essays*, 521d-522a
31 DESCARTES: *Rules*, I 1a-2a
32 MILTON: *Paradise Lost*, BK VII [109-130] 219b-220a / *Areopagitica*, 392b
42 KANT: *Fund. Prin. Metaphysic of Morals*, 260d-261d / *Practical Reason*, 337a-338c; 360d-361d

2b. Wisdom and man's knowledge of good and evil: the relation of wisdom to the moral virtues

OLD TESTAMENT: *Genesis*, 3 / *I Kings*, 3:5-14—(*D*) *III Kings*, 3:5-14 / *II Chronicles*, 1:7-12—(*D*) *II Paralipomenon*, 1:7-12 / *Job*, 28:28 / *Psalms*, 14:1-4; 37:30; 53—(*D*) *Psalms*, 13:1-4; 36:30; 52 / *Proverbs*, 1-2; 3:5-7,21-24; 5:22-23; 6:6-8,32-33; 7:4-5; 8; 9:9-18; 10:8,19,23, 31; 11:12; 12:16; 13:1,14,19; 14:8-9,16-18,29; 15:21,24,33; 17:10; 18:6-7; 19:3; 24:9; 28:7; 29:3 / *Ecclesiastes*, 2:26; 7:9-10,25-26; 8:5; 10:12-15
APOCRYPHA: *Wisdom of Solomon* passim, esp 1:1-7, 6:12-25, 7:22-30, 8:5-7, 9:9-18, 10:8-10, 12:23-24, 13:1-2, 14:11-14, 14:22-31—(*D*) OT, *Book of Wisdom* passim, esp 1:1-7, 6:13-27, 7:21-30, 8:5-7, 9:9-19, 10:8-10, 12:23-24, 13:1-2, 14:11-14, 14:22-31 / *Ecclesiasticus*, 1: 4-10,14-21,26-27; 11:15-16; 17:1,7; 18:27; 19:18-25; 21:11-12,22-26; 22:16-18; 23:2-3; 27:11,13; 39:1-11; 43:33; 45:26; 47:12-20; 50: 28-29—(*D*) OT, *Ecclesiasticus*, 1:4-10,16-27; 11:15-16; 17:1,6; 18:27; 19:18-22; 21:12-15, 25-29; 22:19-22; 23:2-3; 27:12,14; 39:1-15; 43:37; 45:31; 47:14-22; 50:30-31
NEW TESTAMENT: *Matthew*, 7:26-27 / *Romans*, 1:18-25; 16:19 / *Philippians*, 1:9-11 / *Colossians*, 1:9-10 / *James*, 3:13-18
5 AESCHYLUS: *Agamemnon* [160-183] 53d-54a
5 SOPHOCLES: *Antigone* [1348-1353] 142d
6 THUCYDIDES: *Peloponnesian War*, BK I, 370a-c
7 PLATO: *Charmides*, 7a-13c passim, esp 7b-c, 12d-13a / *Laches*, 31a-b; 33a-37a / *Protagoras*, 56b; 58a-64d esp 62a-64a / *Euthydemus*, 69a-71a / *Cratylus*, 86c-d / *Symposium*, 166c-167d / *Meno*, 183c-184c; 189b-d / *Phaedo*, 226a-b; 230d-234c esp 232a-b, 233d-234c / *Republic*, BK I, 306c-308a; BK III, 337b-d; BK IV, 346a-355a; BK VI-VII, 383d-398c / *Critias*, 485b-c / *Theaetetus*, 530b-531a / *Philebus*, 635c-639a,c / *Laws*, BK I, 643c-d; BK III, 669b-671b; BK XII, 795c-796b / *Seventh Letter*, 801b-c; 806b-c; 808c-d
8 ARISTOTLE: *Sophistical Refutations*, CH 24 [180^{a}7-15] 248a / *Metaphysics*, BK I, CH 2 [982^{b}4-10] 500d; BK III, CH 2 [996^{a}21-^{b}13] 514d-515a
9 ARISTOTLE: *Ethics*, BK VI, CH 5 389a-d; CH 12-13 393b-394d; BK X, CH 8 [1178^{a}16-18] 432d / *Politics*, BK VII, CH 1 [1323^{b}21-36] 527c-d
12 EPICTETUS: *Discourses*, BK II, CH 22, 167d-168a; BK III, CH 2 177c-178d; BK IV, CH 5 228a-230b
14 PLUTARCH: *Demetrius*, 726a-d
17 PLOTINUS: *First Ennead*, TR II, CH 6-7 9a-10a; TR III, CH 6 11d-12b
18 AUGUSTINE: *City of God*, BK XIX, CH 20 523d-524a
19 AQUINAS: *Summa Theologica*, PART I, Q 1, A 6, REP 3 6b-7a; Q 64, A 1, ANS 334a-335c; Q 79, A 10, REP 3 423d-424d; PART I-II, Q 2, A 1, REP 1 615d-616c; A 2, REP 3 616d-617b
20 AQUINAS: *Summa Theologica*, PART I-II, Q 57, A 4, ANS 38a-39a; A 5, ANS 39a-40a; Q 58, A 4, ANS 44a-d; PART II-II, Q 19, A 7, ANS 469d-470c; Q 45 598c-603c esp AA 3-4 600c-601c; Q 46, A 2, ANS 604b-d; A 3 604d-605a,c
23 HOBBES: *Leviathan*, PART II, 112a-b
25 MONTAIGNE: *Essays*, 59c-60a; 70d-72a; 478c-480c
27 SHAKESPEARE: *All's Well That Ends Well*, ACT I, SC I [109-116] 143c / *Macbeth*, ACT III, SC I [48-54] 295b; ACT IV, SC II [1-17] 302b-c
31 DESCARTES: *Discourse*, PART III, 49d-50b
31 SPINOZA: *Ethics*, PART V, PROP 42 463b-d
32 MILTON: *Comus* [331-489] 40b-44a esp [375-385] 41b-42a / *Paradise Lost*, BK VIII [316-337] 239a-b; BK IX [679-779] 262a-264a; BK XI [84-98] 301a / *Samson Agonistes* [38-59] 340b
33 PASCAL: *Pensées*, 460 254b
35 LOCKE: *Human Understanding*, BK I, CH III, SECT 16, 117a
37 FIELDING: *Tom Jones*, 31c-d; 182a-c
38 ROUSSEAU: *Inequality*, 344d-345c
42 KANT: *Fund. Prin. Metaphysic of Morals*, 256a-b / *Practical Reason*, 337a-338c; 360d-361d / *Pref. Metaphysical Elements of Ethics*, 365b [fn 1]; 368b-369a; 377b-c
46 HEGEL: *Philosophy of History*, PART II, 279d-281a
51 TOLSTOY: *War and Peace*, BK V, 194b-195a; 197b; BK VIII, 335a
52 DOSTOEVSKY: *Brothers Karamazov*, BK V, 120b-121d

(2. *Wisdom, virtue, and happiness.*)

2c. Wisdom as a good: its role in the happy life; the place of the wise man in society

OLD TESTAMENT: *Genesis*, 41:33,37–45 / *Exodus*, 18:21–26 / *Deuteronomy*, 1:13 / *I Kings*, 3:5–28; 4:29–34; 10:1–10—(*D*) *III Kings*, 3:5–28; 4:29–34; 10:1–10 / *II Chronicles*, 1:7–12; 9:1–9—(*D*) *II Paralipomenon*, 1:7–12; 9:1–9 / *Job*, 28:12–20 / *Psalms*, 90:12—(*D*) *Psalms*, 89:12 / *Proverbs*, 1:1–5:2; 8–9; 10:1; 12:8; 14:1,3,24, 35; 15:20,24; 16:16,20,22; 17:2,16,21,25; 19:2, 8,13,20; 20:15,26; 21:20–22; 22:17–21; 23:15–16,19–25; 24:1–14; 26:1,8; 27:11; 28:2,26; 29:8 / *Ecclesiastes*, 1:17–18; 2:12–26; 6:8; 7:5,11–12,16–19; 8:1,5; 9:11–18; 10:1–6; 12:8–12—(*D*) *Ecclesiastes*, 1:17–18; 2:12–26; 6:8; 7:6, 12–13,17–20; 8:1,5; 9:11–18; 10:1–6; 12:8–12 / *Ezekiel*, 28:2–7—(*D*) *Ezechiel*, 28:2–7 / *Daniel*—(*D*) *Daniel*, 1:1–3:23; 3:91–12:13

APOCRYPHA: *Tobit*, 4:18—(*D*) OT, *Tobias*, 4:19 / *Wisdom of Solomon* passim, esp 3:11–15, 4:8–9, 6:12–25, 7:7–10:21—(*D*) OT, *Book of Wisdom* passim, esp 3:11–15, 4:8–9, 6:13–27, 7:7–10:21 / *Ecclesiasticus*, 1:16–19; 4:11–19, 23–24; 6:18–37; 7:5,19; 8:8–9; 9:14–15,17; 10:1–4,25; 11:1; 14:20–15:10; 19:8,18; 20:13,29–31; 21:12–13,15–17,21,24–26; 22:16–17; 24:1–22; 25:4–5,10; 26:14; 27:12; 34:8; 37:19–26; 38:24–39:11; 40:20,25; 41:14–15; 44:1–15; 47:13–17; 51:13–28—(*D*) OT, *Ecclesiasticus*, 1:20–24; 4:12–22,28–29; 6:18–37; 7:5,21; 8:9–12; 9:21–22,24; 10:1–4,28; 11:1; 14:22–15:10; 19:8,18; 20:13,31–33; 21:14–16,18–20,24,27–29; 22:19–20; 24:1–30; 25:6–7,13; 26:18; 27:13; 34:8; 37:21–29; 38:25–39:15; 40:20,25; 41:17–18; 44:1–15; 47:15–18; 51:18–36 / *Susanna*—(*D*) OT, *Daniel*, 13 / *Bel and Dragon*—(*D*) OT, *Daniel*, 14

NEW TESTAMENT: *Luke*, 11:31 / *James*, 3:13–18

4 HOMER: *Iliad*, BK XI [618–644] 78d-79a

5 SOPHOCLES: *Oedipus the King* [1–57] 99a-d; [300–462] 102a-103c / *Antigone* [632–765] 136c-137d; [1348–1353] 142d / *Ajax* [1226–1263] 153c-154a

5 EURIPIDES: *Medea* [292–305] 214c-d / *Bacchantes* [386–433] 343a-b

6 HERODOTUS: *History*, BK I, 6c-8a; BK VIII, 280a-b

6 THUCYDIDES: *Peloponnesian War*, BK I, 370a-c; 383d-384a; BK II, 402a-404d

7 PLATO: *Charmides*, 13b-d / *Laches*, 33a-34b / *Protagoras*, 44a-45b / *Euthydemus*, 69a-71a; 76a; 83c-84a / *Symposium*, 167a-d / *Meno*, 183c-184c / *Apology*, 207a-208a / *Phaedo*, 226a-b; 233c-234c / *Gorgias*, 272b-273b; 291c-292b / *Republic*, BK IV, 346a-356a passim, esp 346a-347a, 354d-355a; BK V–VII, 368c-401d / *Timaeus*, 476a-b / *Theaetetus*, 525c-526a; 528c-531a / *Statesman*, 598b-608d / *Philebus* 609a-639a,c esp 635c-639a,c / *Laws*, BK I, 643c-d; BK II, 655b-656a; BK III, 669b-671b; BK V, 688d; BK XII, 796b-d / *Seventh Letter*, 801b-802c; 803c-804b; 806b-c; 808c-809a

8 ARISTOTLE: *Metaphysics*, BK I, CH 1 [981^b13–24] 500a; CH 2 500b-501c; BK XII, CH 7 [1072^b 13–29] 602d-603a

9 ARISTOTLE: *Ethics*, BK I, CH 5 [1095^b13–1096^a 4] 340d-341a; CH 8 [1098^b19–32] 344a-b; BK VI, CH 7 [1141^a18–$^b7$] 390a-c; CH 8 390d-391c; CH 12 [1143^b17–1144^a6] 393b-c; BK VII, CH 12 [1152^b33–1153^a8] 404a-b; BK X, CH 2 [1172^b26–32] 426d-427a; CH 7–8 431d-434a / *Politics*, BK VII, CH 1 [1323^b21–36] 527c-d; CH 2 [1324^a 23–35] 528b; CH 3 [1325^b14–32] 529d-530a

11 NICOMACHUS: *Arithmetic*, BK I, 811d

12 LUCRETIUS: *Nature of Things*, BK II [1–61] 15a-d; BK V [1–54] 61a-d; [1113–1135] 75c-d; BK VI [1–42] 80a-d

12 EPICTETUS: *Discourses*, BK III, CH 22 195a-201a

12 AURELIUS: *Meditations*, BK II, SECT 17 259b-d; BK V, SECT 9 270b-c

13 VIRGIL: *Georgics*, II [490–493] 65b

14 PLUTARCH: *Lycurgus*, 47a-48c / *Numa Pompilius*, 59c-60b / *Solon* 64b,d-77a,c esp 68b-d / *Pericles*, 122d-123c / *Alexander*, 543b-544a; 566a-567d / *Cato the Younger*, 637b-c / *Cicero*, 717a-b / *Dion*, 782c-788b

15 TACITUS: *Annals*, BK IV, 72a; BK VI, 91c; BK XIV, 153d-155a; BK XV, 172c-173d

17 PLOTINUS: *First Ennead*, TR II, CH 7, 9d-10a; TR IV, CH 4–16 14a-19b

18 AUGUSTINE: *Confessions*, BK III, par 7 14c-d / *City of God*, BK VIII, CH 5, 267d; CH 8, 270c

19 AQUINAS: *Summa Theologica*, PART I–II, Q 2, A 1, REP 2 615d-616c; Q 3, AA 5–6 626b-628a

20 AQUINAS: *Summa Theologica*, PART I–II, Q 66, A 5, REP 1-2 79b-80c; PART II-II, Q 19, A 7, ANS 469d-470c; Q 45, A 2, REP 2 599d-600c; A 3, REP 3 600c-601a; AA 4–6 601a-603c

21 DANTE: *Divine Comedy*, HELL, IV 5c-7a; PURGATORY, III [16–45] 56a-b

22 CHAUCER: *Prologue* [285–308] 164a-b / *Tale of Melibeus*, par 12–13 404a-405a; par 15, 407a-b; par 20–21, 409a-b; par 29 412b-413a

23 HOBBES: *Leviathan*, PART II, 164a,c

24 RABELAIS: *Gargantua and Pantagruel*, BK III, 127b,d-129a

25 MONTAIGNE: *Essays*, 55d-62a; 69d-72a; 126b-127c; 150c-151a; 231d-242d passim; 308c-d

26 SHAKESPEARE: *Richard II*, ACT III, SC II [178–185] 337b / *1st Henry IV*, ACT I, SC II [89–100] 436b-c

27 SHAKESPEARE: *All's Well That Ends Well*, ACT I, SC I [109–116] 143c

29 CERVANTES: *Don Quixote*, PART I, 185c; PART II, 332b-333b; 340d-343a esp 341c; 353b-356d; 361a-d

30 BACON: *Advancement of Learning*, 5a-b; 20b-26a; 27c; 30a-c

31 DESCARTES: *Rules*, I 1a-2a / *Meditations*, III, 88d-89a

31 SPINOZA: *Ethics*, PART IV, APPENDIX, IV 447b-c; XXXII 450c-d; PART V, PROP 25-42 458d-463d
32 MILTON: *Comus* [375-385] 41b-42a / *Paradise Lost*, BK VIII [540-566] 244a-b / *Areopagitica*, 383a
35 LOCKE: *Civil Government*, CH VII, SECT 94 46a-c; CH VIII, SECT 105 48c-49a; CH XIV, SECT 166 63d-64a / *Human Understanding*, BK II, CH XXI, SECT 55-56 192c-193b; BK III, CH X, SECT 8 293c-d
35 HUME: *Human Understanding*, SECT I, DIV 4, 452a-b; DIV 5 452d-453b
37 FIELDING: *Tom Jones*, 182a-c
38 MONTESQUIEU: *Spirit of Laws*, BK XXIV, 202d-203a
38 ROUSSEAU: *Political Economy*, 373d-374a
40 GIBBON: *Decline and Fall*, 32a-b; 205d-206a; 284a-c; 338d-339c; 644b-645d
41 GIBBON: *Decline and Fall*, 72c; 76d-77b
42 KANT: *Practical Reason*, 339b-d; 360d-361d esp 361d / *Pref. Metaphysical Elements of Ethics*, 365b [fn 1]; 368c-d
43 FEDERALIST: NUMBER 49, 159d-160a; NUMBER 57, 176d-177a
43 MILL: *Representative Government*, 374c-377a; 384b-387d; 401a-406a passim, esp 403b-404c
44 BOSWELL: *Johnson*, 122d; 296b
46 HEGEL: *Philosophy of Right*, PREF, 4b-5c / *Philosophy of History*, PART II, 279d-280b; PART IV, 360b-c; 363d-364c
47 GOETHE: *Faust*, PART II [8094-8133] 197a-198a
48 MELVILLE: *Moby Dick*, 107a-b; 313b-314a
51 TOLSTOY: *War and Peace*, BK XV, 643a-b

3. The love of wisdom and the steps to wisdom: the sophist, the philosopher, and the wise man

OLD TESTAMENT: *I Kings*, 3:5-28; 4:29-34; 10: 1-10—(*D*) *III Kings*, 3:5-28; 4:29-34; 10:1-10 / *II Chronicles*, 1:7-12—(*D*) *II Paralipomenon*, 1:7-12 / *Job*, 32:7-9 / *Psalms*, 90:12; 111:10—(*D*) *Psalms*, 89:12; 110:10 / *Proverbs*, 1:5-6; 2:1-9; 4:5-13; 8:1-11,32-33; 9:1-6,10; 10:13-14; 12:1; 13:1,20; 14:6,33; 15:2,7,14,31-33; 16:21-23; 17:16,24; 18:15; 19:8,20,25; 21:11; 22:17-21; 23:12,23; 24:13-14 / *Ecclesiastes*, 1-4 passim, esp 1:12-2:14; 8:1,16-17
APOCRYPHA: *Wisdom of Solomon*, 6-9—(*D*) OT, *Book of Wisdom*, 6-9 / *Ecclesiasticus*, PROLOGUE; 1:14-20,26; 3:29; 4:11-19,24-25; 6:18-37; 8:8-9; 9:14-15; 14:20-27; 18:28-29; 21:11-15; 24:1,18-22,30-34; 25:10; 26:14; 34: 9; 37:23-24; 38:24-39:11; 40:20; 47:13-17; 50:27-29; 51:13-30—(*D*) OT, *Ecclesiasticus*, PROLOGUE; 1:16-25,33; 3:31; 4:12-22,29-30; 6:18-37; 8:9-12; 9:21,23; 14:22-27; 18:28-29; 21:12-18; 24:1,24-30,41-47; 25:13; 26:18; 34: 9; 37:26-27; 38:25-39:15; 40:20; 47:15-18; 50:29-31; 51:18-38
NEW TESTAMENT: *Luke*, 2:52 / *James*, 1:5
5 EURIPIDES: *Bacchantes* [395] 343a
7 PLATO: *Lysis*, 22b-c / *Protagoras*, 54c-55a / *Euthydemus* 65a-84a,c / *Phaedrus*, 125b-126c; 140d / *Symposium*, 166c-167c; 169c-172d / *Apology*, 201d-203a / *Phaedo*, 223b-225c esp 225c / *Republic*, BK II, 320b-c; BK V-VII, 368c-401d / *Timaeus*, 476a-b / *Parmenides*, 491a-d / *Theaetetus*, 528c-531a esp 530b-c / *Sophist*, 558c-d; 571a-c; 577c-579d esp 579a-d / *Seventh Letter*, 808c-809a
8 ARISTOTLE: *Metaphysics*, BK I, CH 2 [982^b11-27] 500d-501a; BK IV, CH 2 [1004^b18-27] 523d
9 ARISTOTLE: *Ethics*, BK I, CH 6 [1096^a11-17] 341b; BK X, CH 7 [1177^a28-^{b}3] 432a
11 NICOMACHUS: *Arithmetic*, BK I, 811a
12 LUCRETIUS: *Nature of Things*, BK II [1-61] 15a-d; BK III [1-30] 30a-b; BK V [1-54] 61a-d; BK VI [1-42] 80a-d
12 EPICTETUS: *Discourses*, BK II, CH 17 158d-161a; BK III, CH 2 177c-178d; CH 10 185d-187a; CH 15 190a-191a; CH 19 192c-d; CH 21 193d-195a; CH 24 203c-210a esp 207d-210a; BK IV, CH 5, 228a-b; CH 6 230b-232c; CH 8 235b-237d
12 AURELIUS: *Meditations*, BK III, SECT 12 262b-c; BK V, SECT 9 270b-c; BK VI, SECT 12 274c
17 PLOTINUS: *First Ennead*, TR III 10a-12b / *Fifth Ennead*, TR IX, CH 1-2 246c-247b
18 AUGUSTINE: *Confessions*, BK III, par 8-10 14d-15d / *City of God*, BK VIII, CH 1-3, 264b,d-266b; CH 5-8 267d-270d esp CH 8, 270c-d; CH 10 271a-d / *Christian Doctrine*, BK II, CH 7 638d-639c; CH 31 651d-652b; CH 37-38 653d-654c; BK IV, CH 5 677a-d
19 AQUINAS: *Summa Theologica*, PART I, Q 12, A 1, ANS 50c-51c; A 8, REP 4 57b-58b
20 AQUINAS: *Summa Theologica*, PART I-II, Q 68, A 7, REP 1 94c-95c; PART II-II, Q 19, A 7 469d-470c; Q 45, A 6, REP 3 602b-603c; PART III, Q 12, A 2, CONTRARY 777b-778b
21 DANTE: *Divine Comedy*, PARADISE, IV [124-132] 112a
22 CHAUCER: *Prologue* [285-308] 164a-b / *Knight's Tale* [2438-2452] 200a
23 HOBBES: *Leviathan*, INTRO, 47b-d
24 RABELAIS: *Gargantua and Pantagruel*, BK II, 81a-83b
25 MONTAIGNE: *Essays*, 55d-62a; 65c-66a; 69d-72a; 238c-d; 239d-240a
31 DESCARTES: *Rules*, I 1a-2a / *Discourse*, PART I, 41d-42a; 43d-44a
33 PASCAL: *Pensées*, 327 231a-b; 425-555 243b-270a
35 HUME: *Human Understanding*, SECT I 451a-455b passim, esp DIV 2 451b-c, DIV 7 453c-454a
41 GIBBON: *Decline and Fall*, 523c-528a,c passim, esp 525b-c, 526c-d
42 KANT: *Practical Reason*, 337a-338c; 360d-361d / *Pref. Metaphysical Elements of Ethics*, 365b [fn 1]; 368c-d

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43 MILL: *Liberty*, 276b-277a
46 HEGEL: *Philosophy of Right*, PREF, 4b-5c / *Philosophy of History*, PART II, 271d-272a; 279d-281a
47 GOETHE: *Faust*, PART I [354-601] 11a-16b; [1011-1125] 25b-28a

4. The praise of folly: the wisdom of fools and innocents

OLD TESTAMENT: *Psalms*, 8:2; 131—(*D*) *Psalms*, 8:3; 130 / *Ecclesiastes*, 1:17-18; 4:13
APOCRYPHA: *Ecclesiasticus*, 19:24—(*D*) OT, *Ecclesiasticus*, 19:21
NEW TESTAMENT: *Matthew*, 11:25-26; 18:1-4; 21:15-16 / *Mark*, 10:13-15 / *Luke*, 10:21 / *I Corinthians*, 1:17-2:16; 3:18-20; 4:10 / *II Corinthians*, 1:12 / *I Peter*, 2:1-2
5 EURIPIDES: *Bacchantes* [386-433] 343a-b
18 AUGUSTINE: *Christian Doctrine*, BK I, CH 11-12 627b-d; CH 14 627d-628b
20 AQUINAS: *Summa Theologica*, PART II-II, Q 45, A 5, REP 3 601c-602b; Q 46, A 1, REP 2 603c-604b
22 CHAUCER: *Troilus and Cressida*, BK I, STANZA 90-93 12b-13a
24 RABELAIS: *Gargantua and Pantagruel*, BK III, 201a-202d
25 MONTAIGNE: *Essays*, 150c-151a; 231d-242d esp 233b, 235b-c, 238c-d; 499d-500a; 502a-504c; 508a-512a; 520b-d
26 SHAKESPEARE: *Love's Labour's Lost*, ACT V, SC II [68-74] 274d / *As You Like It*, ACT I, SC II [92-96] 599d-600a; ACT II, SC VII [12-61] 607b-d
27 SHAKESPEARE: *Twelfth Night*, ACT I, SC V [1-146] 4b-5d; ACT III, SC I [1-75] 14a-d; ACT IV, SC I [1-24] 21c-d; SC II [76-113] 23a-b / *King Lear* 244a-283a,c esp ACT I, SC IV [106-345] 251b-253c, SC V 254a-c, ACT II, SC IV [1-128] 258b-259d, ACT III, SC VI [1-91] 266c-267c
29 CERVANTES: *Don Quixote*, PART I, 194a; PART II, 334d-336a; 340d-343a esp 341c-d
32 MILTON: *Paradise Lost*, BK XII [561-573] 331b
33 PASCAL: *Pensées*, 271 222a; 327 231a-b
42 KANT: *Fund. Prin. Metaphysic of Morals*, 261c-d
47 GOETHE: *Faust*, PRELUDE [85-88] 3a
48 MELVILLE: *Moby Dick*, 307a; 380a-381a; 385b
51 TOLSTOY: *War and Peace*, BK XII, 559d; BK XV, 643a-b
52 DOSTOEVSKY: *Brothers Karamazov*, BK V, 121d

CROSS-REFERENCES

For: Other discussions of the distinction between speculative and practical wisdom, or between wisdom and prudence, *see* PHILOSOPHY 2a; PRUDENCE 2a; THEOLOGY 3b.

The relation of wisdom to other intellectual virtues, *see* SCIENCE 1a(1); VIRTUE AND VICE 2a(2).

Various conceptions of the supreme form of human knowledge, *see* DIALECTIC 2a; METAPHYSICS 1.

The relation of philosophical to theological wisdom, *see* KNOWLEDGE 6c(5); PHILOSOPHY 1a; THEOLOGY 2, 4a.

Comparisons of divine and human wisdom, *see* KNOWLEDGE 7a; TRUTH 2d.

Other discussions of the knowledge of good and evil, and of the relation of knowledge to virtue, *see* GOOD AND EVIL 6a; KNOWLEDGE 8b(1); VIRTUE AND VICE 1a; and for the relation of wisdom to happiness, *see* HAPPINESS 2b(7); PHILOSOPHY 4a.

The conception of the philosopher king, or of the place of the wise man in society, *see* MONARCHY 2b; PHILOSOPHY 4c; STATE 8b.

The conception of philosophy as the love of wisdom, and for the distinction between the sophist, the philosopher, and the wise man, *see* PHILOSOPHY 6a-6b; TRUTH 8e.

ADDITIONAL READINGS

Listed below are works not included in *Great Books of the Western World*, but relevant to the idea and topics with which this chapter deals. These works are divided into two groups:

I. Works by authors represented in this collection.
II. Works by authors not represented in this collection.

For the date, place, and other facts concerning the publication of the works cited, consult the Bibliography of Additional Readings which follows the last chapter of *The Great Ideas.*

I.

AUGUSTINE. *Divine Providence and the Problem of Evil*
——. *On the Trinity*, BK XIII
AQUINAS. *On the Trinity of Boethius*
——. *Summa Theologica*, PART II–II, QQ 176–177
F. BACON. *The Wisdom of the Ancients*
——. "Of Wisdom for a Man's Self," "Of Seeming Wise," in *Essays*

II.

CICERO. *De Officiis* (*On Duties*), II
HORACE. *Satires*, BK II (3, 7)
Pirke Aboth (*Sayings of the Fathers*)
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BONAVENTURA. *On the Reduction of the Arts to Theology*
NICOLAS OF CUSA. *De Venatione Sapientiae*
ERASMUS. *The Praise of Folly*
DONNE. *The Triple Foole*
SUÁREZ. *Disputationes Metaphysicae*, I (5)
CHARRON. *De la sagesse*
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——. "The Wisdom of Life," in *Complete Essays*
R. BROWNING. *Rabbi Ben Ezra*
NIETZSCHE. *Thus Spake Zarathustra*
MANN. *The Magic Mountain*
WHITEHEAD. *Adventures of Ideas*, CH 4
MARITAIN. *The Degrees of Knowledge*, CH 6–7
——. *Science and Wisdom*, pp 3–33

Chapter 102: WORLD

INTRODUCTION

HE who does not know what the world is," writes Marcus Aurelius, "does not know where he is. And he who does not know for what purpose the world exists, does not know who he is, nor what the world is." According to the Stoic emperor, for whom "there is one universe made up of all things, and one God who pervades all things," man has only to exercise the divine spark of reason in himself in order to be at home in a world which reason rules.

He does not hesitate long before the dilemma that "it is either a well-arranged universe or a chaos huddled together." In the belief that it is through and through an orderly world—a cosmos rather than a chaos, governed by providence rather than by chance—Aurelius is willing to assume whatever place destiny allots him in the universal scheme. "Everything harmonizes with me," he says, "which is harmonious to thee, O Universe."

With a Christian's faith in God's plan and providence, Montaigne is also willing to conceive the universe as the stage on which man acts his destined part. But suppose, Montaigne adds, that we consider "man alone, without foreign assistance, armed only with his own proper arms, and unfurnished with the divine grace and wisdom, which is all his honor, strength, and the foundation of his being." How then does the world appear? Is it, in all its vastness, the human habitat—the home of man, its lord and master?

Man deceives himself, Montaigne thinks, if he thus pictures the world in terms of his own reason and knowledge. What could lead him to believe, he asks, that "this admirable movement of the celestial arch, the eternal light of those planets and stars that roll so proudly over his head, the fearful motions of that infinite ocean, were established, and continue so many ages, for his service and convenience? Can anything be imagined so ridiculous as that this miserable and wretched creature, who is not so much as master of himself . . . should call himself master and emperor of the world?"

If, as Montaigne thinks he should, man "feels and sees himself lodged here in the dirt and filth of the world, nailed and riveted to the worst and deadest part of the universe, in the lowest story of the house, and most remote from the heavenly arch," how absurd for him to imagine himself "above the circle of the moon and bringing heaven under his feet." Except "by the vanity of the same imagination" by which "he equals himself to God," how can he regard himself as occupying an exalted position in the universe?

Deprived of the religious faith that he is made in God's image and that all the rest of the visible universe is made for him, only presumption or conceit can save man from being dwarfed by the world. But science robs man of such conceit, according to Freud. The cosmology that "is associated in our minds with the name of Copernicus" displaces man and shrinks him. Humanity cannot hold on to "its naive self-love," Freud writes, when it realizes that the earth is "not the center of the universe, but only a tiny speck in a world-system of a magnitude hardly conceivable."

NOT ONLY IN THE REFLECTIONS of Aurelius, Montaigne, and Freud, but throughout the tradition of the great books, the conception of the world or universe is inseparable from the ideas of God and man. These three ideas always interpenetrate each other, though the resulting pattern of thought varies according to the direction in which thought moves from any one of the three to the other two.

Sometimes the whole universe lies on one

side of the infinite distance between the Creator and His creation, and man has a special place of honor in the hierarchy of beings which constitutes the order of the created world. Though man is greater than the earth he treads or the skies he watches, the whole world is less than God, Who has made it out of nothing and Who, in the freedom of His act of creation, is unaffected by the world's coming to be or passing away. On this view, taken by Christian theologians, God is not part of the world, the world is not part of God, nor is there any whole which embraces both; and if "world" means the physical totality, then man belongs both to this world and to another—the realm of spiritual creatures which is also part of the created universe.

Sometimes "world" means the all-embracing universe, uncreated and co-eternal with the divinity which dwells in it, a thing of soul as well as body, including mind as well as matter. Whether God is the prime mover of the universe; the transcendent One from which emanates in all degrees of being the multiplicity of intelligible and sensible things; the infinite substance which exceeds the sum of all the finite things that exist only as its modifications; or the Absolute Spirit which manifests itself historically in both physical and psychical nature—on any of these views cosmology merges with theology, as in the theories of Aristotle, Plotinus, Spinoza, and Hegel. For Spinoza and Hegel, as for the Stoics, to know the world is to know God. Its order or structure is more than divinely instituted. It is the indwelling divinity itself.

Such views of the world tend, for the most part, to look upon the individual man as a microcosm mirroring the macrocosm. The world's body and soul, its matter and mind, are there to be seen in miniature. Considering the philosophers who assert that "mind is the king of heaven and earth," Socrates suggests in the *Philebus* that "in reality they are magnifying themselves." Nevertheless, the doctrine of a world-soul animating the body of the universe is repeatedly proposed in the dialogues of Plato as a way of understanding man; and that mad or at least cryptic Platonist, Captain Ahab, gazing on the gold doubloon he has nailed to the mast as a reward for sighting Moby Dick, observes in soliloquy that "this round gold is but the image of the rounder globe, which, like a magician's glass, to each and every man in turn but mirrors back his own mysterious self."

A third alternative remains. Sometimes, as with Lucretius and later philosophers of a materialist cast, the world is all there is and all there is of it can be reduced to atoms and the void. It is thrown together by blind chance rather than designed by a presiding intelligence. The universe obeys no laws except the laws of its own matter in motion. "Rid of its haughty lords," nature, according to Lucretius, is "seen to do all things spontaneously of herself without the meddling of the gods." For their own happiness, Lucretius exiles his papier-maché gods to the interspaces where they "lead a life without care." But man is not so fortunate.

In a world that is not made for him, and in which, godless, he must be entirely self-reliant, man is burdened with heavy cares. Since he is one of nature's progeny, he may not be wholly alien in this world of material forces; but neither is he, like a beloved son, assured of nature's hospitality. The dominant note here is that of man *against* the world; and in this unequal struggle science alone gives him the sense—or perhaps the illusion—that at least in his little corner of the world his mind may dominate. Yet from time to time defeat reminds him that the world remains unruly. Bridle its matter and harness its energies as he will, he holds no checkrein to prevent his being overthrown.

As THE CHAPTER ON NATURE indicates, the word "nature" in one of its meanings seems to be synonymous with "world." This fact, as well as the various ways in which "world" has been used in the foregoing discussion, requires us to note a certain ambiguity. When we speak of the world, our meaning may range from the earth or globe which man inhabits to the solar system in which our planet revolves and beyond that to the whole physical universe, however far-flung. We also use "world" to signify an entire realm of things which is distinctively set apart from another order of existence, as when we speak of material and spiritual worlds, or when we refer to the world of thought or the world of sense. Such phrases as "world government" and "world peace" use "world" in a political sense

which evokes the image of the whole order of human society upon this globe.

We shall restrict ourselves in this chapter to that sense of "world" in which it signifies the object of cosmological speculations and controversies. We are concerned with the idea of the universe or cosmos. As we have already observed, the universe may be quite differently conceived according to the way in which it is related to God, but it is almost always conceived as that totality in which man and his earth and solar system exist, and outside of which nothing can exist except God. According to the theologians, the angelic hierarchies are no exception, for they fall within the created universe. But philosophers like Plato and Plotinus, who identify the world with the physical universe, set apart from it the eternal ideas or the order of the pure intelligences.

The traditional issues concerning the world or universe, so understood, can be summarized by three basic questions: Are there many worlds or is there only one? What is the structure of the world? Does the world have a beginning and does it have an end?

The first of these questions seems to violate the meaning of "world" as *the* universe—the complete totality of things. How can there be more than one *all*? But that difficulty, as we shall see, may be avoided by the hypothesis of a plurality of worlds succeeding one another in infinite time. It may even be met by the supposition that the infinity of space permits the possibility of two or more coexistent but unrelated worlds. Considerations of the time and space of the world, amplified in the chapters on SPACE and TIME, have a bearing on this issue of one or many worlds.

The second question presupposes agreement that the world has a structure, for if it does not, no problem arises concerning what that structure is. Such agreement is present in the tradition, and is unaffected by the dispute over the role of chance or design in the world's production, and by the controversy concerning the world's creation. As Harvey points out, the Greek word "cosmos" connotes order and beauty. Its opposite is chaos.

Writers may disagree about an original chaos prior to the formation of the cosmos. Plato, for example, refers to a time when the elements "were all without reason and measure"—"before they were arranged so as to form a universe." Milton also writes of a time when "yet this world was not, and *Chaos* wilde reign'd where these Heav'ns now rowl." In the "dark illimitable Ocean without bound"—before "the Heav'ns and Earth rose out of *Chaos*"—"eldest Night and *Chaos*, Ancestors of Nature, held eternal *Anarchie*." In contrast, Aristotle maintains that "chaos or Night did not exist for an infinite time" prior to the world, and he argues against "the theologians who generate the world from Night."

But these differences of opinion leave the main point unaffected. The world is a cosmos, not a chaos. The universe has some order. Even those who doubt the perfection of its order, or who point out how it is marred by evil and irrationality, affirm an order or structure, according to which the universe hangs together and is in some degree intelligible to man. The disputed question of the world's structure, therefore, centers on what the structure is. What precisely is the principle or pattern of cosmic coherence? By what image or analogy shall man try to hold the world before his mind as if it were a single intelligible object?

This problem, as well as the issue concerning one or many worlds, cannot be completely discussed apart from the last of the three questions —the question of the world's beginning and end. For example, if world follows world in succession, each must have a beginning and an end. So, too, the world's structure takes on a different aspect for those who affirm and those who deny its creation by a divine intelligence; and according to at least one view of the order in the universe, men are persuaded that it must be made or ruled by reason, and argue against its being the result of chance.

But the question of the world's beginning must not be confused with the issue of creation, or the problem of the world's relation to God. Aquinas may agree with Berkeley's criticism of "the ancient philosophers who maintained the being of a God," while holding "Matter to be uncreated and co-eternal with Him"; but he does not wholly agree with Hobbes that "to say the world was not Created, but Eternal (seeing that which is Eternal has no cause), is to deny there is a God." For Aquinas, to deny cre-

ation is to deny God, but whether the created world ever began to be is a question for faith, not reason. Nor does the denial of creation necessarily imply the eternity of the world—at least not in the sense in which Lucretius imagines the world to have both a beginning and an end.

TWO GREAT EXPONENTS of atomism in the tradition of the great books—Lucretius and Newton—show us that agreement on some of the basic questions of cosmology does not preclude disagreement on others. Both conceive the world as built of indestructible atomic particles. They conceive its structure to be determined by the motions of its parts, both large and small, through the forces exerted by body upon body. Both, furthermore, favor the hypothesis of a plurality of worlds, but only Lucretius holds that this world had a chance beginning and will come to a similar end.

When Lucretius refers to the infinite universe, which, "bounded in no direction ... spreads out free from limit," he does not mean this world in which man now lives. He means the void in which our world as well as other worlds are formed out of the infinite number of atoms which, combining and separating, cause the birth and death of worlds. "In no wise can it be deemed probable," he writes, "when space yawns illimitable towards all points, and seeds in number numberless and sum unfathomable fly about in manifold ways driven on in ceaseless motion, that this single earth and heaven have been brought into being, that those bodies of matter so many in number do nothing outside them."

The existence of other worlds than this seems probable to him, not only because of the infinity of the universe in respect to its space and matter, but also because the atoms form each world "without purpose, without foresight, without result." As chance produced this world, so it can produce others. Hence, Lucretius argues, "you must admit that there are elsewhere other combinations of matter like to this which ether holds in its greedy grasp. ... You must admit that in other parts of space there are other earths and various races of men and kinds of wild beasts. Moreover in the sum of all there is no one thing which is begotten single in its kind." On this principle, he thinks, "you must admit that earth and sun, moon, sea, and all things else ... are not single in their kind, but rather in number past numbering."

By calling the atoms eternal bodies and first-beginnings, Lucretius indicates that it is each particular world, not the universe of matter and the void, which has a beginning and an end. The atoms or first-beginnings "fall into arrangements such as those out of which this, our sum of things, has been formed," he explains, "not by design ... but because many in number and shifting about in many ways throughout the universe they are driven and tormented by blows during infinite time past." Thus a world is born, and so even does it grow by the addition of bodies from without. But as a world is born and grows, it also decays and dies. "Many bodies ebb away and withdraw from things," Lucretius writes, "but still more must join them, until they have touched the utmost point of growth. Then piece by piece age breaks their powers and matured strength, and wastes away on the side of decay," until finally "in this way even the walls of the wide world all around will be stormed and fall to decay and crumbling ruin."

According to Newton, the atoms are indestructible but not eternal bodies. Upon their indestructibility or permanence depends the uniform and enduring texture of nature in all ages. "That Nature may be lasting," Newton says, "the changes of corporeal things are to be placed only in the various separations and new associations and motions of these permanent particles." But for Newton the indivisibility of the ultimate particles of matter does not preclude their being created. "It seems probable to me," he writes, "that God in the beginning formed matter in solid, massy, hard, impenetrable movable particles, of such size and figures, and with such other properties ... as most conduced to the end for which he formed them."

Not through the chance colligation of atoms, but through their being "variously associated in the first creation by the counsel of an intelligent agent," is the world formed. "For it became him who created them to set them in order. And if he did so," Newton adds, "it's unphilosophical to seek for any other origin of the

world, or to pretend that it might arise out of a chaos by the mere laws of nature; though being once formed, it may continue by those laws through many ages."

Newton differs from Lucretius in these particulars, but shares his view of the probability of many worlds. "Since space is divisible *in infinitum*, and matter is not necessarily in all places, it may also be allowed," Newton declares, "that God is able to create particles of matter of several sizes and figures, and in several proportions to space . . . and thereby to vary the laws of nature, and make worlds of several sorts in several parts of the universe. At least," he continues, "I see nothing of contradiction in all this."

OTHER WRITERS SEEM TO FIND a plurality of worlds repugnant to reason, if not flatly contradictory. Plato, for example, appears to think that the possibility of other worlds is inconsistent with the perfection of this one—certainly if this world is made in the image of the eternal ideas. Because "the original of the universe contains in itself all intelligible beings," Plato's Timaeus argues that there cannot be many worlds, but "one only, if the created copy is to accord with the original." It belongs to the world's perfection to be solitary, and for this reason, Timaeus explains, "the creator made not two worlds or an infinite number of them; but there is and ever will be one only-begotten and created heaven."

Aristotle reasons differently to the conclusion that "there cannot be more worlds than one." The conclusion follows in his view from the impossibility of an infinity of body or matter, and with it an infinity of space. "The universe is certainly a particular and a material thing," he writes. "If it is composed not of a part but of the whole of matter, then though the being of 'universe' and of 'this universe' are still distinct, yet there is no other universe, and no possibility of others being made, because all the matter is already included in this." He thinks it a tenable hypothesis that "the world as a whole includes *all* its appropriate matter"; hence, he concludes, "neither are there now, nor have there ever been, nor can there ever be formed, more heavens than one, but this heaven of ours is one and unique and complete."

On theological grounds, Augustine challenges those who suppose "either that this is not the only world, but that there are numberless worlds, or that indeed it is the only one, but that it dies, and is born again at fixed intervals, and this times without number." On theological grounds also, though with a different conception of God and the universe, Spinoza maintains that "besides God no substance can be or be conceived"; that "God is one, which is to say, in nature there is but one substance, and it is absolutely infinite"; that all finite things have their existence in the one infinite substance of God; and that God is "not only the cause of the commencement of their existence, but also of their continuance in existence." Because God's liberty consists, in Spinoza's conception, in acting according to the necessity of His own nature, not in freedom of will, he insists that "things could be produced by God in no other way and in no other order than that in which they have been produced." This is not merely the only actual but the only possible world.

Aquinas agrees that there is only one actual world. "The very order of things created by God," he writes, "shows the unity of the world." Since "whatever things come from God have relations of order to each other and to God himself . . . it is necessary that all things should belong to one world. Therefore," Aquinas continues, "only those were able to assert the existence of many worlds who do not acknowledge any ordaining wisdom, but rather believed in chance; as did Democritus, who said that this world, besides an infinite number of other worlds, was made by a coming together of atoms."

Aquinas places God's liberty in freedom of choice, and so he contemplates the possibility of other worlds than this. This is the only world God actually created, but since, in creating, "God does not act from natural necessity," and since, in the act of creation, the divine will "is not naturally and from any necessity determined to these creatures," Aquinas concludes that "in no way is the present scheme of things produced by God with such necessity that other things could not come to be."

As the chapter on WILL indicates, Spinoza holds that God does not have the power of free

choice. He therefore argues that the actual world, being the only possible one, cannot be bettered. All things, he writes, have been "produced by God in the highest degree of perfection, since they have necessarily followed from the existence of a most perfect nature." Aquinas, on the other hand, denies that this is the best of all possible worlds. "Given the things which actually exist," he says, "the universe cannot be better, for the order which God has established in things, and in which the good of the universe consists, most befits things. . . . Yet God could make other things, or add something to the present creation; and then there would be another and a better universe."

OTHER SPECULATIONS CONCERNING the cosmos seem to divide into three sorts, according as they consider the matter and space, the size and shape, of the universe; or they try to discover the principle by which all things are ordered together in one world; or they examine whatever order is found, and judge its perfection, its goodness, and its beauty.

The first of these three types of cosmological theory belongs primarily to the physicist and the astronomer. From Aristotle to Einstein, observation, mathematical calculation, and imaginative hypotheses have propounded the alternatives of a finite or infinite universe or, as Einstein prefers to put it, of a "finite yet unbounded universe," as opposed to one which is either simply finite or both infinite and unbounded.

Archimedes in the *Sand-Reckoner* undertakes to show that the number of the grains of sand in a universe whose outer sphere extends to the distance of the fixed stars, is, however large, a finite rather than an infinite number. Lucretius and Newton, as we have seen, embrace the opposite hypothesis, while Aristotle defends the proposition that the universe is finite, bounded and spherical in shape. Among the great astronomers, Copernicus and Kepler, no less than Ptolemy, conceive the world as bounded by an outer sphere. Copernicus opens his treatise by remarking that "the world is like a globe; whether because this form is the most perfect of all . . . or because it is the figure having the greatest volume . . . or because the separate parts of the world, *i.e.*, the sun, moon, and stars, are seen under such a form; or because all things seek to be delimited by such a form, as is apparent in the case of drops of water and other liquid bodies, when they become delimited through themselves."

A spherical or (if matter is not distributed uniformly) an elliptical or quasi-spherical universe, "will be necessarily finite," according to Einstein, but it will also "have no bounds." Among the conceivable "closed spaces without limits," Einstein points out that "the spherical space (and the elliptical) excels in its simplicity, since all points on it are equivalent." But "whether the universe in which we live is infinite, or whether it is finite in the manner of the spherical universe," he thinks is a question that "our experience is far from being sufficient to enable us to answer." Recent astronomical observations of the velocity of the receding nebulae have suggested the hypothesis of an infinitely expanding universe.

These cosmological theories are more fully discussed in the chapter on SPACE. Another point of physical speculation concerning the uniformity of the world's matter—not the uniformity of its distribution, but the sameness or difference in kind of terrestrial matter and the matter of the heavenly bodies—is considered in the chapters on ASTRONOMY and MATTER. We turn, therefore, to the question of the world's structure, apart from its size, its shape, and the disposition of its matter.

THREE METAPHORS SEEM to express the great traditional images of the world's structure. The world is a living organism. *It is like an animal* with a soul, even a soul endowed with reason. The world is a multitude of diverse and unequal individual things, forming a hierarchy and associated, according to their natures and functions, for the common good of the whole. *It is like a society*, a society under divine law and government. The world is a system of interdependent moving parts, linked together from the least to the greatest in an unbroken chain of causation. *It is like a machine.*

The first of these world views is proposed by Plato. It is not the earliest of the three, perhaps, if the atomistic cosmology of Democritus, which Lucretius later expounds, can be interpreted as adopting the mechanical analogy. Full-fledged

mechanism may, however, be thought to await 17th century developments in the science of mechanics, when, for Descartes, Newton, and others, the laws of mechanics become the only laws of nature. The conception of the world as a divinely instituted and governed society seems to be a product of Jewish and Christian faith. Though that expression of it which includes a hierarchical ordering of all things from the elemental bodies to the angels belongs to Christian theologians and poets, there may be a pre-Christian version in the Stoic theory of the world as governed by a divine intelligence.

According to Plato, in the *Timaeus*, "God desired all things to be good and nothing bad," and he "found that no unintelligent creature taken as a whole was fairer than the intelligent taken as a whole; and that intelligence could not be present in anything which was devoid of soul. For which reason," Timaeus explains, "when he was framing the universe, he put intelligence in soul, and soul in body.... Wherefore, using the language of probability, we may say that the world became a living creature truly endowed with soul and intelligence by the providence of God." Since his intention was that "the animal should be as far as possible a perfect whole and of perfect parts," he gave it self-sufficiency, a spherical body—which figure "comprehends within itself all other figures"—and circular movement. The universe did not require, therefore, sense-organs or hands or feet.

"Such was the whole plan of the eternal God about the god that was to be, to whom for this reason he gave a body, smooth and even, having a surface in every direction equidistant from the center.... And in the center," according to Timaeus, "he put the soul, which he diffused throughout the body, making it also to be the exterior environment of it; and he made the universe a circle moving in a circle.... Having these purposes in view he created the world a blessed god."

The theory of a world soul and of an animated, organic universe appears not only in the *Timaeus*, but also in other Platonic dialogues. In the *Phaedrus*, for example, Socrates says that "the soul in her totality has the care of inanimate being everywhere"; and in the *Laws*, the Athenian Stranger, asking whether "it is the soul which controls heaven and earth, and the whole world," replies that "the best soul takes care of the world and guides it along the good path."

In somewhat different form, the theory of a world soul appears in Plotinus, according to whom the cosmic soul belongs only to the material universe and is, therefore, third and lowest in the scale of the "authentic existents." It appears in Gilbert and Kepler, though in the latter largely as the expansion of a metaphor. It is considered by William James, whose comment on the "materialistic, or so-called 'scientific,' conceptions of the universe" is that "they leave the emotional and active interests cold," whereas he thinks "the perfect object of belief would be a God or 'Soul of the World,' represented both optimistically and moralistically. ... All science and all history would thus be accounted for in the deepest and simplest fashion."

Precisely because exponents of the doctrine attribute divinity to the world soul, Augustine and Aquinas object to it. "Impious and irreligious consequences follow," in Augustine's opinion, from the notion that "God is the soul of the world, and the world is as a body to Him." To those who compare the microcosm with the macrocosm by saying that "the soul is in the body as God is in the world," Aquinas replies that "the comparison holds in a certain respect, namely, because as God moves the world, so the soul moves the body. But it does not hold in every respect, for the soul did not create the body out of nothing as God created the world."

Furthermore, according to Aquinas, "God is not a part of it, but far above the whole universe, possessing within Himself the entire perfection of the universe in a more eminent way." God in relation to the world should not be conceived by analogy with soul and body, but by comparison to a king who "is said to be in the whole kingdom by his power, although he is not everywhere present." This analogy fits better with the conception of the universe as a society under divine government.

Although Aurelius reminds himself to "regard the universe as one living being, having one substance and one soul," he also takes the view that the world is a community of things ordered to one another. "The intelligence of

the universe is social," he writes. "Accordingly it has made the inferior things for the sake of the superior, and it has fitted the superior to one another. . . . It has subordinated, co-ordinated, and assigned to everything its proper portion." This view of the universe as a community is the one most fully developed in Christian thought. Augustine and Aquinas go much further than Aurelius in depicting the hierarchy of things and their ordination to one another under the eternal law. Both take as a basic text from Scripture the statement that God has "ordered all things in measure, and number, and weight." According to its dignity or worth, each thing occupies a place and plays its part in the general scheme of things.

"The parts of the universe are ordered to each other," Aquinas writes, "according as one acts on another, and according as one is the end and exemplar of the other." The government of the universe by the divine reason produces a perfection of order in the whole, which is the intrinsic common good of the universe, and directs each thing to the attainment of its end, in which consists its own perfection. "It belongs to the divine goodness," Aquinas says, "as it brought things into being, to lead them to their end. And this is to govern." But neither the perfection of each thing, nor the order of the universe itself, is the ultimate end of divine government. "Some good outside the whole universe," he says, "is the end of the government of the universe"—for the end of all things, as their beginning, lies in the goodness of God.

THE CONCEPTION OF THE WORLD as divinely governed, and cared for by divine providence, excludes chance as a factor in the formation of the world or in its structure. With Democritus and Epicurus in mind, Aquinas points out that "certain ancient philosophers denied the government of the world, saying that all things happened by chance." But the rejection of chance does not seem to be peculiar to Christian faith or theology.

Plato and Plotinus also deny that the order in the universe can be the result of chance. For Plato it is not merely that the world is animated by a rational soul, but also, as the Athenian Stranger suggests in the *Laws*, that it is a work of art rather than of nature or chance.

"'Atoms' or 'elements'—it is in either case an absurdity, an impossibility," writes Plotinus, "to hand over the universe and its contents to material entities, and out of the disorderly swirl thus occasioned to call order . . . into being." According to him, "there is nothing undesigned, nothing of chance, in all the process." Aristotle, too, speaks against the atomists who "ascribe this heavenly sphere and all the worlds to spontaneity" or chance. "When one man," he writes, referring to Anaxagoras, "said that reason was present—as in animals, so throughout nature—as the cause of order and of all arrangement, he seemed like a sober man in contrast with the random talk of his predecessors."

It might be supposed that those who view the world through the eyes of Newton or Descartes (when they say, as Fielding does, "the world may indeed be considered as a vast machine"), would be inclined to favor chance rather than reason or design. But this does not seem to be the case, at least not for Newton or Descartes. "This most beautiful system of the sun, planets, and comets," Newton declares, "could only proceed from the counsel and dominion of an intelligent and powerful Being."

Descartes asks us to consider what would happen if God were now to create a new world "somewhere in an imaginary space." Suppose that He agitated its matter in various ways "so that there resulted a chaos as confused as the poets ever feigned, and concluded His work by merely lending His concurrence to Nature in the usual way, leaving her to act in accordance with the laws which He had established." Something like this orderly universe would be the result. The laws of matter in motion, Descartes thinks, are "of such a nature that even if God had created other worlds, He could not have created any in which these laws would fail to be observed."

In the tradition of the great books, only the ancient atomists seem to take the position that the universe is a thing of chance. But this does not mean that, except for the atomists, agreement prevails concerning the manifestation of purpose or design in the world's structure. "Is the Kosmos an expression of intelligence, rational in its inward nature, or," James asks, "a brute external fact pure and simple?" James finds two answers to this question which he

calls "the deepest of all philosophic problems" —one which regards the world "as a realm of final purposes, that ... exists for the sake of something," and one which sees "the present only as so much mere mechanical sprouting from the past, occurring with no reference to the future."

As the chapter on MECHANICS indicates, Newton and Descartes are, in a sense, mechanists; yet they also affirm final causes—ends or purposes—in the plan of the universe. Newton speaks of God's "most wise and excellent contrivance of things, and final causes." It is true that Descartes, while referring to the universe as a work of divine art, says that God's purpose may not be visible to us in all its arrangements. Therefore "the species of cause termed final finds no useful employment in physical (or natural) things; for it does not appear to me," he explains, "that I can without temerity seek to investigate the (inscrutable) ends of God." But this states a rule of method in natural science, not the denial of a cosmic plan.

That denial is to be found, however, most plainly in Spinoza. "It is commonly supposed," he writes, "that all things in nature, like men, work to some end; and indeed it is thought to be certain that God Himself directs all things to some sure end, for it is said that God has made all things for man, and man that he may worship God." Against this view, which he regards as the most besetting of all human prejudices, Spinoza holds that "nature does nothing for the sake of an end, for that eternal and infinite Being whom we call God or Nature acts by the same necessity by which He exists." Since "He exists for no end, He acts for no end; and since He has no principle or end of existence, He has no principle or end of action. A final cause, as it is called," Spinoza continues, "is nothing, therefore, but human desire, in so far as this is considered as the principle or primary cause of anything."

Because man discovers things in nature which serve as means to his own ends, man is led to infer, Spinoza declares, that "some ruler or rulers of nature exist, endowed with human liberty, who have taken care of all things for him, and have made all things for his use ... and hence he affirmed that the gods direct everything for his advantage, in order that he may be bound to them and hold them in the highest honor.... Thus has this prejudice been turned into a superstition, and has driven deep roots into the mind—a prejudice which was the reason why everyone has so eagerly tried to discover and explain the final causes of things." The attempt, however, to show that nature does nothing in vain (that is to say, nothing which is not profitable to man) seems, in Spinoza's opinion, "to end in showing that nature, the gods, and man are alike mad."

WHERE SPINOZA DENIES purpose or plan in the universe because everything exists or happens from the necessity of efficient, not final, causes (and ultimately from the necessity of nature or God himself), Lucretius argues against design or providence from the imperfection of the world. To those who "suppose that the gods designed all things for the sake of men," Lucretius says: "Even if I did not know what first-beginnings are, yet this, judging from the very arrangements of heaven, I would venture to affirm, and led by many other circumstances to maintain, that the nature of the world has by no means been made for us by divine power: so great are the defects with which it stands encumbered."

Spinoza would dismiss this argument. He thinks he can easily answer those who ask, "How is it that so many imperfections have arisen in nature—corruption, for instance, of things till they stink; deformity, exciting disgust; confusion, evil, crime, etc.?" He holds that "the perfection of things is to be judged by their nature and power alone; nor are they more or less perfect because they delight or offend the human senses, or because they are beneficial or prejudicial to human nature."

Others deal differently with the apparent imperfections in the world. Descartes, for example, makes the point that "the same thing which might possibly seem very imperfect ... if regarded by itself, is found to be very perfect if regarded as part of the whole universe." Marcus Aurelius goes further. "Nothing is injurious to the part," he writes, "if it is for the advantage of the whole.... By remembering, then, that I am part of such a whole, I shall be content with everything that happens."

In terms of another principle, Berkeley asks

us to "consider that the very blemishes and defects of nature are not without their use, in that they make an agreeable sort of variety, and augment the beauty of the rest of creation, as shades in a picture serve to set off the brighter and more enlightened parts. . . . As for the mixture of pain or uneasiness which is in the world, pursuant to the general laws of nature," he thinks that "this, in the state we are in at present, is indispensably necessary to our well-being."

In the opinion of those "philosophers who, after an exact scrutiny of all the phenomena of nature, conclude that the *whole*, considered as one system is, in every period of its existence, ordered with perfect benevolence," Hume sees only a specious, if also sublime, consolation for all human ills. But he does not think such convictions ever really work in practice. "These enlarged views may, for a moment," he says, "please the imagination of a speculative man, who is placed in ease and security; but neither can they dwell with constancy on his mind, even though undisturbed by the emotions of pain or passion; much less can they maintain their ground when attacked by such powerful antagonists."

But according to theologians like Augustine and Aquinas, evil does not and cannot exist in the world except as a privation or corruption of some good. "Evil neither belongs to the perfection of the universe, nor comes under the order of the universe," writes Aquinas, "except accidentally, that is, by reason of some good joined to it." But how does evil enter into a world created by a supremely good deity? What "God chiefly intends in created things," Aquinas answers, "is the good of the order of the universe. Now the order of the universe requires . . . that there should be some things that can, and sometimes do, fail. And thus God, by causing in things the good order of the universe, consequently and, as it were by accident, causes the corruptions of things." Furthermore, "the order of justice belongs to the order of the universe; and this requires that penalty should be dealt out to sinners. And so God is the author of the evil which is penalty, but not of the evil which is fault."

ON THIS POINT OF THE PERFECTION of the universe, the great conversation passes from the order of the world to the problem of evil and to related issues. When Freud, for example, in commenting on what he calls "the religious Weltanschauung," says that "earthquakes, floods and fires do not differentiate between the good and devout man, and the sinner and unbeliever," he raises questions which are considered in the chapters on JUSTICE, PUNISHMENT, and GOOD AND EVIL. The perfection of the universe also leads to a discussion of the beauty of its order. The praises which are differently voiced by the astronomers, the theologians, and the poets extol not the visible beauties of nature, but the intelligible beauty of the cosmic structure—perceptible to a Kepler in his mathematical and musical formulation of the harmonies of the world.

In addition to questions of its goodness and beauty, the problem of the world's order is sometimes stated in terms of its rationality. For some writers, such as Hegel, rationality is affirmed as the very foundation of existence. "*What is rational is actual and what is actual is rational*," he writes. "On this conviction the plain man like the philosopher takes his stand, and from it philosophy starts in its study of the universe of mind as well as the universe of nature." To others, like William James, "the whole war of the philosophies is over that point of faith. Some say that they can see their way already to the rationality; others that it is hopeless in any other but the mechanical way. To some the very fact that there is a world at all seems irrational."

Against the Hegelian notion of the world as a perfectly ordered whole (to which James applies the epithet "block universe"), James proposes the conception of a "concatenated universe." "The real world as it is given at this moment," James declares, "is the sum total of all its beings and events now. But can we think of such a sum? Can we realize for an instant what a cross-section of all existence at a definite point in time would be? While I talk and the flies buzz, a sea-gull catches a fish at the mouth of the Amazon, a tree falls in the Adirondack wilderness, a man sneezes in Germany, a horse dies in Tartary, and twins are born in France.

"What does that mean?" James asks. "Does the contemporaneity of these events with each

other, and with a million more as disjointed as they, form a rational bond between them, and unite them into anything that means for us a world?" It would certainly not mean a universe or cosmos for those who, like Hegel, insist upon the pervasive unity of the universe as a whole which completely and rationally relates all its parts. But for James, who conceives the universe in a pluralistic rather than in a monistic fashion, the "collateral contemporaneity" of all things, "and nothing else, is the *real* order of the world."

ALL OF THESE ISSUES carry the discussion back to what is perhaps the decisive question—the question of the world's origin. According as men believe it to be the purposeful work of a beneficent intelligence or the product of blind chance or of equally blind necessity, their other judgments about the world tend in the general directions of optimism or pessimism. Yet this is only true for the most part.

The problem of the world's origin involves some technical issues which do not seem to have such consequences for man's appraisal of the universe. One is the question whether a created world has a beginning in time or is co-eternal with its creator. As is indicated in the chapters on ETERNITY and TIME, whichever way the disputed question concerning the eternity of the world is answered, its creation may be affirmed or denied. Those who think the world is created declare that the power needed to maintain the world in being is identical with the creative power needed to initiate it. "The divine conservation," as Berkeley points out, is conceived as "a continual creation."

The most difficult point in issue concerns the meaning of creation itself. According to Christian doctrine, the essence of creation consists in making something out of nothing. On this principle Aquinas, for example, contrasts creation with generation or procreation and with artistic production. In biological generation, the offspring is produced out of the substance of its progenitors. In artistic production, some pre-existent material is transformed by the craftsman. But according to the theologian, creation is not change, "for change means that the same thing should be different now from what it was previously."

In becoming or alteration, some being is presupposed. "Creation is more perfect and more excellent than generation and alteration," Aquinas says, "because the term *whereto* is the whole substance of the thing; whereas what is understood as the term *wherefrom* is absolutely non-being," which, as he remarks, is the same as *nothing*. Since the distance between total non-being and being is infinite, only an infinite power can create, or make something out of nothing.

Lucretius flatly denies this possibility when he asserts as a first principle that "nothing can be produced from nothing." Not even the gods can violate this principle. "Nothing," he declares, "is ever gotten out of nothing by divine power." To Locke, on the other hand, the inconceivability of creation constitutes no argument against it. Writers like Lucretius "must give up their great maxim, *Ex nihilo nihil fit*. . . . It is not reasonable to deny the power of an infinite Being because we cannot comprehend its operations. We do not deny other effects upon this ground," Locke continues, "because we cannot possibly conceive the manner of their production. . . . It is an overvaluing ourselves, to reduce all to the narrow measure of our capacities, and to conclude all things impossible to be done, whose manner of doing exceeds our comprehension."

But may not the world be related to a supreme cause or principle in some way which does not involve *exnihilation*? The great books present various alternatives. Aristotle's prime mover is the unmoved and eternal cause of the world's eternal motion, not of its coming into being or its conservation in being. Plato's demiurge is a divinity which, according to the myth of the world's origin in the *Timaeus*, fashions the universe after the model of the eternal ideas, artistically producing their sensible replicas in the matter or space which is called "the receptacle."

The emanation of the sensible as well as the intelligible world from the transcendent All-One in the cosmogony of Plotinus, or the production of finite things from the infinite substance of God in Spinoza's theory, seem to be more like generation or procreation than like creation in the meaning of the opening chapter of Genesis.

Such theories, according to theologians like Augustine and Aquinas, or philosophers like Berkeley and Locke, deny what is meant by creation in the Judaeo-Christian tradition. To Berkeley they are all equally forms of atheism. Yet it should be remarked that to Spinoza a theory like that of Plato's is also impious; for it places "something outside of God which is independent of Him, to which He looks while He is at work as to a model, or at which He aims as if at a certain mark. This is indeed nothing else than to subject God to fate, the most absurd thing which can be affirmed of Him whom we have shown to be the first and only free cause of the essence of all things as well as of their existence."

THE VARIOUS THEORIES OF the world's origin usually extend also to the problem of the world's end. Aristotle, for example, who denies a beginning to the motions of the heavens and all other cycles of natural change, affirms them to go on in everlasting perpetuity. But it is not merely those who think the world has no beginning or source who attribute endless endurance to it. If the world did not have endless duration, it would not be for Plato the moving image of eternity. And though they conceive the world as somehow a divine emanation or production, Plotinus and Spinoza, no less than Aristotle, hold it to be everlasting if not eternal. "We hold that the ordered universe, in its material mass," Plotinus writes, "has existed for ever and will for ever endure."

The proposition that nothing is ever reduced to nothing is, for Lucretius, as true as the principle that nothing ever comes from nothing. He applies these principles, however, only to the eternal atoms, uncreated and indestructible, not to the world after world which arises and perishes as the atoms come together and disperse. Just as any compound body which atoms form can be dissolved into its simple bodies, so whole worlds are subject to similar dissolution, and will suffer it in the course of long ages. Yet though world succeeds world in the ceaseless activity of the eternal atoms, Lucretius contemplates a universe without beginning or end.

Since annihilation (or reduction to nothingness) is the opposite of exnihilation (or creation out of nothing), it might be expected that the doctrine which rests on the faith that "in the beginning God created heaven and earth," would also foresee an end to all things—a return of the whole created universe to the nothingness from which it came. Sacred Scripture does contain the prophecy of a final cataclysm. "The earth shall reel to and fro like a drunkard, and shall be removed like a cottage," says Isaiah. Reciting the parable of the tares in the field, Matthew explains that as "the tares are gathered and burned in the fire, so shall it be in the end of this world." In the Gospel according to Luke, Christ foretells His second coming:

> And there shall be signs in the sun, and in the moon, and in the stars; and upon the earth distress of nations, with perplexity; the sea and the waves roaring;
>
> Men's hearts failing them for fear, and for looking after those things which are coming on the earth: for the powers of heaven shall be shaken;
>
> And then shall they see the Son of man coming in a cloud with great power and great glory . . .
>
> Heaven and earth shall pass away; but my word shall not pass away.

But there is one other text which exercises a controlling influence on the theologian's interpretation of Scripture. In the second Epistle of Peter, we find:

> . . . . . the day of the Lord will come as a thief in the night; in the which the heavens shall pass away with a great noise, and the elements shall melt with fervent heat, the earth also and the works that are therein shall be burned up . . . . . .
>
> Nevertheless we, according to his promise, look for new heavens and a new earth, wherein dwelleth righteousness.

The final conflagration will be the end of the world as we know it, but it will bring about the re-formation, not the annihilation, of the material universe. As God has the power to create, so, according to Aquinas, He has the power to annihilate, but "since the power and goodness of God are rather manifested by the conservation of things in being . . . we must conclude by denying absolutely that anything at all will be annihilated." In the concluding treatises of the *Summa Theologica*—dealing with the end of the world, the Last Judgment, and the resurrection of the body—the final cataclysm is described as the cleansing of the world by fire to bring into being a new earth and a new heaven.

In our time, men talk of the end of the world as an event which might by chance occur if a

chain reaction set up by atomic fission got out of control and exploded the whole material universe. The physicist's theory of entropy also forecasts the eventual dissipation of energy to the point at which the universe will be a frozen mass of inert matter. These are secular alternatives to the religious prophecy of the world's end. But what Jesus said of the Last Judgment —that its time is a secret hidden from men— may be applicable to any termination of the world, certainly if it lies in the hands of God, and not merely at the disposal of man or nature.

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REFERENCES

To find the passages cited, use the numbers in heavy type, which are the volume and page numbers of the passages referred to. For example, in **4** HOMER: *Iliad*, BK II [265–283] **12d**, the number **4** is the number of the volume in the set; the number **12d** indicates that the passage is in section d of page 12.

PAGE SECTIONS: When the text is printed in one column, the letters **a** and **b** refer to the upper and lower halves of the page. For example, in **53** JAMES: *Psychology*, **116a-119b**, the passage begins in the upper half of page 116 and ends in the lower half of page 119. When the text is printed in two columns, the letters **a** and **b** refer to the upper and lower halves of the left-hand side of the page, the letters **c** and **d** to the upper and lower halves of the right-hand side of the page. For example, in **7** PLATO: *Symposium*, **163b-164c**, the passage begins in the lower half of the left-hand side of page 163 and ends in the upper half of the right-hand side of page 164.

AUTHOR'S DIVISIONS: One or more of the main divisions of a work (such as PART, BK, CH, SECT) are sometimes included in the reference; line numbers, in brackets, are given in certain cases; *e.g.*, *Iliad*, BK II [265–283] **12d**.

BIBLE REFERENCES: The references are to book, chapter, and verse. When the King James and Douay versions differ in title of books or in the numbering of chapters or verses, the King James version is cited first and the Douay, indicated by a (*D*), follows; *e.g.*, OLD TESTAMENT: *Nehemiah*, 7:45—(*D*) *II Esdras*, 7:46.

SYMBOLS: The abbreviation "esp" calls the reader's attention to one or more especially relevant parts of a whole reference; "passim" signifies that the topic is discussed intermittently rather than continuously in the work or passage cited.

For additional information concerning the style of the references, see the Explanation of Reference Style; for general guidance in the use of *The Great Ideas*, consult the Preface.

1. Diverse conceptions of the universe

1*a*. The universe as a living organism: the doctrine of the world soul

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8 ARISTOTLE: *Physics*, BK VIII, CH 2 [252^{b}17-28] 336c-d; [253^{a}6-21] **337a-b** / *Heavens*, BK II, CH 1 [284^{a}27-35] 376a / *Soul*, BK I, CH 5 [411^{a}6-23] 641a-b

12 EPICTETUS: *Discourses*, BK I, CH 14, **120d-121a**

12 AURELIUS: *Meditations*, BK IV, SECT 29 266a; SECT 40 **267a-b**; SECT 46 **267c**; BK V, SECT 8 269d-270b; SECT 30 **273a**; BK VI, SECT 38 277c-d; BK VII, SECT 9–10 **280b-c**; BK IX, SECT 8 **292b**; BK X, SECT 6–7 **297a-c**; BK XII, SECT 29–30 **310a-b**

13 VIRGIL: *Aeneid*, BK VI [724–734] **230b-231a**

16 KEPLER: *Epitome*, BK IV, **853b-856a** / *Harmonies of the World*, 1030a; **1083a-1084b**

17 PLOTINUS: *Second Ennead*, TR I, CH 4 **36d-37b**; TR II **40a-42a**; TR III, CH 13 **46c-47b**; CH 16–18 **48b-50a**; TR IX **65d-77d** passim / *Third Ennead*, TR I, CH 4 **79d-80a**; TR II, CH 16 **90c-91c**; TR VIII **129a-136a** passim / *Fourth Ennead*, TR III, CH 1–12 **141c-149b** passim; TR IV, CH 6–16 **161b-166b**; CH 22–27 **168d-172a**; CH 29–45 **173b-183a** passim; TR VIII, CH 2, **201c 202a**; TR VIII, CH 7–TR IX, CH 1 **204b-205c** / *Fifth Ennead*, TR I, CH 2, **208d-209a**; TR II, CH 2 **215a-c**; TR IX, CH 3 **247b-d**; CH 13–14 **251a-d** / *Sixth Ennead*, TR V, CH 12 **310b-d**

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23 HOBBES: *Leviathan*, PART II, **162b**

28 GILBERT: *Loadstone*, BK V, **104b-105d**

34 NEWTON: *Principles*, BK III, GENERAL SCHOL, **370a** / *Optics*, BK III, **542b-543a**

40 GIBBON: *Decline and Fall*, **307b-c**; **767c** [n 18]

42 KANT: *Judgement*, **565d**

48 MELVILLE: *Moby Dick*, **115b-117a**

51 TOLSTOY: *War and Peace*, BK XIV, **608a-b**

53 JAMES: *Psychology*, **658b-659a**

1*b*. The universe as a machine: the system of its moving parts

12 LUCRETIUS: *Nature of Things*, BK I [418–448] **6b-c**; BK II [62–307] **15d-19a**

12 AURELIUS: *Meditations*, BK X, SECT 6 **297a-b**

17 PLOTINUS: *Third Ennead*, TR I, CH 2–3 **78d-79c**

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23 HOBBES: *Leviathan*, PART III, 172b; PART IV, 269d
30 BACON: *Novum Organum*, BK I, APH 66 114d-115c
31 DESCARTES: *Discourse*, PART V, 54d-56a / *Meditations*, IV, 90a-b / *Objections and Replies*, 215a-b
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42 KANT: *Judgement*, 558b-559d; 561c-562a,c; 562d-564a; 568c-570b
45 FOURIER: *Theory of Heat*, 169a-b
53 JAMES: *Psychology*, 5a; 882a-884b; 889b-890a

1c. The universe as an ordered community of beings diverse in kind: eternal law and divine government

7 PLATO: *Critias*, 479c
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33 PASCAL: *Pensées*, 72 181a-184b; 347-348 233b-234a
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3. The universe and God: divine immanence and transcendence

3a. The unity of God and the world: the distinction between *natura naturans* and *natura naturata*

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12 AURELIUS: *Meditations*, BK VII, SECT 9 280b-c
17 PLOTINUS: *Second Ennead*, TR IX, CH 16, 75c-76a / *Third Ennead*, TR VIII 129a-136a / *Fourth Ennead*, TR IX 205a-207a,c / *Fifth Ennead*, TR I, CH 1-2 208a-209b; TR II 214c-215c; TR III, CH 15-17 224c-226c; TR VIII, CH 7 242d-243c; CH 9 243d-244c
18 AUGUSTINE: *Confessions*, BK I, par 2-3 1b-2a; BK III, par 10 15b-d; par 18 18b; BK IV, par 26 25c-d; par 31 26c-27a; BK VI, par 4 36a-b; BK VII, par 1-7 43b-45d; par 16-23 48c-50c esp par 21 49d-50a; BK X, par 8-10 73b-74a; BK XII, par 7 100d-101a / *City of God*, BK IV, CH 12-13 195d-196b; BK VII, CH 6 248a-b; CH 30 261b-d; BK XII, CH 25 358b-359a / *Christian Doctrine*, BK I, CH 12 627c-d
19 AQUINAS: *Summa Theologica*, PART I, Q 3, A 8 19d-20c; Q 4, A 3 22b-23b; Q 6, A 4 30b-d; Q 8 34c-38c; Q 51, A 3, REP 3 277a-278c; Q 90, A 1, ANS 480d-481d; PART I-II, Q 17, A 8, REP 2 692a-c
21 DANTE: *Divine Comedy*, PARADISE, XXXIII [82-105] 157a-b
23 HOBBES: *Leviathan*, PART II, 162b
28 HARVEY: *On Animal Generation*, 428c-d
31 DESCARTES: *Meditations*, VI, 99c
31 SPINOZA: *Ethics*, PART I 355a-372d esp DEF 3-6 355b, AXIOM 1-7 355c-d, PROP 1-8 355d-357d, PROP 14-16 359d-362a, PROP 18 363c, PROP 25 365b, PROP 29-30 366b-d; PART II, PROP 1-11 373d-377c esp PROP 7, COROL and SCHOL 375a-c; PART IV, PROP 4 425b-d
32 MILTON: *Paradise Lost*, BK XI [334-346] 306b
34 NEWTON: *Principles*, BK III, GENERAL SCHOL, 370a-371a
35 LOCKE: *Human Understanding*, BK II, CH XIII, SECT 18 152a-c; CH XV, SECT 2-4 162c-163b
35 BERKELEY: *Human Knowledge*, SECT 149-150 442d-443b; SECT 155 444b-c
42 KANT: *Practical Reason*, 334b-335b / *Judgement*, 565c-d; 566c-d; 580c-d
46 HEGEL: *Philosophy of History*, INTRO, 156d-157b; 176b-c; PART I, 220c-221a; 224a-b; 227c-228a
47 GOETHE: *Faust*, PART I [447-453] 13a
48 MELVILLE: *Moby Dick*, 115b-117a
51 TOLSTOY: *War and Peace*, BK V, 216d-218b; BK XIV, 608a-b; BK XV, 631a-c
52 DOSTOEVSKY: *Brothers Karamazov*, BK VI, 153b-d

3b. The duality of God and the world: the distinction between Creator and creature

OLD TESTAMENT: *Psalms*, 97:9—(*D*) *Psalms*, 96:9
NEW TESTAMENT: *I John*, 2:15-17
9 ARISTOTLE: *Motion of Animals*, CH 3 [699a11]-CH 4 [700a5] 234a-235a
12 LUCRETIUS: *Nature of Things*, BK I [146-158] 2d-3a; BK II [167-183] 17a-b; [1090-1104] 29a; BK V [76-90] 62a-b; [146-194] 63a-c; BK VI [43-79] 80d-81b
18 AUGUSTINE: *Confessions*, BK I, par 2-3 1b-2a; BK III, par 10 15b-d; BK IV, par 26 25c-d; BK VI, par 4 36a-b; BK VII, par 4-7 44b-45d; par 16-23 48c-50c esp par 17 49a, par 21 49d-50a; BK X, par 8-10 73b-74a; BK XII, par 7 100d-101a; par 21 103d-104a / *City of God*, BK VII, CH 29 261a-b; BK XII, CH 17 353a-354a
19 AQUINAS: *Summa Theologica*, PART I, Q 3, A 8 19d-20c; Q 8, A 1, ANS and REP 1,3 34d-35c; A 3 36b-37c; Q 18, A 4 107d-108c; Q 44, AA 1-2 238b-240a; Q 61, A 3, REP 2 316a-d; Q 90, A 1, ANS 480d-481d; Q 103, A 2 529a-530a; Q 105, A 5 542a-543b; PART I-II, Q 17, A 8, REP 2 692a-c
21 DANTE: *Divine Comedy*, PARADISE, I [97-142] 107b-d; II [112-148] 109a-b; XIII [52-66] 126a; XIX [40-66] 135c-d; XXVIII 148d-150b; XXIX [127-145] 151c-d
22 CHAUCER: *Knight's Tale* [2987-3040] 209a-210a

(3. *The universe and God: divine immanence and transcendence.* 3b. *The duality of God and the world: the distinction between Creator and creature.*)

23 HOBBES: *Leviathan*, PART II, 162b
30 BACON: *Advancement of Learning*, 17c
31 DESCARTES: *Discourse*, PART V, 54d-56a / *Meditations*, VI, 99c / *Objections and Replies*, 110b-112a; 123c-d; 158b-159a
35 LOCKE: *Human Understanding*, BK III, CH VI, SECT 11-12 271b-272b
38 MONTESQUIEU: *Spirit of Laws*, BK I, 1a-b
42 KANT: *Pure Reason*, 190a-c; 192c-d / *Practical Reason*, 334b-335b / *Judgement*, 566c-d; 580c-d
46 HEGEL: *Philosophy of History*, PART I, 245d-246c

4. The origin of the world: cosmos out of chaos

5 ARISTOPHANES: *Birds* [685-703] 551b-c
7 PLATO: *Timaeus*, 458a-b
8 ARISTOTLE: *Metaphysics*, BK XII, CH 6 [1071^{b} 27-1072^{a}13] 601c-602a
12 LUCRETIUS: *Nature of Things*, BK V [416-448] 66c-d
18 AUGUSTINE: *Confessions*, BK XIII, par 45 123a
31 DESCARTES: *Discourse*, PART V, 54d-56a
32 MILTON: *Paradise Lost*, BK I [6-10] 93b; BK II [850-1009] 129b-133a; BK III [1-55] 135b-136b; BK V [577-599] 187b-188a
40 GIBBON: *Decline and Fall*, 307b
47 GOETHE: *Faust*, PART II [7851-7950] 191b-193b

4a. The denial of ultimate origins: the eternity of the world and its motions without beginning or end

7 PLATO: *Timaeus*, 447b-c
8 ARISTOTLE: *Topics*, BK I, CH 11 [104^{b}13-18] 148a-b / *Physics*, BK VIII, CH 1-2 334a-337b; CH 8-9 348b-353b / *Heavens*, BK I, CH 3 [270^{b} 1-24] 361c-362a; BK I, CH 9 [279^{a}12]-BK II, CH 1 [284^{b}6] 370b-376a; BK II, CH 6 379c-380c / *Generation and Corruption*, BK II, CH 10-11 437d-441a,c / *Meteorology*, BK I, CH 14 [352^{a} 16-353^{a}27] 458b-459a,c; BK II, CH 3 [356^{b}2-357^{a}4] 462b-d / *Metaphysics*, BK IX, CH 8 [1050^{b}20-28] 576c-d; BK XII, CH 6-8 601b-605a
12 LUCRETIUS: *Nature of Things*, BK I [146-214] 2d-3d; [988-1007] 13b; BK II [80-141] 16a-d; [294-307] 18d-19a; [569-580] 22b; [1048-1063] 28b-c; BK V [187-194] 63c; [416-431] 66c-d
12 AURELIUS: *Meditations*, BK V, SECT 13 271b; SECT 23 272b; BK VI, SECT 15 275a-b; BK IX, SECT 28 293d-294a; BK X, SECT 7 297b-c
16 KEPLER: *Epitome*, BK IV, 846a-848b; 890a-891a
17 PLOTINUS: *Second Ennead*, TR I 35a-39d; TR IX, CH 3-4 67b-68a; CH 7-8, 69c-70a / *Third Ennead*, TR VII, CH 8, 123d-124a
18 AUGUSTINE: *City of God*, BK XI, CH 4 324a-d; BK XII, CH 10-12 348b-350a
19 AQUINAS: *Summa Theologica*, PART I, Q 10, A 2, REP 2 41d-42c; A 4, ANS 43b-44b; Q 14, A 12, ANS 85d-86d; Q 46, AA 1-2 250a-255a
20 AQUINAS: *Summa Theologica*, PART III SUPPL, Q 91, A 2, ANS 1017c-1020c
23 HOBBES: *Leviathan*, PART II, 162b
31 SPINOZA: *Ethics*, PART I, PROP 16-17 362a-363c; PROP 33 367b-369a
35 LOCKE: *Human Understanding*, BK II, CH XIV, SECT 26 160c-d
42 KANT: *Pure Reason*, 132d-133c; 135a-137a,c; 152a-d; 160b-161d

4b. Myths or hypotheses concerning the world's origin by artistic production: the demiurge, the creative ideas, the receptacle

7 PLATO: *Timaeus*, 447a-477a,c / *Sophist*, 577d-578b
9 ARISTOTLE: *Parts of Animals*, BK I, CH 1 [641^{b}13-29] 164c-d
12 LUCRETIUS: *Nature of Things*, BK V [181-194] 63b-c
17 PLOTINUS: *Second Ennead*, TR V, CH 3 58d-59c; TR IX, CH 8 70a-d; CH 10-12 72a-73d / *Fourth Ennead*, TR III, CH 10-12 147c-149b / *Fifth Ennead*, TR VIII, CH 7 242d-243c; CH 12-13 245c-246c / *Sixth Ennead*, TR IV, CH 10 302b-c
18 AUGUSTINE: *Confessions*, BK XI, par 7 90d-91a; BK XIII, par 45 123a
31 SPINOZA: *Ethics*, PART I, APPENDIX, 370c-371b
40 GIBBON: *Decline and Fall*, 307b
42 KANT: *Pure Reason*, 188c-189a

4c. The formation of the world by a fortuitous concourse of atoms

8 ARISTOTLE: *Physics*, BK II, CH 4 [196^{a}25-^{b}4] 272d-273a; CH 6 [198^{a}5-13] 275a
12 LUCRETIUS: *Nature of Things*, BK I [1022-1037] 13c-d; BK II [216-250] 17d-18b; [1048-1063] 28b-c; BK V [184-194] 63c; [416-508] 66c-67c
12 AURELIUS: *Meditations*, BK X, SECT 6, 297a
13 VIRGIL: *Eclogues*, VI [29-40] 19b-20a
17 PLOTINUS: *Third Ennead*, TR I, CH 3 79b-c
19 AQUINAS: *Summa Theologica*, PART I, Q 15, A 1, ANS 91b-92a; Q 22, A 2, ANS 128d-130d; Q 47, A 1, ANS 256a-257b
34 NEWTON: *Optics*, BK III, 542a-b

4d. The emanation of the world from the One

17 PLOTINUS: *First Ennead*, TR VII, CH 2 26c-d / *Second Ennead*, TR I, CH 5 37b-c; TR III, CH 11-12 46b-c; CH 16-18 48b-50a; TR IX, CH 3-4 67b-68a; CH 7-8 69c-70d / *Third Ennead*, TR II, CH 1-3 82c-84c; CH 16 90c-91c; TR III, CH 1 93b-c; TR VII, CH 11-12 126a-127d; TR VIII 129a-136a passim; TR IX, CH 3, 137b-c / *Fourth Ennead*, TR II, CH 2 140d-141c; TR IV, CH 10 163a-c; CH 13 164d-165b; CH 31-39

174d-180a; CH 45 182b-183a / *Fifth Ennead*, TR I, CH 4-9 209d-213c; TR III, CH 10-12 221b-223c; TR IV 226d-228b; TR VIII, CH 7 242d-243c / *Sixth Ennead*, TR II, CH 21 279b-280a; TR IV, CH 2 297d-298c; CH 4-5 299a-300a; TR V 305c-310d; TR VII, CH 1-2 321b-323a; CH 16 330a-c

4e. The creation of the world *ex nihilo*

12 LUCRETIUS: *Nature of Things*, BK I [146-214] 2d-3d
18 AUGUSTINE: *Confessions*, BK X, par 9 73c-d; BK XI, par 6-16 90c-93b; BK XII-XIII 99b-125a,c
19 AQUINAS: *Summa Theologica*, PART I, Q 21, A 4, REP 4 126c-127c; QQ 44-46 238a-255d; Q 50, A 1, ANS 269b-270a; A 3, ANS 272a-273b; QQ 65-66 339a-349d; Q 104 534c-538c; PART I-II, Q 17, A 8, REP 2 692a-c
21 DANTE: *Divine Comedy*, PARADISE, VII [121-148] 116b-c; X [1-6] 120b; XIX [40-66] 135c-d; XXIX [13-48] 150b-d
23 HOBBES: *Leviathan*, PART II, 162b; PART III, 188d
30 BACON: *Advancement of Learning*, 17b-d
31 DESCARTES: *Discourse*, PART V, 54d-56a / *Meditations*, IV, 90a-b / *Objections and Replies*, PROP III 132d-133a esp COROL 133a; 137d-138a; 140b-c; 229c-d
31 SPINOZA: *Ethics*, PART I, PROP 17, SCHOL 362c-363c; APPENDIX, 370c-372d passim
32 MILTON: *Paradise Lost*, BK I [6-10] 93b; BK III [708-735] 150b-151b; BK IV [720-735] 168a-b; BK V [468-479] 185b; BK VII [59-640] 218b-231a esp [139-161] 220a-b
33 PASCAL: *Pensées*, 482 258a
34 NEWTON: *Optics*, BK III, 541b; 542a-543a
35 LOCKE: *Human Understanding*, BK IV, CH X, SECT 15 352d-353a; SECT 18-19 353c-354c
35 BERKELEY: *Human Knowledge*, SECT 92 431a
35 HUME: *Human Understanding*, SECT XII, DIV 132, 509d [fn 1]
38 MONTESQUIEU: *Spirit of Laws*, BK I, 1a-b
42 KANT: *Pure Reason*, 132d-133c; 135a-137a,c; 152a-d; 160b-161d / *Practical Reason*, 334b-335b / *Judgement*, 594d [fn 1]
46 HEGEL: *Philosophy of History*, PART I, 245d-246a; PART IV, 361a
49 DARWIN: *Origin of Species*, 239c-d
54 FREUD: *New Introductory Lectures*, 875d-876a; 877d

4e(1) The distinction between creation and motion, generation, and artistic production

18 AUGUSTINE: *Confessions*, BK XI, par 7 90d-91a / *City of God*, BK XI, CH 10, 327d
19 AQUINAS: *Summa Theologica*, PART I, Q 14, A 8, ANS 82c-83b; Q 19, A 4 111c-112c; Q 22, A 2, ANS and REP 3 128d-130d; Q 27, A 1 153b-154b; A 2, REP 3 154c-155b; Q 44, A 2 239b-240a; Q 45 241d-250a; Q 66, A 1 343d-345c; Q 75, A 6, REP 2 383c-384c; Q 104, A 1 534c-536c; Q 110, A 2, ANS 565d-566d
23 HOBBES: *Leviathan*, INTRO, 47a
35 LOCKE: *Human Understanding*, BK II, CH XXVI, SECT 2 217b-d
42 KANT: *Pure Reason*, 81d-82a; 188c 189a

4e(2) The problem of time and eternity in relation to creation: the conservation of creatures in time

APOCRYPHA: *Wisdom of Solomon*, 7:17-18—(*D*) OT, *Book of Wisdom*, 7:17-18
17 PLOTINUS: *Third Ennead*, TR VII, CH 11 126a-d
18 AUGUSTINE: *Confessions*, BK VII, par 7, 45c; par 21 49d-50a; BK XI, par 10-17 91d 93c; par 40-41 98d-99b; BK XII, par 40 109b 110a / *City of God*, BK XI, CH 4-7 324a 326c; BK XII, CH 12 349b-350a; CH 15-17 351b-354a
19 AQUINAS: *Summa Theologica*, PART I, Q 8, A 1, ANS 34d-35c; Q 9, A 2, ANS 39c-40d; Q 14, A 12, ANS 85d-86d; Q 46 250a-255d; Q 61, A 2 315c-316a; Q 66, A 4 348d-349d; Q 75, A 6, REP 2 383c-384c; Q 104, A 1 esp REP 4 534c-536c; AA 3-4 537b-538c
21 DANTE: *Divine Comedy*, PARADISE, XXIX [13-48] 150b-d
30 BACON: *Advancement of Learning*, 17c
31 DESCARTES: *Discourse*, PART V, 55d-56a / *Meditations*, III, 87b-d / *Objections and Replies*, 228b
32 MILTON: *Paradise Lost*, BK V [577-594] 187b-188a; BK VII [70-108] 218b-219b
35 LOCKE: *Human Understanding*, BK II, CH XIV, SECT 24-30 160b-161d esp SECT 30 161c-d; CH XV, SECT 12, 165c
35 BERKELEY: *Human Knowledge*, SECT 46 421b-c
42 KANT: *Practical Reason*, 334b-335b

4e(3) The revelation and dogma of creation: interpretations of Genesis 1; the work of the six days

OLD TESTAMENT: *Genesis*, 1-2; 5:1-2 / *Exodus*, 20:8-11 esp 20:11 / *I Samuel*, 2:8—(*D*) *I Kings*, 2:8 / *Nehemiah*, 9:6—(*D*) *II Esdras*, 9:6 / *Job*, 9:4-13; 10:8-13; 12:7-10; 26:7-14; 28:24-27; 38:4-13 / *Psalms*, 8; 24:1-2; 33:6-9; 74:16-17; 89:11-12; 90:2; 95:4-5; 96:5; 102:25-26; 104; 119:73,90; 121:2; 136:5-9; 146:5-6; 148—(*D*) *Psalms*, 8; 23:1-2; 32:6-9; 73:16-17; 88:12-13; 89:2; 94:4-5; 95:5; 101:26-27; 103; 118:73,90; 120:2; 135:5-9; 145:5-6; 148 / *Proverbs*, 3:19-20; 8:22-31 / *Ecclesiastes*, 3:11 / *Isaiah*, 40:21-28; 42:5; 44:24; 45:7-8,12,18; 48:12-13; 51:13—(*D*) *Isaias*, 40:21-28; 42:5; 44:24; 45:7-8, 12,18; 48:12-13; 51:13 / *Jeremiah*, 10:10-13; 27:5; 31:35; 51:15-16—(*D*) *Jeremias*, 10:10-13; 27:5; 31:35; 51:15-16 / *Amos*, 4:13; 5:8 / *Jonah*, 1:9—(*D*) *Jonas*, 1:9 / *Zechariah*, 12:1—(*D*) *Zacharias*, 12:1
APOCRYPHA: *Judith*, 16:14—(*D*) OT, *Judith*, 16:17 / *Rest of Esther*, 13:10—(*D*) OT, *Esther*,

(*4e. The creation of the world* ex nihilo. *4e*(3) *The revelation and dogma of creation: interpretations of Genesis 1; the work of the six days.*)

13:10 / *Wisdom of Solomon*, 1:14; 6:7; 7:15–21; 9:1,9; 11:17,24—(*D*) OT, *Book of Wisdom*, 1:14; 6:8; 7:15–21; 9:1,9; 11:18,25 / *Ecclesiasticus*, 17:1–9; 18:1,6; 23:19–20; 24:8–9; 33:7–15; 39:16–35; 42:15–43:27—(*D*) OT, *Ecclesiasticus*, 17:1–8; 18:1,5; 23:28–29; 24:12–14; 33:7–15; 39:21–41; 42:15–43:29 / *Song of Three Children*, 34–60—(*D*) OT, *Daniel*, 3:56–82 / *Bel and Dragon*, 5—(*D*) OT, *Daniel*, 14:4 / *II Maccabees*, 7:23,28—(*D*) OT, *II Machabees*, 7:23,28

NEW TESTAMENT: *John*, 1:1–10 / *Acts*, 14:15–17; 17:22–28—(*D*) *Acts*, 14:14–16; 17:22–28 / *Romans*, 1:19–20 / *Colossians*, 1:16–17 / *Hebrews*, 1:10–11; 3:4; 11:3 / *II Peter*, 3:5 / *Revelation*, 4:11; 10:6; 14:7—(*D*) *Apocalypse*, 4:11; 10:6; 14:7

18 AUGUSTINE: *Confessions*, BK VII, par 7 45a-d; BK XI, par 5–17 90b-93c; BK XII–XIII 99b-125a,c / *City of God*, BK VII, CH 29 261a-b; BK VIII, CH 9–12 270d-273a; BK X, CH 31 319b-d; BK XI, CH 4–34 324a-342a,c; BK XII 342b,d-360a,c esp CH 1–2 342b,d-343d, CH 4–5 344b-345b, CH 9–27 347b-360a,c; BK XXII, CH 1 586b,d-587b

19 AQUINAS: *Summa Theologica*, PART I, Q 7, A 2, REP 3 31d-32c; Q 8, A 3, ANS and REP 1 36b-37c; Q 14, A 12, ANS 85d-86d; Q 21, A 4, REP 4 126c-127c; QQ 44–46 238a-255d; Q 56, A 2, REP 4 292d-294a; QQ 65–74 339a-377a,c

20 AQUINAS: *Summa Theologica*, PART III, Q 3, A 8, REP 2 729b-730b

21 DANTE: *Divine Comedy*, PARADISE, VII [121–148] 116b-c; X [1–6] 120b; XIII [52–87] 126a-b; XIX [40–51] 135c; XXIX [1–48] 150b-d

30 BACON: *Advancement of Learning*, 17b-d / *Novum Organum*, BK II, APH 15 149a

32 MILTON: *Paradise Lost*, BK III [708–735] 150b-151b; BK V [468–479] 185b; [800–863] 192b-194a; BK VII [59–640] 218b-231a esp [139–161] 220a-b

37 FIELDING: *Tom Jones*, 187d-188a

52 DOSTOEVSKY: *Brothers Karamazov*, BK V, 120d-121c

5. The number of worlds: the uniqueness of this world; the possibility or actuality of other worlds

7 PLATO: *Timaeus*, 448a-b; 459b-c / *Statesman*, 586c-590a

8 ARISTOTLE: *Physics*, BK III, CH 4 [203^{b}15–29] 281c-d; BK VIII, CH 1 [250^{b}15–251^{a}8] 334a-c; [252^{a}5–^{b}7] 335d-336b / *Heavens*, BK I, CH 8–9 367b-370d; CH 10 [279^{b}12–17] 370d-371a; [280^{a}13–34] 371c-d

12 LUCRETIUS: *Nature of Things*, BK II [1023–1174] 28a-30a,c

18 AUGUSTINE: *City of God*, BK XI, CH 5 324d-325c; BK XII, CH 11 349a-b; CH 13 350a-d; CH 17 353a-354a; CH 19–20 354d-357a

19 AQUINAS: *Summa Theologica*, PART I, Q 25, AA 5–6 147d-150a

25 MONTAIGNE: *Essays*, 252b-253a; 443a-b

31 DESCARTES: *Discourse*, PART V, 54d-56a / *Meditations*, IV, 90b / *Objections and Replies*, 228b

31 SPINOZA: *Ethics*, PART I, PROP 33 367b-369a

32 MILTON: *Paradise Lost*, BK II [910–920] 131a

34 NEWTON: *Optics*, BK III, 543a

6. The structure of the world

***6a.* The parts and places of the world: the uniformity of the matter of the world**

NEW TESTAMENT: *I Corinthians*, 15:40–41

7 PLATO: *Phaedo*, 247b-250a / *Timaeus*, 448a-449c

8 ARISTOTLE: *Heavens*, BK I, CH 2 359d-360d; CH 3 [270^{a}12–^{b}26] 361b-362a; CH 9 [279^{a}12–^{b}4] 370b-d; BK II, CH 4 [287^{b}15–21] 379b; CH 7 380c-d / *Metaphysics*, BK VIII, CH 4 [1044^{b}2–8] 569a-b; BK IX, CH 8 [1050^{b}6–27] 576b-d esp [1050^{b}20–27] 576c-d; BK XI, CH 6 [1063^{a}10–17] 591b; BK XII, CH 2 [1069^{b}24–27] 599a

9 ARISTOTLE: *Parts of Animals*, BK I, CH 5 [644^{b}21–645^{a}5] 168c-d

12 LUCRETIUS: *Nature of Things*, BK I [418–448] 6b-c; [1052–1094] 14a-c; BK II [294–307] 18d-19a; BK V [534–563] 68a-b

16 PTOLEMY: *Almagest*, BK I, 5a-6a; 8b; 9a-11b; BK XIII, 429a-b

16 COPERNICUS: *Revolutions of the Heavenly Spheres*, BK I, 511b; 517b-518a; 519b-520a

16 KEPLER: *Epitome*, BK IV, 853b-857b; 888b-890b; 894a-b; 919b; 929b-930b; 931b-932a; 935a-b

17 PLOTINUS: *Second Ennead*, TR I 35a-39d; TR IV, CH 8 52c-53a / *Third Ennead*, TR V, CH 6, 104a

19 AQUINAS: *Summa Theologica*, PART I, Q 10, A 5, ANS 44b-45c; A 6, REP 2 45c-46d; Q 55, A 2, ANS 289d-290d; Q 58, A 1, ANS 300c-301a; A 3, ANS 301d-302d; Q 66, A 2 345d-347b; Q 68, A 1, ANS 354a-355c; Q 70, A 3, ANS and REP 2 365b-367a; Q 75, A 6, ANS 383c-384c; Q 84, A 3, REP 1 443d-444d; Q 97, A 1, ANS 513c-514c; Q 104, A 1, REP 1,3 534c-536c; Q 115, A 3, ANS 588c-589c

20 AQUINAS: *Summa Theologica*, PART I–II, Q 49, A 4, ANS 5a-6a; PART III, Q 5, A 2, ANS 736d-737c

21 DANTE: *Divine Comedy*, PARADISE, II [112–148] 109a-b; X [1–36] 120b-c; XXII [124–154] 140d-141b; XXVIII 148d-150b

23 HOBBES: *Leviathan*, PART III, 172b; PART IV, 269d

28 GILBERT: *Loadstone*, BK VI, 110b-c

28 GALILEO: *Two New Sciences*, THIRD DAY, 214d

33 PASCAL: *Vacuum*, 358a

(*4e. The creation of the world* ex nihilo. *4e*(3) *The revelation and dogma of creation: interpretations of Genesis 1; the work of the six days.*)

13:10 / *Wisdom of Solomon*, 1:14; 6:7; 7:15–21; 9:1,9; 11:17,24—(*D*) OT, *Book of Wisdom*, 1:14; 6:8; 7:15–21; 9:1,9; 11:18,25 / *Ecclesiasticus*, 17:1–9; 18:1,6; 23:19–20; 24:8–9; 33:7–15; 39:16–35; 42:15–43:27—(*D*) OT, *Ecclesiasticus*, 17:1–8; 18:1,5; 23:28–29; 24:12–14; 33:7–15; 39:21–41; 42:15–43:29 / *Song of Three Children*, 34–60—(*D*) OT, *Daniel*, 3:56–82 / *Bel and Dragon*, 5—(*D*) OT, *Daniel*, 14:4 / *II Maccabees*, 7:23,28—(*D*) OT, *II Machabees*, 7:23,28

NEW TESTAMENT: *John*, 1:1–10 / *Acts*, 14:15–17; 17:22–28—(*D*) *Acts*, 14:14–16; 17:22–28 / *Romans*, 1:19–20 / *Colossians*, 1:16–17 / *Hebrews*, 1:10–11; 3:4; 11:3 / *II Peter*, 3:5 / *Revelation*, 4:11; 10:6; 14:7—(*D*) *Apocalypse*, 4:11; 10:6; 14:7

18 AUGUSTINE: *Confessions*, BK VII, par 7 45a-d; BK XI, par 5–17 90b-93c; BK XII–XIII 99b-125a,c / *City of God*, BK VII, CH 29 261a-b; BK VIII, CH 9–12 270d-273a; BK X, CH 31 319b-d; BK XI, CH 4–34 324a-342a,c; BK XII 342b,d-360a,c esp CH 1–2 342b,d-343d, CH 4–5 344b-345b, CH 9–27 347b-360a,c; BK XXII, CH 1 586b,d-587b

19 AQUINAS: *Summa Theologica*, PART I, Q 7, A 2, REP 3 31d-32c; Q 8, A 3, ANS and REP 1 36b-37c; Q 14, A 12, ANS 85d-86d; Q 21, A 4, REP 4 126c-127c; QQ 44–46 238a-255d; Q 56, A 2, REP 4 292d-294a; QQ 65–74 339a-377a,c

20 AQUINAS: *Summa Theologica*, PART III, Q 3, A 8, REP 2 729b-730b

21 DANTE: *Divine Comedy*, PARADISE, VII [121–148] 116b-c; X [1–6] 120b; XIII [52–87] 126a-b; XIX [40–51] 135c; XXIX [1–48] 150b-d

30 BACON: *Advancement of Learning*, 17b-d / *Novum Organum*, BK II, APH 15 149a

32 MILTON: *Paradise Lost*, BK III [708–735] 150b-151b; BK V [468–479] 185b; [800–863] 192b-194a; BK VII [59–640] 218b-231a esp [139–161] 220a-b

37 FIELDING: *Tom Jones*, 187d-188a

52 DOSTOEVSKY: *Brothers Karamazov*, BK V, 120d-121c

5. The number of worlds: the uniqueness of this world; the possibility or actuality of other worlds

7 PLATO: *Timaeus*, 448a-b; 459b-c / *Statesman*, 586c-590a

8 ARISTOTLE: *Physics*, BK III, CH 4 [203^{b}15–29] 281c-d; BK VIII, CH 1 [250^{b}15–251^{a}8] 334a-c; [252^{a}5–^{b}7] 335d-336b / *Heavens*, BK I, CH 8–9 367b-370d; CH 10 [279^{b}12–17] 370d-371a; [280^{a}13–34] 371c-d

12 LUCRETIUS: *Nature of Things*, BK II [1023–1174] 28a-30a,c

18 AUGUSTINE: *City of God*, BK XI, CH 5 324d-325c; BK XII, CH 11 349a-b; CH 13 350a-d; CH 17 353a-354a; CH 19–20 354d-357a

19 AQUINAS: *Summa Theologica*, PART I, Q 25, AA 5–6 147d-150a

25 MONTAIGNE: *Essays*, 252b-253a; 443a-b

31 DESCARTES: *Discourse*, PART V, 54d-56a / *Meditations*, IV, 90b / *Objections and Replies*, 228b

31 SPINOZA: *Ethics*, PART I, PROP 33 367b-369a

32 MILTON: *Paradise Lost*, BK II [910–920] 131a

34 NEWTON: *Optics*, BK III, 543a

6. The structure of the world

6a. The parts and places of the world: the uniformity of the matter of the world

NEW TESTAMENT: *I Corinthians*, 15:40–41

7 PLATO: *Phaedo*, 247b-250a / *Timaeus*, 448a-449c

8 ARISTOTLE: *Heavens*, BK I, CH 2 359d-360d; CH 3 [270^{a}12–^{b}26] 361b-362a; CH 9 [279^{a}12–^{b}4] 370b-d; BK II, CH 4 [287^{b}15–21] 379b; CH 7 380c-d / *Metaphysics*, BK VIII, CH 4 [1044^{b}2–8] 569a-b; BK IX, CH 8 [1050^{b}6–27] 576b-d esp [1050^{b}20–27] 576c-d; BK XI, CH 6 [1063^{a}10–17] 591b; BK XII, CH 2 [1069^{b}24–27] 599a

9 ARISTOTLE: *Parts of Animals*, BK I, CH 5 [644^{b}21–645^{a}5] 168c-d

12 LUCRETIUS: *Nature of Things*, BK I [418–448] 6b-c; [1052–1094] 14a-c; BK II [294–307] 18d-19a; BK V [534–563] 68a-b

16 PTOLEMY: *Almagest*, BK I, 5a-6a; 8b; 9a-11b; BK XIII, 429a-b

16 COPERNICUS: *Revolutions of the Heavenly Spheres*, BK I, 511b; 517b-518a; 519b-520a

16 KEPLER: *Epitome*, BK IV, 853b-857b; 888b-890b; 894a-b; 919b; 929b-930b; 931b-932a; 935a-b

17 PLOTINUS: *Second Ennead*, TR I 35a-39d; TR IV, CH 8 52c-53a / *Third Ennead*, TR V, CH 6, 104a

19 AQUINAS: *Summa Theologica*, PART I, Q 10, A 5, ANS 44b-45c; A 6, REP 2 45c-46d; Q 55, A 2, ANS 289d-290d; Q 58, A 1, ANS 300c-301a; A 3, ANS 301d-302d; Q 66, A 2 345d-347b; Q 68, A 1, ANS 354a-355c; Q 70, A 3, ANS and REP 2 365b-367a; Q 75, A 6, ANS 383c-384c; Q 84, A 3, REP 1 443d-444d; Q 97, A 1, ANS 513c-514c; Q 104, A 1, REP 1,3 534c-536c; Q 115, A 3, ANS 588c-589c

20 AQUINAS: *Summa Theologica*, PART I–II, Q 49, A 4, ANS 5a-6a; PART III, Q 5, A 2, ANS 736d-737c

21 DANTE: *Divine Comedy*, PARADISE, II [112–148] 109a-b; X [1–36] 120b-c; XXII [124–154] 140d-141b; XXVIII 148d-150b

23 HOBBES: *Leviathan*, PART III, 172b; PART IV, 269d

28 GILBERT: *Loadstone*, BK VI, 110b-c

28 GALILEO: *Two New Sciences*, THIRD DAY, 214d

33 PASCAL: *Vacuum*, 358a

(6. The structure of the world. 6d. The goodness and beauty of the universe: its evil and imperfections.)

8 ARISTOTLE: *Heavens*, BK II, CH 12 383b-384c / *Generation and Corruption*, BK II, CH 10 [336^{b}25-34] 438d / *Metaphysics*, BK I, CH 3 [984^{b}8-22] 502d; BK IX, CH 9 [1051^{a}17-22] 577a-b; BK XII, CH 7 [1072^{b}30-1073^{a}2] 603a; CH 10 [1075^{a}12-24] 605d-606a; BK XIV, CH 4 [1091^{a}29-1092^{a}9] 624a-d

9 ARISTOTLE: *Parts of Animals*, BK I, CH 5 [644^{b}22-645^{a}26] 168c-169a / *Politics*, BK VII, CH 4 [1326^{a}29-32] 530b-c

11 NICOMACHUS: *Arithmetic*, BK II, 839d-840b

12 LUCRETIUS: *Nature of Things*, BK II [167-183] 17a-b; BK V [195-234] 63c-64a

12 EPICTETUS: *Discourses*, BK IV, CH 7, 233a-b

12 AURELIUS: *Meditations*, BK III, SECT 2 259d-260a

16 PTOLEMY: *Almagest*, BK I, 5a

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16 KEPLER: *Epitome*, BK IV, 853b-887a passim, esp 863b-872b / *Harmonies of the World*, 1023b-1085b esp 1049b-1050a, 1071b, 1077b-1080b

17 PLOTINUS: *Second Ennead*, TR III, CH 16 48b-49a; CH 18 49c-50a; TR IV, CH 16 57b-c; TR IX 65d-77d passim / *Third Ennead*, TR II, CH 3 83d-84c; CH 8, 86c-d; CH 10-14 88a-89d / *Fifth Ennead*, TR VIII, CH 8-9 243c-244c; CH 12-13 245c-246c

18 AUGUSTINE: *Confessions*, BK VII, par 16-23 48c-50c; BK X, par 8-10 73b-74a / *City of God*, BK V, CH 11 216c-d; BK VIII, CH 6 268d-269c; BK X, CH 14 307c-308a; BK XI, CH 4, 324a-b; CH 16-18 331a-332a; CH 22-23 333d-335c; BK XII, CH 2 343c-d; CH 4-5 344b-345b; BK XIX, CH 12-13 517b-520a; BK XXII, CH 24 609a-612a / *Christian Doctrine*, BK I, CH 4 625b-c

19 AQUINAS: *Summa Theologica*, PART I, Q 2, A 3, REP 1 12c-14a; Q 5, A 3 25a-d; Q 6, A 4 30b-d; Q 17, A 1 100d-101d; Q 19, A 9, REP 2 116d-117d; Q 22, A 2, REP 2 128d-130d; Q 23, A 5, REP 3 135d-137d; A 7, REP 3 138d-140a; A 8, REP 2 140a-141a; Q 25, A 6, REP 3 149a-150a; Q 48, A 1, REP 5 259b-260c; A 2 260c-261b; Q 49, A 2, ANS 266a-c; Q 50, A 1, ANS 269b-270a; A 3, ANS 272a-273b; Q 65, A 1, REP 2-3 339b-340b; Q 66, A 1 343d-345c; Q 72, A 1, REP 6 368b-369d; Q 74, A 3, REP 3 375a-377a,c; Q 92, A 1, REP 3 488d-489d; Q 103, A 2 529a-530a

20 AQUINAS: *Summa Theologica*, PART III SUPPL, Q 74, A 1 925c-926c; Q 91 1016a-1025b

21 DANTE: *Divine Comedy*, PARADISE, I [97-142] 107b-d; II [112-148] 109a-b; VIII [91-114] 117d-118a; X [1-36] 120b-c; XIII [52-81] 126a-b; XXVIII 148d-150b; XXIX [13-48] 150b-d

22 CHAUCER: *Troilus and Cressida*, BK III, STANZA 1-7 54b-55b; STANZA 250-253 87a-b

28 GILBERT: *Loadstone*, BK V, 104b-105d

28 HARVEY: *On Animal Generation*, 491d-492a

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31 SPINOZA: *Ethics*, PART I, PROP 33 367b-369a; APPENDIX 369b-372d passim; PART III, 395a-d; PART IV, PREF 422b,d-424a

32 MILTON: *Paradise Lost*, BK VII [548-564] 229a-b

34 NEWTON: *Principles*, BK III, GENERAL SCHOL, 369b-370a

35 BERKELEY: *Human Knowledge*, SECT 109 434b; SECT 146 442a-b; SECT 151-154 443b-444b

35 HUME: *Human Understanding*, SECT VIII, DIV 79 486b-c; SECT XI, DIV 106-107, 499c-500a passim

37 FIELDING: *Tom Jones*, 186c-d; 187d-188a

40 GIBBON: *Decline and Fall*, 81b-c

42 KANT: *Pure Reason*, 187c-188c / *Judgement*, 544c-546d

47 GOETHE: *Faust*, PROLOGUE [243-270] 7a-b; PART II [11,288-303] 274b-275a

48 MELVILLE: *Moby Dick*, 144a-145a

52 DOSTOEVSKY: *Brothers Karamazov*, BK VI, 153b-d

54 FREUD: *New Introductory Lectures*, 878a-b

7. The space of the world: astronomical theories concerning the size or extent of the universe

OLD TESTAMENT: *Job*, 38:18-20 / *Proverbs*, 25:3

7 PLATO: *Timaeus*, 448d-449a

8 ARISTOTLE: *Physics*, BK IV, CH 5 [212^{b}11-21] 292a / *Heavens*, BK I, CH 5-7 362c-367b; BK II, CH 4 378a-379b; CH 8 [290^{a}30-^{b}11] 382a

11 ARCHIMEDES: *Sand-Reckoner* 520a-526b

12 LUCRETIUS: *Nature of Things*, BK I [951-1113] 12d-14d; BK II [1048-1104] 28b-29a; BK VI [647-652] 89a

16 PTOLEMY: *Almagest*, BK I, 10b

16 COPERNICUS: *Revolutions of the Heavenly Spheres*, BK I, 516a-517b

16 KEPLER: *Epitome*, BK IV, 882a-886b

19 AQUINAS: *Summa Theologica*, PART I, Q 8, A 4, REP 3-4 37c-38c

32 MILTON: *Paradise Lost*, BK VIII [66-178] 233b-236a

34 NEWTON: *Principles*, BK III, PROP 42, 367a

35 LOCKE: *Human Understanding*, BK II, CH XIV, SECT 26 160c-d; BK IV, CH III, SECT 24 320c-d

42 KANT: *Pure Reason*, 135a-137a,c; 160b-161d / *Judgement*, 501a-b

54 FREUD: *General Introduction*, 562c

8. The end of the world

OLD TESTAMENT: *Psalms*, 102:25-26—(*D*) *Psalms*, 101:26-27 / *Isaiah*, 2:1-4; 13:6-22; 24; 34; 51:6; 65:17-66:24—(*D*) *Isaias*, 2:1-4; 13:6-22; 24; 34; 51:6; 65:17-66:24 / *Daniel*, 12 / *Joel*, 2:1-11 / *Micah*, 4:1-3—(*D*) *Micheas*, 4:1-3 / *Zephaniah*—(*D*) *Sophonias* / *Zechariah*, 14—(*D*) *Zacharias*, 14 / *Malachi*, 3-4—(*D*) *Malachias*, 3-4

NEW TESTAMENT: *Matthew*, 3:9-12; 10:14-15; 11:20-24; 13:33-43,47-50; 24 / *Mark*, 13:4-37 / *Luke*, 17:20-37; 21:5-38 / *Acts*, 2:17-21; 17:31 / *I Corinthians*, 7:29-31 / *I Thessalonians*, 4:15-5:4—(*D*) *I Thessalonians*, 4:14-5:4 / *Hebrews*, 1:10-11; 9:26-28 / *II Peter*, 3:7-13 / *I John*, 2:18-19 / *Jude* / *Revelation* esp 10:6, 14:15-16, 21:1-27, 22:13—(*D*) *Apocalypse* esp 10:6, 14:15-16, 21:1-27, 22:13

9 ARISTOTLE: *Motion of Animals*, CH 4 [699^{b}12-700^{a}6] 234d-235a

12 LUCRETIUS: *Nature of Things*, BK V [91-125] 62b-d; [235-415] 64a-66c; BK VI [535-607] 87c-88b

16 KEPLER: *Epitome*, BK IV, 847b-848b

18 AUGUSTINE: *City of God*, BK XVIII, CH 53 504d-505c; BK XX 530a-560a,c

20 AQUINAS: *Summa Theologica*, PART III SUPPL, QQ 73-74 922b-935a,c; Q 77, A 2 945a-946b; Q 88, A 3 1002d-1004b; Q 91 1016a-1025b

23 HOBBES: *Leviathan*, PART III, 230a; 244b-c

27 SHAKESPEARE: *Tempest*, ACT IV, SC I [146-158] 543b

32 MILTON: *Christs Nativity* [133-172] 4b-5b / *Paradise Lost*, BK III [274-343] 141b-143a; BK VII [139-161] 220a-b; BK XI [45-83] 300a-301a; BK XII [537-551] 331a

40 GIBBON: *Decline and Fall*, 187c-188c

41 GIBBON: *Decline and Fall*, 233c

CROSS-REFERENCES

For: Discussions relevant to the conception of the universe as a living organism, as extension and thought, as the objectification of mind, and as an ordered community, *see* CAUSE 7c; GOD 7c; MIND 10f-10f(1); SOUL 1a.

Other considerations of the world and man, *see* MAN 10c, 10e.

The problem of the unity or duality of God and the world, *see* GOD 5d-5e, 11; NATURE 1b; ONE AND MANY 1b; RELATION 3.

The issues concerning the world's origin, its eternity, and its creation, *see* ART 2c; ASTRONOMY 8c(1); CHANGE 13; ELEMENT 5h; ETERNITY 2; GOD 7a; INFINITY 3e; ONE AND MANY 1a; TIME 2b-2c.

The issue concerning divine freedom in relation to the necessity of this world and the possibility of other worlds, *see* GOD 4c, 5g; LIBERTY 5d; WILL 4b.

Other discussions of the uniformity of the world's matter, *see* ASTRONOMY 8a; CHANGE 10c; MATTER 1b; MECHANICS 4a.

Other treatments of the space and the size of the world, *see* ASTRONOMY 5; INFINITY 3d, 4a; SPACE 3a.

The issue concerning hierarchy or continuity in the order of nature, *see* BEING 3a; GOOD AND EVIL 1b; LIFE AND DEATH 2, 3a; NATURE 3b.

The consideration of the world's rationality or intelligibility, *see* MIND 10a; NATURE 3a.

Another discussion of the beauty of the world, *see* BEAUTY 7b; and for the goodness of the universe in relation to God's goodness and the problem of evil, *see* GOD 4f, 5h-5i; GOOD AND EVIL 1d, 2b.

The atomistic theory of the world's growth and decay, *see* ELEMENT 5h; and for the religious dogma of the world's end and related theological doctrines, *see* GOD 7g-7h; IMMORTALITY 5g; PROPHECY 4d; SOUL 4d(3).

ADDITIONAL READINGS

Listed below are works not included in *Great Books of the Western World*, but relevant to the idea and topics with which this chapter deals. These works are divided into two groups:

I. Works by authors represented in this collection.
II. Works by authors not represented in this collection.

For the date, place, and other facts concerning the publication of the works cited, consult the Bibliography of Additional Readings which follows the last chapter of *The Great Ideas.*

I.

AUGUSTINE. *De Genesi ad Litteram*
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——. *De Aeternitate Mundi*
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W. JAMES. *A Pluralistic Universe*

II.

ARISTARCHUS. *On the Sizes and Distances of the Sun and Moon*
EPICURUS. *Letter to Herodotus*
——. *Letter to Pythocles*
PHILO JUDAEUS. *On the Eternity of the World (De Aeternitate Mundi)*
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BERNARD SYLVESTRIS. *De Mundi Universitate*
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——. *Candide*
——. "Chain of Created Beings," "End of World," in *A Philosophical Dictionary*
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C. S. PEIRCE. *Collected Papers*, VOL VI, par 185–237
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APPENDICES

APPENDIX I

BIBLIOGRAPHY OF ADDITIONAL READINGS

The Bibliography of Additional Readings provides information concerning the authors and works cited in the Additional Readings. In addition to the full name and dates of each author, the Bibliography gives as much of the following information as is appropriate to each work cited: the full title (and subtitle, if any); the name of the editor or translator, if these are identified in the recommended edition; the place of publication of the edition or translation recommended; the name of the publisher and the date of publication; the original title; the date and, in some cases, the place of composition or publication.

Since the Additional Readings are 102 separate lists of authors and works, and the Bibliography is a single compilation of the titles which comprise these 102 lists, each was constructed according to different principles. The following statement of these principles serves to guide the reader in using the Bibliography in relation to the Additional Readings.

AUTHORS' NAMES: In the Additional Readings, surnames are used, with initials added only where necessary to distinguish identical surnames; for example, J. H. NEWMAN. In a few exceptional cases, full names are used because this is the more recognizable form; for example, LEONARDO DA VINCI. The common Anglicized spelling is employed for reference to foreign names.

The alphabetical order of authors' names in the Bibliography is determined by the way in which the names appear in the Additional Readings. Initials do not affect the order; for example, J. H. NEWMAN appears in the Bibliography as NEWMAN, JOHN HENRY. When full names are used in the Additional Readings, the first name determines the alphabetical location of the author in the Bibliography; for example, LEONARDO DA VINCI is listed under "L," not under "D" or "V."

TITLES OF WORKS: In the Additional Readings, full titles are generally used. In some cases abbreviated forms are employed to avoid undue length. All subtitles are omitted.

In the Bibliography, both title and subtitle are used; and, with few exceptions, the title is given as it appears on the title page of the edition cited.

Titles are arranged in alphabetical order under the names of their authors. The alphabetization of titles disregards initial English articles (*a*, *an*, and *the*), but not prepositions (*of*, *on*, etc.).

The titles of anonymous works are placed in alphabetical order among the authors' names; for example, *Aucassin and Nicolette* appears in the Bibliography between ATHANASIUS and AUGUSTINE.

The opening words of a shortened title in the Additional Readings sometimes differ from those of the full title. In these cases, the short title precedes the full title in the Bibliography, and is placed in brackets; for example, Faraday's *Various Forces of Matter* appears in the Bibliography as [Various Forces of Matter] *A Course of Six Lectures on the Various Forces of Matter and Their Relations to Each Other*.

The full title sometimes includes the names of a number of works, of which the Additional Readings cites only one. If the opening words of the full title differ from those of the title in the Additional Readings, the latter is placed in brackets and precedes the full title in the Bibliography; for example, Shaw's *Crude Criminology* appears in the Bibliography as [Crude Criminology] *Doctors' Delusions, Crude Criminology, and Sham Education*. The alphabetization is determined by the bracketed title, since this is the title which appears in the Additional Readings.

TRANSLATIONS: The manner of citing titles in the Additional Readings indicates whether a foreign work is available in English translation. If no translation exists or is available, the title is given only in its original language. If, however, the work has been translated, the English title is always used, sometimes in conjunction with its original foreign title. When two

titles are thus given, which appears first depends in large part on the wording of the title page or the backbone of the volume which contains the translation.

Some translations carry the original title in the primary place, and use the translation as a secondary title. Some translations use only the English title. In these cases, where the work is well-known under its original title, this is added in parentheses after the English title. Some translations use only the foreign title. In these cases, an English version is added in parentheses after the original title.

In the Bibliography, the titles of translated works are listed alphabetically according to the way in which they are cited in the Additional Readings. If the original title is given first in the Additional Readings, then only it is used in the Bibliography. If the English title is given first in the Additional Readings, or if only it is used, then the work is listed alphabetically in the Bibliography according to the English title. In these cases the English title is always accompanied by the original title in parentheses.

COLLECTIONS: In the Additional Readings, the titles of essays or papers which are parts of a published collection are sometimes given within quotation marks, followed by the title of the collection, the latter appearing in italics; for example, J. H. NEWMAN. "Private Judgment," in VOL II, *Essays and Sketches*, or MCILWAIN. "The Fundamental Law Behind the Constitution," in *The Constitution Reconsidered*. In these cases it is the italicized title of the collection in which the essay or paper is published, rather than the quoted title of the essay or paper, which is listed in the Bibliography; for example, the essay by McIlwain in the example above is represented in the Bibliography by the following entry under MCILWAIN, CHARLES HOWARD: *The Constitution Reconsidered*.

The title of an individual essay or paper, or of a single lyric poem, is sometimes cited in the Additional Readings without reference to the collection in which it is published. In these cases, the title is italicized, not quoted. The individual work is represented in the Bibliography by this title, and the bibliographical information includes the title of the collection in which it is published.

A work listed in the Additional Readings may be available only in a collection or set of volumes with a single collective title. The collective title and the number of the volume in which the cited work appears are included in the bibliographical information; for example, what is cited in the Additional Readings as "AUGUSTINE. *On the Trinity*," is represented in the Bibliography by the following entry under AUGUSTINE, AURELIUS, SAINT, BISHOP OF HIPPO: "*On the Trinity*. In Vol. III, *Select Library*." *Select Library* is a shortened form of the collective title of a set of volumes; *i.e.*, *A Select Library of the Nicene and Post-Nicene Fathers of the Christian Church*. Ed. by P. Schaff. First Series, 8 vols.

When the full title of a collection, and bibliographical information about it, is given as part of the entry for a particular title, subsequent listings of other parts of the same collection may refer back to the collective title by using *ibid.* or *q.v.* or "see above." In other cases, only a shortened form of the collective title is given in the entry itself. Here the collective title in full, accompanied by bibliographical information, is given in a note appended to the last entry for that author.

WHOLE AND PART CITATIONS: In all cases in which parts of a work are recommended in the Additional Readings, the citation indicates these parts in a number of ways. It usually gives author's, editor's, or translator's divisions of the work, such as book, part, chapter, section, etc. In the few cases where such divisions are not citable, it gives page references to a particular edition. When page numbers are given, it is, of course, necessary to use this edition to find the pages cited.

When author's or editor's divisions are used, they are usually applicable to all standard editions of the work, especially if it was originally written in English. In the case of translations, it sometimes happens that the translator has made his own divisions of the work. Where this is so, the divisions indicated must be found in the particular translation specified in the Bibliography. The author's or translator's divisions are given in the same manner as similar divisions are given in the Reference sections of the 102 chapters; *i.e.*, BK, PART, CH, SECT, etc., followed by the number of the division in Arabic or Roman numerals according to the usage of the work cited.

Sometimes letters or numbers, without part names, signify subordinate divisions of the author's work; for example, HEGEL. *The Phenomenology of Mind*, IV, B (3). These are given precisely as they appear in the works themselves.

In a few cases, the recommended part of an author's work is titled. Such titles are placed in parentheses after the title of the work itself; for example, PÉGUY. *Basic Verities* (Freedom).

CHRONOLOGICAL ORDER: In the Additional Readings, the titles are listed in a chronological order; or, more precisely, they are divided into two groups, each in chronological order. The first of these consists of works written by the authors represented in *Great Books of the Western World*, but not published in this set; the second consists of works by other authors.

The order is determined in the same way in both groups—by the date of an author's work, not by his birth or death date. For each title listed in the Additional Readings, the determining or order date is given in the Bibliography.

For all contemporary works, and works written in English which appear in only one edition, the date which follows the place of publication and the name of the publisher is the order date.

For all translations, the order date is the date of the original writing or publication. This is given in parentheses, along with information about the original title and its place of writing or publication.

Similarly, for works which have been recently republished or which exist in several editions, the order date is the date of the original publication, or perhaps the date of composition. This date is given in parentheses. If it is the date of composition, it is given by itself. If it is the date of a first edition or an original publication of the work, it is given with other bibliographical information.

When parts of collections—poems, essays, plays—are individually cited, the order is determined by the date, in parentheses, of the individual work, not by the publication date of the collection.

When the entry for a particular title in the Bibliography includes two dates, the order date is always the one in the parentheses at the end of the entry.

A question mark in conjunction with a date signifies that it cannot be determined with certainty; the letter *c.* (for *circa*, or "about") signifies that the date is regarded as an approximation.

In a great many cases, more than one work is cited for a particular author, and often the publication date, or even the date of composition, is difficult to ascertain. This is especially true of works written in antiquity. Hence the chronological principle had to be applied with the following qualifications:

1. When two or more works by the same author are cited, they are grouped together under his name in strict chronological sequence. The chronological position of such a group of titles is determined by the date of the most recent title in the group. Hence, the whole series of individual titles in a list of Additional Readings may not be in strict chronological sequence.

2. If the work was published in the author's lifetime, the date used (if available) was that of its first publication. In the case of posthumously published works, the date of composition was used.

3. In the case of works for which no publication or composition date was available, the date of the author's death was usually substituted; or, as indicating the period in which he flourished, the median date of the author's life.

4. In the case of lectures later compiled and published as books, the date the lectures were first delivered was used.

5. In the case of a work published in several volumes over a period of years, the publication date of the first volume was used.

6. In the case of collections of papers or essays published during the author's lifetime and within a short time of the first scattered publication of the individual papers or essays, the date used was the publication date of the collection. But when the collection was published posthumously, or a long time elapsed between the first scattered publication and the publication of the collection, the median date of original publication dates was used. Whenever one set of dates could not be definitely determined, the other was used.

7. If a collection, published posthumously, represented the bulk of an author's writing, a date in the middle of his productive period was chosen.

8. When a single essay from a collection was cited, the date of the original publication of that essay was used, not the publication date of the collection.

9. In the case of single plays, the date used was that of original publication or first performance, whichever could be more definitely ascertained. If both were equally ascertainable, the earlier was used.

10. The publication date of a single lyric poem was used if it appeared separately before its appearance in a collection. Otherwise the date of the collection was used.

Because the foregoing factors affected the application of the chronological principle, the authors are frequently not listed in strict chronological order in the Additional Readings. However, the precise chronological position of each author can be determined by his life dates, which appear in the Bibliography. A question mark in conjunction with these dates signifies that they cannot be determined with certainty; the letter *c.* signifies that a date is regarded as an approximation; and *fl.* (for *floruit*) indicates that a date given is the period when the author flourished.

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APPENDIX II

THE PRINCIPLES AND METHODS OF SYNTOPICAL CONSTRUCTION

THE FOLLOWING ESSAY is intended as a supplement to the Preface. The Preface is the editor's statement of the nature, structure, purpose, and uses of the Syntopicon. But, as therein remarked, it does not treat the intellectual and editorial problems which were faced in constructing the Syntopicon, nor does it explain the principles and methods by which they were solved.

Any sustained use of the Syntopicon will undoubtedly raise questions about these principles and methods. Such questions may arise from a purely speculative interest, or they may be prompted by a desire for more detailed guidance in the use of the Syntopicon—the ways in which it can be used, the procedures to facilitate its use, and the limitations to which its use is subject. This essay attempts to anticipate and to give systematic answers to such questions.

Since different problems were faced and different principles followed in the several parts of the work, this essay is divided into the following sections:

		PAGE
I.	The Great Ideas and the Inventory of Terms	1219
II.	The Outlines of Topics and the Cross-References	1233
III.	The Introductions	1254
IV.	The References	1265
V.	The Additional Readings	1295

I. THE GREAT IDEAS AND THE INVENTORY OF TERMS

THE GREAT IDEAS, LIKE THE GREAT BOOKS, represent a selection. In both cases the criteria controlling the selection can be explained. In neither case do the purpose and rationale of the choice preclude the possibility of disagreement, even when due consideration is given to these criteria.

No list of the great works of western civilization can expect unanimous and unqualified acceptance by persons learned enough to judge. There may be disagreement concerning what constitutes a great book or concerning the principles which give form to the collection as a whole. But even when such disagreement is absent, there are likely to be differences with regard to the inclusion or exclusion of particular authors and titles.

Under the circumstances, the most that can be hoped for is that these differences concern no more than a small fraction of the whole. No greater measure of

the Syntopicon? If the books had been radically different, the ideas would have been different also. If, for example, *world culture* were now an historic reality, and if a set of books were chosen to represent the unity and continuity of a *world tradition*, the list of great ideas would probably differ in a number of striking respects. But it is the western world, not the whole world, of which these are the great books and the great ideas.

It is the western tradition *as a whole* that the great books *as a set* represent. But each one of the great ideas, not the total collection of them, stands in relation to the whole tradition represented by the set. One indication of the greatness of these ideas is that each of them pervades the entire tradition. If, for example, the set of great books had been restricted in any way—to represent the culture of antiquity exclusively or only modern thought, or to represent what is sometimes called "the scientific tradition" as opposed to "the tradition of humane letters"—then a somewhat different set of terms would have had to be chosen as the great ideas of that partial or sectarian tradition.

Not all of the great ideas are equally extensive in range. Not all have equal vitality in all the epochs of western civilization, or equal significance for all its intellectual phases. In this sense they are not all equally great.

Ideas like KNOWLEDGE, MAN, GOD have the maximum range, pervading all the major periods and also all the divisions of learning or kinds of literature. Ideas like JUSTICE, LIBERTY, STATE, and WEALTH on the one hand, or like MATTER, SPACE, TIME, and WORLD on the other, have universality insofar as they are basic concepts in all periods of the western tradition. They are discussed from one end of the great conversation to the other. But they are not discussed in *all* the great books, for they are not relevant to every imaginative or intellectual consideration.

Still other ideas do not run evenly throughout the entire tradition. OLIGARCHY, PROPHECY, and ANGEL, for example, have a more lively incidence in ancient or mediaeval than in modern thought. EVOLUTION and PROGRESS are examples of an opposite sort. There may be anticipations of these ideas in ancient and mediaeval thought, but not until the modern period do they become dominant notes in man's view of nature and history.

These exceptions to the universality—in time and interest—of the great ideas testify to the principle followed in selecting the 102 basic terms of the Syntopicon. For the most part, these terms have the requisite universality. The reader can verify this for himself by observing the distribution of authors and books cited in the Reference sections of the various chapters. He will find that authors of every period have a voice in the conversation, and that almost every sort of book is represented—poetry, science, history, philosophy, theology. He will also find, however, that, except for the truly ubiquitous ideas, one or another branch of learning or literature may predominate, and sometimes a whole field of inquiry may be absent. Some ideas, by the intensity of their significance for one epoch or one department of human thought, make up for their limited range or scope. To admit these to the company of the great ideas, the requirement of universality was relaxed.

The varying lengths of the 102 chapters, ranging as they do from 11 to 62 pages, cannot be taken, without some qualification, as a measure of the universality of these ideas in the tradition of western thought. The length of a chapter does not depend *only* on the volume of the references—the number of authors, books, and passages cited; it depends also upon the complexity of the idea, that is, upon the number of topics required to state all the related meanings, problems, or issues which have been discussed in the name of that idea. But these two factors taken together do account for the size of each chapter. The varying chapter length therefore indicates a gradation among the 102 great ideas, with respect to their universality or ubiquity in extent and to their interior complexity or manifold significance in intent.

IT IS IMPOSSIBLE TO DEFINE ANY MINIMUM degree of range and amplitude which distinguishes the ideas selected for syntopical treatment from the hundreds of other terms that were eliminated in the early stages of the work. With regard to the vast majority of those eliminated, a clear and certain judgment was possible, in the light of criteria already stated. There were, of course, borderline cases in which the decision to include or exclude a term remained doubtful even after prolonged deliberation. Such decisions had to be made, finally, in a somewhat arbitrary fashion, in terms of practical criteria not yet stated. One of these, for example, was the necessity for some limitation on the number of chapters. In some cases, the significance of the dropped term might be adequately covered in the analysis of other terms which more clearly deserved inclusion.

The first list of possible terms numbered upward of 700. It might serve some purpose to present a brief sampling of the terms which, while among the most likely candidates for inclusion, were discarded in the early stages of the work.

analysis
axiom
authority
becoming
belief
character
choice
conquest
contemplation
creation
criticism
deduction
doubt
environment
equality
essence
equity
fact
faith
fallacy
force
friendship
generation
grammar
growth
harmony
heredity
hero
hope
ideal
imitation
inference
instinct
intuition
jurisprudence
learning
marriage
methodology
money
nutrition
obedience
organism
ownership
patriotism
persuasion
population
possibility
poverty
power
prediction
probability
production
profit
property
providence
purpose
reality
republic
revelation
revenge
rights
ruler
salvation
self
sex
skepticism
society
sovereignty
spirit
style
substance
superstition
synthesis
taxation
teaching
temperament
theory
thought
tolerance
tradition
use
utopia
value
volition
wages
woman
worship
youth

Certain terms which may at first appear coordinate with the 102 great ideas are actually more rather than less general in their significance. "Society" and "thought," for example, express concepts which require a number of chapters, in part or whole, for their adequate treatment. The entry under "thought" in the Inventory of Terms refers the reader to a large number of chapters, such as IDEA, JUDGMENT, LANGUAGE, MEMORY AND IMAGINATION, MIND, REASONING. The word "thought" is not only more general but also more indefinite; these chapters cover the discussion of thought in the more definite terms in which it occurs in the great books.

The situation with respect to "society" is not quite the same. The entry under "society" in the Inventory of Terms refers the reader to a number of chapters, of which two—FAMILY and STATE—deal with the two main types of society or community (*i.e.*, the domestic and the political). For the most part, the great books discuss the family and the state rather than the more generic notion of society or human association as such. For the most part, they do not discuss primitive societies which are strictly neither families nor states; and if they consider other types of association, such as economic corporations or religious communities, they do so in relation to the family or the state. The generic concept of society is treated fully at the generic level only in the comparatively recent literature of sociology and anthropology.

It should be clear from these two examples that words expressing concepts more generic than the great ideas, are relegated to the Inventory of Terms according to the same principle as that applied to words expressing subordinate concepts. In both cases the standard is set by the range and level of the discussion in the great books.

With a few exceptions, such as "thought" and "society" (which are more generic), or "republic" (which is coordinate), the vast majority of the words listed in the Inventory are subordinate terms. Many are words which actually appear in the phrasing of one or more of the topics under the great ideas; or they may be synonyms for these words. Some are words which are implied by the meaning of one or more topics. Such words and their synonyms are listed in the Inventory, as well as words verbally present in the topics.

AS THE 2987 TOPICS OF THE SYNTOPICON state the themes which are discussed under the great ideas, so the words listed in the Inventory represent the terms in which those themes are discussed. For both, the ultimate point of reference is, of course, the content of the great books and of the tradition they represent. Through the intermediation of the topics, the terms of the Inventory reflect the same principles of selection as do the great ideas. This accounts for differences between the Inventory of Terms and other basic word lists, such as Baldwin's *Dictionary of Philosophy and Psychology*, Lalande's *Vocabulaire technique et critique de la philosophie*, the general terms contained in the classified listing of articles in the *Encyclopaedia Britannica*, and the abstract titles under the classification of articles in the *Encyclopaedia of the Social Sciences*. All of these necessarily include technical terms

of highly specialized import in particular fields of inquiry. They also tend to reflect predominantly the state of knowledge and opinion in the 19th and 20th centuries—the latest developments of the tradition rather than the whole of it.

The Inventory of Terms consists mainly of words in common use. It is not the vocabulary of philosophy, science, or any other special study. It is the basic vocabulary of ordinary speech concerning ideas which belong not to the last century or to the present day, but to the collective, common wisdom of mankind. Though most of its words have currency in contemporary English speech, they also have currency in the thought of thirty centuries, no matter how they were verbally expressed, in a variety of languages, living and dead.

An entry in the Inventory of Terms usually consists of a term followed by an enumeration of the topics in which that term is a significant element. There are two exceptions to this procedure, which deserve comment.

For most of the terms listed, the relevant topics are cited in a single group in the alphabetical order of the chapters in which they appear. But for a certain number of terms, the topics are divided into two groups, each arranged alphabetically. In these cases, topics of immediate relevance are distinguished from those of remote relevance. The former state themes or issues in which the term under consideration is central to the discussion; the latter, those to which it tends to be peripheral.

The second exception is the citation of whole chapters in addition to individual topics from other chapters. When whole chapters are cited, they are placed first in the enumeration because all their topics are of maximum relevance to the term under consideration. The procedure of citing whole chapters was adopted initially in the construction of those entries which are the names of the great ideas themselves. It was extended to words which are synonyms for the chapter titles, and to a small number of other words which express terms of considerable magnitude.

The reason for the inclusion of the chapter names and their synonyms in the Inventory of Terms should be immediately apparent. Each of the great ideas is involved in the meaning of topics in other chapters. The fact that each of the great ideas is implicated in the analysis of many others shows the interconnection of the ideas, a point to which we shall return presently. It also helps to indicate the difference in magnitude—in topical range—between the great ideas and all subordinate notions.

In almost every case, the names of the great ideas (or their synonyms) have a greater number of topics cited for them in the Inventory of Terms than do other terms. This shows that they are the major terms in the tradition of western thought. They are the terms with the most varied and manifold significance, and with the greatest incidence in the discussion of important problems. It might almost be said that they are the unavoidable terms in the principal areas of discourse. That subordinate terms have a much more restricted topical range confirms the difference in discursive amplitude between them and the great ideas.

The reader can therefore verify for himself, by examining the Inventory of Terms, the difference between the great ideas and all other terms. He need only

compare the number and variety of topics cited for the great ideas and for all other terms. By the same criterion, he can also order all the other terms in the Inventory according to the degree to which they approach the great ideas in topical range. He would find that the class of terms which, by this test, most nearly approximated the great ideas, is not large—probably much less than one hundred of the 1798 terms in the Inventory. These would be the borderline terms—the few whose omission from the company of the great ideas might be disputed.

THE 102 CHAPTERS OF THE SYNTOPICON present the great ideas in alphabetical sequence. The Inventory of Terms is also alphabetically arranged, partly for convenient reference and partly to avoid the formulation of any rigid systematic order among the great ideas and their subordinate terms. Many systematic arrangements of these concepts are possible, and the adoption of any one of them would be prejudicial to the others. The alphabetical arrangement admits all possibilities, and conceals all alike. On the other hand, as we have just seen, the Inventory of Terms reveals as well as conceals the relation of the great ideas to one another, and of other terms to them. But the relationships revealed in the Inventory are not systematic in the sense of giving one idea or set of ideas logical priority over others.

The Inventory of Terms merely shows the subordination of one concept to another insofar as the one enters into the topics which express the content of the other. But this sort of relationship between two great ideas does not place them in a fixed systematic order, for each may be subordinate to the other; that is, each may be involved in the topics of the other. LIBERTY, for example, is involved in the topics of JUSTICE, and JUSTICE in the topics of LIBERTY; INFINITY is involved in the topics of SPACE, TIME, MATTER, and WORLD, and they in turn are involved in the topics of INFINITY.

Other types of relation among the great ideas are indicated in the Introductions and the Cross-References, which are, respectively, the first and fourth parts of each of the 102 chapters. Both of these parts of the Syntopicon are discussed at greater length subsequently in this Appendix. Here it is sufficient to point out that the interconnection of the great ideas which the Introductions and the Cross-References suggest, is an order no more systematic than that indicated by the Inventory of Terms.

The Cross-References in one chapter call the reader's attention to similar or related topics in other chapters. A particular Introduction usually refers the reader to other Introductions for a fuller consideration of certain matters, or for the exposition of affiliated points. That neither of these types of connection sets up a systematization of the ideas, is simply shown by the fact that neither places them in a unique logical order. The Introduction and the Cross-References merely show that one idea is related to a number of other ideas, without specifying the logical character of the connection. Without such specification, the network of connections set up by the Inventory of Terms, the Introductions, and the Cross-References cannot become a systematic order.

A systematic order of concepts belongs properly to the exposition of a doctrine. The tradition of western thought contains a variety of doctrines, many of them conflicting. Of these, certainly of the principal ones, the great books provide the best and fullest exposition; and their conflict appears most sharply whenever the voices in the great conversation engage in explicit controversy. *The Great Ideas*, as a syntopicon of the great books, must therefore avoid, so far as that is humanly possible, any trace of systematic order. In no other way could it present the whole tradition free of prejudicial coloring by any one of its parts. In no other way could it embrace every variety of position without the distortion that would necessarily follow from a stronger attachment to one than to others.

Detachment is the essence of a purely dialectical treatment of ideas, as opposed to the dogmatic exposition of a particular doctrine—dogmatic not in the sense of being without rational foundation or defense, but simply in the sense of being attached to some particular order of ideas in preference to all others. The explanations which follow, concerning the construction of the Outlines of Topics and the manner in which the Introductions were written, will offer further evidence of the dialectical detachment that was sought in every phase of this work, because it was necessary for carrying out the conception of the Syntopicon. That dialectical detachment is preserved by the alphabetical ordering of the great ideas insofar as it alike admits or conceals all possible orderings; and it is confirmed by the non-systematic character of the various connections among the great ideas, as these are indicated by the Inventory of Terms, the Cross-References, and the Introductions.

THESE CONNECTIONS, THOUGH NOT SYSTEMATIC, are neither haphazard nor insignificant. They point to various constellations of ideas which are the conceptual patterns of major fields of learning or inquiry.

Consider, for example, the interconnection of the ideas of GOVERNMENT, FAMILY, STATE, LAW, CONSTITUTION, DUTY, JUSTICE, LIBERTY, MAN, CITIZEN, SLAVERY, PUNISHMENT, WAR, and REVOLUTION; and of these with the ideas of particular forms of government, such as ARISTOCRACY, DEMOCRACY, MONARCHY, OLIGARCHY, and TYRANNY. These ideas have more complex and intimate relations with one another than any of them has with such ideas as ANIMAL, CHANCE, DEFINITION, EVOLUTION, MATTER, SENSE, SOUL, or WORLD. Their interconnection forms that constellation of concepts which characterizes the field of political thought, and distinguishes it from all other fields.

The interconnection of the ideas of LABOR, WEALTH, JUSTICE, LIBERTY, SLAVERY, FAMILY, STATE, REVOLUTION, WAR, and perhaps DEMOCRACY and OLIGARCHY, forms the constellation of concepts which characterizes the field of economic thought. To take a more sharply contrasting example, the interconnection of the ideas of GOD, MAN, IMMORTALITY, FATE, PROPHECY, SOUL, SIN, WORLD, RELIGION, and THEOLOGY, and the relation of these to such ideas as GOOD AND EVIL, DUTY, HAPPINESS, VIRTUE, LAW, and PUNISHMENT, constitute the conceptual pattern of religious thought.

In none of the preceding examples is the enumeration of ideas intended to be exhaustive. In each case, only the principal concepts are mentioned. But even if to these were added all the peripheral concepts—those having any appreciable degree of relevance to the subject matter—many of the great ideas would still be omitted from the constellation of concepts involved in a particular subject matter or field of inquiry. This indicates that every idea is not associated equally with every other. All belong together in the single intellectual firmament of western thought, but they also form separate sub-groups or constellations which delineate traditional subject matters.

Yet one may wonder whether every great idea is not in some way related to every other—if not directly, then at least through the mediation of other ideas. Some evidence on this point is afforded by the examples given above. Politics and economics have common ideational elements. The concepts of JUSTICE, LIBERTY, SLAVERY, FAMILY, STATE, REVOLUTION, WAR, DEMOCRACY, and OLIGARCHY are involved in both fields of thought. Politics and religion also have common ideational elements (*viz.*, MAN, DUTY, LAW, PUNISHMENT). By this measure they would seem to overlap less than do politics and economics. But whether they overlap more or less, it is through the relation of the various fields of inquiry to one another that each of the 102 great ideas has some degree of relevance to all the others.

At different times in the tradition of western thought, the major fields of inquiry or subject matter have been differently conceived, and either more broadly or more narrowly defined. According to different doctrines, the relation of the fields to one another—the order of the sciences, the general groundplan of learning—is differently construed. Hence it would be prejudicial and presumptuous to advance here a definitive formulation of concepts, central and peripheral, which separate or relate the traditional fields of inquiry, such as politics; ethics or morality; economics; religion and theology; metaphysics; physics, biology, or the philosophy of nature; psychology, anthropology, or the philosophy of man; epistemology or the theory of knowledge; history and the philosophy of history; the liberal arts of grammar, rhetoric, and logic; poetry and the philosophy of art.

By using the Syntopicon, the reader can discover for himself the grouping of the great ideas in the various patterns appropriate to distinct and related subject matters. In doing this he will be aided primarily by the Cross-References and the Introductions, and also to some extent by the Inventory of Terms. Instead of constraining him by dogmatically imposing one against any other construction of the fields of learning, the Syntopicon leaves the reader free to find, and even facilitates his finding, the various and often conflicting constructions that have been made in the tradition of the great books.

IT MAY BE OBSERVED THAT, OF THE VARIOUS FIELDS OF LEARNING named above, some are also names of great ideas, whereas others, which seem to be of equal importance, are not. This fact requires some explanation. It also raises the question whether the great ideas are all ideas in the same sense. Is the idea which signifies

a field of learning or a subject matter, such as mathematics, physics, or theology, the same sort of conception as the ideas which signify basic notions in that particular field? Is the chapter on PHYSICS, for example, on the same level with the chapters on CHANGE, ELEMENT, MATTER, SPACE, TIME?

Clearly there is a difference between these two orders of ideas. The conception of a science, a subject matter, or a field of inquiry, is obviously different from the conception of the objects or realities considered in that field. One of the basic problems throughout the tradition of western thought has been the division of human knowledge, the definition of the departments of learning, the nature and order of the arts and sciences. Hence, among the great ideas, certain ideas have developed in the course of thinking about this problem. They are conceptions of the nature of particular sciences or subject matters.

But not all subject matters which appear in the most recent classifications of the sciences are discussed at sufficient length in the great books to warrant their taking their place among the great ideas of the whole tradition. Psychology, for example, does not receive as much attention as physics, and so there is a chapter dealing with the conception of physics, but none dealing with the conception of psychology. Instead the consideration of psychology appears primarily as a group of topics in the chapters on MAN and SOUL. Grammar, likewise, does not receive the attention that logic and rhetoric do; accordingly, there are chapters dealing with the arts or sciences of logic and rhetoric, but none dealing with grammar. Instead grammar is considered in a group of topics in the chapter on LANGUAGE, and also occurs in the chapters on LOGIC and RHETORIC, in topics which treat the relation of grammar to these other arts.

By consulting the Inventory of Terms the reader will be able to discover in which chapters and under which topics consideration is given to the arts, sciences, or branches of learning whose names do not appear among the 102 chapter titles. It may be useful, however, to enumerate those chapters which deal with branches of learning or fields of inquiry. They are: ASTRONOMY, DIALECTIC, HISTORY, LOGIC, MATHEMATICS, MECHANICS, MEDICINE, METAPHYSICS, PHILOSOPHY, PHYSICS, POETRY, RELIGION, SCIENCE, and THEOLOGY.

With a few exceptions, each of these chapters is devoted entirely to the consideration of a discipline or subject matter—its definition, its scope, its principles, methods, and problems. The exceptions are the chapters on ASTRONOMY, HISTORY, MECHANICS, and MEDICINE, which are concerned *only in part* with various conceptions of the nature, principles, and methods of the disciplines named. In part they *also* include topics which state issues not *about* these sciences, but *within* them—issues about the objects studied in these sciences.

The chapter on ASTRONOMY, for example, includes discussions of celestial phenomena in general and of particular heavenly bodies; the chapter on HISTORY includes discussions of the processes and patterns of historical change; the chapter on MEDICINE includes discussions of the nature, causes, and classification of diseases and the general theory of health; and considerably more than half the chapter on MECHANICS deals with the basic notions in the science of mechanics, and the

concepts and problems of various branches of physical science. This part of the chapter on MECHANICS is (along with such chapters as SPACE, TIME, and QUANTITY) the complement of the chapter on PHYSICS, which concerns itself entirely with the character of physics as an experimental science and as a philosophy of nature.

The other chapters which are restricted to the consideration of the character and method of particular disciplines also have their complements. The chapters on DEFINITION, HYPOTHESIS, IDEA, INDUCTION, JUDGMENT, OPPOSITION, PRINCIPLE, and REASONING, for example, are complementary, in the sense indicated, to the chapter on LOGIC; the chapters on INFINITY, QUANTITY, SPACE, and TIME are complementary to the chapter on MATHEMATICS; and so on for each of the chapters which revolve around the nature and methods of a particular discipline.

That the chapters on ASTRONOMY, HISTORY, MECHANICS, and MEDICINE are treated somewhat differently from the rest (being mixed chapters rather than exclusively concerned with the idea of a science or of its subject matter), is explained in the same way as the fact that the sciences of economics and psychology are treated in topics subordinate to the ideas of WEALTH and MAN. On purely logical grounds, these disciplines or branches of learning may be considered as important as ASTRONOMY, MECHANICS, or PHYSICS, but as a matter of historic fact they have not been equally subjected to analysis, definition, and discussion in the tradition of western thought, especially when that is taken as a whole. All such differences in treatment reflect the actual content of the great books rather than any theory developed apart from the books or according to the bias of one period or phase of the tradition.

WE HAVE NOW SUFFICIENTLY EXPLAINED the selection of the 102 great ideas and their relation to one another and to the concepts enumerated in the Inventory of Terms. We have distinguished whatever was based, in the treatment of the ideas, on purely pragmatic considerations or reasons of convenience, from policies which were based on theoretic principles reflecting the conception of the Syntopicon itself. We have observed a number of differences among the great ideas: that all are not equally great, not equally complex in structure, or extensive in scope; that they vary in the range of subject matters to which they pertain or in the emphasis they receive in different periods or phases of the western tradition; that they are not all on the same level, some being concepts of the branches of human learning, others concepts of the objects of human inquiry.

One more point of difference among the great ideas remains to be mentioned. That is the difference between what might be called the "easy" and the "difficult" ideas. The measure of this difference is the number of distinct meanings which have been attached to the name of an idea in the tradition of the great books.

Two ideas represent the extremes between which all the rest vary. One extreme is the chapter on IDEA; it almost seems that no two of the great books which expound a theory of ideas use the word "idea" in the same sense. At the

other extreme is the chapter on PUNISHMENT; the authors of the great books may differ in their theories of the purpose or use of punishment, but they differ very little, if at all, on the meaning of the word "punishment."

In proportion to the degree of their systematic ambiguity, the great ideas are more or less difficult as subjects for syntopical treatment. The names of the great ideas, like other words, have systematic ambiguity when their various distinct meanings are related according to some principle. That the ambiguity be systematic is obviously indispensable to the unity of each chapter dealing with a great idea. To preserve the unity of a chapter, some intelligible relation must obtain among all the senses in which its principal term is used in the topical development of the idea. The unity of each chapter depends on the existence of a common thread underlying all the twists in meaning that its principal term undergoes.

Sheer equivocation—that is, the use of the principal term in two absolutely unrelated meanings—would divide the chapter into two parts, with no reason for their being together except a purely verbal identity, of accidental origin. Hence, in proportion as the word expressing an idea is more ambiguous, the danger is greater that the systematic ambiguity may verge upon sheer equivocation.

The handling of the systematic ambiguity itself, and the avoidance of sheer equivocation, are the two aspects of the semantic difficulty encountered in treating almost all of the great ideas, because of their manifold or complex significance. The solution of this difficulty—different in different chapters according to the precise nature of the semantic problem in each—was achieved by means of the topical subdivision of the great ideas. The order and relation of the topics made it possible to take care of the order and relation of the various meanings of the idea. A fuller statement of the way semantic difficulties were overcome in the construction of the Syntopicon belongs, therefore, to the next section of this essay, which deals with the Outlines of Topics.

II. THE OUTLINES OF TOPICS AND THE CROSS-REFERENCES

THE TOPICS ARE THE BASIC UNITS OF THE SYNTOPICON. They perform a double function. The Outline of Topics in each chapter is the analysis of a great idea, setting forth its various meanings, its themes and problems; and the individual topics serve as the immediate headings under which are assembled the references to the discussion of each particular subject in the great books. The topics are the major subdivisions of the discussion in the sphere of each of the great ideas, as the ideas are the main divisions of the whole discussion in the great books. As each idea represents a general field of discourse—a domain of learning and inquiry—covering a variety of related themes and problems, so, under each idea, the various topics represent the themes and problems which are the particular subjects of discussion in that field.

To understand how the topics perform these two functions—that of analyzing the ideas and that of providing headings for the references—it is necessary, first, to consider the nature and variety of the individual topics; and, second, to exam-

ine the structure of the Outlines of Topics in the light of the principles which determined the order of the topics, the selection of certain topics and the omission of others.

A topic is essentially a subject for discussion. The Greek word *topos* from which "topic" is derived literally means a *place*. Its literal meaning is retained in such English words as "topography" and "topology," which signify the study of physical or geometrical places. The conception of a topic as a subject for discussion is a metaphorical extension of this root meaning. A topic is a logical place; it is a place where minds meet to consider some common problem or theme.

The minds may agree or disagree; they may argue the matter from different points of view; they may contribute to the discussion in a variety of ways—by offering examples, by proposing definitions or hypotheses, by stating analyses or arguments, by debating what has already been said, or by advancing a new view. But whatever form each contribution takes, it must be relevant, though it need not be relevant in the same way or to the same degree. The various contributions are relevant to each other through their relevance to the common theme or problem, and this gives unity to the variety of things being said.

A topic, then, is a place where minds meet through being relevant to a common subject of discussion. It is a place at which an intelligible exchange of thought, insight, or opinion can occur. We recognize this when we refer to the topics of a conversation; and thereby we also acknowledge that a conversation, in order to be good, must have topics. The more conscious it is of its topics, the better a conversation is, the better it can sustain relevance as it shifts from theme to theme.

In this sense the conception of the Syntopicon is inseparable from the conception of the tradition of western thought as a single great conversation in which the best minds of every period and persuasion have participated. As the units of any good conversation are its topics, so the units of the great conversation are the 3000 topics under which the Syntopicon cites relevant discussion in the great books. If the notion of the great conversation had been a myth, the Syntopicon could not have been constructed at all. To say that these two volumes of *The Great Ideas* make possible a syntopical reading of the great books, is to say also that they bear witness to the actuality of the great conversation.

The traditional conception of a topic belongs to the logic of discussion—of dispute, controversy, or any other exchange of opinion among men. It is not necessary that every topic be disputed, for it to be true that every topic is necessarily disputable. Wherever a difference of opinion is possible, or wherever a variety of relevant views is conceivable, there a topic can be formulated, for there will be a meeting place for discussion. According to this understanding of the nature of a topic, the 3000 topics of the Syntopicon are the meeting places of western thought. They are not possible but actual topics. Discussion of each of them can be found in the tradition of the great books.

TO ACCORD WITH ITS LOGICAL FUNCTION, a topic must have a certain grammatical and, perhaps, even rhetorical form. For example, a topic is not a proposition. It

neither asserts nor denies anything. It is neither true nor false. It would be inappropriate, therefore, to state a topic in a declarative sentence.

If we consider the relation of law to liberty, we can assert, in a proposition, that the supremacy of law *is* the principle of political liberty; or we can deny this, if we say it *is not* the principle. But topic 7b in the chapter on LAW does neither, and permits both. This topic—"The supremacy of law as the principle of political liberty"—merely presents for consideration one traditional formulation of the relation of law to liberty.

It may be supposed that if a topic states a problem, it should be put in the form of a question. For example, LAW 7b might have been expressed thus: "Is the supremacy of law the principle of political liberty?" or "Whether the supremacy of law is the principle of political liberty?" But the interrogative form of statement is almost as restrictive as the declarative. It seems to call only for a Yes or No answer. If the issue were as simple as this, it might have been most explicitly expressed in the form of a dilemma: "*Either* the supremacy of law is the principle of political liberty *or* it is not." But a dilemma of this sort does not exhaust all the relevant possibilities. It is therefore a bad phrasing of the topic, and at the same time indicates what is wrong with the interrogative phrasing. It limits the topic to one question or one issue.

The topic concerning the relation of law to liberty raises more than one question. Its phrasing permits such questions as, "In what sense is the supremacy of law the principle of political liberty?" Furthermore, as phrased, the topic allows for more than an affirmation or a denial. It permits the expression of doubt on the subject; it permits the formulation to be entertained as an hypothesis for the purpose of seeing what consequences follow; it is open to a variety of explanations or reasons for thinking that the supremacy of law is or is not the principle of political liberty; it is even open to the adduction of examples--particular instances in history or fiction which show the dependence of political liberty upon the supremacy of law, or the opposite.

A topic, in short, must have greater amplitude than any other logical form of statement. The familiar grammatical forms of the declarative or interrogative sentence, or even the complex sentence which expresses a dilemma, are therefore inappropriate for the statement of topics. Since it must be able to include all these and more, the statement of a topic must be less determinate in verbal structure.

It is easier to say what a topic is not, than what it is or should be. If it must always be a less determinate expression than a sentence, and if it must usually be a more complex expression than a single word or pair of words (which are the verbal expression of terms, such as the great ideas), it would seem to follow that the proper expression of a topic is a phrase—often, perhaps, a fairly elaborate phrase involving a number of terms and signifying a number of possible relations between them. This general description of the grammatical form of a topic does not, however, convey an adequate notion of the extraordinary variety of possible phrasings.

An examination of the phraseology employed in the statement of the 3000 topics of the Syntopicon will reveal many types of topical statement. Some topics are simple and others complex; and of the complex topics, some involve two and some more than two component phrases, related as coordinate, as primary and secondary, or in some other way. For example, "The ideal of the educated man" (EDUCATION 1a) is a simple topic; "The right to property: the ownership of the means of production" (LABOR 7b) is a complex topic; and "The use and criticism of the intellectual tradition: the sifting of truth from error; the reaction against the authority of the past" (PROGRESS 6c) is a more complex topic. We shall return presently to the problem of the complex topic, and especially to the consideration of the relation of its parts.

For the moment, let us examine the various ways in which topics—simple or complex—are phrased. The following is a far from exhaustive sampling of the types of topical statement, but among the 3000 topics of the Syntopicon, there are many instances of each type.

COURAGE 1. The nature of courage

DIALECTIC 1. Definitions of dialectic

CHANCE 1. The conception of chance

GOVERNMENT 1*e*. The attributes of good government

MAN 1. Definitions of man: conceptions of the properties and qualities of human nature

PLEASURE AND PAIN 2. The causes of pleasure and pain

ART 7*a*. Art as a source of pleasure or delight

LABOR 3. The kinds of work and the relationship of different types of workers

MEDICINE 5*b*. The classification of diseases

HAPPINESS 2*b*(2) Pleasure and happiness

CAUSES 3. Causality and freedom

COURAGE 7*c*. Courage in war

HABIT 3*c*. Instinct in relation to reason

ARISTOCRACY 2. The relation of artistocracy to other forms of government

CUSTOM 1. The distinction between nature and convention: its application to the origin of the state and of language

CONSTITUTION 1. The difference between government by law and government by men: the nature of constitutional government

FAMILY 2*b*. Comparison of the domestic and political community in manner of government

JUSTICE 3. The duties of justice compared with the generosity of love and friendship

ART 11. Myths and theories concerning the origin of the arts

DEMOCRACY 5*b*. The theory of representation

GOVERNMENT 1. The general theory of government

EVOLUTION 4. The problem of evolution: the origin of plant and animal species

CHANGE 13. The problem of the eternity of motion or change

ELEMENT 5*b*. Arguments for and against the existence of atoms: the issue concerning the infinite divisibility of matter

POETRY 9*b*. The issue concerning the censorship of poetry

OPINION 5*b*. Advantages and disadvantages of freedom of discussion

EDUCATION 8*b*. The economic support of educational institutions

EXPERIENCE 6*b*. The role of experience in politics: the lessons of history

The foregoing examples illustrate various forms topics take according to the different kinds of subjects they propose for discussion. Some deal with the nature of a thing or its definition, some with its qualities or attributes, some with its causes, and some with its kinds; some deal with distinctions or differences, and some with comparisons or contrasts; some propose a general theory for consideration, some present a problem, and some state an issue. Some—such as the last three above—are difficult to characterize by any formula. The reason for all these types of topical statement—and others not illustrated in the examples given—cannot be explained without reference to the Outline of Topics as a whole.

In the Outline of Topics for each chapter, many different kinds of topics are necessary to cover the whole field of discussion represented by a great idea. Thus, for example, a topic like COURAGE 1—"The nature of courage"—will occur in many chapters, for many chapters open with a consideration of the nature of the thing signified by their principal term. A topic like ARISTOCRACY 2—"The relation of aristocracy to other forms of government"—will appear frequently, for the discussion of the principal term usually involves the consideration of its relation to other terms; a topic like EMOTION 2, "The classification and enumeration of the emotions," or LABOR 3, "The kinds of work and the relationship of different types of workers," will often occupy a place in an Outline of Topics because the classification or enumeration of kinds is a matter considered in many fields of inquiry or discussion. The same can be said for the topics which state theories, problems, issues, definitions, attributes, distinctions, comparisons, and so on.

Under a great idea, many different kinds of subjects are discussed, and these are represented by the various topics set forth in the Outline of Topics for each of the great ideas. It is not surprising that the discussion of one idea should re-

semble, in many respects, the discussion of another; hence we should not be surprised to find a certain sort of topic in chapter after chapter. Some kinds of topics will, of course, appear more frequently than others; some chapters will have a much greater variety of topics than others.

THE TOPICS NOT ONLY VARY IN TYPE according to their subject matter; they also vary in scope or amplitude according to the broadness or narrowness of the theme they enunciate. Some are open to every type of discussion, whereas others seem to impose certain restrictions upon the type of discussion that would be relevant. A topic like "Arguments for and against the existence of atoms" specifically calls for arguments. In contrast, a topic like "The issue concerning the censorship of poetry" permits, in addition to arguments for or against censorship, discussions of the issue itself, dealing, perhaps, with its significance, its presuppositions or implications, and its relation to issues concerning the censorship of other forms of expression. Even broader or more open in this respect are such topics as "The difference between government by law and government by men" or "Art as a source of pleasure or delight."

In terms of what a topic purports to be, every topic should have a certain minimum amplitude. It should solicit and allow the expression of opposite opinions on whatever is the subject of discussion. Whether the topic happens to be stated positively or negatively, it should cover both negations and affirmations of the point in question. It may have greater amplitude than this, but this much at least it should have. Since a topic is a meeting place for minds that disagree or differ, it is defective if its wording suggests one point of view or one position on an issue where many are possible, or where opposite arguments or views are known to exist.

What has just been said applies to topics generally, as statements having a certain logical character. But because they are intended to function as the commonplaces of the great conversation, the topics of the Syntopicon should have scope or range of another sort, in addition to logical amplitude. Ideally, they should be so conceived and so phrased that each topic is able to solicit or to cover contributions from the whole range of authors and works included in *Great Books of the Western World*, and from the books of the Bible as well. This means that the ideal topic is one which is open to contributions from the poets and historians as well as the scientists, philosophers, and theologians; which can cover every variety of doctrine or opinion that has been expressed in the tradition of the great books; and which is equally receptive to the imagination and thought of ancient, mediaeval, and modern times.

These are difficult requirements to meet. They demand a comprehensiveness difficult to achieve without falling into a vagueness which would render the topic useless or unintelligible. They demand, in the formulation of the topic, an almost perfect impartiality on the level of thought, and neutrality on the level of language. The more various and opposed the partisan views a topic tries to cover, the more difficult it is for the topic to be conceived impartially, that is, without

prejudice to any of these views, so that it seems to be formulated as if from *no* point of view. The more diverse and incompatible the terminologies in which the opinions to be covered are expressed, the more difficult it is for the topic to be worded neutrally, that is, without verbal coloration from one or another of the many vocabularies that have been used for the expression of relevant opinions.

In view of such difficulties, it could hardly be expected that the ideal would be realized in the formulation of every one of the 3000 topics in the Syntopicon. Yet it is realized in many and approximated in a fairly large proportion of the rest. Those which fall short of the ideal seem to be of two main types.

(1) Some topics are so conceived and phrased that their coverage is restricted to analytical or argumentative discussions—discussions of the sort which are to be found in expository works of science, philosophy, and theology, or in the discursive passages of poetry and history, whether in the speeches of historical or fictional personages or in the comments of the poets or historians themselves. The conception and wording of the topic tends to exclude exemplary or imaginative material, of the sort to be found in the narrative passages of history or fiction; or in other instances, the topic tends to exclude material of purely illustrative significance, such as reports of experiments in scientific books. These topics fall short of the comprehensiveness of the ideal topic by virtue of the type of material they reject.

(2) Some topics are so conceived and phrased that their coverage is restricted to the doctrines, theories, or opinions of one part, period, or phase of the whole tradition. The limitation on the range of materials which are admissible under such topics may be more or less stringent. Least restricted are those topics which fail to comprehend both pagan and Christian literature, because they are so conceived and worded that they apply to one or the other but not both of these two major phases of the western tradition. More restricted are those topics so conceived and worded as to apply only to a certain group of authors sharing a common doctrine or vocabulary. Most restricted are the topics which cover the thought of a single author. The last represents the extreme opposite of the ideal topics which cover the thought and imagination of every period and every variety of doctrine or opinion, no matter how they may be verbally expressed. But all three of these defective topics fall short of the ideal by virtue of their acknowledged failure to be impartial in thought or neutral in phrasing.

THE SECOND OF THE TWO MAIN TYPES OF DEFECTIVE TOPICS fails to perform the logical function of a topic, and also fails to do what the topics were normally intended to do in the construction of the Syntopicon. Logically, a topic should be hospitable to differences of opinion or opposite views on the same subject. If, for example, there are two or more contrary views on a given subject, it should be possible to formulate a topic which indicates the subject of the controversy in a manner that is impartial to all sides. But this was not always possible, because of difficulties inherent in the materials to be covered. It sometimes became necessary, in constructing topics appropriate to the content of the great books, to state con-

trary views in a *set of topics*, each worded to fit the particular view it represents. This *set of topics* then performed the logical function which, ideally, a single topic should perform; and from the point of view of the Syntopicon, the set of topics provided the remedy in all those instances in which logically defective single topics seemed to be unavoidable. It had the requisite comprehensiveness for a syntopical reading of the great books.

Before we examine the remedy, it may be useful to examine the reason it was necessary. The authors of the great books tend to have special vocabularies. This has little to do with the diversity of the languages in which they originally wrote; it is rather the result of the diverse *terminologies* they use to express their thought. This is as apparent in English translations of their works as it is in their original languages.

The more inventive and fecund a great mind is, the more it will shape the language it uses to fit its thought. To express a new idea or insight, a new word is invented or an old word given a novel meaning. Sometimes in the development of his own characteristic vocabulary, a great writer uses a new word for an old idea which he has appropriated and assimilated to his own thought. Sometimes the opposite occurs; the traditional word is appropriated or borrowed, but the idea which it long expressed is replaced either by a totally new, or at least by a variant, conception.

It can be said without exaggeration that no two authors of the great books have identical vocabularies. This does not mean that they share no common terms—identical words with identical meanings. On the contrary, even those who seem to be most divided by the differences in their terminologies give evidence of belonging to the same tradition by their common acceptance of a large number of terms. Yet, from the extreme at which they share a minimum number of important terms to the extreme at which their basic vocabularies are much more alike than different, this much can be said of *any two authors of the great books*: first, that they use some words in the same way and some differently; and second, that, when they use words differently, they are either expressing the same thought in different words or are using the same word to express wholly or partially different notions.

These facts do not make it impossible for the tradition of the great books to have the qualities of a good conversation. But the necessity of shifting from the vocabulary of one to the vocabulary of another makes it difficult, often extremely difficult, to discover and point out when the authors are talking about the same idea, and in what way their remarks are relevant to the same theme. These are the semantic difficulties which the Syntopicon had to overcome in order to reveal and record the existence of the great conversation.

FOR THE MOST PART DIFFERENCES IN TERMINOLOGY do not make it impossible for topics to cover all authors who make some contribution to the discussion of a particular theme. Even though they do not all use the same word to express their thought, or do not attach the same meanings to the words they use in com-

mon, it is usually possible to find a neutral phrasing for the topic. If the relevant authors use the same words with different—but *related*—meanings, the language of the topic will have the systematic ambiguity necessary to cover these variations. If the relevant authors do not all use the same words to express their thought, but use words which are closely related in meaning, then it may still be possible to find a neutral phrasing for the topic.

This may be achieved by formulating the topic in the words of ordinary discourse, words which are not specially characteristic of any of the authors. Another method is to phrase the topic in the words used by one author or group of authors. This can be done without prejudice to the thought of the others when the key words in the distinct vocabularies of the several authors are related as synonyms. It may even be possible to use synonyms in the phrasing of the topic, to represent the vocabularies of different authors. By any of these methods, the wording of the topic can be given sufficient systematic ambiguity to carry all the related meanings.

Sometimes, however, the meanings which different authors attach to the same word are *not closely related*; sometimes an author has coined words to express his meaning, or given certain words or phrases the stamp of his own doctrine; sometimes the words used by an author have overtones or systematic implications which make it impossible to find synonyms for them in the language of other authors or in the vocabulary of ordinary speech. In all these cases, a single topic to cover all the authors concerned would require phrasing so vague or so general that it could not contribute anything to the analysis of the idea under which it occurred. Such semantic difficulties were usually solved by the construction of a *set of topics*, each phrased in the language characteristic of particular authors or groups of authors. The unity of the set was indicated by a topic which served as the heading under which the particular topics were assembled. For the purpose of stating this unity, a vague or general phrasing of the heading was satisfactory, since the content of the discussion could be sufficiently indicated by the more explicit phrasing of the subordinate topics.

For example, in the Outline of Topics for the idea of DIALECTIC, four topics state four distinct theories of the nature of dialectic. The heading for the group of topics—"2. Diverse theories of dialectic"—merely indicates that the subordinate topics state the different conceptions to be found in the tradition of the great books. The four topics are phrased in a manner appropriate, respectively, to the thought of Plato, Aristotle, Kant, and Hegel and Marx.

2a. Dialectic as the pursuit of truth and the contemplation of being

2b. Dialectic as the method of inquiry, argument, and criticism in the sphere of opinion

2c. Dialectic as the logic of semblance and as the critique of the illusory employment of reason beyond experience

2d. Dialectic as the evolution of spirit or matter

The use of the words "or matter" in topic 2d shows how a single topic can be so phrased as to cover the thought of authors whose positions have a certain affinity even though they disagree as much as do Hegel and Marx. For both Hegel and Marx, dialectic is an evolution. Phrasing the rest of the topic in the alternative (*viz.*, "of spirit or matter") enables it to associate under one heading the Hegelian conception of the dialectic of spirit and the dialectical materialism of Marx.

Another example can be found in the chapter on IDEA. Here the six topics which appear under the general heading—"1. Doctrines of idea"—represent phrasings appropriate to groups of authors or to single authors. The six topics are:

1*a*. Ideas, or relations between ideas, as objects of thought or knowledge: the ideas as eternal forms

1*b*. Ideas or conceptions as that by which the mind thinks or knows

1*c*. Ideas as the data of sense-experience or their residues

1*d*. Ideas as the pure concepts of reason: regulative principles

1*e*. Ideas in the order of supra-human intelligence or spirit: the eternal exemplars and archetypes; the modes of the divine mind

1*f*. Idea as the unity of determinate existence and concept: the Absolute Idea

Again it can be pointed out that the wording of topics 1a and 1e permits the association of authors whose doctrines are affiliated even though they do not agree—Plato with Locke in the case of topic 1a; Spinoza with Aquinas and Augustine in the case of 1e.

Sometimes, however, a topic that is restricted to the doctrine of one author may have to be introduced into a set of topics, all the rest of which have general or unrestricted range. This happens most frequently when a particular author makes a contribution to the conversation, which no one else anticipates or echoes. Thus, in the chapter on MEMORY AND IMAGINATION, under the heading of a general topic, a specially phrased subordinate topic had to be introduced for the contribution of Freud. The general topic was "8. The nature and causes of dreaming"; the subordinate was "8d(1) The manifest and latent content of dreams: the dream-work."

In the chapter on LABOR, under the general heading "7. Economic and political justice to the laborer," a subordinate topic, specially phrased, had to be introduced for the contribution of Marx: "7c(3) The proletariat as a revolutionary class: its revolutionary aims."

In the chapter on BEING, under the general heading "7b. The distinction between substance and attribute, accident or modification: independent and dependent being," a specially phrased subordinate topic had to be introduced for the contribution of Descartes and Spinoza: "7b(4) Extension and thought as dependent substances or as attributes of infinite substance."

These restricted or doctrinal topics are *exceptions* to the rule. Most topics have a neutral phrasing and a systematic ambiguity which permit them to comprehend the whole tradition and all differences in doctrine or opinion. The great majority are topics like "The happiness of the individual in relation to the happiness or good of other men" (HAPPINESS 5a), or "Chance, necessity, and design or purpose in the origin and structure of the world" (CHANCE 3), or "The political regulation and censorship of education" (EDUCATION 8c). Topics of this sort contain no words prejudicial to the thought of any author, and impartially cover every variety of relevant opinion in the whole tradition of western thought, no matter how violently the opinions may differ.

In short, the topical ideals of comprehensiveness and impartiality were achieved in the Syntopicon either by single topics or by sets of topics which comprehended the dialectical development of a concept or an issue in western thought. The rule followed was to employ single topics wherever they could be constructed, and to construct a set of doctrinal topics, or to introduce a doctrinal topic into the context of others, *only when the semantic difficulties could not be otherwise surmounted.*

TO FOLLOW THE RULE OF USING SINGLE TOPICS wherever they could be constructed, and to approach the ideal of making them as comprehensive as possible, it was sometimes both necessary and desirable to formulate a complex rather than a simple topic.

Examples of these two kinds of topics have already been given. The most obvious distinction between them can be most precisely stated in grammatical terms. The simple topic is undivided; its elements are words, all of which belong to the same phrase. The complex topic is divided; its divisions are indicated by two kinds of punctuation. A colon divides the complex topic into its two main parts. The first of these two parts is usually undivided, but the second may be divided into two or more subordinate parts by semi-colons. The two main parts of a complex topic are always separate phrases; when the second of these is divided, its parts are usually separate phrases.

From this grammatical description of the complex topic, it might be inferred that, considered logically, it is always a union of two or more simple topics, each expressed by separate phrases. But this is not always the case. Complex topics seem to fall into three principal types, and their differences must be examined in order for their several distinct functions to be understood.

(1) Sometimes the phrase following the colon does not represent a separate topic, but merely makes the meaning of the phrase preceding the colon clearer in some way—by expanding it, by specifying it, even by illustrating it. The colon, separating the first phrase from the one or more phrases which follow, is roughly equivalent in meaning to the words "that is to say" or "such as." The first type of complex topic is, therefore, only grammatically, not logically, complex, and cannot be broken up into two or more separate topics.

The following examples illustrate the first type of complex topic:

HISTORY 4*b*. The laws and patterns of historical change: cycles, progress, evolution

CITIZEN 8. The idea of world citizenship: the political brotherhood of man

EDUCATION 2. The kinds of education: physical, moral, liberal, professional, religious

CONSTITUTION 7*b*. The safeguards of constitutional government: bills of rights; separation of powers; impeachment

JUSTICE 2. The precepts of justice: doing good, harming no one, rendering to each his own, treating equals equally

EXPERIENCE 7. Mystical or religious experience: experience of the supernatural

EVOLUTION 4*c*. The origin of new forms of life: special creation, spontaneous generation, or descent with modification from older forms

SIGN 2*a*. The first and second imposition of words: names signifying things and names signifying names

(2) In the second type, the separate phrases of a complex topic represent the phrasing of the same topic or related topics in a manner appropriate to different authors. In some cases, the difference between the first and second phrasing is largely verbal; it is almost as if the *same* topic were being phrased in parallel ways. In other cases, the difference is doctrinal as well as verbal. Here the phrase which precedes and the phrase which follows the colon express more or less distinct topics which are like two closely related doctrinal topics. Clearly it is only in the second case that the complex topic could have been broken into two separate topics.

The following examples illustrate the second type of complex topic. (In these illustrations, the authority for the doctrine is indicated in parentheses.)

JUDGMENT 8*b*. Analytic and synthetic judgments (*Kant*): trifling and instructive propositions (*Locke*)

SOUL 2*b*. The order, connection, and interdependence of the parts of the soul (*Plato, Aristotle, Aquinas*): the id, ego, and super-ego in the structure of the psyche (*Freud*)

SENSE 3*d*(3) The estimative or cogitative power (*Aquinas*): instinctive recognition of the harmful and beneficial (*Darwin, Freud*)

QUALITY 2*b*. Primary and secondary qualities (*Locke*): the related distinction of proper and common sensibles (*Aristotle*)

Of the foregoing examples, JUDGMENT 8b illustrates a grammatically complex topic which is logically simple; the two doctrinal phrasings are parallel phrasings

of the same topic. On the other hand, SOUL 2b illustrates a logically complex topic, the two parts of which are distinct topics, and represent related doctrines in the theory of soul.

In some instances, the topic which precedes the colon is generally phrased, while that which follows is the same topic phrased in the language of a particular doctrine. For example:

> FAMILY 7*d*. The emotional impact of family life upon the child: the domestic triangle; the symbolic roles of father and mother (*Freud*)

In some instances, what follows the colon is itself divided into subordinate parts by a semi-colon. These subordinate parts may be related as two parallel doctrinal topics. For example:

> SENSE 3*c*(4) The distinction between sensation and perception (*James*): the accidental sensible (*Aristotle*); complex ideas of substance (*Locke*)

(3) In the third type, the separate phrases of a complex topic represent distinct but related topics. Here the related topics are all phrased in the language of common speech. They do not express the doctrines of particular authors or groups of authors. These topics are all logically as well as grammatically complex; in every case they could have been broken up into separate topics, though in many instances, giving them independent status would have necessitated a more explicit or elaborate phrasing of each. The union of these potentially independent topics into a single complex topic is justified by the logical relation between the parts. They are related aspects of a problem or issue; or they are related points in the discussion of a theme which is itself complex. Sometimes the parts are logically coordinate, in which case the topic preceding and the topic following the colon have equal weight; neither restricts the meaning of the other. Sometimes the parts are not coordinate; the one or more topics following the colon are logically subordinate to the one preceding it, in which case the primary topic controls and limits the meaning of the subordinate parts.

The following examples illustrate the third type of complex topic with *coordinate* parts.

> EVOLUTION 5*b*. Competition in mating: sexual selection
>
> INFINITY 4*b*. The infinite divisibility of matter: the issue concerning atoms
>
> SCIENCE 6*b*. The place of science in society: the social conditions favorable to the advancement of science
>
> JUSTICE 9*f*. Justice between states: the problem of right and might in the making of war and peace

The following examples illustrate the third type of complex topic which has a first or *primary* topic followed by one or more *subordinate* topics.

STATE 2*c*. The source or principle of the state's sovereignty: the sovereignty of the prince; the sovereignty of the people

SPACE 2*c*. Space as a medium of physical action: the ether and action-at-a-distance; the phenomena of gravitation, radiation, and electricity

PHYSICS 4*b*. Experimental discovery: inductive generalization from experiment; the role of theory or hypothesis in experimentation

MEDICINE 1. The profession of medicine, its aims and obligations: the relation of physician to patient; the place of the physician in society

IN A WHOLE OUTLINE OF TOPICS, distinct topics are logically related in two ways: they are either coordinate, or one is subordinate and the other is its supraordinate. This is clearly parallel to the two sorts of relation between the principal parts in a complex topic of the third type. It is reasonable, therefore, to ask why certain topics which are logically coordinate or logically supraordinate and subordinate should be related in these ways as separate topics; whereas other topics which have the same logical relationships to one another should be related as the parts of a single complex topic.

In differentiating between topics to be given independent status and topics to be united into a single complex topic, two principles were followed. The first was the principle of comprehensiveness. A number of related topics were united into a single complex one when their union seemed to be required for a comprehensive discussion of the matter under consideration. The discussion each would have covered, if it had been left as an independent topic, would have been fragmentary or partial. The decision to unite topics was never made in the abstract, but always in terms of the content of the great books, that is, in terms of how their various contributions to the discussion could be most perspicuously organized. In short, related topics were united to form a complex topic when the coverage of the complex topic more nearly approximated the syntopical ideal than the simple topics would have, had each been treated as independent.

The second principle involved the ideals of simplicity and unity, and thus acted as a check to the first principle. If two simple topics were sufficiently comprehensive in their coverage, then, even though logically related, they were given independent status, on the ground that simple topics have greater unity than can be achieved by the union of separate topics, no matter how closely related. The greater the unity of a topic, the greater can be the mutual relevance of the contributions to the discussion it covers.

This second principle worked automatically when two logically related topics were themselves complex. Complex topics were always made independent. But when the problem was whether certain simple topics should remain independent or be united, the two principles of comprehensiveness and simplicity had to be applied with discretion, sometimes in favor of comprehensiveness, and sometimes in favor of unity. It is impossible to state all the reasons of convenience or

policy which operated in such decisions, or to report how particular judgments were made. That such decisions could not always be made with certainty or by rule of thumb, is indicated by the fact that, during the construction of the Syntopicon, many topics which were independent at one stage of the work were later merged, and complex topics were frequently broken into a number of simple ones.

The final product of all these working judgments is manifest in the structure of the Outline of Topics for each of the great ideas. The numbering of the topics in each Outline indicates which topics are related as coordinate and which are related as supraordinate and subordinate.[2] But it is not always possible to tell from its grammatical form whether a given topic is simple or complex, since, as we have seen, some grammatically complex topics are logically simple. Nor is it always possible to tell at once whether a logically complex topic is of the second or third type; or, if of the third type, whether its parts are coordinate or supraordinate and subordinate. Sometimes this will be obvious from the wording or construction of the topic; but often it will be discoverable only after the discussion it covers has been read and studied.

A NUMBER OF OTHER POINTS concerning the structure of the Outlines of Topics call for brief comment.

(1) *The relation of supraordinate and subordinate topics.* The subordinate topics usually represent an analytical development of the theme or problem stated in the supraordinate topic under which they appear. They indicate particular points in the general area of discussion defined by the supraordinate topic. As it covers the whole, they cover the related parts of the whole. Sometimes, however, the subordinate topics represent a set of doctrinal alternatives rather than an analytical development of connected points under the supraordinate. Examples of this have already been given (see pp. 1241–1242).

In the first case, the supraordinate may function as a topic in its own right in addition to serving as a general heading for subordinates. When it functions as a topic, it usually covers a discussion of the whole or general theme, whereas the subordinate topics cover discussions of the parts or particular points. In rare instances, the supraordinate topic introduces a special point of its own, in addition to stating the general theme which the subordinates particularize. But in the second case, that is, when the subordinate topics state a set of doctrinal alternatives, the supraordinate serves merely as a general heading.[3]

[2]Topics numbered 1, 2, 3, etc. are primary and coordinate with one another. Any of these may be supraordinate, in which case topic 2 will have under it subordinate topics numbered 2a, 2b, 2c, etc., and these subordinates will be coordinate with one another. Any of these subordinate topics may, in turn, be supraordinate with respect to its own set of subordinates, in which case topic 2c will have under it subordinate topics numbered 2c(1), 2c(2), etc. Primary and secondary topics may or may not have subordinates; but topics of the order 2c(1), 2c(2), etc. never have subordinates.

[3]The above summary of the relation of supraordinate and subordinate topics applies to the relation between primary and secondary topics (*e.g.*, between topic 3 and topics 3a, 3b, 3c, etc.) and also to the relation between secondary and tertiary topics (*e.g.*, between topic 3b and topics 3b(1), 3b(2), etc.)

(2) *The analytical order of the Outline of Topics as a whole.* The primary topics (*i.e.*, topics 1, 2, 3, etc.) are coordinate in rank; but among these coordinates, certain kinds of topics normally tend to precede others in the Outline. The discussion usually opens with a consideration of the meaning of the idea or of the various ways in which the idea is defined or conceived. Almost as frequently the opening topic deals with the nature of the thing signified by the idea, or proposes the most general theory or theories in which the idea is involved.

The immediately following topics are usually concerned with the principal divisions or classifications of the idea or the thing it signifies (*i.e.*, its kinds, types, or modes); or with its causes or conditions, and with its relation to other ideas or things, frequently stated in terms of comparisons or contrasts. In some instances, this second group of topics deals with the main problems or issues raised by the idea; in some instances, topics of this sort follow the consideration of kinds, causes, and relations.

The concluding topics usually deal with the significance of the idea in fields of learning and inquiry other than the field in which the idea is a *principal* term or concept; or they may deal with the problems or issues raised by the idea in these other fields. In any case, concluding topics of this character cover phases of the discussion which are plainly subsidiary to the matters dealt with in the opening and middle topics.

In chapters on ideas which are susceptible to such discussion, the final topic may be concerned with historical considerations or may provide a place for the collection of illustrative materials.

(3) *Variations in the structure of the Outlines of Topics.* The statements made in (2) above are intended to describe the normal or typical order of the primary topics. But of the 102 Outlines of Topics, no two are exactly alike in structure or order of development. Not all, for example, open or close with topics of the sort indicated; nor do all contain the same variety of intermediate topics or dispose them in the same order.

The Outlines vary in a number of other respects. They differ strikingly in length, or number of topics, ranging from the chapter on FATE with only 6 topics, to the chapter on MIND with 76 topics. They differ almost as much in their analytical detail or the complexity of their structure: some chapters have only primary topics or very few subordinates; whereas in other chapters almost every primary topic covers a set of subordinates, and many of these in turn have subordinate topics of their own. The chapters on FATE or COURAGE, for example, have extremely simple Outlines; those on MIND or STATE, extremely complex ones.

The Outlines also differ in regard to the presence or absence of sets of specialized doctrinal topics. Chapters like PUNISHMENT and EDUCATION, in which the principal term has a common core of meaning throughout the great books, are not embarrassed by semantic difficulties and so do not need to resort to doctrinal topics stated in the language of different authors; whereas chapters like IDEA and

MIND, beset by semantic difficulties, require topics which specify the various senses in which the principal term is used by different authors or groups of authors.

Not only in this last respect, but also with regard to their differences in complexity, length, and the order of their topics, the Outlines vary with the character of the great ideas they articulate and analyze. As each idea is different from all the rest, so is each Outline of Topics. Each was constructed and written to fit the idea—not the idea by itself, but as it has been treated and discussed in the great books.

THE POINT JUST MADE EXPLAINS WHY these 2987 topics were selected—no more, no fewer, and no others—and why they were ordered as they appear in the Outlines. It is like the explanation why just these 102 terms were chosen as the great ideas. Yet if the explanation is understood to mean that the Outlines of Topics were entirely fitted to the great books, it is only partly understood. This would ignore another factor which shaped the Outlines and ordered the topics, even if it did not greatly affect the selection of the individual topics and their phrasing. That other factor was the consideration of purely logical criteria in constructing the Outlines. To the extent that such logical considerations prevailed, the content of the great books was also fitted into the Outlines of Topics.

Logical considerations did not always prevail. The Outlines of Topics assume the form of analyses, but as analyses many of them have logical flaws or deficiencies. Certain topics call attention to the absence of others which would be included in a logically rounded analysis of the idea. Certain topics seem to be given greater prominence than they would deserve in a logically balanced analysis; and certain topics are treated with greater analytical refinement than others which logically deserve the same treatment. In addition, the actual order of topics often only approximates the ideal analytical order, and sometimes even definitely departs from it.

These defects, both logical and substantive, in the Outlines of Topics are all consequences of the same fundamental fact. The Outlines do not represent analyses of the great ideas considered abstractly or in themselves. It might almost be said that they are not analyses of the ideas at all, but rather of the *discussion* of the ideas in the great books. That statement, however, would be too extreme. Though the selection of certain topics and the omission of others were wholly determined by the content of the great books, the order of the topics selected, the choice of the primary topics, and the weight or importance given to certain topics were determined partly by the content of the great books and partly by standards of logical precision in the construction of a rounded and balanced analysis.

The Outlines of Topics, therefore, represent an attempt to reconcile the demands of logic with fidelity to the syntopical aim of exhibiting the great conversation in all its strength and weakness. The actual process by which the Outlines of Topics were progressively formed over a period of seven years reflects the tension between these two interests, even as the final product reflects their joint influence.

The first drafts of the Outlines of Topics were largely *a priori*. They were logical

analyses of the ideas, formulated prior to any effort to use the topics as headings for collecting references to the great books. Yet even these first drafts were not entirely *a priori*; they were constructed in the light of considerable knowledge of the tradition of western thought. To this extent they were *a posteriori*, that is, empirical or historical rather than purely logical.

These original drafts were repeatedly revised in the effort to use each topic as a heading for a segment of the discussion. Topics were discarded; new topics were added; certain topics were merged and others were subdivided; a very large proportion of the topics were rephrased again and again; and the Outlines as wholes were reshaped whenever substantive alterations in their component parts necessitated logical reorganization or refinement. In this process almost all the Outlines went through many drafts. At the same time each Outline was scrutinized as a whole for its intelligibility as an articulation, and its rationality as an organization, of the whole discussion of a great idea.

The absence of certain concepts of contemporary importance from the list of the great ideas can be interpreted to mean that those concepts have only recently risen to a prominence they do not have in the tradition as a whole. The absence of certain topics from the Outlines can be similarly interpreted. The omitted topics cover discussions of recent origin, or discussions which, though they may have antecedents in an earlier day, do not receive as much attention in the great books as they currently attract. In marking the points on which the great books are silent, these absent topics point to contributions to the great conversation made in our time, as well as to *lacunae* in our intellectual heritage.

On the other hand, the Outlines contain a number of topics which elicit from the great books contributions that are slight in number and variety. In certain instances, the presence of these topics reflects the effort to make the Outlines as analytically rounded and balanced as the content of the books would permit. But in other cases, the retention of topics in spite of the slightness of the discussion they cover serves to record the antecedents in the tradition of themes or problems which have become dominant only in our own day.

ONE FINAL POINT ABOUT THE OUTLINES REMAINS TO BE MADE. They often contain topics which resemble one another in the matters they propose for discussion. This is seldom if ever true of the primary topics. The overlapping occurs mainly among the subordinates, and in the interest of analytical refinement or balance. In the analytical breakdown of two primary topics, similar points are often logically relevant. In consequence, similar topics will appear in the two sets of subordinates. If, in order to avoid the duplication, one of these subordinate topics had been omitted, one of the supraordinates would have been left incompletely analyzed and articulated.

For example, in the chapter on LAW, under the general heading of topic 4—"The natural law"—one of the subordinates is topic 4f: "The relation of natural law to civil or municipal law: the state of nature and the regulations of the civil state." In the same chapter, under the general heading of topic 7—"Law and the

state"—one of the subordinates is topic 7c: "The priority of natural to civil law: the inviolability or inalienability of natural rights." The two topics are by no means identical, yet they do have much in common. Each proposes a theme that is logically appropriate in the analysis of the general heading under which it falls. The decision to include both represents the judgment that the inclusion of partially overlapping topics is a much less serious fault than the logical defect which would result from the exclusion of one of them in order to avoid duplication.

The policy which permitted overlapping topics in the same chapter for reasons of analytical completeness had even greater justification in the case of different chapters. The great ideas are so related that it would be impossible to construct analytically adequate Outlines of Topics without some topics under one idea resembling some topics under other ideas. In the same chapter, the resemblance between topics is never more than a similarity—a partial overlapping. But between chapters, the overlapping may be almost complete. The topics may be identical, except for a slight difference in phrasing. For example, the chapter on LAW necessarily includes topic 7b—"The supremacy of law as the principle of political freedom"—under the general heading of topic 7: "Law and the state." But there is an equal necessity for including, in the chapter on LIBERTY, topic 1d—"The supremacy of law as a condition of political liberty"—under the general heading of topic 1: "Natural freedom and political liberty."

Such identical topics are the exception rather than the rule. For the most part, the resemblance between topics of different chapters goes no further than similarity. But there is as much reason, in the interest of analytical completeness, for the partially overlapping topics as for the identical ones. The chapter on CITIZEN necessarily contains a discussion of "The qualifications for citizenship: extent of suffrage" (CITIZEN 3); this is partially duplicated by a discussion that is unavoidable in the chapter on CONSTITUTION—"The justice of different constitutions: the extent and character of citizenship under each" (CONSTITUTION 5a). Or, to take another example, the discussion of philosophy necessarily includes the consideration of "The relation of philosophy to mathematics" (PHILOSOPHY 1b), which approaches that problem somewhat differently from the inevitable consideration of a similar theme in the discussion of mathematics—"The service of mathematics to dialectic and philosophy: its place in liberal education" (MATHEMATICS 1b).

Between any one of the 102 chapters and all the others, the number of overlapping topics—either identical or similar in scope—may at first appear large; but it will seem less remarkable as one realizes the interdependence of the great ideas. Far from concealing the overlapping of topics as if it were a blemish, the Syntopicon calls attention to it, precisely because it points out the interconnection of the great ideas. This is one of the functions performed by the Cross-References in each chapter. As the Inventory of Terms shows the interrelation of the great ideas by noting the appearance of the same term in topics of various chapters, so the Cross-References show the interrelation of the great ideas by

noting, for the topics of one chapter, the topics in other chapters with which they have some affinity.

THE CROSS-REFERENCES POINT OUT TWO DIFFERENT KINDS of affinity between the topics of one chapter and the topics in others. One sort, the affinity of similar topics, has already been discussed. The other sort of affinity exists between a topic in one chapter and topics in other chapters that deal with related, not similar, matters. The latter provide contextual discussion of matters bordering on the theme proposed by the first.

For example, the chapter on FAMILY contains a discussion of "Eugenics: control of breeding; birth control" (FAMILY 6b); the chapter on EVOLUTION goes more fully into the problems of genetics and heredity, and contains two sets of topics which provide a general context for the consideration of eugenics in the chapter on FAMILY. They are the topics in EVOLUTION headed by "2. Genetic variation in the course of generations," and "3. The process of heredity." The Cross-References in the chapter on FAMILY, therefore, call attention to the topics in EVOLUTION in the following manner:

> *For*: A more general consideration of the problems of heredity, *see* EVOLUTION 2–3e.

The Cross-References also perform one other service. Sometimes a topic or group of topics is omitted from a particular chapter because, while it has relevance to the idea of that chapter, it is not indispensable to a rounded or balanced analysis of that idea. However, this topic or group of topics may be necessarily involved in the analysis of some other idea. The Cross-References call attention to such supplementary topics.

For example, the chapter on POETRY might have considered the nature of the fine arts, of which poetry is one. But the Outline of Topics for POETRY opens with a consideration of "The nature of poetry: its distinction from other arts." To supplement this with a discussion of the general theory of the fine arts, presupposed by the distinction of poetry from other arts, the Cross-References contain the following entry:

> "*For:* The consideration of the fine arts in general, *see* ART 7a."

Often there is only a shadowy difference between the cross-references to such supplementary topics and the cross-references to related or contextual topics. It rests largely on a sense of the fitness of a particular topic for the Outline of Topics of a particular chapter. If the topics cited by the Cross-References might have been included in this chapter but were not necessary, they can be regarded as supplementary; if, on the other hand, they would have been adventitious or, at best, peripheral in this chapter, they can be regarded as contextual. In contrast, there is a sharp difference between both these types of cross-references and the third type, which cites similar or identical topics in this and other chapters—topics which are necessary to all the chapters concerned.

The three types of cross-references can sometimes be recognized by certain characteristic words in their phrasing. The cross-references to similar or identical topics often begin with such words as "*For:* Other discussions of . . ," or "*For:* Another consideration of . . ," or "*For:* Other aspects of. . . ." The cross-references to contextual or related topics usually begin with such words as "*For:* Matters relevant to . . ," or "*For:* Discussions bearing on. . . ," or "*For:* Discussions related to . . ." Still another phrasing for the contextual cross-references is "*For:* The general theory of. . . ," or "*For:* The general discussion of. . . ."[4]

The order of the Cross-References follows roughly the order of topics in the Outline. The wording of the Cross-References generally indicates the topic or group of topics in the Outline for which the particular cross-reference to topics in other chapters is being made. For example, LABOR 1a reads: "The curse of labor: myths of a golden age and the decay of the world." The first cross-reference in LABOR reads: "*For:* Other discussions of the golden age, *see* MAN 9a; PROGRESS 1c; TIME 8b." LABOR 1c reads: "The pain of labor and the expiation of sin: the disciplinary and penal use of labor." The second cross-reference in LABOR reads: "*For:* Other considerations of penal labor, *see* PUNISHMENT 4b(3)." LABOR 1e reads: "The honor of work and the virtue of productivity: progress through the invention of arts for the conquest of nature." The third cross-reference in LABOR reads: "*For:* Matters relevant to the nature of productive work and the factors influencing productivity, *see* ART 4, 9a–9b; EDUCATION 6; SCIENCE 1b(1)–1b(2); WEALTH 3a."

Since the relation between particular topics and particular cross-references is immediately obvious from the parallelism in their wording, the absence of cross-references for some of the topics is also immediately discernible. For example, LABOR 1d—"The social necessity of labor and the moral obligation to work"—does not have a cross-reference to topics in other chapters. No other chapter contains topics *similar enough* or *closely enough related* to this theme to warrant their being cited.

This is usually the explanation of the lack of cross-references for certain topics. But sometimes the omission of cross-references for particular topics may have been simply an oversight, which is natural enough in view of the magnitude of the comparison involved—each topic with 3000 others. And sometimes the omission may represent a debatable judgment concerning the relevance of topics in other chapters to a particular topic in this one, or concerning the similarity between a topic in this chapter and those in other chapters. Whether other topics are *similar enough* or *closely enough related* may frequently be a difficult and reversible decision.

As already pointed out, both the Cross-References and the Inventory of Terms

[4]The cross-references to supplementary topics are usually signified by the same opening words as those to the contextual topics; and a great many cross-references which are not marked by any distinctive phrasing may belong to any one of the three types. The reader may not always be notified in advance what to expect in the topics of other chapters cited by the Cross-References; but where the phrasing fails to give him such information, he can readily discover for himself the type of relation involved in the cross-references by turning to the topics cited.

serve to trace the intricate network of relationships among the 102 great ideas. Each does this in its own way. It should be added that both the Cross-References and the Inventory of Terms also serve as instruments for finding particular topics among the 3000 topics in the 102 chapters. The Cross-References do this by listing the topics of other chapters according to their relevance or similarity to those of a particular chapter. Hence the reader, while using or studying a particular chapter, is informed of the location of germane topics in other chapters. The Inventory of Terms lists the fundamentally significant words in each of the topics and, in addition, the terms which are implied by its meaning. Each term is followed by a list of chapters in which related or similar topics appear.

III. THE INTRODUCTIONS

IN THE STRUCTURE OF EACH CHAPTER, the Outline of Topics follows the Introduction. This essay might have been expected, therefore, to deal with the Introductions before it discussed the Outlines of Topics.

There are two reasons for reversing the expected order. First, the topics are, in a sense, integral parts of the great ideas; and, therefore, the examination of the Outlines as analyses of the ideas naturally follows the consideration of the ideas themselves. Second, the topics state the themes, problems, and issues with which the Introductions deal. The Introduction to each of the great ideas is, in part at least, a commentary on its topics. It is not out of order, therefore, to examine the commentary after considering the topics commented on.

But if this is the proper order, then it would seem that it might have been better, in constructing the Syntopicon, to have placed the Outline of Topics first in each chapter, with the Introduction following rather than preceding it. But the fact is that the Introductions are *only in part* a commentary on the topics. They also deal with the idea as a whole, in such a way as to be preparatory for reading the topics. They are genuinely introductions *to* the topics as well as commentaries *on* them.

The reciprocal illumination of each by the other will be better understood in terms of the purposes the Introductions are intended to serve. It will then become clear that the advantage of reading the Outlines of Topics before the Introductions is almost equal to the advantage of reading the Introductions first.

LIKE THE OUTLINES OF TOPICS, the Introductions vary from chapter to chapter—not so much in length as in their method of exposition. They do not all begin or end in the same way; nor do they uniformly treat the same matters or proceed in the same order.

The way in which each Introduction deals with a great idea corresponds to the characteristic difference of that idea from all the others. The ideas differ in four respects, and the Introductions differ accordingly. Each idea has a unique structure. It also has a unique history. The character and intensity of its verbal difficulties are often peculiar to itself. The problems and issues it has engendered are different in origin and in the possibilities of their resolution.

Nevertheless, all the Introductions were conceived and written to perform a common task. They were intended to serve the same fourfold purpose, corresponding to the four respects in which the ideas differ. The Introductions attempt to treat each idea *semantically*, *historically*, *analytically*, and *dialectically*.

(1) *The semantic aim.* It has already been pointed out that most of the names of the great ideas have a range of meanings. They have been used by the authors of the great books in different senses, and many of them have, in addition, meanings of recent origin or popularity. This is true not only of the principal term in each chapter, but also of some of the subordinate terms which appear in the topics. Often the meaning of the principal term is affected by the meaning of a subordinate term connected with it in the statement of a topic.

The semantic aim of the Introductions is to record the various meanings of the words which have been used to name the great ideas, and of the other words which have been used traditionally and currently in discussing the great ideas. The Introductions seldom try to do this exhaustively. They aim at verbal clarification only where necessary—in order to prevent real agreements from being obscured by differences in language, or to discover real disagreements in thought between men who, so far as their language goes, appear to be saying the same, or at least compatible, things.

Like the other parts of the Syntopicon, the Introductions have as their ultimate aim the re-enactment of the great conversation. Each Introduction tries to recreate the discussion of a great idea as though the authors contributing to that discussion were engaged in conversation about its major topics—and almost as though they were contemporaries, confronting each other in actual discourse, rather than dispersed across thirty centuries. The semantic aim of the Introductions is to clarify the meanings of the words they use so that they can be heard talking relevantly to one another. The Introductions succeed to the extent that they suggest how the great minds of the western tradition exist together in a single universe of discourse.

(2) *The historical aim.* To collapse thirty centuries of imagination and thought into a single historical moment would seem to be unhistorical or, worse, antihistorical. Yet the Introductions have just been described as doing exactly this, since they treat the authors of the great books as if they were contemporaries, and use the present tense in reporting their discussion of ideas.

Mill and Aristotle, for example, may be reported as taking one side of an issue, on which they are opposed by Plato and Hobbes. Lucretius may be said to be more in agreement with Freud on certain matters than he is with anyone in antiquity. As far as possible the authors are associated with one another in terms of their thought, not their times. They are opposed to one another in the same way. The centuries can be as readily bridged by genuine agreements as they can be divided by disagreements, apparent or genuine. Neither the agreement nor the disagreement is a necessary function of simultaneity or succession in time.

can find in it. From the point of view of world history, which in a strict sense cannot begin until a world culture is formed, the thirty centuries of imagination and thought represented in the great books tend to become a single time, even as the books tend to belong to a single tradition and culture. By taking the point of view of future world history, we can imagine how the whole tradition of western culture may some day appear as a single parochial episode. In a sense the Introductions are making this imaginary construction when they present the great conversation in the present tense, as if it were taking place among contemporaries.

(3) *The analytical aim.* The Outlines of Topics present analyses of the great ideas. The Introductions perform an analytical function in commenting on the structure of the ideas as set forth in the Outlines.

The Outlines do not explain themselves; for the most part, the order and subordination of the topics do not need explanation. But occasionally the reason for including or giving special prominence to a certain topic or group of topics may not be immediately obvious, especially if the matters dealt with are not familiar to contemporary thought. The converse is also true. Occasionally, the absence of topics which are currently subjects of great interest may deserve a word of explanation. The Introductions try to throw light on both these aspects of the Outlines.

The major parts of the discussion of a great idea are the fundamental problems and issues in which that idea is involved. In commenting on these, the Introductions usually adopt the topical statement of them in the Outlines. Though there is seldom a perfect correspondence between the content of the Introductions and that of the Outlines, there is a general conformity between the main points treated in each. Their order is not necessarily the same, for a discursive treatment of related problems and issues usually demands an order markedly different from that suitable to a topical outline.

In many chapters, topics will be found in the Outline which are not considered in the Introduction. There are two reasons for this. First, the Outline of Topics for a particular idea usually raises more points of importance or interest than can be treated in a short essay. Therefore, some must be ignored or mentioned only in passing. Second, the Outline in a particular chapter frequently includes topics which are similar to or identical with topics in other chapters. Hence, to avoid repetition and undue length, the Introduction to a particular chapter may leave to another chapter's Introduction the treatment of a subject common to both.

Wherever possible, the Introductions notify the reader that a given topic receives attention or ampler treatment in the Introductions to other chapters. Just as the Cross-References for a given chapter indicate the relation of its topics to those of other chapters, so the Introduction supplies its own cross-references to other Introductions in which related matters are discussed. In doing this, the Introductions not only indicate, but often try to illuminate, the interconnection of the great ideas. In addition to examining the structure of the idea with which it deals, it is part of the analytical aim of each Introduction to place this idea in

the larger structure of the whole set of ideas, and especially in the constellation of closely related ideas to which it belongs.

In performing their function as commentaries on the Outlines of Topics, the Introductions usually pay special attention to the groups of doctrinal topics which set forth the positions or views of different authors in their own language. The fact that doctrinal topics could not be avoided in the Outline for a particular chapter indicates both semantic and analytical difficulties which the mere statement of doctrinal topics seldom solves completely. Wherever possible, the Introductions attempt to deal with these difficulties discursively and to clarify points that the elliptical statement of the topics necessarily leaves obscure. But the groups of doctrinal topics call for more than clarification. They usually represent a profound difference of opinion or a many-sided controversy in the tradition of the great books. In treating such matters, the Introductions go beyond their semantic and analytical functions to the dialectical, which is their primary aim.

(4) *The dialectical aim.* The Introductions attempt to report some of the major issues, or basic intellectual oppositions, in the sphere of each of the great ideas. That this is their primary aim does not imply that disagreement is the dominant feature of the intellectual tradition. On the contrary, agreement in almost every case accompanies disagreement; that is, on most of the great issues, the opinions or views which represent opposite sides of the dispute are shared by several authors, often by many. Seldom do we find a solitary exponent of a controversial position.

The great issues align men side by side as well as range them against one another. If, in the rare case, disagreement does not carry with it a proportionate amount of agreement, that disproportion is balanced by the fact that, on a small number of fundamental questions, there seems to be no disagreement among the authors of the great books. On the whole, there is as much agreement as disagreement in the tradition of western thought—agreement across the centuries as well as among contemporaries, and disagreement likewise.

The primacy of the dialectical aim of the Introductions follows from the primacy of the mind's concern with truth. The other aims represent preparatory considerations—how language has been used to express thought, how thought has been affected by historic circumstances, the ground thought has covered in dealing with the great ideas. All these preparations lead to the question they leave unanswered. Where does the truth lie in all the thinking that has been done on each of the great ideas? Where is thought true, and where is it false?

The dialectical aim of the Introductions is primary because it is motivated by this fundamental consideration. In their concern with agreements and disagreements, the Introductions approach the question of truth and falsity. The agreement of men about the nature of things in any field of inquiry establishes some presumption of the truth of the opinions they commonly hold. Their disagreement establishes the counter-presumption—that none of the opinions in conflict, whether shared or not, may be wholly true. Among conflicting opinions, one may,

of course, be wholly true and all the rest false; but it is also possible that each expresses some portion of the whole truth; and, except for flat and isolated contradictions (which seldom if ever occur in the great conversation), it is even possible that all the conflicting opinions may be false, just as it is possible for that opinion to be false on which all seem to agree. Some opinion as yet unexpressed—at least not discoverable in the great books or in other books—may be the truth or nearer to it. In short, agreement and disagreement raise no more than a presumption of truth and falsity, a presumption which further inquiry can always challenge or rebut.

This being the case, the Introductions, in their dialectical effort, must fall short of answering the question which is the mind's fundamental concern. They would be dogmatic, not dialectical, if, on any of the great issues, they asserted or tried to prove the truth or falsity of any view. They would simply become one more voice in the perennial debate on fundamental issues. They refrain from doing this in order to do something else.

The point is not that one more voice carries no weight in the forum of human discussion. The point is rather that a different type of contribution to the pursuit of truth can and should be made. Moreover, it is the only contribution the Introductions can properly make as an integral part of a syntopicon of the great books. These are not isolated essays published by an author in his own name. They are Introductions to chapters on the great ideas in the great books. They introduce the Outlines of Topics. Together with the topics, they lead the reader to the References, and prepare him to read, interpret, and judge what he finds in the books and passages there referred to.

The special contribution the Introductions try to make to the debate of perennial issues consists in being resolutely dialectical throughout. The special quality they try to achieve can be summarized in two words: dialectical objectivity.[5]

[5]The words "dialectical objectivity" may be new, but the ideal they express is old. It has always been the ideal of the encyclopaedist, and the greatness of an encyclopaedia can almost be measured by the closeness of its approximation to this ideal.

In his Prefatory Notice to the 9th edition of the Encyclopaedia Britannica, the Editor, T. S. Baynes, wrote that, in the conflict of opinion, "a work like the Encyclopaedia is not called upon to take any direct part. It has to do with knowledge rather than opinion, and to deal with all subjects from a critical and historical, rather than a dogmatic, point of view. It cannot be the organ of any sect or party in Science, Religion, or Philosophy. Its main duty is to give an accurate account of the facts and an impartial summary of results in every department of inquiry and research."

In the Prefatory Material to the 11th edition of the Encyclopaedia Britannica, James Bryce quoted the foregoing paragraph from Baynes, and added: "The Encyclopaedia Britannica itself has no side or party, it attempts to give representation to all parties, sects, and sides. . . . Every effort has been made to obtain, impartially, such statements of doctrine and belief in matters of religion and similar questions as are satisfactory to those who hold them, and to deal with these questions, so far as criticism is concerned, in such a way that the controversial points may be understood and appreciated, without prejudice to the argument. The easy way to what is sometimes considered impartiality is to leave controversy out altogether; that would be to avoid responsibility at the cost of perpetuating ignorance, for it is only in the light of the controversies about them that the importance of these questions of doctrine and opinion can be realized. . . . Amid the variety of beliefs which are held with sincere conviction by one set of people or another, impartiality does not consist in concealing criticism, or in withholding the knowledge of divergent opinion, but in an attitude of scientific respect which is precise in stating a belief in the terms, and according to the interpretation, accepted by those who hold it." And in another place, Bryce said: "He who writes a treatise often writes it to prove his own theory and disparage the theories of others; but in a work of reference such exclusiveness or partisanship would be reprehended, and is therefore usually avoided."

They try to look at all sides and take no sides. Of course, they fail to achieve so exacting an ideal. They may succeed, as the topics do, in taking no sides. Just as the topics state subjects on which there can be different opinions, without affirming or denying any of the possible opinions, so the Introductions try to present the issues without prejudice to any partisan point of view, and treat conflicting positions impartially. But it is easier to take no sides than to look at all sides. In this latter respect, the Introductions undoubtedly fail.

To begin with, it is never possible to say that *all* possible sides of an important issue have been examined. They can never be exhaustively enumerated. The answers and arguments to be found in the great books are always weighty and significant, and are usually a fair sampling of the best human thought on the subject, but they never exhaust the possibilities of thought. Secondly, it is seldom possible for the Introductions, within the limits of a short essay, to examine even all the answers and arguments in the great books; and even if some selection can be justified on the ground that it chooses the most significant opinions or the principal arguments, it still remains a selection. Finally, even those positions and arguments selected for examination and summary may not all be viewed with an equally open mind or presented in an equally favorable light. Perfect dialectical objectivity is not guaranteed by avoiding explicit judgments on the truth of conflicting opinions. Partiality can intrude itself in a variety of subtler ways—by the manner in which arguments are summarized, by shades of emphasis and neglect, by the tone of a question or the color of a passing remark, and by the order in which the various positions are presented.

In order to avoid some of these faults, or at least to minimize their impairment of dialectical objectivity, the Introductions resort to an obvious device and use it as much as possible. They report the opinion or argument of an author in his own language, substituting quotation for summary. Quotations may, of course, be wrenched out of context, and their sense may be falsified by the way in which they are quoted. But since each introductory essay is associated with references to the great books, citing fully all the passages from which the quotations are taken (and many more besides, which provide the rest of the context), the reader of the Introductions is protected against such discrepancies as may occur. This device of quotation provides the Introductions with a safeguard against the greater danger of summarization. In addition, it gives them the flavor of the great conversation itself. It offers the reader a sample of the wealth of material cited in the References.

Only the writer's firm intention to avoid them can be relied on to prevent other sorts of defection from dialectical objectivity. Dialectical objectivity demands a deliberate effort to balance question against question, to forego any comment that might be prejudicial, to check any tendency toward over- or under-emphasis. The reader can judge for himself the extent to which such effort has been successful in the writing of the Introductions. On all these counts, the measure of dialectical objectivity achieved should be evident. But the reader cannot easily judge its achievement on the one remaining count—the order of discussion in the Introductions.

For example, many Introductions end with the exposition of a particular author's theory of a controversial subject, and sometimes with a quotation unaccompanied by comment. Does this signify approval of the author's position on the question? In presenting a number of conflicting positions, the Introductions must necessarily expound them in some order. Does the theory coming last in the series have the favored place, or does the first? The assumption behind these questions (which arise naturally enough) is that the writer of the Introductions may have intellectual convictions which influence his ordering of the discussion, even though he does not allow himself to express them explicitly in the form of judgments about what is true or false.

That assumption is partly correct. No mature mind can be without convictions. But they do not necessarily constitute an insuperable obstacle to maintaining the dialectical detachment sought for in the Introductions. If the writer can refrain from expressing his own judgment about what is true and false, he can also, though perhaps with more difficulty, exercise sufficient caution to prevent his convictions from influencing the order in which he treats a variety of opinions, one of which he may hold as his own. He can do this by making certain that the views he himself favors do not uniformly occupy the same place in the order of discussion—whether that be first or last.

A deliberate effort was made to avoid uniformity in the order of treatment. The result of this attempt cannot be judged by examining a single Introduction; but, by taking the 102 Introductions as a whole, the reader can observe whether uniformity has been avoided.

The reader's final judgment on the attainment of their dialectical aim can be made in terms of a test much more relevant than any examination of details of method or order in the Introductions. If a dialectical balance has been preserved, the reader should be left with the major questions to answer for himself. He should be left with the major issues unresolved, unless he has resolved them in his own mind. If he has any opinion as to where the truth lies, it should be his own, formed by him in the light of his reading, not pre-formed for him in any way. From the Introductions themselves, he should derive only three types of opinion: (1) that, for each of the great ideas, these are *some* of the questions or issues worth considering; (2) that, for each of the questions or issues mentioned, these are *some* of the answers or solutions; and (3) that some of the questions are so connected that answering one of them in a certain way partly determines how others must be answered.

If the Introductions do more than this, they overstep their dialectical limits, for more than this would be to declare one answer true and another false. But if they do this much, neither more nor less, then they neither exceed their bounds nor fall short of their mark. And if, with respect to the three types of opinion they do try to assert, the Introductions win the reader's acceptance, then they have for him as much dialectical truth as can be attained.

IT SEEMS APPROPRIATE AT THIS POINT to say a word about the writing of the Introductions.

They were written by the Editor in Chief of *The Great Ideas*. In a few cases, preliminary drafts of the essays were prepared by the General Editor. Drafts of all the essays were read and criticized by the Editor in Chief of *Great Books of the Western World*, by editors on the staff of the Syntopicon, and by other persons who generously accepted the task of reading and commenting on them.

The suggestions for revision from all these sources were collated to guide the writing of a final draft. In this, as in most collaborative efforts, the final responsibility for accepting or rejecting suggestions rested with one person. The Editor in Chief of *The Great Ideas* assumed that final responsibility of authorship. To some degree, then, the Introductions as published bear the authority of a group of minds working in collaboration, but they do not pretend to be that anomalous thing—a composite literary production.

In their report of the traditional discussion of the great ideas, the Introductions reflect their author's reading of the great books. They also represent some knowledge of the books listed in the Additional Readings; it should not be necessary to say that no one—certainly no one responsible for the content of the Introductions—has read all this literature. As for the great books, no one can claim to have read them all equally well, or to have read all of them systematically and carefully for their relevance to each of the 102 great ideas. That kind of reading was hardly feasible before the Syntopicon was constructed. The Introductions were being written at the same time that the references to the great books were being compiled, topic by topic, idea after idea.

One fact about the writing of the Introductions deserves repetition and emphasis. They were conceived as parts of the Syntopicon and constructed in relation to the other parts, especially the Outlines of Topics and the References. According to this conception of their purpose, they were written, not for scholars or specialists, but for the general reader—or, more specifically, for future readers of the great books.

This last point calls attention to one of the difficulties faced in writing the Introductions. They could have, and would have, been written quite differently had they been intended for an audience of persons already familiar with the great books. Should such persons read the Introductions, they may need to be reminded of this fact. Some readers may have devoted considerable time to the study of a particular author or group of authors; as measured by the depth of their own scholarship, the Introductions may appear superficial or inadequate in the treatment of those authors. Other readers, as a result of their own scientific or philosophical work, may hold certain of the theories discussed in the Introductions; as measured by the complexity of their own speculative involvement, the Introductions may appear to present imperfect or over-simplified versions of these doctrines. Such persons are asked to remember that the Introductions try to give some account of *all*, not just a few, of the authors of the great books, and to present, for each of the great ideas, a dialectical treatment of conflicting opinions, not a scholarly exposition of particular doctrines considered in isolation. This they try to do in a manner suited to the layman, not the specialist—for future readers of the great books, not past masters of them.

From the standpoint of the lay reader, the Introductions may have defects of an opposite sort. The effort to make them intelligible to a person who has not read the great books—or, certainly, not studied them—involved a constant struggle against space limitations. It was often necessary to use certain technical words or phrases which have an established traditional meaning, without being able to explain their significance in readily understandable terms. For example, for brevity of reference it was often necessary to use such expressions as Kant's "categorical imperative," Hegel's "Absolute Idea," Spinoza's "infinite modes," Freud's "repression," Newton's "evanescent quantity," or Ptolemy's "epicycles," but it was not always possible, at the point at which they were used, to explain their meaning.

When the Introductions are obscure or cryptic for this reason, a remedy is available for the lay reader. The language of the Introductions is keyed to that of the topics. The reader can therefore go to the topic which contains the difficult word or phrase; under it he will find references to the book in which that expression is amply explained by the author who made it part of his technical vocabulary. In some instances, the difficult expression does not appear in the language of the topics, but, as used in the Introductions, it may be associated with the name of a particular author. The remedy is still to go to the References, find the citations of that author's work, and look there for its meaning.

THE BREVITY OF THE INTRODUCTIONS makes them dependent upon a reading of the great books, under the guidance of the topics and references, for the amplification of meanings. This is also true of many of the concepts and theories they deal with. Brevity of treatment, with or without quotations from authors, will leave the reader in need of fuller explanation. For the reader who is left perplexed by the Introductions, the References provide a direct route to the better understanding he seeks.

The brevity of the Introductions even helps to fulfill the primary purpose of the Syntopicon as a whole, which is to serve as a stimulus and a guide to reading the great books. Reading the Introductions can never be a substitute for reading the books. The Introductions were designed to create, and leave unsatisfied, an appetite for understanding. The quotations from the great books which they contain are always, as the volume of the References indicates, a small proportion of the quotable material. The topics with which they deal at any length are always a small proportion of the topics under the Outline for each idea.

The Introductions are thus, at best, intimations of the great conversation. They are, in short, introductions; and, in addition to all their other aims, they have a seductive aim which succeeds whenever the reader is prompted by perplexity, doubt, curiosity, or wonder to go from the Introductions to the References and from them to the great books. Since the Introductions usually employ the language of the topics, the reader is seldom left in doubt as to where he can find the additional material he seeks.

There is one other deficiency in the Introductions which results from their brevity, and it, too, has its remedy. The interconnection of the great ideas is such

that sometimes the same points—the same problems, issues, concepts, or theories —deserve treatment in the Introductions to more than one chapter. Since the Introductions appear in the alphabetical order of the ideas, each had to be written so that it could be read as an autonomous essay. This consideration made desirable the repetition of certain matters in two or more Introductions, but the amount of repetition was sharply limited by the requirement of brevity.

In consequence, certain matters, highly relevant to the dialectic of a particular idea, were reserved for treatment in the Introductions to other ideas. Wherever this occurs, the Introductions cite the other chapters in which these points are more amply treated. Thus, though any particular Introduction may be obscure because it does not fully explain all the notions or doctrines to which it alludes, other Introductions provide the reader with a remedy.

As for the great ideas, so also for the Introductions to the chapters on them, the alphabetical order conceals the intricate and highly significant pattern of their interdependence or co-implication. This order permits the reader to begin with any Introduction, or to read any one without first having to read others. But though the Introductions were designed for such use, they were also written with an eye to the total pattern of the great ideas. It is part of their aim to take the reader wherever he starts and lead him from one idea to another along paths that, crisscrossing in all directions, cover the whole circle of ideas.

IV. THE REFERENCES

THE REFERENCES, WHICH FORM THE CENTRAL PART OF EACH CHAPTER, are the heart of the Syntopicon. More than either the Introductions or the Outlines of Topics, the References represent a reading of the great books. Quite literally, each of the 163,000 references enumerated under the 2987 topics represents an examination of a book, in whole or part, for its relevance to the topic under which the reference is given.

The reading necessary to record the 163,000 references could hardly be done by one man, or even a small group of men, within so short a time as seven years. The great books could be read through once in that time, but a first reading would obviously be inadequate to the task of discovering the contribution each makes to the thousands of themes which comprise the length and breadth of the great conversation. Nor could the situation be very much improved simply by a second or third reading. The References represent a different type of reading.

To use a comparison which may help to explain the difference, the ordinary reading of a great book is like photographing a richly complex scene, taking it in as a whole by seeing the picture from a certain distance; whereas the kind of reading which produced the References is like a "close-up," viewing one detail in that scene and making it stand out as clearly as possible. As a photographic "close-up" presupposes the picture of the whole as background, so reading with a special focus presupposes the ordinary perspective in reading. In terms of this analogy, each of the 2987 topics is a special focus on the 443 works comprising *Great Books of the Western World* and, in addition, the 77 books of the Bible.

It might almost be said that, to produce the References, this body of literature had to be read with a special focus as many times as a real difference in the topics required a change of focus. At least that is the effect the References create for the user of the Syntopicon. The references under each topic provide him with a special set of readings *in* the great books, produced by reading *through* them with a particular theme or question in mind.

The necessity of employing a fairly large staff of readers to create the references for a syntopical reading of the great books and the Bible, combined with inevitable changes in personnel over a period of seven years, raised the problem of achieving a unified result from the collaboration of so many minds. If, for example, two readers understood the same topic differently, they would not be reading the books from the same point of view, when they selected passages to be cited in the references under that topic. With a staff of thirty to forty readers, the possibility and extent of such discrepancies were multiplied many times. The difficulty of obtaining a unified result was aggravated by other circumstances, such as the number of books which had to be read, the different kinds of reading demanded by their variety, and the number of topics which had to be considered in relation to one another.

Just as the Introductions have unity because they were written by one person, so, ideally, the References ought to have a comparable unity—as if, so to speak, all the reading they represent had been done by one man, yet safeguarded against the blindnesses and biases of any individual mind by having that one reader consult with many others in order to weigh and verify his interpretation of the texts.

Under the exigencies of time, and in terms of inescapable human limitations, the unity of the References could not be achieved in that way. To explain how a sufficiently unified result was obtained from the collaboration of so many minds, and to throw light on the problems faced in compiling the References, it seems useful to relate briefly how the work was done.

THE WORK OF COMPILING THE REFERENCES was accomplished in three distinct phases: a preliminary or exploratory phase; a middle period devoted to systematic reading and discussion; and a final phase in which the references were critically reviewed and edited.

At the beginning of the work, the staff of readers cited books or passages for their relevance to one or more of the great ideas. The list of ideas was still tentative; and each idea was treated as a heading by itself, without subdivision into topics. Each member of the editorial staff was assigned a particular group of authors and was responsible for discovering their contribution to the discussion of all the ideas.

The most important result of this initial exploratory phase was the realization of the need for a topical analysis of each of the main ideas. The second and more systematic phase of the work began when the list of 102 ideas was finally determined and a topical analysis of each idea had been drafted. In their first formulation the topics reflected the reading done in the previous period, but they also

required that reading to be re-done for the sake of testing the topics and improving the references.

In the concomitant development of the Outlines of Topics and the References, refinements in syntopical analysis and syntopical reading had to keep pace with one another. At each stage, the topics directed the course of syntopical reading, and syntopical reading tested the topics for their accuracy and adequacy as statements of the themes discussed in the great books. Each stage involved a renewed examination of the books in the light of the topics, and an adjustment of the topics to the discoveries of research. Topics were discarded, new ones were added; topics were rephrased or merged with one another. The next stage of reading had to respond to all the changes in topics caused by the previous stage. This meant a systematic examination of the references which had been assembled at the previous stage, and a continuing search for new references to ensure an adequate treatment of the books under the topics as then formulated.

It was crucial to the idea of the Syntopicon that the editorial staff share a common understanding of the topics and the books. But the division of labor which had been adopted tended to make the individual reader a specialist in handling a particular group of authors and works. Each member of the editorial staff developed special knowledge of certain books, special skill in reading them syntopically, and special articulateness in calling attention to the problems raised by his authors and books.

Regular staff conferences were instituted to overcome the disadvantages of such specialization as well as to take advantage of its benefits. Conducted by the Editor in Chief, with assistance from the General Editor, the conferences aimed to produce a community of understanding by considering the meaning of each idea and its topics in relation to the content of the great books as a whole. They also provided an opportunity for individual staff members to criticize the Outlines of Topics from the vantage point of a concentrated syntopical reading of a few assigned authors, and to suggest changes in the topics to accommodate the thought or language of those authors.

The proposed changes had to be considered by other staff members for their effect upon the syntopical treatment of other authors. Any change that was finally adopted had consequences for the work of the entire staff. It was the task of the Editor in Chief to harmonize the different, often conflicting, demands made on the developing structure of the Syntopicon by the content and intellectual style of particular authors; and to balance the special interests urged by individual staff members, against the general aim of making the Syntopicon reflect the content of the great books as a whole.[6]

[6]To maintain the steady flow of work, to keep accurate records of work done and changes made, and to make these records currently available for inspection by the editorial staff was an enormous clerical undertaking. The extent of these labors can best be indicated by the fact that, during the main phase of the work, the clerical staff needed to support and execute the editorial effort was two or three times larger than the editorial staff. Furthermore, the tasks to be performed were never simply clerical; they involved considerable understanding of the material being handled. Were it not for the intelligent direction and vigilant supervision of all this work by the Executive Editor, the Assistant Editors, Editorial Assistants, and Supervisors, errors made in transmitting the materials from one stage to another might have vitiated the entire editorial effort.

The system of specialization during the first two phases of the work necessitated a complete re-examination of the references in order to achieve greater unity and coherence than could be attained simply through staff conferences. To secure these results, the final re-checking of the references had to be organized in a way radically different from the way in which the references had been originally accumulated and checked.

Prior to the last phase of the work, no one of the 102 chapters had, as a whole, been scrutinized in all details; nor had any one person examined, for the topics of each chapter, all the references to the great books. Where before each member of the editorial staff had been responsible for finding and judging passages in a small number of books in relation to all ideas and topics, it was now necessary for some one person to be responsible for examining and judging all the passages cited in a single chapter. In no other way could the coherence of the references under each topic be assured. In no other way could a uniform standard of comprehensiveness and intelligibility be maintained for all the topics in a given chapter.

Under the direction of the Editor in Chief, the General Editor and the three Associate Editors undertook this final critical reading. The 102 chapters were divided among them. Each chapter was examined as a whole by one editor; each of its topics was considered in relation to the whole range of the great books. The problems raised by this study of whole chapters were discussed in general conferences, at which decisions were reached for the resolution of difficulties. The close collaboration of the five editors during this final phase of work was the nearest approach to the ideal of unity which the dimensions of the task permitted.

Both the critical nature of the work during this last period and the character of the editorial conferences required an articulation of general policies, together with an explicit recognition of the discretion needed in applying them. It is therefore possible to give, in the rest of this discussion of the References, an account of the principles which governed their compilation and may guide their sustained use.

THREE GENERAL PRINCIPLES CONTROLLED the compilation of the References. They can be stated as criteria for the acceptability of references proposed for each topic, and even for the tenability of the topic itself in the light of those references.

The first principle was the criterion of *relevance*. The acceptability of any reference under a particular topic depended upon its relevance to the meaning of that topic. This principle, though simple in itself, was extremely complex in application, because of the many types and degrees of relevance which topical headings make possible. Some indication of this can be given by an enumeration of the main types of relevance. A book or passage was judged relevant to a particular topic if it

—expounded one or more of the points made in the topic

—analyzed the meaning of the topic

—explained the significance of the topic

—affirmed one or more of the propositions implied by the topic

—denied one or more of the propositions implied by the topic

—questioned, doubted, challenged, or suspended judgment on one or more of the propositions implied by the topic

—assumed one or more of the propositions implied by the topic in order to develop the consequences of such assumption

—interpreted the meaning of the topic in relation to other matters not stated in the topic, such as its presuppositions or implications

—exemplified the topic by providing illustrative instances from poetry, history, or science

—illuminated the topic by taking it as a point of departure for discussing related matters

—satirized the topic or those who discuss its meaning seriously

These types of relevance are not mutually exclusive. For example, a particular passage may analyze the meaning of the topic as well as affirm or deny one or more of the propositions it implies. Furthermore, not only do these various types of relevance have unequal weight, but also, within each type, passages differ in the degree of their relevance to a particular topic. Hence the judgment of a reference in terms of relevance involved more than a determination that it was or was not relevant in one of the ways enumerated.

The book or passage in question had to be judged for the degree of its relevance, in itself and by comparison with other relevant materials. There was no exact measure for the minimum degree of admissible relevance. The judgment was finally made in terms of the character of the particular topic and in the light of all the other references under consideration. References were often rejected for negligible relevance as well as for irrelevance. The references now remaining under each topic are there because they were finally judged to be substantially relevant.

The second principle was the criterion of *coherence*. As we have already observed in considering the construction of the topics, a normal topic tends to have systematic ambiguity, that is, a number of related meanings. Systematic ambiguity is a middle ground between absolute univocation or unity of meaning, and absolute equivocation or multiplicity of meanings. The few topics with complete unity of meaning raised no problem, since a reference was either relevant to that one meaning or not relevant at all. The problem of coherence occurred for all the rest.

The coherence of the references under a particular topic depended on their being relevant, not to the *same* meaning in all cases, but to *related* meanings. For example, two passages, each of which may be relevant in itself because it explains the meaning of the topic, become incoherent if the meanings they attribute to the topic are utterly unrelated to one another. Strictly speaking, it is not the passages but the topic which becomes incoherent, if it includes references which construe it as having a number of *unrelated* meanings.

The principle of coherence was, therefore, an extension of the principle of relevance. It required that the topic, read in the light of all references under it,

should, if it had many meanings, always remain systematically ambiguous, and never pass into the sheer equivocation produced by unrelated meanings. It also required that a common thread of meaning should run through all passages referred to under a particular topic, making each passage relevant to the others as well as to the topic itself. This did not mean, of course, that all passages would be mutually relevant, either to the same degree or in the same way; just as the principle of relevance did not demand the same type or degree of relevance to the topic of all passages placed under it.

The remedy for incoherence was to reject certain references which did not fit with others under the same topic. If there were two sets of references which did not form a coherent whole, one set had to be rejected.

In some instances, the troublesome references constituted a small proportion of the whole collection, and the problem was easily solved by rejecting these and retaining the rest. But, in other instances the sets of passages which did not fit together were about equal in number and importance; or at least each set was sufficiently numerous and important to deserve retention. In these cases, the usual solution was to formulate a new topic under which one set could more properly be placed, leaving the others under the original topic, which then became coherent through the removal of the first set. Sometimes two new topics were formulated to replace one which had collected several mutually incoherent sets of references.

The principle of coherence automatically prevented topics from dividing into two or more sets of completely incoherent references, but it left to judgment the degree of coherence required to maintain the unity of a given topic involving a number of related meanings. The result of these judgments should be that all references found under any topic not only fit the topic, but fit together under it, and have, to some degree, the unity of a common subject matter of discussion.

The third principle was the criterion of *sufficiency*. This applied to topics, not to individual references. In the final stage of work, each topic had to be judged to determine whether its collection of references was sufficient to justify its retention.

As the principles of relevance and coherence guided the editors in correcting errors of commission, so the principle of sufficiency directed attention to errors of omission and caused a search for materials to supply the deficiency. It was never possible, of course, to be certain that all errors of omission had been corrected. Errors of commission were detectible in materials which could be thoroughly examined; but to be sure that errors of omission had not been made in the treatment of a particular topic would have meant, on each occasion of doubt, the re-examination of 443 separate works and 77 books of the Bible.

Hence the judgment as to the adequacy of a given set of references always involved doubt. It is certainly not claimed for the references under the 3000 topics that they constitute a *full* collection of the relevant passages in the great books. But the effort to check errors of omission was diligent enough to permit the claim that the references under each topic constitute an adequate representation of what the great books say on that subject.

In terms of this standard, the principle of sufficiency operated to question the retention of topics whose references, judged to be an adequate collection, did not seem to make a substantial contribution to the great conversation as a whole. At various stages of work, topics were rejected for insufficiency in content. Those which remain meet the standard of sufficiency in two ways: the references they subsume have been judged to be an adequate representation of the great books on that subject; and as represented by these references, what the great books have to say has been deemed of sufficient substance for consideration.

THE APPLICATION OF THESE THREE CRITERIA was necessarily affected by the different kinds of topics under which the references were placed. For example, the standard of sufficiency could not be the same for a restricted doctrinal topic as for one designed to comprehend every variety of doctrine. A topic restricted to the doctrine of a single author or a small group of authors was judged to have sufficient content if the references adequately represented that author or group.

The principles of coherence and relevance did not operate in the same way for simple and complex topics. In the case of complex topics, involving two or more related points, one passage might be relevant through its bearing on one of these points, and another passage, through its bearing on some other point. Thus the coherence of all the references under a complex topic had to be judged differently from the coherence of those under a simple topic.

Though the topical ideal was comprehensiveness (which meant being open to all sorts of books as well as every variety of doctrine), it was not always possible to formulate topics which had such comprehensive coverage. As already indicated, some topics were construed more narrowly and some more broadly; some were restricted to discursive passages and some were open to both discursive and exemplary passages; some were developed under a strict policy of referring only to passages right on the point and others were developed under a looser policy of referring to passages having a more remote relevance to the point, perhaps even dealing with peripheral matters.

According to these and other differences among the topics, the three principles had to be differently applied as the exigencies of each topic demanded. Relevant references were sometimes rejected because of the policy governing the construction of a particular topic. The degree of coherence achieved in certain topics was much greater than that in others. In general, however, it can be said that the more complex the topic, or the more comprehensive the range of its references, the more its references will vary in degree and type of relevance. Less coherence was required for such topics than for more restricted ones.

IN THE LIGHT OF THESE GENERAL PRINCIPLES, qualified as they must be for different kinds of topics, the following, more particular points can now be made about the references assembled under any one topic.

(1) *The order of the authors cited.* Under each topic the references are arranged in the order of the volumes in the set. This places the authors in a roughly chronological order. In two respects, this order deviates from strict chronology. References to the Bible are always placed first, in spite of the range of time covered by the books of the Old and New Testament. To have placed these books in a more accurate chronological relation to the other books would have divided the references to the Bible into several distinct groups.

The other reason for deviation from strict chronology is the association of two or more authors in the same volume. For example, the works of the three astronomers—Ptolemy, Copernicus, and Kepler—are published together in Volume 16. The position of this volume is determined by the date of Ptolemy, the earliest of the three. In consequence, though Ptolemy is rightly placed after Tacitus (Volume 15) and before Plotinus (Volume 17), Copernicus and Kepler are made to appear in the list prior to Augustine and Aquinas, who were, chronologically, their predecessors. The association of Galen with Hippocrates in Volume 10 displaces Galen by many centuries; Harvey is displaced by being combined with Gilbert and Galileo, as is J. S. Mill, by being combined with the authors of *The Federalist.* These are the major exceptions to strict chronology. For the most part, the reader who follows the order of the references under a particular topic will be following the discussion in the order of its historical development.

(2) *The order of the passages cited for a particular author.* Normally, a reference to the work of an author involves the citation of two or more distinct passages, often quite a large number. Each of these citations is a unit reference, making up the whole complex reference. The order of these unit references follows strictly the order of the pages in the volume to which reference is being made. When several works by one author are included in one volume, these works are arranged in chronological order, wherever that can be done. Hence if the complex reference to the works of a single author involves the citation of passages from several of his works, these passages will usually be cited in the order in which they were written.

For the reader, the importance of this fact is negative. The order in which passages are cited is *not* the order of their significance as contributions to the discussion of the particular topic. When many passages are cited, they are not all of equal substance. Some are capital texts, expressing the essence of the author's views on the subject. Others are subordinate texts which add qualifications, amplify or extend the major discussion, or may be of quite peripheral significance.

The reader cannot understand or assess the contribution of a particular author to a given topic until he has distinguished for himself the capital from the subordinate texts. The order in which the various passages are cited does not help him to do this. Their arrangement by pages rather than by importance was a practical necessity. Knowledge of this warns the reader that the first passages to which the references direct him may not be—in fact, they seldom are—the principal ones.

(3) *Whole and part citations.* References to a given work may be either to the whole work or to a part; and part citations vary in length from a large section, such as a book or chapter, to a small passage, consisting of a series of paragraphs or a single paragraph or even less. In the case of scientific and philosophical writings, whole works are very infrequently cited, though large sections, ranging from a whole book or chapter to a number of such divisions, may often be referred to. The citation of whole poetical or historical works is more frequent.

The reason for this difference lies in the difference, to be considered presently, between the relevance of discursive or expository passages and that of narrative or exemplary passages. In advance, it need only be said that the primary relevance of a narrative work, whether an epic or a dramatic poem, a novel or a play, usually consists in the exemplary significance of the whole narrative. This is less true of historical than of fictional narratives. Historical episodes, occupying a few pages of an historical work, are more frequently cited for their exemplary significance than are whole historical narratives; whereas in the case of fictional or poetical narratives, often nothing less than the whole story will make the point, though here, as with histories, episodes may also be cited.

In contrast, for expository or discursive relevance, it is seldom necessary to cite the whole of a scientific, philosophical, or theological work; and even the citation of large parts is necessary less frequently than for historical and poetical works. A short series of paragraphs, a small paragraph, or even a few compact sentences will often make the point adequately.

Thus, the amount of reading recommended by the references under a particular topic varies, not only with the number of unit references contained under that topic, but also with the number of whole works and large parts cited, in proportion to the number of relatively small passages. It may be thought that the citation of whole works or even of large parts tends to defeat the purpose of the Syntopicon, since no reader can reasonably be expected to read this much in the course of a syntopical reading of the great books in relation to a particular topic. But the purpose for which whole works or large parts are cited does not require them to be read every time they are referred to.

It is assumed that the reader will gradually acquire acquaintance with whole works, and will then appreciate somewhat the significance of references to whole works or large parts without re-reading. Furthermore, even prior to such acquaintance with whole works, these references inform the user of the Syntopicon of the range of literature relevant to a particular topic, even if, at the time, they necessarily leave him in ignorance of some of the content.

In other words, the citation of whole works by title performs a useful function, even if all the recommended reading cannot be done at one time. The shorter passages cited can be read and will provide an indication of the content of a topic, so that the user of the Syntopicon will have the background and the motivation for doing the more extensive reading that may have to be postponed. Not to have cited whole works or large parts, simply because of the extent of reading involved,

would have resulted in a distorted and inadequate representation of the relevance of the great books to many topics.

Several devices were used in constructing the references to help the reader in handling references to whole works or large parts.

The first simply enables him to recognize at once whether a reference cites a whole work, or a large part of it as a whole unit. As indicated in the Explanation of Reference Style, when the page numbers immediately follow the title of a work, without separation by a comma, the reference is to the work as a whole. Similarly, when a chapter or other part of a work is cited, and the page numbers immediately follow, without separation by a comma, the reference is to that part as a whole. The presence of the comma indicates that the reference is to some passage in the whole work, or in one of its parts. The absence of the comma notifies the reader that he is being referred to a whole work or to the whole of one of its parts.

The second device is the use of the symbol *esp* which stands for "especially." Frequently the citation of a whole work or a large part is accompanied by a number of references to short passages within these wholes. These references to smaller parts are preceded by the symbol *esp.* This is done where it is feasible, so that the reader, without reading the whole, can go immediately to the places where the author makes his point in compact form or most emphatically. However, the passages especially cited—even a long series of them—can never be taken as an adequate substitute for the whole.

The third device serves a purpose quite opposite to that of the second. It was not always possible to cite a number of short passages for special reference within a large whole. This could be either because nothing less than the whole work was relevant to the topic, or because the passages which showed the relevance of the whole were so numerous and so diffused throughout that an enumeration of them would be impracticable. In the latter case, the symbol *passim* was used to notify the reader that he could discover the relevance of the whole by beginning to read almost anywhere within its boundaries, and by reading as much as seemed to suit his time and interest. When the citation of a whole work, or of a large part, is unaccompanied by either *esp* or *passim*, the reader is offered no alternative to reading the whole.

(4) *The boundaries of the references.* The problem of boundaries occurs only for references to passages which are less than a whole work, or a whole part, such as a whole chapter or section. In the case of wholes, the boundaries indicated in the references are, of course, the opening and closing pages. But for any passage which is less than a recognizable part or section of the work, the boundaries aim to give the user of the Syntopicon a unit of reading which combines maximum brevity with maximum intelligibility.

Ideally, the passage cited should begin at whatever paragraph or line the relevant material begins; and it should end, similarly, with the paragraph or line after which the material ceases to be relevant. The method of citing half-pages for

volumes printed in a single column of type, and quarter-pages for volumes printed in a double column—described more fully in the Explanation of Reference Style—made it possible for the references to indicate the initial and terminal boundaries of a passage with some precision. But to locate the beginning or end of a passage within a quarter- or a half-page still leaves a margin of uncertainty, and so the reader must often exercise some judgment to decide precisely where the passage begins and ends. The boundaries of the passage are given with absolute precision only where the reference includes line numbers. In all other cases, the boundaries are only approximately indicated.

The Explanation of Reference Style explains how boundaries are shown by page numbers and sections, and by author's divisions and line numbers. The problem to be discussed here concerns the editorial effort to combine maximum brevity and maximum intelligibility in the determination of boundaries.

These two aims were often in conflict: there was always the risk of diminishing the intelligibility of the passage by narrowing its boundaries for the sake of brevity or compactness; there was always the opposite danger of introducing diffuseness and even irrelevance by extending the boundaries for the sake of making sure that the passage would be adequately intelligible. No rule could be formulated for effecting the compromise which would always *maximize* both values. In fact, the determination of boundaries called for a different kind of judgment in referring to different authors, and even to different works of the same author. It was much easier for certain types of writing than for others—easiest, perhaps, for the mathematical and scientific works, most difficult for the poetical and historical works, especially in the citation of narrative passages having exemplary relevance.

It cannot be expected that boundary problems were always perfectly solved. In a certain proportion of the references, the passages may be either too long or too short. But even in these instances the margin of error is probably not very great—not enough to put the user of the Syntopicon to much trouble or inconvenience.

(5) *Kinds of passages and kinds of books.* We have already referred to the difference between the relevance of discursive or expository passages and the relevance of narrative or exemplary passages. This is a distinction which divides all the references into two main groups. No matter what the type or meaning of the topic under which it is cited, every passage cited is relevant in one of these two ways. It either discusses the topic or illustrates its meaning. Sometimes the same passage does both, though it usually is predominantly of one sort or the other.

It might at first be thought that the great books would also divide into two groups—those providing expository and those providing exemplary passages. To some extent this is true. Since they are essentially discursive writing, the great works of mathematics, experimental science, social science, philosophy, and theology naturally tend to yield references which have expository relevance—expounding, explaining, analyzing, affirming, denying, doubting, arguing. The

great works of poetry or fiction, of history and biography, being narrative in form, naturally tend to yield references which have exemplary or illustrative significance. But there are important exceptions in both cases.

The great narrative works, whether poetical or historical, contain essentially discursive passages. The fictional or historical characters in the narrative think and speak about a vast number of the themes which constitute the topics of the 102 chapters. Wherever, in the course of a narrative, men speak or think in an orderly sequence, such speeches or trains of thought may have discursive relevance to one or more topics. Furthermore, in many of the great poetical and historical works, the author speaks in his own person on themes germane to his narrative. These passages are, of course, discursive and may have expository relevance.

On the other hand, the great discursive works of science, philosophy, and theology contain passages which are exemplary or illustrative in their significance. These passages differ in one important respect from the illustrative materials in the poetical and historical works. They are seldom, if ever, narrative in form. For example, a scientific treatise will contain descriptions of experiments performed; a mathematical work will contain particular demonstrations; and such passages may have exemplary or illustrative significance for a topic dealing with scientific theory or method.

There are a few exceptions to the rule that expository or discursive works do not contain narrative passages which can be cited as exemplary. The myths and stories told in the dialogues of Plato are certainly narrative in form. But these passages almost always contain material which is implicitly, if not explicitly, discursive. They are among the best instances of writing which seems to have both sorts of relevance to the same topic. Other instances are passages containing descriptions of scientific experiments, accompanied by theoretical comments of general significance.

The Bible is unique, perhaps, in respect of the frequency with which its passages combine both sorts of relevance. There are, of course, many purely narrative passages in the Old and the New Testaments, as there are many which seem to contain preachment or precept exclusively. But a very large number of biblical passages combines example with precept, or parable with preachment. It may even be said that the most famous and striking passages in the Bible transcend the distinction and have a type of significance or relevance uniquely their own.

Nothing in the way a given reference is symbolized or recorded notifies the user of the Syntopicon which kind of passage is being cited. In a few instances, he may be able to guess what to expect from the nature of the work referred to. If a narrative work is cited as a whole, or even in any large part, its significance for the topic will almost necessarily be exemplary rather than expository. But if the passage cited is relatively small, then, even in a narrative work, the passage may be either expository or exemplary. In general, this is also true of the citation of all, or large parts, of expository works. Here, as before, relatively small passages may be of either sort. Where no clue is provided by the general character of

the work being cited the user of the Syntopicon can discover the significance of the passage only by reading it.

(6) *Series of references which have collective significance.* It has already been pointed out that the references under a particular topic are unequal in their relevance to it. References were sometimes rejected because their relevance was too remote or slight. But sometimes an opposite policy was followed. A reference which, by itself, might have been judged insubstantial or remote took on greater significance when read in the light of other references under the same topic. In consequence, it was retained, both for what it added to the whole collection of references and for its own increased significance as a member of that collection.

A collection of references, possessing a certain unity through the inner relation of its members, was most frequently constituted by a series of passages from the works of a single author. But sometimes references to one author were judged in the light of references to others. A given author's contribution to the discussion of a certain topic might be slight if taken by itself, but it gained interest in relation to the utterances of others on the same topic; and so otherwise slight passages were retained because of their value as members of the whole collection of references under that topic.

This information about the way in which the references were often constructed to achieve a collective effect may help the user of the Syntopicon. One who examines *all* the references under a topic will usually find that some of the authors cited are major, and some minor, contributors to the discussion. He will also find that, for a single author, some passages referred to make a major, and some a minor, contribution.

The person who has read through all the passages bearing on a topic will have little difficulty in discriminating between the major and the minor voices in the great conversation on that theme. The elements of the collection will tend to assume their proper places and proportions. But to one who is still in the process of reading the passages in the order in which they are cited, the collective significance of the whole, and of each part as a member of it, will not be apparent.

Such a person will encounter many passages whose content does not seem to justify their inclusion. If he bears in mind that a passage may have more significance within the collection than it has alone, he will suspend judgment on its worth until he has gone further in his reading under that topic. Unless an error was made, the questionable passage is there because it was judged that the reader would eventually see more of interest in it than first meets the eye, by re-reading or remembering it in the light of other passages.

The chapter on MAN contains a good example of a large collection of references which have more significance collectively than they do individually. The topic reads: "Cultural differences among men: Greek and barbarian, Jew and gentile, European and Asiatic." Of the more than one hundred passages cited, it can almost be said that no single one by itself deals adequately with the subject of cultural differences among men, or even with the specific cultural differences

mentioned. But references to the Bible form a significant collection on the distinction of Jew and gentile, and so do those to Gibbon. The series of references to Herodotus, Thucydides, Plato, Aristotle, and Hippocrates forms a significant collection on the distinction of Greek and barbarian. The references to Montesquieu and Hegel are significant on the distinction between European and Asiatic. Some of the references to Hegel, taken together with those to Darwin and Tolstoy, form a collection which illuminates the subject of cultural differences in general. Thus the whole set of references is adequate to the topic in a way that no single reference or small group of them is.

A collection of references may also be used to achieve an intelligible rendering of the contribution of narrative works, poetical or historical. Where the whole narrative could not be cited, it was often possible to select a series of episodes—particular scenes and events—which, read successively, would have the cumulative effect of illustrating the topic. This is often the point of a long series of references to Herodotus, Tacitus, Plutarch, and Gibbon, or to Homer, Virgil, Dante, Milton, Tolstoy, Dostoevsky, and Melville.

With discursive works there was less necessity for grouping references to achieve a cumulative effect. But even here it was often true that only a certain number of the passages referred to had independent significance, whereas others depended for part of their significance on the context provided by the collection. However, it should be added that, for most of the great works of science, philosophy, and theology, the number of passages which could be cited for their independent significance exceeded the number which could be cited only in the context of others.

IN THE LIGHT OF THESE CONSIDERATIONS, two general rules can be formulated to guide the reader in interpreting the materials recommended for his reading.

1. The location of a passage under a topic reflects the judgment that it is relevant in some manner and degree to the subject in question; but it does not indicate the kind of relevance, or whether the relevance is dependent on other passages. The reader must discover that for himself.
2. To discover the significance of a particular passage, the reader must consider it in relation
   a. to the kind of book from which it is taken;
   b. to other passages from the same book, or other books by the same author;
   c. to passages from other authors cited under the same topic, with some attention to their chronological order, and to the kinds of books written by the different authors being considered;
   d. to the collective significance of the whole set of references.

One other observation should be added. Very frequently the same passage is cited under different topics of one chapter, as well as under the topics of different

chapters. The user of the Syntopicon may meet the same passage many times as he goes from topic to topic, or chapter to chapter. A moment's reflection will discover the reason for this.

A passage rich in content is naturally relevant to a large number of different topics, and deserves as many different readings as are necessary to exhaust its meanings. Each topic under which it is cited directs the user of the Syntopicon to read the passage in a different way—interpreting it in the light of that particular topic. A previous reading of the passage in another connection will usually not suffice for an understanding of its relevance to the topic under which it now appears.

This is particularly true of passages open to conflicting interpretations. Such passages will appear, in the same chapter, under topics which express a conflict of theory or opinion, and must be examined in the light of these topics if the reader wishes to discover how they are susceptible of such conflicting interpretations.

WE MUST NOW CONSIDER A NUMBER OF EXCEPTIONS to the rules just stated. The rules may guide the user of the Syntopicon in interpreting what he will normally find in the references, but they do not take account of deviations from the norm. Perhaps these deviations can be best described by enumerating the three kinds of special problems which arose in constructing the references: (A) those caused by the special character of certain topics; (B) those caused by the special character of certain books; and (C) those caused by considerations of scholarship or by difficulties of interpretation.

(A) PROBLEMS CAUSED BY THE SPECIAL CHARACTER OF CERTAIN TOPICS

(1) *The distinction and relation between supraordinate and subordinate topics.* This distinction has already been sufficiently explained in the section of this Appendix dealing with the topics (see pg. 1247). The supraordinate topic is a heading under which the subordinate topics logically fall, as making particular points or as elaborating the meaning of the supraordinate. But some supraordinates function *only* as logical headings for a number of subordinates, whereas other supraordinates function also as topics *in their own right.*

The supraordinates which are only headings have no references cited under them. They are, from the point of view of content, empty. All other supraordinate headings have references under them, just as their subordinates do. But because of their special character as supraordinate topics, their reference content tends to differ from that of subordinate topics.

Supraordinate topics were used to collect in one place all passages dealing in general terms with points treated in particular terms in the passages cited under the subordinate topics; *or* they were used to list references to whole books or large parts of books, while references under the subordinate topics cited shorter passages.

These methods of developing a supraordinate topic were frequently combined. When a supraordinate was developed according to either or both methods, its references tend to cover the same ground as do those of all the subordinates together. The supraordinate will refer to the most general or the most inclusive passages which are divided among the various subordinates. Since the subordinate topics state particular points, or cover parts of the whole subject indicated by the supraordinate, they will contain many passages not cited under the supraordinate.

The usual difference in reference content between a supraordinate topic and its subordinates is this: the passages cited under the supraordinate cover, without distinction, all the points which are divided among the subordinate topics; the passages cited under each of the subordinates were selected to distinguish the discussion of one of these points from that of others.

One example may clarify the relation between supraordinate and subordinate topics. In the chapter on LANGUAGE, the Outline of Topics opens as follows:

1. The nature and functions of language: the speech of men and brutes
   - 1*a*. The role of language in thought
   - 1*b*. The service of language to society
2. Theories of the origin of language
   - 2*a*. The hypothesis of one natural language for all men
   - 2*b*. The genesis of conventional languages: the origin of alphabets

The two subordinate topics (1a and 1b) make particular points generally covered by the first clause in the wording of supraordinate topic 1. Similarly, in supraordinate topic 2, the two subordinates (2a and 2b) deal with particular aspects of the theory of the origin of language. Accordingly, the reference content of topics 1 and 2 will include much that will also be found under 1a and 1b, 2a and 2b, but without any discrimination of the particular points which their references provide.

Some of the reference content of the supraordinates will not appear under either of the subordinates, because certain passages are so general as to be relevant only to the supraordinate topics. Similarly, certain passages, because particular in their significance, have relevance only to the subordinates, and appear only there.

Topic 1 in the chapter on LANGUAGE happens to illustrate another point which holds true for a number of supraordinate topics. Topic 1 is complex. The part preceding the colon states the main theme; the part following, a subordinate theme. The subordinate theme is itself a special point in the general discussion of the nature and functions of language. Hence it is mainly the first part of topic 1 which functions as a supraordinate for topics 1a and 1b.

The reference content of this complex supraordinate topic will therefore include, besides those passages that belong in a supraordinate, passages relevant to the narrower, special point made in the part of the topic following the colon.

These passages will not reappear under the subordinate topics, unless they are relevant there for other reasons; as, for example, a discussion of human and animal societies might deal, in this connection, with human speech and animal cries. What is true of this complex supraordinate topic holds generally for all complex supraordinates which in part state general themes that cover the particular points made in the subordinate topics, and also in part state particular themes of their own.

One other kind of topic, which is not strictly a supraordinate because it has no subordinates under it, sometimes resembles the supraordinate topic in the range and character of its reference content. That is the opening topic of a chapter, which frequently stands alone. For example, in the chapter on CITIZEN, the opening topic—"The individual in relation to the state"—has no subordinates; neither does the opening topic in the chapter on CONSTITUTION—"The difference between government by law and government by men: the nature of constitutional government."

Both of these opening topics have maximum generality for the range of discussion covered by the whole chapter. In a sense, therefore, they can be regarded as logically supraordinate to all the topics which follow. Accordingly, such opening topics will include among their references many passages that will be cited again under later topics.

In the light of the foregoing consideration of supraordinate topics, the following recommendation is made to the user of the Syntopicon. If he is interested in the whole ground covered by the supraordinate topic together with its subordinates, he will generally find it profitable to examine first the passages cited under the supraordinate. If, however, his interest is only in some particular point treated in one of the subordinates, he can go directly to the passages cited under that topic. He can supplement this later by turning to the broader materials referred to under the supraordinate, or even, perhaps, by turning to the materials cited under other subordinate topics. In general he should bear in mind that references listed under a supraordinate will more frequently cite whole books or longer selections therefrom, than will references listed under the subordinates.

(2) *Restricted or doctrinal topics.* Ideally, a topic should be phrased so as to comprehend every variety of relevant doctrine, and include materials from every type of book. But as we have already observed (see pg. 1239), a certain number of topics fall short of this ideal of comprehensiveness. Either their wording restricted them to the doctrine of one particular author or a special group of authors; or they were construed strictly, rather than broadly, so as to exclude certain types of material. Usually, the strictly construed topics excluded passages of exemplary rather than discursive relevance.

These facts about restricted topics are repeated here merely to advise the user of the Syntopicon not to expect the same range of materials in the reference content of all topics. For example, he should not always expect to find exemplary passages along with expository ones; though, had the topic been construed less

strictly, such passages might have been there because they are relevant. Nor can he always expect to find all the passages with discursive relevance to a particular subject, if its treatment has been divided among a number of separate doctrinal topics. In such cases, he must look to a whole group of related doctrinal topics to cover all the relevant authors and books.

Even within a single topic, different authors were sometimes treated differently because the special contribution of each could be most effectively handled in a somewhat different manner. For example, one author might be cited only for his major utterances on the subject, whereas another might be represented by an almost complete collection of the passages from his works, including those of minor as well as those of major relevance. This was the result of a judgment that, on the topic in question, one author's complete position should be examined, while, for another author, only that portion of his work which bears directly on the subject need be considered.

One other special point deserves mention here, though it does not belong to the problem of the restricted topic. Certain topics, as noted (see pg. 1237), state comparisons, contrasts, distinctions, or differences. Ideally, to be relevant to such a topic, a passage should deal explicitly with the comparison, etc. But not all the references listed under such topics cite passages explicitly on this point. Some deal explicitly with just one of the terms being compared, and involve the other only by implication; sometimes they do not consider the other term even by implication. These passages are cited on the ground that the comparison proposed by the topic is to be found in the set of references as a whole, if some passages deal with one and some with the other of the terms to be compared.

In a few rare cases of topical comparisons or distinctions, no passages could be found which made the comparison or distinction explicitly, and yet the sense of the tradition on that point could be gathered from a series of passages dealing with one or the other of the two terms.

(3) *Contrary or contradictory topics.* Quite frequently a supraordinate topic states a problem or issue on which there are a number of opposed points of view; the subordinate topics severally state the opposite views. Sometimes a general subject of inquiry is announced by the supraordinate topic, and its subordinates propose various theories of the matter, contrary to one another in some way.

Such sets of topics presented a special problem in constructing the references. In the ordinary case in which a topic not only stated the issue but aimed to cover all controversial positions taken on it, the set of references was developed to include both affirmations and negations of the point at issue, or all sides of the controversy. But when a number of topics explicitly set forth the controversial positions, the reference content of each topic was restricted in the following way.

Passages which expressed a view in any way contrary to the view stated in the topic were not cited, on the ground that some other topic, stating that contrary view, was the proper place for the citation of the contrary position. But if a particular author, in developing his own theory explicitly commented on the position

of an adversary, the passage containing that explicit commentary was judged relevant to both topics—the topic stating the view opposed by the author as well as the one stating his own view. If, however, an author's expression of his own opinion constituted the denial of some other view *only by implication*, the passage in which that author's opinion was expressed was cited only under the positive topic and not under the contrary one as well.

A glance at the structure of the Outline for a particular chapter, and a quick examination of the wording of its topics, will tell the user of the Syntopicon in which way controversial issues were handled—whether by single topics covering all sides of the controversy, or by separate topics representing opposing sides. In the former case, the reader can expect to find contrary views expressed in passages cited under a single topic; in the latter, he will find only affirmative opinions in the passages cited under each of a set of contrary topics, and perhaps also explicit criticisms of each position by its adversaries.

(B) PROBLEMS CAUSED BY THE SPECIAL CHARACTER OF CERTAIN BOOKS

(1) *The Bible.* No other book in the western tradition has been subject to such extensive interpretation, or to interpretation based on such incompatible principles as, for example, on the one hand, the principles of higher criticism which treat the Bible as a secular document, and, on the other hand, the principles of exegesis peculiar to a text considered to be the sacred and revealed word of God. Let us deal with this second point at once, since it is paramount for the significance of all references to the Bible.

The Bible, especially the Old Testament, is to a certain extent an historical book. It reports the events of Jewish history; it describes the customs of the Jewish people and the gentiles with whom they came in contact; it deals with the political and social institutions of the Jewish tribe, the Jewish state, and the kingdoms of Judah and Israel. Biblical passages of an historical tenor were, therefore, found relevant to topics dealing with customs, social practices, and political institutions. But citing them under such topics did not prejudge the issue whether the Bible is sacred writing or merely an historical record, like any secular history.

Those who, in the light of their religious faith, read the Bible as Sacred Scripture do not exclude the historical or literal sense as one mode of interpreting it. On the contrary, they usually insist that the literal or historical sense must be the basis of all other interpretations—allegorical, anagogical, and moral.

Nor is the issue of the two approaches to the Bible prejudged by any other aspect of its treatment along with references to the works included in *Great Books of the Western World.* No matter what the topic under which the Bible is cited, the reader is always left quite free to decide that issue for himself. He can always read a biblical passage *either* as a portion of divine revelation, *or* as human writing no different from other human literature.

This is true even when the Bible is cited under topics which explicitly state a religious position, either one common to Judaism and Christianity, or one exclusively Jewish or Christian. The reader is still free to interpret the passage either as conveying the divine revelation of the religious dogma in question, or as conveying the opinion of Moses or Isaiah, of Matthew or Paul, on the subject.

Of course, a passage will not have the same meaning when read as the revelation pertinent to an article of religious faith, as when it is read as the merely human formulation of a religious tenet; but then, though perhaps to a lesser degree, passages from other books have different meanings for the man of religious faith and for the man without it.

A second problem concerning the Bible was that of choice among different, and often conflicting, interpretations of particular passages, especially those whose meaning has been much disputed throughout the tradition of biblical commentary. This problem was solved, as was the first, by *not choosing* between conflicting interpretations. If a particular passage, on one traditional interpretation, was relevant to a certain topic, it was cited there. If, by another traditional interpretation, it was also relevant to another topic, even one contrary in tenor to the first, it was cited there also. This permits the reader to consider both interpretations and judge between them.

Since biblical exegesis is, in a sense, an endless process, it may be asked what limits were set to placing diverse interpretations on a particular passage. The answer is that the work of citing the Bible was governed, in large part, by well-established traditional interpretations; and where these were not available, the judgment was nevertheless made in conformity with generally accepted standards of interpretation and by analogy with the interpretation of similar passages.

Still another problem concerned Christian interpretations of Old Testament passages which do violence to the Jewish sense of their meaning. Such passages were treated in the light of both interpretations. Therefore, the user of the Syntopicon should not be surprised to find passages from the Old Testament cited under topics which state specifically Christian doctrines denied by the Jewish faith. These references do not prejudge the theological issues between the two historic religions of the West. Failure to cite these passages in their Christian as well as in their Jewish sense would have meant failure to present these issues, so far as the Bible is concerned.

Finally, there was the somewhat parallel problem of conflicting interpretations within the Christian tradition itself, as between the Roman Catholic and the Protestant interpretations. In general, the problem was solved in the same way as that of Jewish versus Christian interpretations of the same texts. But this problem was complicated by the incorporation of the divergent interpretations in two English translations of the Bible—the Douay and the King James.

Not only are some crucial passages quite differently rendered in the two versions, but the books of the Bible itself are often differently named or numbered, and differently ordered to one another. Certain books which the Douay version treats as parts of the Old Testament, the current King James translation treats as

Apocrypha. Even within particular books, the numbering of chapters and verses is frequently different.

Hence it was necessary to refer to both the King James and the Douay versions whenever there was even the slightest variance between them. (This complication in the mode of citation of biblical passages is more fully treated in the Explanation of Reference Style.) To whatever extent the treatment of the Bible approaches adequacy, the thousands of paired citations, giving King James and Douay equivalents in book, chapter, and verse, constitute a concordance between the Protestant and Roman Catholic renderings of the Bible.

This method of citing the Bible according to both versions whenever they varied led to one difficulty for which there was, finally, no satisfactory solution. In a small number of cases, the wording of a passage in one version made it relevant to a topic to which it was not at all relevant according to the language of the other version. Under such circumstances, to cite the passage would be to prejudge for the reader the rightness of one version as against the other. Avoidance of this meant omitting some few passages which readers of one version would know, and think relevant to the topic under which it was not cited. What was thought the less unsatisfactory of the two solutions was chosen. The error of omission was judged less grievous than the violation of the Syntopicon's rule of dialectical objectivity, which demanded most insistently to be followed in such cases of conflicting interpretation.

Errors of omission of this sort were unavoidable. But they were, in the very nature of the case, not the only errors of omission, since it was never possible to be sure that all traditional interpretations of the Bible, from whatever source, had been taken into account, much less all the possible interpretations to which biblical passages are subject. Furthermore, the references to the Bible will be judged by many critics of quite different persuasions to contain grave errors of commission—serious misinterpretations of difficult texts which, in consequence, have been assigned to topics where they do not belong.

The decision to include references to the Bible along with those to the works published in *Great Books of the Western World* was made with all these risks in mind. It seemed better to undertake this task, whatever defects or errors would certainly remain in the finished work, than not to have the voice of the Bible present in the great conversation. More than half the authors in this set quote the Bible, refer to it, or write with the Bible in mind. The Bible could not be omitted from the references under many topics to which it is relevant and wherein the other books assume its presence.

(2) *The poetical and historical books.* Next to the Bible, the great narrative works of history and fiction presented the greatest difficulties. What was done here may be the subject of much controversy. It may be held that the meaning of poetry—and, to a lesser extent, of history—cannot be comprehended under ideas or topics. It should be said in reply that it is not claimed that the meaning of a poem like the *Iliad*, the *Divine Comedy*, or *War and Peace*, is exhausted by references

which cite it as relevant to the consideration of certain ideas and topics. The same disclaimer applies to the histories of Herodotus, Thucydides, Tacitus, and Gibbon, and to the biographies of Plutarch.

A brief statement of the theory governing the syntopical treatment of such works may indicate some of the difficulties, and prevent some misunderstanding of what was done. The controlling theoretical insight was that abstract and concrete, universal and individual, are everywhere correlated. For example, the fictional character and actions of Achilles, in the *Iliad*, are ideas in concrete or particular embodiment. The historical episodes, reported by Thucydides, in the struggle between democracy and oligarchy in the Greek city states, present individual instances of certain universal propositions in political theory. Again, many passages in his *History of the Peloponnesian War* concretely exemplify the problems of might and right in the relation of states to one another.

A political theorist would state these issues abstractly and universally and would, perhaps, formulate general conclusions as to the consequences of trying to combine democracy with imperialism. A poetical historian, like Thucydides, makes such points concretely by telling the tragic story of what happened to democratic, imperialistic Athens.

To say that the whole of the *Iliad* can be cited under a topic on the relation of men and gods, or that particular scenes or episodes can be cited under topics dealing with honor or pride or love, is not to say that the poetic meaning of the *Iliad* can be exhaustively comprehended by such references, even if they were themselves exhaustive of its content so far as that is relevant to the ideas and topics of the Syntopicon.

To say that the *History of the Peloponnesian War* can be cited as a whole under certain topics in the chapters on JUSTICE or LIBERTY, and to say that particular events in it can be cited under topics dealing with treaties between states, military strategy, or political revolution, is not to say that such references, even if complete, would exhaustively represent the content or significance of the *History*.

But neither is it claimed that the references to the great scientific and philosophical works exhaust their content or meaning. No more is claimed for any work of either kind—narrative or discursive—than that the references to it represent, more or less adequately, its contribution to the great conversation, on as many themes as it may have relevance for. So far there is no difference. The difference lies simply in the mode of relevance. What one kind of work says abstractly, in terms of general propositions and universal concepts, the other kind says concretely, in terms of individual characters and particular actions or events.

The whole theory of the references to fictional and historical narratives under ideas and topics, rests on the logic of example. Logically, to exemplify is to present individual or particular instances of a universal concept or a general proposition. To abstract or generalize is the logical opposite of exemplification: it consists in stating the universal concept or general rule which applies to a particular case, and embraces all similar particulars as well. Without going further into the logic of universal and particular, of abstract concept and concrete ex-

perience, let it suffice to say that the references in the Syntopicon which have discursive relevance move on the plane of the abstract and the general; whereas the references which have exemplary relevance move on the plane of the concrete and the particular.

The basic theory underlying the collocation of references to expository and narrative works under the same topics is simply that the two planes run parallel to one another. They are at all points correlative expressions of the same thing. They are as inseparable from one another, and as indispensable to one another, as human thought and human experience. Nothing which can be grasped by the human mind on one plane is incapable of expression on the other; in fact, nothing can be grasped by the human mind on either plane without also being available to insight or experience on the other.

Using this theory as a basis for the syntopical reading of the great poetical and historical narratives did not prevent or solve all difficulties in the treatment of particular works. It is impossible to give a brief account of these difficulties, since they were as various as the works themselves. Each narrative seemed to raise problems of its own. It should be reported, for whatever guidance it gives the user of the Syntopicon, that all problems were not solved with equal success.

The references to Tolstoy's *War and Peace*, for example, seem to be a better indication of its exemplary relevance to the topics, than those to Dostoevsky's *Brothers Karamazov*. The same difference appears between Milton's *Paradise Lost* and Goethe's *Faust*, or between Gibbon's *Decline and Fall of the Roman Empire* and the *Histories* and *Annals* of Tacitus. These works may have presented unequal difficulties; some may have yielded more readily to a syntopical reading than others. The other alternative is that the syntopical reading of these works was not equally well or imaginatively done. In any case, reading the narrative works to discover their exemplary relevance to the topics was always a more difficult task than reading them for their discursive relevance.

A word should be added here about this second type of reading to which the narrative works were submitted. A speech by Pericles or Hamlet can have the same kind of relevance to a particular topic as a statement on it by a philosopher or a theologian. The poetical and historical works are rich in discursive relevance to many topics, especially those dealing with moral and political subjects, and hardly less so with respect to metaphysical and theological themes.

But one distinction must be kept in mind in considering references to the thought contained in narrative works. The thought of Pericles or Hamlet is not the thought of Thucydides or Shakespeare, at least not in the sense in which the discourse of Marcus Aurelius, Montaigne, Darwin, Marx, or William James expresses the thought of an author speaking in his own person. Sometimes an historian or poet speaks in his own person as well as through his characters. Thucydides does, and so does Gibbon; Fielding and Tolstoy are at some pains to distinguish their own reflections from the thoughts of their characters. In other cases, no such distinction can be found because the author did not make it. In all the plays of Shakespeare there is no word from the poet himself as distinguished from the utterances of his characters.

What Shakespeare himself has to say is said only by his plays, and only through the exemplary significance of narrative, of character and action. In contrast, Tolstoy speaks in two ways—in an exemplary fashion through narrative of character and action, and discursively through the passages in which Tolstoy himself discourses on a variety of subjects. In addition, both Shakespeare and Tolstoy have much to say discursively through the speeches of their characters. But this indirect mode of speech must always be distinguished from the author's own discourse, and certainly from the totally non-discursive—that is, the exemplary—significance of the poet's creation of plot and characters.

This distinction applies to a certain number of works not ordinarily classed as poetry or history. The dialogues of Plato constitute a striking exception to the rule that the scientific and philosophical authors speak in their own persons. The thoughts and speeches of Callicles, Gorgias, Thrasymachus, Alcibiades, or even Socrates himself, are not direct discourse by Plato.

Because they have the poetical form of dramatic narratives, the dialogues of Plato presented a very special problem. In one sense, they had to be treated like the plays of Shakespeare. A particular speech by a character in the dialogues was cited like a particular speech by a character in the plays—for its discursive content and without any judgment as to whether it expressed the thought of the author or the very opposite. But since there can be no question that Plato used the dialogues to express his own ideas, it was also necessary to construct the references to the dialogues so that they represented Plato's own opinions as well as those of his characters.

In many cases this could be done by following the line of thought in the speeches of that one character which Plato used as his *alter ego*. This was usually Socrates, but sometimes another, as, for example, the Athenian Stranger in the *Laws*. In other cases, it had to be done either by citing a sequence of discursive passages in which Plato's own argument or theory becomes clear, or even by citing a whole dialogue. These last two methods of representing the thought of Plato resemble the method of representing Shakespeare's thought by citing a sequence of dramatic episodes or the narrative content of a whole play.

But the difference in the treatment of Plato and Shakespeare is as important as the similarity. Whereas the representation of Shakespeare's thought was achieved only through the exemplary significance of whole plays or narrative episodes therefrom, the representation of Plato's thought was achieved mainly through the discursive significance of whole dialogues, or analytical and argumentative passages therefrom. However, in a few cases, a dialogue was cited for its narrative as well as for its expository significance; as, for example, the *Apology*, which tells the story of the trial of Socrates, or the *Crito* and *Phaedo*, which tell the story of his imprisonment and execution.

Though the dialogues of Plato are the most striking exception to the rule in the treatment of philosophical and scientific works, similar methods were sometimes employed in other cases. For example, the *Two New Sciences* of Galileo is written in dialogue form. Here, as with Plato, the opinions of the characters in the

dialogue were sometimes cited, even though they were plainly not expressing the opinion of Galileo.

The scientific and philosophical treatises of Aristotle are partly historical. They usually give an account of the thought of others, as well as expound Aristotle's own ideas. The references to Aristotle, therefore, include the citation of passages which report opinions with which Aristotle may disagree—for example, those of Parmenides, Democritus, Anaxagoras, or others. This does not involve passing judgment on the reliability of Aristotle's report. Aristotle's summary is often the main or only historical evidence on certain doctrines in antiquity. Were such passages not cited, the discussion of a number of topics would be less rounded than it is.

In only one case is an author's report of the views of others not cited in isolation from his comments thereon. That is the case of Aquinas. Since the statement of the objections—the opinions of others—in the *Summa Theologica* is always accompanied by replies, and each reply is paired with an objection, the objections are never cited by themselves.

(3) *The mathematical and scientific books.* The above paragraphs deal with the treatment of the expository works of science, philosophy, and theology, insofar as they presented problems like those presented by narrative works of poetry and history. Furthermore, we have already pointed out that particular demonstrations in mathematical treatises, or descriptions of particular experiments in works of natural science, were often cited for their illustrative significance under topics dealing with the theories or methods of mathematics and science. Such references do not differ, in mode of relevance, from those to particular episodes in narrative books. They exemplify the point of the topic under which they are cited.

But the mathematical and scientific books presented one difficulty peculiarly their own. For example, certain propositions in Euclid's *Elements* are relevant to a topic in the chapter on QUANTITY which deals with the relations of solids and with inscribed and circumscribed spheres. But these propositions are not intelligible apart from prior ones on the properties of the circle—propositions not strictly relevant to the topic in question. These should not be cited here, but under another topic in the chapter on QUANTITY which deals with circles.

No completely satisfactory solution could be found for the problem raised by the order of propositions in a mathematical treatise. On the one hand, to cite only the relevant propositions under a particular topic, and to omit reference to all the prior theorems on which their intelligibility depends, makes it necessary for the reader to discover these prior theorems for himself, if he wishes to understand the propositions cited. On the other hand, to cite, under a particular topic, not only the mathematical propositions directly relevant to it, but also all the prior demonstrations on which they may depend for their intelligibility, would almost always frustrate the user of the Syntopicon by making him begin his reading with propositions of no apparent relevance to the topic in question. He might have to go through a long series of propositions before he came to those bearing directly on the topic.

Of these two alternatives, the first was chosen as slightly less unsatisfactory. The user of the Syntopicon will at least see at once the relevance of the propositions cited; and, recognizing his failure to understand these propositions in isolation, he can remedy his difficulty by finding their logical antecedents. He needs only to know that, in the order of mathematical exposition, later propositions depend upon earlier ones for both their demonstration and their intelligibility.

This is true not only of strictly mathematical treatises, but also of all the great works in mathematical physics, such as Galileo's *Two New Sciences*, Newton's *Mathematical Principles of Natural Philosophy*, Fourier's *Analytical Theory of Heat*, and the astronomical treatises of Ptolemy, Copernicus, and Kepler. For example, in the chapter on ASTRONOMY, there is a group of topics on the particular heavenly bodies. One of these deals with the moon and its irregularities. Under that topic, Proposition 66 in Book I of Newton's *Principles* is directly relevant. But in Newton's exposition, Proposition 66 depends on at least thirty prior propositions. According to the policy followed, only the one relevant proposition was cited; the others were omitted because they were irrelevant, even though absolutely necessary to the understanding of Proposition 66.

Spinoza's *Ethics*, written *in ordine geometrico*--in the geometrical order—clearly indicates that this special problem is caused by the nature of mathematical demonstration. Its subject matter is metaphysical and moral, not mathematical, but the *Ethics* presented the same problem as Euclid's *Elements* or Newton's *Principles*, because it used an order of exposition in which propositions are logically related as prior and posterior. The method employed in referring to a mathematical work was therefore used also for Spinoza's *Ethics*, just as the method employed for Plato's dialogues was also applied to Galileo's. References to Spinoza's *Ethics* cite particular propositions without citing all the prior propositions on which they depend.

The problem of referring to propositions in works written in a mathematical manner is an aggravated form of the more general problem faced in treating all expository works, scientific, philosophical, or theological, as well as mathematical. As already pointed out, it was frequently necessary to cite a whole series of passages, some major, some subordinate, in order to present an author's thought on a particular topic adequately. The significance of many of these passages, especially the minor ones, depends on the context of the others; and since passages are always cited according to the order in which they occur, the user of the Syntopicon is often asked to read first something which gains significance only from materials to be read subsequently. But there are two differences.

In the case of works not written in a strictly deductive order, the passages cited first in a series of references may depend for their significance upon materials which come later, whereas in the mathematical or deductive order, later propositions always depend on earlier ones. In non-mathematical works, all the passages in a series have some relevance to the topic in their own right; whereas in mathematical works, the prior propositions are strictly not relevant at all.

(c) SPECIAL PROBLEMS OF SCHOLARSHIP AND INTERPRETATION

(1) *The problem of translations.* More than half of the works included in *Great Books of the Western World* are translations. If translations were always faithful to the sense of the original language, this would raise no problem. But, as every one knows, they are not. All translations are subject to suspicion, and almost none ever satisfies all competent scholars.

Scientific or philosophical works are generally better translated than poetic works. Translations from modern languages, such as Italian, French, and German, are usually better than those from ancient languages, and among the latter, translations from Latin are usually superior to those from Greek. It might almost be said that no Greek scholar is ever perfectly satisfied with an English rendering of Greek poetry or philosophy.

Even if the translations from Greek published in this set were the best available, it would still be true that certain passages, clearly relevant to particular topics in their English rendering, become less clearly relevant, or even irrelevant, when read in the Greek. The members of the staff who did the syntopical reading of the Greek books discovered this again and again.

They raised a difficult question. Were they to cite the passage according to its significance in the original Greek or in the English translation? If, whenever there was a variance between original and translation, the interpretation of the passage and its topical allocation were to be determined by the Greek wording, the user of the Syntopicon would find passages in the English translation omitted from topics to which they are relevant. If, on the other hand, the wording of the translation was to be the standard, the reader would find Homer, or Aeschylus, or Plato cited under topics to which, according to some good scholarship, they are not relevant.

At first this appears to be a choice between errors of omission and errors of commission. Actually, it was a deeper problem, involving a decision as to the purpose the Syntopicon could and should serve. Since the Greek books were being published in English, it would have been totally impractical to make the references depend upon the sense of the Greek. By reading the passages cited in English, the reader could not possibly discover why they were relevant to the topic; and, in addition, he would find relevant passages which were not cited. Since the purpose of the Syntopicon is to guide the reading of the great books as here published, the only solution, however unsatisfactory it may be in some respects, was to base the interpretation and topical allocation of passages on their sense in English translation.

This solution applies, of course, to translations from all foreign languages. But it is less unsatisfactory for the others than for the Greek books. It will not seem unsatisfactory in any case to the general reader with only English at his command. Since he must become acquainted with the great books in translation, the

Syntopicon serves him well by referring to them as if they were all written in English. The scholar may regret the distortions and errors necessarily consequent upon this policy, but he is in a position to correct such errors wherever he discovers them.

(2) *The problem of interpretation.* Almost all of the great books contain passages which, even when translated with absolute fidelity or when originally written in English, are difficult to interpret—passages on which there has been much scholarly commentary and on which competent scholars have long disagreed. The topical allocation of such a passage according to one theory of its meaning would inevitably evoke criticism from the scholars of an opposite school.

The solution of this problem was, in part, like that of the special problem of biblical interpretation: the same passage was cited under different topics according to divergent or even conflicting interpretations of it. As in reading biblical texts, well-known traditional interpretations were consulted and often followed.

Here the great books themselves were helpful. Later authors comment on earlier ones. The interpretation of one great author by another was frequently available and was often influential in the syntopical treatment of a particular passage. Even when two or more among the great authors disagreed in interpreting one of their predecessors, it was still possible to follow their divergent readings of the passage by placing it under as many different topics as were suggested by the diverse meanings they assigned to it.

To whatever extent the method of multiple interpretation and allocation was successfully practiced, the references, even to extremely difficult passages, avoided the necessity of choosing between conflicting theories of their meaning. But it cannot be claimed that *all* the recorded interpretations of difficult texts were followed in allocating those passages—not all the interpretations to be found in the great books themselves were used, much less all those which can be found in the voluminous literature of scholarly commentary on the great books. Again, the policy was determined by the primary purpose of the Syntopicon—to serve the general reader of the great books rather than the scholar.

A large number of scholarly interpretations of difficult texts are highly specialized. They often involve an elaborate theory of the whole work and, beyond that, of the mentality of the author. For the Syntopicon to follow such interpretations would only bewilder the general reader. He would find passages cited under topics to which their relevance could not be apparent, because it depended on hidden principles of interpretation.

The controlling principle, therefore, was to place passages only under topics where their relevance would become apparent to the general reader either when he read the passage carefully in the light of the topic, or read it carefully in this light and also in the light of some or all of the other passages cited under that topic. Scholarly interpretations which did not permit the references to conform to this rule had to be ignored.

(3) *The problem of the validity of the great conversation.* The compilation of the references under topics and ideas construes the authors as talking about the same themes, and even as talking to one another about them. In the latter sense, the great conversation is admittedly in part a fiction, since earlier authors cannot actually talk to later ones. Nevertheless, logically, their remarks on a subject often function as comment on or even rejoinders to the remarks of their successors. Though they are chronologically arranged, the references under each topic do not form a straight line but a circle, in which any point may be diametrically opposed to any other. The great conversation does not move irreversibly from past to present; it moves in a circle of thought which partly transcends time.

The assumptions underlying the construction of the references to represent the great conversation have already been stated and defended in this essay. But the issue they raise between the historical and dialectical treatment of ideas deserves further comment here.

In its most extreme form, the position of historical scholarship is that each of the great authors, certainly the greatest among them, somehow managed to create an intellectual world entirely his own—peopled by his own ideas, walled in by the unique systematic ordering which he imposed upon them, and rendered incommunicable with other worlds by his private vocabulary. According to this extreme position, to talk with or listen to one of the great authors on any of the great themes, it is necessary to gain admittance to his world with the keys provided by historical scholarship. The keys are available to anyone who will take the pains to acquire them—to anyone except the great authors themselves who, having constructed their own worlds, insist upon talking and being talked to, each in his own. In one sense, they lock each other out; in another sense, each introduces the others into his own world, but always recreates them in his own image.

According to this view of the history of ideas, a genuine dialectic of ideas is impossible, and the notion of the great conversation is an imposture. The references, which collect the authors under the same topic and present them as relevant to one another as well as to the same theme, does violence to the principles and method of their work by blindly ignoring the innermost secret of their individuality. If the passages cited by the references had been properly interpreted, each according to the special lights of its author, they could not have been placed side by side in this way.

The issue raised by the most extreme form of historical scholarship thus finally comes down to a question whether the passages cited in the references were rightly interpreted. The question cannot be decided simply by reading the passages, for even if they do *appear* to be relevant to one another and to the same topic, the historical scholar who denies the great conversation can always insist that the *appearance* results from a superficial reading, and that the *reality*, discernible only by a deeper understanding of the texts on historical principles, is quite otherwise.

The issue is one of conflicting assumptions—or, perhaps, presumptions. If it is presumptuous, on the part of those who constructed the Syntopicon, to stand outside the great authors in an effort to align them in a conversation and engage them in a dialectic which they themselves did not always explicitly recognize, it may be no less presumptuous, on the part of the extreme exponents of historical scholarship, to isolate the great authors from one another, imprisoning each in his own intellectual world.

No doubt the kind of complete immersion in the work of a single author which the best scholarship often involves, tends to impress one with the unique and incommensurable character of his thought. But the contrary impression can be as readily formed by a dialectical reading of the books. At its best it also involves complete immersion, not in the work of one author, but in the tradition which somehow embraces them all.

Whether a final understanding of the great books would favor the intellectual isolation or communion of their authors—or both -is a question that must be left to any reader who feels competent to make that judgment. The user of the Syntopicon need not make it while in the process of using the Syntopicon. He need only know that the Syntopicon was constructed on dialectical principles, not on the principles of historical scholarship in their most extreme form.

He will then realize that the interpretation of the passages cited in the references was based on the assumption that the books can be read together and can be construed as mutually relevant under many topics, if not under all. Whatever his own final judgment, he will be guided by the knowledge that the creators of the Syntopicon were committed to the policy of trying to see the authors as somehow more in communion than in isolation.

The creators of the Syntopicon acknowledge taking a position on this ultimate issue of interpretation. This does not mean that they were unaware of or undisturbed by the difficulties of applying their principles. The preceding discussion of the construction of the references consists largely of a recital of difficulties, and of the frequent necessity of choosing the less objectionable of two unsatisfactory solutions.

The effort to achieve dialectical comprehensiveness by means of systematic ambiguity in the topics may sometimes have stretched equivocation to the breaking point. In other cases, the margin of equivocation permitted may have been misleadingly and unhelpfully great. In still others, the unity among the authors may have been a thin thread as compared with the bulk of their differences. But all these risks were knowingly undertaken in the interest of showing that the great authors can be read as though in conversation on the same question or topic, even when their positions and language are so disparate that more cautious scholars would hesitate to ascribe unity to the topic, or coherence to the conversation.

The scholars take another sort of risk which the creators of the Syntopicon were unwilling to assume—the risk of asserting that the topics discussed and the questions answered by one author are incommensurable with the topics and questions

considered by another. As between the dialectical unity of the western mind and the historical isolation of its individual geniuses, the true meaning of the intellectual tradition can be discovered only by taking risks of both sorts. Justice must be done to each author as an individual and to his place in the tradition.

THROUGHOUT THE PRECEDING DISCUSSION, the aim has been to assess the virtues and defects of the References, to indicate possible errors of omission and commission and their causes, and to consider the problems of interpretation which could seldom be perfectly solved.

But even if no errors of commission had been made, and no mistakes in interpretation, the References would not represent an adequate comprehension of the contribution of the great authors or the content of their books. The References merely try to indicate what the books have to say on these topics. They undoubtedly have much more to say than can be exhausted by even a complete allocation of their contents under the 3000 topics that were chosen.

The fact that certain authors or books yielded more readily than others to the method of the Syntopicon certainly does not mean that the latter are less rich or meaningful because they are represented by fewer references. These defects and discrepancies naturally resulted from the effort to treat the whole set of books—the whole tradition rather than individual authors and works—as the object of study. Therefore, syntopical reading of the great books as a whole may necessarily be a more or less inadequate reading of each individual book. The one need not be substituted for the other, nor should it be.

There is also inadequacy in the reverse direction. Even if no errors of omission had been made, the References would not represent an adequate discussion of the topics. To take them as such would be to assume that what the great books have to say on these subjects exhausts everything that can be said or even everything that has been said. Many topics of great significance have references collected under them which do less than complete justice to the problems or issues they propose. The Outlines of Topics frequently include questions or themes on which other books especially concerned with these subjects amplify, and in some cases add, often substantially, to what the great books have to say. Therefore, to round out the discussion, a list of Additional Readings at the end of each chapter supplements the References assembled in that chapter.

V. THE ADDITIONAL READINGS

THE WORKS RECOMMENDED were chosen to supplement the works contained in *Great Books of the Western World*. They were selected, for each chapter, to round out the discussion of the idea and topics to which the great books make the principal contribution.

The Additional Readings far from exhaust all the writings which could be listed as relevant to a particular chapter. More than relevance was required. The books chosen for each chapter had to make a significant and substantial

contribution to the discussion of the chapter's idea and topics; and their contribution was largely measured by the degree to which they did not repeat, but rather added to what was said by the great books cited in the References.

Only primary works were considered; that is, no books about books or authors were recommended, only books about the subject matter of the chapter and its topics. This criterion excluded two sorts of books which, in other connections, have much interest and merit: the vast literature of commentary on the great books and their authors, and the equally vast literature of intellectual history—histories of the arts and sciences, of philosophy and religion, and of ideas in general. In a few instances, historical works of this sort were listed because they were not exclusively historical, but also contained some primary discussion of the subject matter of a science.

Earlier in this essay, we considered the criteria underlying the selection of the works included in *Great Books of the Western World.* It was then observed that the distinction between these and some of the extremely important works listed in the Additional Readings expressed a judgment as to which books were *indispensable* for the great conversation and for the liberal education attainable by participation in it. This distinction, like the one between the 102 great ideas and the many other terms listed in the Inventory of Terms, is sometimes difficult to make and to defend. As there are borderline terms which might have been included among the great ideas, so there are borderline books which might have been included among the works published in this set. But, for the most part, the differentiation is clear enough and clearly defensible.

It should be noted at once that the distinction between the works published in this set and the Additional Readings, is a distinction between two groups of books, not two groups of authors. Each list of Additional Readings includes a few authors represented in this set, as well as many authors not represented. Not all the writings of the great authors are published in this set. Some of these are works of importance only for particular ideas, or their topics. These deserve to be recommended just as do similarly limited works by authors not represented in this set.

Since it seemed probable that users of the Syntopicon would develop a special interest in the great authors, the Additional Readings for each chapter were divided into two groups: I. Authors represented in this set; and, II. Authors not so represented.

This separation may prove convenient to the reader who wishes to know whether the authors cited in the References of a given chapter had anything else to say on its topics. There is no difference between the two groups so far as the works themselves are concerned. In both, the titles are of works not published in this set, but recommended because they round out the discussion of a particular idea or some of its topics.

THE CRITERION OF RELEVANCE in selecting the Additional Readings was essentially the same as that employed in constructing the References. But there were differences in its application.

First, the books and passages cited in the References were always judged for their relevance to one topic, never to the idea as a whole or to a large group of topics; whereas the works cited in the Additional Readings of each chapter were judged for their relevance to the idea as a whole. In only a few instances are works recommended because of their importance to the discussion of a particular group of topics. Most of the works cited in the Additional Readings are recommended for their relevance to the whole idea or to almost the whole range of its topics. It was not practicable to indicate that a recommended work had a limited relevance to particular topics. The user of the Syntopicon must discover this for himself. Sometimes the wording of a title reveals its direct bearing on certain topics.

Secondly, in the references to the great books, the usual citation is a short passage; whole books or large divisions of them are cited much less frequently. In the Additional Readings, the usual citation is a whole book; references to large divisions are much less frequent, and to short passages, still less so.

However, in both the References and the Additional Readings, some of the materials have discursive relevance and some have exemplary relevance. The Additional Readings include autobiographies, histories, and works of poetry or fiction—novels and plays—as well as essays and scientific, philosophical, and theological treatises. They even include lyric poems, which have the same sort of relevance as the sonnets of Shakespeare and the shorter poems of Milton in the set. For example, as a certain sequence of Shakespeare's sonnets is relevant to the ideas of LOVE and TIME, Wordsworth's *Ode to Duty* and his *Ode on the Intimations of Immortality* are relevant to DUTY and IMMORTALITY. The only difference is that the sonnets of Shakespeare were cited under particular topics, whereas the two odes of Wordsworth were cited for the whole ideas.

THE PREPARATION OF BIBLIOGRAPHIES or reading lists on particular subjects is usually the work of specialists in those fields. Unlike the selection of the great books, which is properly the task of those concerned with general or liberal education, the selection of readings on specific subjects should be guided by those who are expert in some specialized field of learning or research. While the Board of Editors could take full responsibility for the contents of *Great Books of the Western World*, the editors of *The Great Ideas* could not assume a like responsibility for the contents of its 102 reading lists.

They therefore obtained the help of experts by the following procedure: they constructed tentative lists of readings for each chapter, and sent these to specialists in various fields for criticism and emendation, asking them to recommend titles not listed, and to suggest the deletion of titles not worthy of inclusion.

The editors are grateful to the scholars who so generously contributed their time and effort to this part of the project, and substantially improved the lists by their recommendations. But these recommendations could not be taken as finally decisive. Many of the lists were sent to two or more specialists who, as might be expected, disagreed on a certain number of items. It was necessary for the editors to decide in such cases of conflict.

Furthermore, it was impossible to ask a large number of scholars to check all the 102 reading lists. At most they could be asked to examine a small number of them. Yet it was desirable to obtain a certain degree of consistency for all the lists. Therefore, some effort had to be made to see that the same principles of selection were applied uniformly to all 102 lists. This was done by a small number of consultants, who reviewed and revised the complete set of reading lists, each consultant considering all lists from the standpoint of some particular type of book—such as poetical works, historical works, mathematical and scientific works, philosophical and theological works.

Finally, neither the specialists who gave advice on books in particular fields nor the consultants who examined all the lists could be expected to understand fully the precise purpose the Additional Readings were intended to perform in the Syntopicon. For this, they would have had to study the Outlines of Topics, and also to know the range of the references under each topic. To make the Additional Readings supplement the References, chapter by chapter, it was necessary to know on what points and in what way the discussion of each idea and its topics needed to be amplified.

Since work on the References was in process at the same time that the Additional Readings were being constructed, such knowledge was neither available nor easily communicable. The final judgment on the content of the Additional Readings had to be left, therefore, to the editors of *The Great Ideas.* In the last two years of work on the Syntopicon, they revised the lists which had been constructed and corrected during the preceding years. They had to assume responsibility for whatever errors of omission or commission the lists contained.

A FEW WORDS SHOULD BE ADDED HERE to account for what scholars and specialists are likely to regard as errors of omission or commission. As the Syntopicon was designed primarily for use by the general reader, so also were the Additional Readings. Consequently, certain things were intentionally omitted, though their importance and relevance could be reasonably defended.

In many fields, there is a vast periodical literature of important essays, articles, research reports, and monographs. Such literature is generally not available to the general reader, who is limited to what can be found in bookstores or in local public libraries, and seldom has access to the great collections of a few university libraries or a few public libraries of national standing. Furthermore, the monographs and papers which appear in the learned journals are usually extremely technical, and their contribution to the discussion of a subject is usually narrow and specific rather than broad and general. For these reasons, no periodical literature was included in the Additional Readings, except in the few cases in which papers or essays, first published in learned journals, were later collected and published as books; and then only if these papers were not too narrow in their significance.

For similar reasons, the effort was made to cite only books written in English or translated into English, though here there were more exceptions to the rule.

In every case, the exceptions had to be justified on the ground that the untranslated work was of such crucial importance or such unique significance that the discussion of the subject would suffer substantially from its omission. This is especially true of the literature of antiquity and the Middle Ages, some of whose basic works are not yet translated.

To the reader with no foreign language at his command, the inclusion of these titles is a recommendation which is now only instructive, but may become useful at some future date. It can be hoped that works not yet translated at the time of publishing the Syntopicon will progressively become available in English.

The same general policy was followed in the case of works out of print and not available in any except a few public or university libraries. It seemed purposeless to recommend to the general reader titles he could not procure in some edition, either at bookstores or public libraries. Yet here as before a certain number of exceptions were made, on the ground that the particular title was of extraordinary value. Since such works may once again become available through the publication of new editions, these recommendations may also have some future usefulness.

The chief criticisms of errors of commission are likely to be directed by scholars against some of the contemporary works included in the reading lists, *i.e.*, mainly works published in the last five or ten years; to a less extent, all works published in this century.

Except for Freud's later writings, this set of great books contains no works published in the twentieth century. The reason is not that no great books have been written in this century. Rather it is that not enough time has yet elapsed to give anyone the necessary detachment and perspective to decide which contemporary books belong with the great books of the past. The factor of recency is responsible for considerable controversy over which books of the nineteenth century deserve to be classified as great, and it is generally much easier to get a judgment approaching unanimity concerning the great books of antiquity and the Middle Ages than those of modern times.

For the same reason, the contemporary works listed in the Additional Readings are more likely to be criticized than all the rest. It is much more difficult to assess their contribution or estimate their importance accurately. When a sound judgment can be formed about them, some will certainly turn out to have been overestimated.

At the risk of such errors of commission, a deliberate effort was made to include in the reading lists as many contemporary books as possible. This seemed desirable because *Great Books of the Western World* stops short of this century, and also in order to give concrete evidence that all of the ideas and many of the themes of the great conversation are subjects of inquiry and discussion by the most active minds of our own day. That some contemporary books are recommended which may ultimately be judged unworthy, seemed on the whole less of a disservice to the user of the Syntopicon than would be the omission of these books. In trying to include the most recent publications, the Additional Readings in some chapters cite original works published as late as 1950.

INVENTORY OF TERMS

INVENTORY OF TERMS

The Inventory of Terms is designed to facilitate the use of the Syntopicon as a reference book. By means of the terms here listed in alphabetical order, it directs the reader to the relevant topics in the 102 chapters, and thus enables him to discover what the great books have to say on the 3000 topics which represent the themes of the great conversation. The titles of the 102 chapters are included in this alphabetical list because each of the great ideas is also a term in topics of chapters other than the one devoted to its consideration.

In order to see the particular topic in the context of related topics, the reader should turn first to the Outline of Topics in which the particular topic occurs. Immediately following the Inventory (p. 1346), a table lists the pages in Volumes I and II of *The Great Ideas* on which each Outline of Topics appears. The Outline of Topics in each chapter directs the reader to the pages of its Reference section where the particular topic is treated.

EACH TERM IN THE INVENTORY is accompanied by references to the chapters and topics in which it is a significant element. The terms are the words or phrases printed in bold face type. Whole chapters are cited by both chapter number and name; for example, *see* CH 4: ART. Individual topics are cited by the name of the chapter and the number of the topic in the Outline of Topics of that chapter; for example, *see* ART 5a.

In each entry, topics are cited in the alphabetical order of the chapters in which they appear. However, whole chapters, when cited, always precede individual topics. In some entries, the citations are divided into two groups, those of primary and those of secondary significance. The first group is separated from the second by a diagonal line.

SOME WORDS CARRY A QUALIFIER in parentheses to indicate the sense in which they are being used. For example, **Balance** (*phys.*) stands for the term *balance* as used in physics; **Crisis** (*med.*) stands for the term *crisis* as used in medicine. When the same word is used in two or more senses, qualifiers indicate the distinct terms it represents. For example, **Function** (*biol.*) stands for the term *function* as it is used in biology, and **Function** (*math.*) stands for the term *function* as it is used in mathematics.

Terms which are the names of particular sciences, such as logic or biology, may be related to topics which treat the nature of the science itself, or they may be related to topics concerned with the subject matter of that science. The words "science of" or "subject matter of," following words like "logic" and "biology," indicate which sort of topic is being cited. For a small number of such words, the qualifying phrase is not needed to determine the meaning.

Phrases are sometimes necessary to express a single term or to make its meaning definite; for example, **Law of contradiction, Military strategy and tactics.** The same purpose is served by pairing related or similar words; for example, **Appearance and reality, Franchise or suffrage,** and **History, historian.**

FOR COMMENT ON THE USE of the Inventory of Terms, see the Preface (Vol. I, pp. xviii–xx); and for the general principles and methods of its construction, see Appendix II (Vol. II, pp. 1225–1228).

A

***A priori* and *a posteriori*:** *see* EXPERIENCE 2d; JUDGMENT 8c; KNOWLEDGE 6c(4); REASONING 5b(3) / *see also* MATHEMATICS 1c; MEMORY AND IMAGINATION 1a; SPACE 4a–4b; TIME 6c

Abilities (*psychol.*): *see* LIFE AND DEATH 3; MAN 4–5a; SOUL 2c–2c(3) / *see also* ANIMAL 1a(1)–1a(4); HABIT 2b, 5–5d; KNOWLEDGE 6b; MAN 6a; QUALITY 2a; SOUL 2a; VIRTUE AND VICE 2a

Abiogenesis: *see* EVOLUTION 4c / *see also* ANIMAL 8b; EVOLUTION 4a

Abnormal and normal: *see* NATURE 2e

Abnormality (*psychol.*): *see* DESIRE 6b–6c; DUTY 4b; EMOTION 3a, 3c–3c(4); LOVE 2a(2)–2a(4); MAN 5b; MEDICINE 6a–6c(2); MEMORY AND IMAGINATION 2c(2)–2c(4), 5c; MIND 8–8c; ONE AND MANY 3b(5); OPPOSITION 4c; PLEASURE AND PAIN 8c; PUNISHMENT 6; SIGN AND SYMBOL 6c; SIN 5; WILL 9b

Absolute: *see* ONE AND MANY 1; OPPOSITION 2e / *see also* HISTORY 4a(3); IDEA 1f; MIND 10f–10f(2); PROGRESS 1a

Absolute and limited government: *see* CONSTITUTION 1; LAW 7a; MONARCHY 1a–1a(2); TYRANNY 5–5c / *see also* CITIZEN 2b; CONSTITUTION 3a;

GOVERNMENT 1b; MONARCHY 4d–4c(4); SLAVERY 6b–6d

Absolute and relative (*philos.*): *see* RELATION 6–6c; UNIVERSAL AND PARTICULAR 7–7c / *see also* BEAUTY 5; CUSTOM AND CONVENTION 9a; GOOD AND EVIL 6d; HISTORY 4c; OPINION 6a; TRUTH 7a–7b

Absolute and relative (*phys.*): *see* CHANGE 7c(3); RELATION 6a; SPACE 2a; TIME 1

Absolute Idea: *see* IDEA 1f / *see also* DIALECTIC 2d(2); HISTORY 4a(3); PROGRESS 1a

Absolute mind: *see* MIND 10f

Absolution (*theol.*): *see* RELIGION 2f; SIN 4e / *see also* GOD 9e; RELIGION 2c

Abstemiousness: *see* DESIRE 6b; TEMPERANCE 2

Abstract and concrete (*log.*): *see* IDEA 4b(1); MEMORY AND IMAGINATION 5b; ONE AND MANY 1c; SIGN AND SYMBOL 2e

Abstraction: *see* IDEA 2g; MEMORY AND IMAGINATION 6c(1); UNIVERSAL AND PARTICULAR 2b–2c, 4c / *see also* BEING 8b; EXPERIENCE 2b; MAN 1b; MATHEMATICS 2a; QUALITY 6a; SENSE 5a; SPACE 5

Abulia: *see* WILL 9b

Acceleration: *see* MECHANICS 5e(2), 6c; QUANTITY 5c

Accident and substance: *see* BEING 7b–7b(6); FORM 2c(2) / *see also* BEING 8c–8e; MATTER 1b; NECESSITY AND CONTINGENCY 2d; ONE AND MANY 3b(3); QUALITY 1, 3d; QUANTITY 1

Accidental and essential: *see* BEING 8d–8c; NECESSITY AND CONTINGENCY 3a–3c; ONE AND MANY 3b(1); SAME AND OTHER 3a / *see also* CHANCE 1a, 2a; NATURE 3c(1)

Accidental and intentional: *see* PUNISHMENT 2a; VIRTUE AND VICE 5c; WILL 3a–3a(2)

Accidental and substantial change: *see* BEING 7b(5); CHANGE 6; MATTER 1b / *see also* CHANGE 7–10c

Accidental sensibles: *see* SENSE 3c(4)

Acoustics: *see* MECHANICS 7b

Acquired characteristics: *see* EVOLUTION 3a

Acquisitiveness: *see* DESIRE 7a(3); VIRTUE AND VICE 6c; WEALTH 10c(3)

Action and contemplation: *see* HAPPINESS 2b(7); KNOWLEDGE 6c(1); LABOR 1b; PHILOSOPHY 4a, 4c, 6d; PLEASURE AND PAIN 4c–4c(2); PRUDENCE 2a; STATE 8c; WISDOM 1b, 2c

Action and passion (*metaph.*): *see* CHANGE 3; TIME 5a

Action and production: *see* KNOWLEDGE 6e(2); PRUDENCE 2b / *see also* ART 6c; KNOWLEDGE 8a; LABOR 2–2b; SCIENCE 3–3b; VIRTUE AND VICE 2a(2)

Action and reaction: *see* CHANGE 7d; MECHANICS 1b

Action-at-a-distance: *see* ASTRONOMY 3b; MECHANICS 6d(2); SPACE 2c

Actual or personal sin: *see* SIN 2a, 4–4e

Actuality and potentiality (*metaph.*): *see* BEING 7c–7c(3); FORM 2c(1); INFINITY 4c; MATTER 1–1a / *see also* HABIT 1a; INFINITY 1b; MATTER 3b; MIND 2b; QUANTITY 7; TIME 5b

Adam: *see* MAN 9b–9b(1); SIN 3–3c; WILL 7c(1)

Adaptation (*biol.*): *see* ANIMAL 3d, 11b; EVOLUTION 5a(1); HABIT 3c; LIFE AND DEATH 4

Addition: *see* INFINITY 3a; MATHEMATICS 4a

Adequate and inadequate ideas and knowledge: *see* IDEA 3b, 6c; KNOWLEDGE 6d(3); OPINION 3b

Adjudication: *see* LAW 5g; PRUDENCE 6b

Administration (*pol.*): *see* GOVERNMENT 3e–3c(2); LAW 7c; MONARCHY 1b(3)

Adolescence: *see* FAMILY 6c; LIFE AND DEATH 6c; MAN 6c

Adoration: *see* DUTY 11; GOD 3c; HONOR 6a; RELIGION 2b

Adult: *see* FAMILY 6c; LIFE AND DEATH 6c; MAN 6c

Adultery: *see* FAMILY 4d; SIN 2c(1)

Aesthetic judgment: *see* ART 7b; BEAUTY 5; JUDGMENT 4 / *see also* CUSTOM AND CONVENTION 9a; NATURE 5d; POETRY 8; UNIVERSAL AND PARTICULAR 7c

Aesthetics, science of: *see* BEAUTY 5; JUDGMENT 4; PHILOSOPHY 2c; POETRY 8

Aesthetics, subject matter of: *see* ART 1–8; BEAUTY 1–2, 5–6; GOOD AND EVIL 1c; KNOWLEDGE 6c(1)–6c(2); NATURE 5d; POETRY 1–1b, 5–6b, 8–8c / *see also* JUDGMENT 4; KNOWLEDGE 8a; PHILOSOPHY 1d; RELATION 6c

Aetiology (*med.*): *see* MEDICINE 5d–5d(2), 6c–6c(2)

Aeviternity: *see* ANGEL 3c; ETERNITY 1b; TIME 2a

Affective qualities: *see* PLEASURE AND PAIN 4b; QUALITY 2a

Affective tone (*psychol.*): *see* SENSE 3c(2)

Affirmation and negation (*log.*): *see* INFINITY 2b; JUDGMENT 6b, 7a; OPPOSITION 1d(1); REASONING 2a(2)

After-effects (*med.*): *see* MEDICINE 5c

After-life: *see* IMMORTALITY 5–5g / *see also* ETERNITY 4d; GOD 7g; HAPPINESS 6, 7c–7c(3); KNOWLEDGE 7c; MIND 4c; PROPHECY 2a; PUNISHMENT 5d, 5c(1)–5e(2); SOUL 4d 4d(4)

Age: *see* LIFE AND DEATH 6–6c; MAN 6c

Agent intellect: *see* MIND 1a(4)

Aggression: *see* WAR AND PEACE 3a / *see also* GOVERNMENT 6; JUSTICE 9f; WAR AND PEACE 6a

Agnosticism (*theol.*): *see* GOD 2c; KNOWLEDGE 5a(1); THEOLOGY 5

Agriculture: *see* ART 9a; LABOR 5b; NATURE 2a; WEALTH 3c

Air: *see* ELEMENT 3b; MECHANICS 5b, 5d; OPPOSITION 3b

Alchemy: *see* CHANGE 10a; ELEMENT 3c

Algebra: *see* MATHEMATICS 4a; MECHANICS 3c

Alien: *see* STATE 5a

Alimentary system (*biol.*): *see* ANIMAL 5e, 6b

Allegiance: *see* CITIZEN 4; DUTY 10; LAW 6a, 7d; REVOLUTION 1b; STATE 3c / *see also* JUSTICE 10b; LAW 6c; REVOLUTION 6a

Allegory: *see* POETRY 8c; RHETORIC 2a; SIGN AND SYMBOL 4d

Alliances (*pol.*): *see* GOVERNMENT 5a; STATE 9e (2); WAR AND PEACE 10g, 11c

Almsgiving: *see* RELIGION 2c; WEALTH 10c(1)

Alphabets: *see* LANGUAGE 2b

Alteration: *see* CHANGE 9–9b; QUALITY 5

Altruistic love: *see* LOVE 1c, 2b–2b(4)

Ambiguity: *see* LANGUAGE 5a; SIGN AND SYMBOL 3a, 4c

Ambition: *see* DESIRE 7a(2); HONOR 2b, 5a

Amendment (*pol.*): *see* CONSTITUTION 8a; REVOLUTION 1a

Amnesia: *see* MEMORY AND IMAGINATION 2c(3)

Amnesty: *see* JUSTICE 9g

Amusement: *see* PLEASURE AND PAIN 4d

Analogy (*biol.*): *see* ANIMAL 2b; LIFE AND DEATH 3b

Analogy and the analogical (*log.*): *see* IDEA 4b (4); REASONING 4f; RELATION 1d; SAME AND OTHER 3b; SIGN AND SYMBOL 3c(1), 3d / *see also* BEING 1; GOD 6b; SIGN AND SYMBOL 5f

Analysis and synthesis (*log., math.*): *see* LOGIC 4d; MATHEMATICS 3c; PHILOSOPHY 3c; REASONING 5b(3), 6b

Analytic and synthetic judgments: *see* JUDGMENT 8b

Analytical geometry: *see* MATHEMATICS 1d; MECHANICS 3c

Anarchy: *see* DEMOCRACY 2; GOVERNMENT 1a, 5; LIBERTY 1b; TYRANNY 3

Anathema (*theol.*): *see* RELIGION 6c(1)

Anatomy, subject matter of: *see* ANIMAL 3–3d; SENSE 3a / *see also* EVOLUTION 6c, 7b(1)

Ancestors: *see* FAMILY 7b

Ancestry (*biol.*): *see* EVOLUTION 3d, 4c, 5, 7b, 7b(2), 7c; MAN 8c

Angel: *see* CH 1: ANGEL; *and* KNOWLEDGE 7b; MIND 10c / *see also* BEING 7b(2)–7b(3); ETERNITY 4a; FORM 2d; HONOR 6b; LANGUAGE 11; MAN 3b; SOUL 4d(2); UNIVERSAL AND PARTICULAR 4b

Anger: *see* COURAGE 3; EMOTION 2–2b; SIN 2c(1)

Angles (*math.*): *see* QUANTITY 3a; SPACE 3d

Animal: *see* CH 2: ANIMAL; CH 24: EVOLUTION; *and* LIFE AND DEATH 3–4; MAN 1a–1c, 4a–4c; REASONING 1a; SENSE 2a–2c; STATE 1a / *see also* CHANGE 10b; EMOTION 1c; HABIT 3–3e; KNOWLEDGE 7d; LANGUAGE 1; LIFE AND DEATH 6a; MAN 8c; MEMORY AND IMAGINATION 6b; MIND 3–3c; SOUL 2c(2); WILL 3a(1), 6c

Animal society: *see* STATE 1a

Animate and inanimate: *see* CAUSE 2; CHANGE 6c, 8–10b; LIFE AND DEATH 2 / *see also* NATURE 3b; WORLD 6b

Animism: *see* ASTRONOMY 8b; MIND 10b; NATURE 6a; SOUL 1a; WORLD 1a

Annexation (*pol.*): *see* STATE 9c(1); WAR AND PEACE 6a

Anthropology, subject matter of: *see* CUSTOM AND CONVENTION 2–4, 7a–7b; EVOLUTION 7c; MAN 2b(1), 7–7c, 9c; STATE 1c

Anthropomorphism: *see* GOD 6a; RELIGION 6f

Antinomies (*log.*): *see* DIALECTIC 3c; OPPOSITION 1c; REASONING 5c; THEOLOGY 3c

Antiquity: *see* TIME 8a–8b / *see also* EVOLUTION 7c; MAN 9c

Antithesis and thesis (*philos.*): *see* DIALECTIC 3d; HISTORY 4a(3); OPPOSITION 2b; 2c

Anxiety: *see* EMOTION 3c(3); SIGN AND SYMBOL 6c

Aphasia: *see* MEMORY AND IMAGINATION 2c(3)

Apodictic judgment: *see* JUDGMENT 6c; NECESSITY AND CONTINGENCY 4e(1) / *see also* HYPOTHESIS 5; REASONING 2b

Apologetics: *see* RELIGION 6b; THEOLOGY 4c

Appearance and reality: *see* BEING 7c; DIALECTIC 2a(1) / *see also* BEING 3a, 5

Apperception: *see* SENSE 3c(5)

Appetite: *see* ANIMAL 1a(3); DESIRE 1–3d; HABIT 3a; SENSE 3e; WILL 1

Applied science: *see* ART 6c; KNOWLEDGE 6c(1)–6c(2), 8a; MATHEMATICS 5; PHYSICS 5; PROGRESS 3c; SCIENCE 1b(1), 3b

Appreciation (*aesth.*): *see* ART 7–7b; BEAUTY 4–5; JUDGMENT 4; MEMORY AND IMAGINATION 7a; NATURE 5d; POETRY 8–8c; SENSE 6; UNIVERSAL AND PARTICULAR 7c

Apprehension (*log.*): *see* IDEA 2g, 6f; JUDGMENT 1; PRINCIPLE 2a–2a(3)

Apprentice: *see* LABOR 3d

Archetype: *see* ASTRONOMY 3a; FORM 1a; GOD 5f; IDEA 1c

Area (*math.*): *see* MECHANICS 3d; QUANTITY 3d(1), 6b

Argument: *see* DIALECTIC 2b, 3b; OPINION 2c; REASONING 5c–5d; RHETORIC 4c–4c(3) / *see also* INDUCTION 4–4b; PHILOSOPHY 6b

Aristocracy: *see* CH 3: ARISTOCRACY; *and* DEMOCRACY 2b, 3c; EDUCATION 8d; VIRTUE AND VICE 7c / *see also* CITIZEN 2c; CONSTITUTION 5a, 7a; GOVERNMENT 2a; HONOR 4b; OLIGARCHY 2; REVOLUTION 3c(2), 5a; STATE 5c

Arithmetic, science of: *see* MATHEMATICS 1 / *see also* ASTRONOMY 4; EDUCATION 5d; MATHEMATICS 4a

Arithmetic, subject matter of: *see* QUANTITY 4–4c / *see also* INFINITY 3a; MATHEMATICS 1c, 4a; MECHANICS 3a; ONE AND MANY 2a; TIME 6c

Arms and armament: *see* STATE 9e(1); WAR AND PEACE 7, 10f

Army: *see* DEMOCRACY 7c; STATE 9e(1); WAR AND PEACE 7, 10, 10b–10c

Art: *see* CH 4: ART; *and* BEAUTY 2; CHANCE 5; EXPERIENCE 3a; KNOWLEDGE 8a; NATURE 2a; PROGRESS 6a; PRUDENCE 2b; VIRTUE AND VICE 2a(2) / *see also* CH 69: POETRY; *and* EDUCATION 4d, 6; HABIT 5a; KNOWLEDGE 6e–6e(2); LABOR 1e, 2–2b, 4c; LANGUAGE 4–9; LOGIC 3–3b; MEDICINE 2–2c, 3a; MEMORY AND IMAGINATION 7–7b; MIND 1c(2); PHILOSOPHY 2c; PHYSICS 5; PLEASURE AND PAIN 4c(1); PROGRESS 6d; RHETORIC 1–1c; SCIENCE 1b(1), 3b; STATE 7b, 8d–8d(3); VIRTUE AND VICE 4d(4); WAR AND PEACE 10; WORLD 4c(1)

Arteries: *see* ANIMAL 5b

Artificial and natural: *see* ART 2–3; NATURE 2a; ONE AND MANY 3b(2); POETRY 1a / *see also* ART 9a; BEAUTY 2; MEDICINE 2b; WEALTH 1

Artificial selection: *see* EVOLUTION 2a

Artisans: *see* LABOR 3a-3b; STATE 5c, 6b

Asceticism: *see* PLEASURE AND PAIN 7b; RELIGION 3d; TEMPERANCE 6a

Aseity: *see* GOD 5e

Assent (*log.*): *see* JUDGMENT 9; KNOWLEDGE 6d–6d(3); OPINION 3b

Assimilation (*biol.*): *see* ANIMAL 6b–7; CHANGE 8b

Association (*pol.*): *see* EMOTION 5a; STATE 1–1d, 2b, 3–3f, 5–5c / *see also* FAMILY 2a; GOVERNMENT 1a; JUSTICE 9b; LOVE 4–4c; MIND 9c; NATURE 2b; NECESSITY AND CONTINGENCY 5b; ONE AND MANY 5d; WAR AND PEACE 11a

Association of ideas: *see* IDEA 5e; MEMORY AND IMAGINATION 2c; MIND 1g(1); RELATION 4f; SENSE 3d(1); TIME 5c

Assumption (*log.*): *see* CUSTOM AND CONVENTION 9b; HYPOTHESIS 3–4a; INDUCTION 4a; PRINCIPLE 3c(2) / *see also* ASTRONOMY 2b; DIALECTIC 3b; MATHEMATICS 3a; MECHANICS 2b; OPINION 2c; SCIENCE 4a, 5e

Astrology: *see* ASTRONOMY 11; PROPHECY 3b, 5

Astronomy, science of: *see* ASTRONOMY 1–7, 13; MECHANICS 4a / *see also* EDUCATION 5d; HYPOTHESIS 4–4d; MATHEMATICS 5–5b; PHYSICS 3; PROGRESS 6b; SCIENCE 5e

Astronomy, subject matter of: *see* ASTRONOMY 8–10b; MECHANICS 3b, 4a, 5f–5f(2), 6d–6d(2); SPACE 3d; TIME 4; WORLD 7

Asylum (*pol.*): *see* JUSTICE 9g

Asymptote (*math.*): *see* INFINITY 3c; QUANTITY 3b(4)–3c

Atavism (*biol.*): *see* EVOLUTION 3d

Atheism: *see* GOD 10, 13; RELIGION 6f

Atom: *see* ELEMENT 3a, 5a–5d, 5g; INFINITY 4b; MECHANICS 1a; SPACE 2b(1)-2b(3) / *see also* CHANGE 2–2a, 10c; ETERNITY 4b; MATTER 2; ONE AND MANY 2b–2c, 3a(3); WORLD 4c

Atomism: *see* CHANGE 6a; ELEMENT 5–5h; MAN 3c; MATTER 3a, 6; MIND 2e; PRINCIPLE 1b; SOUL 3d; WORLD 4c

Atonement (*theol.*): *see* GOD 9c; PUNISHMENT 5c, 5e(2); RELIGION 2f; SIN 3d, 4e, 6c

Attachment (*psychol.*): *see* DESIRE 4b; LOVE 2a(3)

Attention (*psychol.*): *see* MIND 1g(3); ONE AND MANY 4b; SENSE 3c(5)

Attraction (*phys.*): *see* ASTRONOMY 3b; MECHANICS 6d–6d(2), 7d–7d(2), 7c(3); SPACE 2c

Attribute and substance: *see* BEING 7b–7b(6); FORM 2c(2) / *see also* BEING 8c–8e; MATTER 1b; NECESSITY AND CONTINGENCY 2d; ONE AND MANY 3b(3); QUALITY 1, 3d; QUANTITY 1

Augmentation (*biol.*): *see* ANIMAL 7; CHANGE 8b; MAN 4a; SOUL 2c(1)

Augury: *see* PROPHECY 3b; SIGN AND SYMBOL 5b

Authority (*log.*): *see* LOGIC 4f; OPINION 2d; PROGRESS 6c; RELIGION 1b(1), 6c(1); THEOLOGY 4c

Authority (*pol.*): *see* GOVERNMENT 1d, 1g–1g(3); LAW 1c, 6a / *see also* ARISTOCRACY 4; CONSTITUTION 1, 6; DEMOCRACY 4b; FAMILY 6d; LAW 7d; LIBERTY 1d; MIND 9e; MONARCHY 4c(3); STATE 2c, 9d; TYRANNY 1a, 1c, 5, 5c; WILL 10a

Automaton: *see* ANIMAL 1e

Autonomy (*metaph.*): *see* GOD 4e, 5c; LIBERTY 5d; NECESSITY AND CONTINGENCY 2a; WILL 4b, 5a(4)

Autonomy (*pol.*): *see* GOVERNMENT 5; LAW 6b; LIBERTY 1b; STATE 9d

Avarice: *see* DESIRE 7a(3); SIN 2c(1); WEALTH 10c / *see also* EMOTION 2a; INFINITY 6a; TEMPERANCE 2

Aversion: *see* DESIRE 3d; EMOTION 2a; LOVE 1b; OPPOSITION 4b

Axiom: *see* PRINCIPLE 2b(2), 3–3c(3), 5; REASONING 5b(1) / *see also* HABIT 5c; INDUCTION 3; JUDGMENT 8a–8b; KNOWLEDGE 6c(2); LOGIC 1a; MATHEMATICS 3a; METAPHYSICS 3c; OPINION 2c; PHILOSOPHY 3b; SCIENCE 4a; TRUTH 3c

B

Balance (*phys.*): *see* MECHANICS 5a; QUANTITY 6c

Balance of power: *see* GOVERNMENT 5a; STATE 9c(1)–9e(2); WAR AND PEACE 3b

Balance of trade: *see* WEALTH 9c / *see also* STATE 9a; WEALTH 4g

Ballistics: *see* MECHANICS 3b, 5f–5f(1)

Ballot: *see* DEMOCRACY 5b(3); GOVERNMENT 1h

Banking: *see* WEALTH 5d

Baptism: *see* RELIGION 2f; SIN 3e / *see also* GOD 9e; RELIGION 2c; SIGN AND SYMBOL 5c

Barbarian: *see* MAN 7c / *see also* CUSTOM AND CONVENTION 7b; SLAVERY 2a; STATE 9b

Barter (*econ.*): *see* WEALTH 4b

Beatific vision: *see* DESIRE 7b; GOD 6c(4); HAPPINESS 7c(1); KNOWLEDGE 7c; MIND 4f; WILL 7d

Beatitude or blessedness (*theol.*): *see* ANGEL 4; DESIRE 7b; ETERNITY 4d; GOD 4h, 6c(4), 8c; HAPPINESS 7c–7c(2), 7d; IMMORTALITY 5f; LOVE 5a(2); MIND 4f; WILL 7d

Beauty: *see* CH 6: BEAUTY; *and* GOOD AND EVIL 1c; NATURE 5d; PLEASURE AND PAIN 4c(1); RELATION 5c; SENSE 6; TRUTH 1c; UNIVERSAL AND PARTICULAR 7c / *see also* CUSTOM AND CONVENTION 9a; HYPOTHESIS 4c; JUDGMENT 4; LOVE 1d; RELATION 6c; WORLD 6d

Becoming: *see* CH 10: CHANGE; *and* BEING 5, 8a–8b; DESIRE 1; MATTER 1–1b / *see also* DIALECTIC 3a; KNOWLEDGE 6a(1); NECESSITY AND CONTINGENCY 2c; OPINION 1; PHYSICS 1; SENSE 1b; SPACE 1a; WORLD 4e(1)

Being: *see* CH 7: BEING; *and* GOOD AND EVIL 1b; METAPHYSICS 2a–2b; NECESSITY AND CONTINGENCY 2–2d; ONE AND MANY 1–1c; OPPOSITION 2a–2c; TRUTH 1b / *see also* CHANGE 1; DIALECTIC 2a, 3a; FORM 1a, 2–2d, 4; GOD 4a; IDEA 3c, 6a; INFINITY 1b; JUDGMENT 5b, 8c; KNOWLEDGE 6a(1), 6a(4); MATHEMATICS 2b; MATTER 3–3d; OPINION 1; PRINCIPLE 1c; RELATION 1a–1b, 5b; SAME AND OTHER 1a; SENSE 1b; UNIVERSAL AND PARTICULAR 2a

Belief or faith (*theol.*): *see* GOD 6c(2); KNOWLEDGE 6c(5); OPINION 4–4b; RELIGION 1–1b(3); TRUTH 4a; VIRTUE AND VICE 8d(1); WILL 3b(3) / *see also* HABIT 5c(3); LOGIC 4f; MIND 5c; PHILOSOPHY 6c; RELIGION 6b–6d; THEOLOGY 2, 4b; WAR AND PEACE 2b; WISDOM 1c

Belief or opinion (*log.*): *see* KNOWLEDGE 4b; OPINION 1–3c; WILL 3b(1) / *see also* CUSTOM AND CONVENTION 9a; PRINCIPLE 3c(2); REASONING 5a

Benevolent despotism: *see* MONARCHY 3a, 4b, 4e(1)–4e(2); SLAVERY 6b; TYRANNY 4–4b, 6

Bible: *see* LANGUAGE 12; THEOLOGY 4b / *see also* GOD 6c(1); RELIGION 1b(1); RHETORIC 2d; SIGN AND SYMBOL 5e

Bills of rights: *see* CONSTITUTION 7b; LIBERTY 1g / *see also* DEMOCRACY 4b; JUSTICE 6, 6c, 6e; LAW 4e, 7c; PROGRESS 4c

Biogenesis: *see* EVOLUTION 4c / *see also* ANIMAL 8b; EVOLUTION 4a

Biology, subject matter of: *see* CH 24: EVOLUTION; *and* ANIMAL 1–11b; LIFE AND DEATH 1–7; MECHANICS 4c; SENSE 2–3a; SOUL 1b, 2c–2c(2) / *see also* CHANGE 6c, 8b, 9b, 10b; MAN 4a–4b, 7a; MEDICINE 2a, 4–5d(2); PROGRESS 2

Birth: *see* ANIMAL 9e; FAMILY 6b

Birth control: *see* FAMILY 6b

Blame and praise: *see* HONOR 1, 3a–3b, 4c; VIRTUE AND VICE 4d(2) / *see also* COURAGE 5; PLEASURE AND PAIN 10a–10b; PUNISHMENT 3a; RHETORIC 3a

Blasphemy: *see* GOD 3b; RELIGION 2g; SIN 2c(1)

Blessedness or beatitude (*theol.*): *see* ANGEL 4; DESIRE 7b; ETERNITY 4d; GOD 4h, 6c(4), 8c; HAPPINESS 7c–7c(2), 7d; IMMORTALITY 5f; LOVE 5a(2); MIND 4f; WILL 7d

Blood: *see* ANIMAL 5b

Bodily humours: *see* MEDICINE 5d(1); OPPOSITION 3b, 4b

Body: *see* BEING 7b(2), 7b(4); ELEMENT 3–3d, 5–5h; LIFE AND DEATH 2; MATTER 2–3a; MECHANICS 1a; MIND 2c–2c; SOUL 3c; SPACE 1–1d / *see also* CHANGE 10a, 10c; ETERNITY 4b; INFINITY 4a; MAN 3a; MECHANICS 4a, 5–7e(5); ONE AND MANY 3b(4); QUANTITY 1

Body and mind or soul: *see* MAN 3a–3a(2); MATTER 2d; MIND 2–2e; ONE AND MANY 3b(4); SOUL 1b–1c, 4b / *see also* BEING 7b(2); FORM 2d; IMMORTALITY 5b; LIFE AND DEATH 1; MAN 2b(3); MATTER 4c–4d; MEDICINE 5d(2), 6c(1); MIND 4e; SOUL 3c, 4d–4d(4)

Book of Life (*theol.*): *see* GOD 7f

Book of nature: *see* LANGUAGE 10; SIGN AND SYMBOL 1c

Borrowing: *see* JUSTICE 8d; WEALTH 5d–5e

Botany, subject matter of: *see* ANIMAL 1b; CHANGE 10b; EVOLUTION 4–4d; LIFE AND DEATH 3a, 4, 6a; MAN 4a; SOUL 2c(1)

Bounties (*econ.*): *see* WEALTH 4g

Bourgeoisie: *see* LABOR 7c(1); OLIGARCHY 5b–5c; OPPOSITION 5b; REVOLUTION 5b; STATE 5d(2)

Brain and nervous system: *see* ANIMAL 5g; MEMORY AND IMAGINATION 1b; MIND 1g(2), 2c(1); SENSE 3a

Branches of government: *see* CONSTITUTION 2a; DEMOCRACY 5c; GOVERNMENT 3–3e(2); LIBERTY 1g

Breathing: *see* ANIMAL 5d; LIFE AND DEATH 3a

Breeding: *see* ANIMAL 8c(4); EVOLUTION 2a, 3c, 5c; FAMILY 6b

Brother and sister: *see* FAMILY 7c; LOVE 2b(4)

Brotherhood of man: *see* CITIZEN 8; LOVE 4c; MAN 11b

Budget: *see* GOVERNMENT 4; WEALTH 9e(1)

Buoyancy (*phys.*): *see* MECHANICS 5b

Burial rites: *see* LIFE AND DEATH 8d

Business: *see* WEALTH 3–4g, 6–6e, 7c–7d(2), 9–9h / *see also* JUSTICE 8–8d; LABOR 5–7f;

4b–4c; MEMORY AND IMAGINATION 1; MIND 1a, 1e; SENSE 1a–1d, 3b–3b(2); SOUL 2c(2)–2c(3)

Coincidence: *see* CHANCE 1a

Coition (*biol.*): *see* ANIMAL 8c(4)

Collective responsibility: *see* PUNISHMENT 2; SIN 6b

Collectivism: *see* DEMOCRACY 4a(2); LABOR 5d, 7b; REVOLUTION 4b; STATE 6b; WEALTH 6a, 7d(2), 8a

Colonies or dependencies: *see* DEMOCRACY 7b; GOVERNMENT 5b; LIBERTY 6c; MONARCHY 5–5b; REVOLUTION 7; SLAVERY 6d; STATE 9f, 10b; TYRANNY 6; WAR AND PEACE 6a

Color: *see* MECHANICS 7a(2); QUALITY 2b; SENSE 3c(3)

Comedy and tragedy: *see* POETRY 4b

Comets: *see* ASTRONOMY 9f; MECHANICS 5f–5f(1)

Command: *see* DUTY 5; JUDGMENT 3; LAW 1b; NECESSITY AND CONTINGENCY 5a(2); PRINCIPLE 4b; PRUDENCE 5b; WILL 2c(3), 8d

Commensurability: *see* MATHEMATICS 2c; QUANTITY 6a

Commerce: *see* WEALTH 4–4g / *see also* LIBERTY 2c; OPPOSITION 5a; STATE 9a

Commodities: *see* LABOR 6a; WEALTH 4–4g, 5c

Common and proper names (*log.*): *see* SIGN AND SYMBOL 2d; UNIVERSAL AND PARTICULAR 5a

Common and proper sensibles (*psychol.*): *see* QUALITY 2b; SENSE 3c(3)

Common good: *see* GOOD AND EVIL 5d; HAPPINESS 5–5b; JUSTICE 1c; STATE 2f / *see also* ART 10b; CITIZEN 1; DUTY 10; LABOR 3f; LAW 1a; LIBERTY 1c; LOVE 4b; MONARCHY 3a; TEMPERANCE 5a; WEALTH 9a; WILL 10c

Common goods (*econ.*): *see* GOOD AND EVIL 4e; JUSTICE 8a; WEALTH 8a–8b

Common law: *see* LAW 5f, 8

Common notions or axioms: *see* PRINCIPLE 2b(2), 3–3c(3), 5; REASONING 5b(1) / *see also* HABIT 5c; INDUCTION 3; JUDGMENT 8a–8b; KNOWLEDGE 6c(2); LOGIC 1a; MATHEMATICS 3a; METAPHYSICS 3c; OPINION 2c; PHILOSOPHY 3b; SCIENCE 4a; TRUTH 3c

Common sense: *see* SENSE 3b(2), 3d(1) / *see also* KNOWLEDGE 6b(1); QUALITY 2b; SENSE 3c(3)

Commonplaces: *see* RHETORIC 4c(3)

Communication (*log.*): *see* KNOWLEDGE 9–9b; LANGUAGE 1–1b, 11; RHETORIC 2, 2c; SIGN AND SYMBOL 1d, 3–4d; TRUTH 2b / *see also* LIBERTY 2a; OPINION 5–5b; TRUTH 8d

Communism: *see* LABOR 7b, 7c(3); REVOLUTION 1a, 4b, 5c; STATE 5e; WEALTH 6a, 8a / *see also* DEMOCRACY 4a(2); JUSTICE 8a; LABOR 5d, 7f; ONE AND MANY 5d; PROGRESS 3b

Community or society: *see* STATE 1–1d, 2b, 3a–3f, 5–5e / *see also* CUSTOM AND CONVENTION 7–7b; EMOTION 5a; FAMILY 1, 2a–2c; GOOD AND EVIL 5d; JUSTICE 9b; LAW 4b; LIBERTY 1b; LOVE 4–4c; MAN 9c; MEMORY AND IMAGINATION 4b; MIND 9e; NATURE 2b; NECESSITY AND CONTINGENCY 5b; ONE AND MANY 5d; OPPOSITION 5–5c; RELIGION 3–3d; WAR AND PEACE 1, 11a–11b

Commutative justice: *see* JUSTICE 5, 8b; WEALTH 10d

Competition (*econ.*): *see* LIBERTY 2c; OPPOSITION 5a; STATE 9a; WEALTH 4e–4g, 8c, 9c

Complex and simple (*log., metaph.*): *see* ELEMENT 1, 3a, 3d, 5a; ONE AND MANY 2b–2c, 4e; PRINCIPLE 2a–2a(3)

Complex and simple ideas (*psychol.*): *see* IDEA 2c, 2f; MIND 1d(1)–1d(2); ONE AND MANY 4c; SENSE 3c(4), 5a

Composition of forces: *see* MECHANICS 6d(3); OPPOSITION 3d

Compounds (*phys.*): *see* CHANGE 9a; ELEMENT 3d, 5d; MATTER 2

Compulsion or constraint (*pol.*): *see* EMOTION 5c; GOVERNMENT 1d; JUSTICE 1a; LAW 1c, 5, 6b, 7d; LIBERTY 1e; PUNISHMENT 4a

Compulsions and obsessions (*psychol.*): *see* EMOTION 3c(2); SIGN AND SYMBOL 6c; WILL 9b

Concept or conception: *see* IDEA 1b, 2f–2g, 4–4c; MEMORY AND IMAGINATION 5b; UNIVERSAL AND PARTICULAR 2b, 4c–4d / *see also* IDEA 1d, 5a–5d, 6f; JUDGMENT 1; MEMORY AND IMAGINATION 6c(2); SENSE 1d, 5a; TRUTH 3b(1)

Conceptualism: *see* UNIVERSAL AND PARTICULAR 2b / *see also* IDEA 6a

Conclusion and premise (*log.*): *see* NECESSITY AND CONTINGENCY 4e(2); REASONING 2–2c; TRUTH 3b(3) / *see also* DEFINITION 5; DIALECTIC 3b–3c; JUDGMENT 8a; KNOWLEDGE 6c(2); PRINCIPLE 2a(2)–2a(3), 2b(2), 3a–3b

Concrete and abstract (*log.*): *see* IDEA 4b(1); MEMORY AND IMAGINATION 5b; ONE AND MANY 1c; SIGN AND SYMBOL 2e

Concupiscence: *see* LOVE 2a; PLEASURE AND PAIN 7b; TEMPERANCE 2, 6b

Conduction (*phys.*): *see* MECHANICS 7c(1), 7d(1), 7e(2)

Confederations or alliances: *see* GOVERNMENT 5a; STATE 9c(2); WAR AND PEACE 10g, 11c

Confession (*theol.*): *see* SIN 4c / *see also* GOD 9e; RELIGION 2c, 2f; SIGN AND SYMBOL 5c

Confirmation (*theol.*): *see* GOD 9e; RELIGION 2c; SIGN AND SYMBOL 5c

Confiscation (*econ.*): *see* WEALTH 9e(2)

Conflict (*ethics, psychol.*): *see* DESIRE 4a; MAN 5–5a; OPPOSITION 4–4e / *see also* DUTY 6; EMOTION 2c, 4a; LIBERTY 3d; LOVE 3c; MEMORY AND IMAGINATION 8e; PLEASURE AND PAIN 8b; SLAVERY 7

Congruence (*math.*): *see* QUANTITY 6b; SPACE 3c

Conics (*math.*): *see* MECHANICS 3b; QUANTITY 3b(1)-3b(4)

Conjugal love: *see* FAMILY 7a; LOVE 2d

Conquest: *see* DEMOCRACY 7b; GOVERNMENT 5b; JUSTICE 9f; LIBERTY 6c; MONARCHY 5-5b; REVOLUTION 7; SLAVERY 3a, 6d; STATE 9f; TYRANNY 6; WAR AND PEACE 3a, 6a

Conscience: *see* DUTY 4-4b; HONOR 2a; LAW 6a; LIBERTY 2b; RELIGION 6e; SIN 5

Consciousness: *see* IDEA 5e; MAN 2a; MIND 1g(1), 1g(3), 7-7c; ONE AND MANY 4a / *see also* DESIRE 3b(2); HABIT 6a; WILL 5b(1)

Conscription (*pol.*): *see* DEMOCRACY 7c; WAR AND PEACE 10b

Consent (*pol.*): *see* STATE 3d; WILL 10a, 10c / *see also* CONSTITUTION 6; DEMOCRACY 4b; GOVERNMENT 1c, 1g(3)-1h; MONARCHY 4e(3); OPINION 7b; TYRANNY 5c

Conservation of energy: *see* MECHANICS 6e

Conservatism: *see* CHANGE 12b; CUSTOM AND CONVENTION 8; PROGRESS 5

Consistency (*log.*): *see* HYPOTHESIS 4c; REASONING 3b / *see also* LOGIC 1a; PRINCIPLE 3a(3); TRUTH 1a, 3b(3)

Conspiracy: *see* REVOLUTION 1b

Constituent assembly: *see* CONSTITUTION 6

Constituents (*pol.*): *see* CONSTITUTION 9a; DEMOCRACY 5-5c; STATE 8a

Constitution (*pol.*): *see* CH 12: CONSTITUTION; *and* JUSTICE 9c; LAW 7a / *see also* ARISTOCRACY 1-2c; CITIZEN 2b-2c; CUSTOM AND CONVENTION 6a; DEMOCRACY 3-3c, 4d; GOVERNMENT 2b; JUSTICE 10a; LAW 5c; MONARCHY 1a(1), 1b(1)-1b(2), 4e(1); OLIGARCHY 1-2, 4, 5a; REVOLUTION 2a; STATE 3d, 3g

Constitutional and despotic government: *see* CITIZEN 2a-2b; CONSTITUTION 1, 2b-3b; LAW 7a-7b; MONARCHY 1a-1a(2), 4c-5b; TYRANNY 4b-5d / *see also* CONSTITUTION 4, 7b, 8b; GOVERNMENT 1b, 1g(2); LIBERTY 1d, 1f; SLAVERY 6b-6d

Constitutional convention: *see* CONSTITUTION 6

Constitutional law: *see* CONSTITUTION 2b; JUSTICE 10a; LAW 5c, 7a

Constitutional monarchy: *see* CONSTITUTION 3a; GOVERNMENT 2b; MONARCHY 1b(2), 4d(3), 4e(4)

Construction (*math.*): *see* MATHEMATICS 2a, 3b, 4b

Consumption (*econ.*): *see* OPPOSITION 5b; WEALTH 7c / *see also* NATURE 5b; NECESSITY AND CONTINGENCY 5e; WEALTH 10b

Contemplation: *see* KNOWLEDGE 6c(1); LABOR 1b; PHILOSOPHY 4a; PLEASURE AND PAIN 4c

Contemplation and action: *see* HAPPINESS 2b(7); KNOWLEDGE 6e(1); LABOR 1b; PHILOSOPHY 4a, 4c, 6d; PLEASURE AND PAIN 4c-4c(2); PRUDENCE 2a; STATE 8e; WISDOM 1b, 2c

Continence and incontinence: *see* TEMPERANCE 1c; VIRTUE AND VICE 1e / *see also* DESIRE 5c; EMOTION 4b(1); KNOWLEDGE 8b(3); PRUDENCE 3d

Contingency and necessity (*log.*): *see* JUDGMENT 6c; NECESSITY AND CONTINGENCY 4-4e(2); OPPOSITION 1d(2); REASONING 3d / *see also* KNOWLEDGE 6d(1)-6d(2); NATURE 1a(1); OPINION 1; SCIENCE 4b; SIGN AND SYMBOL 4e; TIME 6f

Contingency and necessity (*philos.*): *see* NECESSITY AND CONTINGENCY 1-3c / *see also* CHANCE 1a, 2a; FATE 3; GOD 4a; KNOWLEDGE 6a(1); NATURE 1a(1), 3c(1); OPINION 1; SCIENCE 4b

Continuity and discontinuity (*math., phys.*): *see* CHANGE 5b; ELEMENT 3a, 5a-5b; INFINITY 3b, 4b; MATHEMATICS 2c; MECHANICS 3a; ONE AND MANY 2b, 3a(1)-3a(4); QUANTITY 2, 4c, 6a; SPACE 3a; TIME 1

Continuity and hierarchy (*philos.*): *see* BEING 3a; LIFE AND DEATH 2-3b; NATURE 3b; RELATION 5a(4)-5b; WORLD 6b / *see also* ANIMAL 1b-1c, 2c; EVOLUTION 3e, 4a, 4c, 7b; GOOD AND EVIL 1b; MAN 1a-1c; SENSE 2-2c

Contract: *see* CONSTITUTION 6; CUSTOM AND CONVENTION 6a; STATE 3d; WILL 8e

Contradiction: *see* JUDGMENT 7a; LOGIC 1a; NECESSITY AND CONTINGENCY 4e(1); OPPOSITION 1d(1); PRINCIPLE 1c, 3a(3); TRUTH 3c

Contrariety, contraries (*log.*): *see* JUDGMENT 7a; NECESSITY AND CONTINGENCY 4e(1); OPPOSITION 1a-1b, 1c(2), 1d(1); SAME AND OTHER 3a(2)

Contrariety, contraries (*phys.*): *see* CHANGE 2b; OPPOSITION 3a-3c; QUALITY 4b

Contrition: *see* RELIGION 2f; SIN 4e

Conventional and natural: *see* CUSTOM AND CONVENTION 1; NATURE 2b / *see also* JUSTICE 9a; LANGUAGE 2-2b; NECESSITY AND CONTINGENCY 5c; SIGN AND SYMBOL 1-1f; SLAVERY 2, 3; STATE 3b-3d

Conversion (*log.*): *see* JUDGMENT 7b; REASONING 4a

Conversion (*theol.*): RELIGION 1a, 5b

Coordinates (*math.*): *see* QUANTITY 6b

Copula (*log.*): *see* BEING 1; JUDGMENT 5b

Copulation (*biol.*): *see* ANIMAL 8c(4)

Corporation: *see* LAW 7f; STATE 1d, 2a(2); WEALTH 7d(1)

Corporeal substance: *see* BEING 7b(2); MATTER 2; SOUL 3c

Correlation, correlatives (*log.*): *see* OPPOSITION 1a; QUALITY 4a; RELATION 1c

Correspondence (*log.*): *see* IDEA 6c; KNOWLEDGE 1; TRUTH 1b

Corruptible and incorruptible substances: *see* BEING 7b(3) / *see also* CHANGE 10c; ELEMENT 5a; ETERNITY 4a–4b; SOUL 4b

Corruption (*phys.*): *see* ASTRONOMY 10a; CHANGE 10a; ELEMENT 3c; LIFE AND DEATH 7; MATTER 1b

Cosmogony, subject matter of: *see* CAUSE 7a; CHANCE 3; ELEMENT 5b; GOD 7a; WORLD 4–4c(3) / *see also* ASTRONOMY 6, 8d; GOD 5a; MATTER 3d

Cosmology, subject matter of: *see* CH 102: WORLD; *and* ASTRONOMY 5; ELEMENT 5b; ETERNITY 2; INFINITY 3d–3e; NATURE 1b; TIME 2b-2c / *see also* ASTRONOMY 8c(1); BEAUTY 7b; CAUSE 7–7b; CHANGE 13; INFINITY 4a; SOUL 1a; SPACE 2c

Counsel: *see* PRUDENCE 5a; VIRTUE AND VICE 4d(2); WILL 2c(3)

Courage: *see* CH 13: COURAGE / *see also* HONOR 5c; PLEASURE AND PAIN 8a; TEMPERANCE 1a; VIRTUE AND VICE 2a–2a(1); WAR AND PEACE 10c

Courtesy: *see* HONOR 2e; LOVE 2c; SIGN AND SYMBOL 1e

Courts (*pol.*): *see* GOVERNMENT 3d–3d(2) / *see also* CONSTITUTION 2a; DEMOCRACY 5c; LAW 5g; PRUDENCE 6b

Covenant (*theol.*): *see* GOD 8b; PROPHECY 4a

Covetousness: *see* DESIRE 7a(3); SIN 2c(1); WEALTH 10c, 10e(3)

Cowardice: *see* COURAGE 2

Creation (*theol.*): *see* CAUSE 7a; GOD 7a; MATTER 3d / *see also* ANGEL 3a, ANIMAL 8a; EVOLUTION 4a, 4c, 7a; FORM 1d(2); MAN 8b; SAME AND OTHER 6; SOUL 4c; TIME 2c; WORLD 3b, 4e–4e(3)

Credit (*econ.*): *see* WEALTH 5d

Creed: *see* RELIGION 6c(1), THEOLOGY 4b

Crime: *see* JUSTICE 10c; LAW 6e–6e(3); NECESSITY AND CONTINGENCY 5d; PUNISHMENT 4–4d; WEALTH 9g

Crisis (*econ.*): *see* WEALTH 6e

Crisis (*med.*): *see* MEDICINE 5c

Criticism (*aesth.*): *see* ART 7b; BEAUTY 5; CUSTOM AND CONVENTION 9a; JUDGMENT 4; NATURE 5d; PHILOSOPHY 2c; POETRY 8–8c; RHETORIC 2b; UNIVERSAL AND PARTICULAR 7c

Criticism (*log.*): *see* DIALECTIC 2b, 2c; KNOWLEDGE 5c; LOGIC 4d; METAPHYSICS 4b; MIND 5b; PHILOSOPHY 3d

Crucial experiment: *see* EXPERIENCE 5b; PHYSICS 4c

Cruelty: *see* PLEASURE AND PAIN 8c; TEMPERANCE 2

Culpability: *see* PUNISHMENT 2a, 3c; SIN 5–6b

Culture or civilization: *see* HISTORY 4c; MAN 7c, 9c; PROGRESS 6–6e / *see also* ART 12; LIBERTY 6a; MONARCHY 5a; SCIENCE 6b; STATE 7b–7d

Cure: *see* MEDICINE 1, 2b, 3–3d(3), 6d–7

Curiosity: *see* KNOWLEDGE 2; SIN 2b; TEMPERANCE 2

Currency: *see* WEALTH 5–5e

Current (*phys.*): *see* MECHANICS 7e–7e(2), 7e(5)

Curriculum: *see* EDUCATION 5d / *see also* ASTRONOMY 4; LOGIC 3; MATHEMATICS 1b

Curses: *see* FAMILY 7b; PUNISHMENT 5a

Custom and convention: *see* CH 14: CUSTOM AND CONVENTION; *and* LAW 5f; MAN 7c; NATURE 2b; STATE 9b / *see also* BEAUTY 5; EDUCATION 4c; GOOD AND EVIL 6d; JUSTICE 1f; LANGUAGE 2b; MEMORY AND IMAGINATION 4b; NECESSITY AND CONTINGENCY 5b; OPINION 6a; PROGRESS 5; RELATION 6b-6c; SIGN AND SYMBOL 1a, 1d, 1f; STATE 3b; UNIVERSAL AND PARTICULAR 7a–7c; VIRTUE AND VICE 4d(3)

Cyclical theory of history: *see* HISTORY 4b; PROGRESS 1c

D

Damnation (*theol.*): *see* ETERNITY 4d; GOD 5i; HAPPINESS 7c(3); IMMORTALITY 5e; PUNISHMENT 5d, 5e(1); SIN 6d; VIRTUE AND VICE 8c

Day: *see* ASTRONOMY 7

Day of Judgment: *see* GOD 7h; PROPHECY 4d

Daydreaming: *see* DESIRE 5a; MEMORY AND IMAGINATION 8c

Death: *see* LIFE AND DEATH 7, 8b–8d / *see also* HAPPINESS 4b; IMMORTALITY 1

Death instinct: *see* LIFE AND DEATH 8b

Death penalty: *see* PUNISHMENT 4b(1)

Decalogue: *see* GOD 8c; LAW 3b(1)

Decay (*biol.*): *see* LIFE AND DEATH 6c–7; MAN 6c

Decision (*jurisp.*): *see* LAW 5g; PRUDENCE 6b

Decision (*psychol.*): *see* PRUDENCE 5b; REASONING 5c(3); WILL 2c(3)

Decree: *see* LAW 5a

Deduction or deductive reasoning: *see* REASONING 2–3d, 4c, 5b–5b(5) / *see also* INDUCTION 1b; JUDGMENT 7c; LOGIC 1b; MATHEMATICS 3a; NECESSITY AND CONTINGENCY 4e(2); REASONING 6c; SCIENCE 5d; TRUTH 3b(3); UNIVERSAL AND PARTICULAR 5d

Defense: *see* STATE 9e(1); WAR AND PEACE 3a, 7

Definition: *see* CH 15: DEFINITION; *and* BEING 8c; FORM 3c; NATURE 4a; PRINCIPLE 2a(2)–2a(3); REASONING 5b(2); SAME AND OTHER 4b; SIGN AND SYMBOL 4a / *see also* BEING 8e; CAUSE 5b; INDUCTION 3; MATHEMATICS 3a; MATTER 4b; ONE AND MANY 4c; PHILOSOPHY 3b; PHYSICS 2a; QUALITY 6a; RELATION 4a; SCIENCE 4a; TRUTH 3b(1); UNIVERSAL AND PARTICULAR 4e

Deification: *see* GOD 14; MONARCHY 2a / *see also* GOD 3f; RELIGION 6a

Deism: *see* GOD 12; RELIGION 6f

Delegates (*pol.*): *see* CONSTITUTION 9a; DEMOCRACY 5a–5b; STATE 8a

Deliberation: *see* REASONING 5c(3) / *see also* PRUDENCE 1, 3–3b, 4a, 5a; RHETORIC 3a; VIRTUE AND VICE 5b

Delusion: *see* MIND 8c

Demagoguery: *see* DEMOCRACY 7a; TYRANNY 2c / *see also* OPINION 7b; RHETORIC 1c, 4a–4b, 5b

Demand and supply: *see* WEALTH 4c / *see also* LABOR 6a; WEALTH 4a, 4c, 4f, 6d(3), 6e

Demi-gods: *see* ANGEL 1

Demiurge: *see* WORLD 4b

Democracy: *see* CH 16: DEMOCRACY; *and* ARISTOCRACY 2c; CITIZEN 6; CONSTITUTION 9–9b; GOVERNMENT 1g(3)–1h; LIBERTY 1–2d; OPINION 7–7b; PROGRESS 4c; SLAVERY 5b, 6c; TYRANNY 2c / *see also* CITIZEN 2c–3, 9; CONSTITUTION 5a; EDUCATION 8d; GOVERNMENT 2a, 2c; JUSTICE 6–6e, 9c; LABOR 7f; LIBERTY 6–6c; MONARCHY 1b(3), 4, 4c; OLIGARCHY 2, 3a; REVOLUTION 3a, 3c(2); STATE 2c, 7d; TYRANNY 5c

Demons (*theol.*): *see* ANGEL 5–5b, 6b, 8; SIN 4b

Demonstration (*log.*). *see* BEING 8d; DEFINITION 5; PRINCIPLE 3a–3a(3); REASONING 5b–5b(5) / *see also* CAUSE 5b; JUDGMENT 8a; MATHEMATICS 3a–3b; OPINION 2c; REASONING 4b, 6a–6b, 6d; RHETORIC 4c; SCIENCE 4c, 4e, 5d; SIGN AND SYMBOL 4b; TRUTH 7a

Denomination (*log.*): *see* SIGN AND SYMBOL 2c

Density: *see* MECHANICS 6b

Dependencies or colonies: *see* DEMOCRACY 7b; GOVERNMENT 5b; LIBERTY 6c; MONARCHY 5–5b; REVOLUTION 7; SLAVERY 6d; STATE 9f, 10b; TYRANNY 6; WAR AND PEACE 6a

Dependent and independent being · *see* BEING 7b, 7b(4); NECESSITY AND CONTINGENCY 2–2b / *see also* CAUSE 7a; GOD 4a, 5c; NATURE 1b, 3c(4); ONE AND MANY 1a–1b; WORLD 3–3b

Depressions (*econ.*): *see* WEALTH 6e

Descent of man: *see* EVOLUTION 7–7b(3); MAN 8c

Description and explanation (*log.*): *see* CAUSE 5–5d; HYPOTHESIS 4–4b; PHYSICS 2b; SCIENCE 4c / *see also* ASTRONOMY 2b, 3–3b; MECHANICS 2c, 7a, 7c(1)

Desire: *see* CH 17: DESIRE; *and* GOOD AND EVIL 3c; LOVE 1c / *see also* ANIMAL 1a(3); BEAUTY 3; BEING 3b; EMOTION 2–2c; HABIT 3a; INFINITY 6a; MEMORY AND IMAGINATION 8c; MIND 1e(3), 9b; PLEASURE AND PAIN 6a–6b, 6d; PRUDENCE 3a; SENSE 3e; VIRTUE AND VICE 5a; WILL 1

Despair: *see* COURAGE 3; EMOTION 2a; LIFE AND DEATH 8b; SIN 2c(1); VIRTUE AND VICE 8d(2)

Despotic and constitutional government: *see* CITIZEN 2a–2b; CONSTITUTION 1, 2b–3b; LAW 7a–7b; MONARCHY 1a–1a(2), 4c–5b; TYRANNY 4b–5d / *see also* CONSTITUTION 4, 7b, 8b; GOVERNMENT 1b, 1g(2); LIBERTY 1d, 1f; SLAVERY 6b–6d

Destiny: *see* CH 27: FATE; *and* CHANCE 2b; CHANGE 15b; HISTORY 4a(1); LIBERTY 5a; PROPHECY 1a; WILL 7b–7c

Determinism (*philos.*): *see* CHANCE 2a; FATE 5; NECESSITY AND CONTINGENCY 3–3c / *see also* CAUSE 3; HISTORY 4–4c; LIBERTY 4b, 5a; MECHANICS 4; NATURE 3c(2); NECESSITY AND CONTINGENCY 5a(1); WILL 5 5b(4); WORLD 1–1c, 3–3b

Deterrence: *see* PUNISHMENT 1d

Devil (*theol.*): *see* ANGEL 5–8; SIN 4b

Devotion (*theol.*): *see* DUTY 11; GOD 3c–3e; JUSTICE 11b; LOVE 5a(1); RELIGION 2–2g

Diagnosis: *see* MEDICINE 3c, 5c; SIGN AND SYMBOL 4e

Dialectic: *see* CH 18: DIALECTIC; *and* BEING 4a; HISTORY 4a(3); HYPOTHESIS 1; IDEA 5c; INDUCTION 4a; METAPHYSICS 1–2b; REASONING 5c; RHETORIC 1a; TRUTH 4d; WISDOM 1a / *see also* GOOD AND EVIL 5c; LOGIC 1b, 4d, MATHEMATICS 1b; METAPHYSICS 3c; PHYSICS 1a; PRINCIPLE 3–3c(3); PROGRESS 1a

Dichotomy (*log.*): *see* DEFINITION 2a; OPPOSITION 1c(1)

Diet (*med.*) · *see* MEDICINE 3d(1)

Difference and likeness: *see* QUALITY 4c; SAME AND OTHER 2c, 3c

Differentia (*log.*): *see* DEFINITION 2b; OPPOSITION 1c(2); SAME AND OTHER 4b / *see also* FORM 3c; NATURE 1a(1)–1a(2), 4a; ONE AND MANY 3b(1)

Digestion: *see* ANIMAL 5c, 6b

Dignity of man: *see* GOD 3f; MAN 10–10e, 13; WILL 7a / *see also* LABOR 1f; MAN 1–1c, 3–3c; MIND 3a; SAME AND OTHER 6; SOUL 3b; WORLD 2

Dimensions and dimensionality: *see* QUANTITY 3; SPACE 1c

Diplomacy, diplomat: *see* GOVERNMENT 5a / *see also* STATE 9c–9c(2); WAR AND PEACE 6–6b, 10g, 11c

Discovery (*log.*): *see* EXPERIENCE 5a; LOGIC 4b; PHYSICS 4b; REASONING 4b; SCIENCE 5b / *see also* HYPOTHESIS 2, 4–4b; INDUCTION 5; PROGRESS 6c; TRUTH 8d

Discrimination (*psychol.*): *see* IDEA 5e; SENSE 3d(1)

Discursive knowledge: *see* KNOWLEDGE 6c(1); REASONING 1b

Disease: *see* MEDICINE 5–7; MIND 8a–8c / *see also* LIFE AND DEATH 5; MAN 5b

Disfranchisement: *see* LABOR 7d; SLAVERY 5a–5b

Disjunction (*log.*): *see* JUDGMENT 6d

Disobedience (*theol.*): *see* ANGEL 5a; GOD 3b; SIN 1, 3b

Disposition (*psychol.*): *see* EMOTION 4c; HABIT 2; MAN 6a; QUALITY 2a; VIRTUE AND VICE 2c, 4a

Disproof: *see* REASONING 4e

Disputation: *see* DIALECTIC 2b(2), 3b; INDUCTION 4a; LOGIC 5; OPPOSITION 1c; PHILOSOPHY 6b; THEOLOGY 5

Distance: *see* ASTRONOMY 9a; QUANTITY 3a, 5a, 6c; SPACE 3d

Distinctness (*log.*): *see* BEING 4b; IDEA 3b, 6d; TRUTH 1a, 3b(1) / *see also* KNOWLEDGE 6d(3); OPINION 3b; TRUTH 3d(3)

Distribution (*econ.*): *see* JUSTICE 8–8a; LABOR 4a; REVOLUTION 4b; WEALTH 8–8d

Distributive justice: *see* JUSTICE 5, 9c; WEALTH 8–8d / *see also* DEMOCRACY 4a; HONOR 4b; JUSTICE 8a; OLIGARCHY 5a

Diversity and identity (*metaph.*): *see* SAME AND OTHER 1–3d / *see also* ONE AND MANY 2a; PRINCIPLE 3a(3); SOUL 1d

Divination: *see* ASTRONOMY 11; MEMORY AND IMAGINATION 8a; PROPHECY 3–3c, 5; SIGN AND SYMBOL 5b

Divine beatitude or glory: *see* GOD 4h; HAPPINESS 7d; HONOR 6a

Divine being: *see* GOD 4–4h / *see also* CHANGE 15c; ETERNITY 3; INFINITY 7–7d; LIBERTY 5d; MIND 10g; NATURE 1b; NECESSITY AND CONTINGENCY 2a–2b; ONE AND MANY 1b; WORLD 3–3b

Divine causality: *see* CAUSE 7–7d; GOD 5a–5d; NATURE 3c(4); WORLD 4–4e(3) / *see also* ART 2c; GOD 2b; LIBERTY 5a–5c; MATTER 3d

Divine choice: *see* GOD 5g; LIBERTY 5d; WILL 4b

Divine election or predestination: *see* CHANCE 2b; FATE 4; LIBERTY 5c; SIN 6a; WILL 7c

Divine freedom: *see* GOD 4c; LIBERTY 5d; NECESSITY AND CONTINGENCY 2a

Divine goodness: *see* GOD 4f; GOOD AND EVIL 2–2a; INFINITY 7c / *see also* GOD 5h; GOOD AND EVIL 2b; KNOWLEDGE 5d; OPPOSITION 2d; WORLD 6d

Divine government: *see* CAUSE 7c; GOD 7c; JUSTICE 11a; LAW 3–3b(2); WORLD 1c

Divine grace: *see* GOD 7d / *see also* CAUSE 7d; HABIT 5e(1); LIBERTY 5c; MAN 9b(3); MIND 5c; NATURE 6b; SIN 7; VIRTUE AND VICE 8b; WILL 7e(2)

Divine ideas: *see* FORM 2b; GOD 5f; IDEA 1e

Divine intellect or mind: *see* GOD 4g; IDEA 1e; MIND 10g; UNIVERSAL AND PARTICULAR 4b; WILL 4a

Divine justice and mercy: *see* GOD 5i; JUSTICE 11–11b; PUNISHMENT 5e–5e(2)

Divine knowledge: *see* GOD 5f; INFINITY 7d; KNOWLEDGE 7a; LIBERTY 5b

Divine language: *see* LANGUAGE 12; PROPHECY 3d; RELIGION 1b(1); SIGN AND SYMBOL 5e

Divine law: *see* DUTY 5; GOD 7c, 8c; LAW 2–3b(2), 4d; MAN 9b(3); PROPHECY 2c; SIN 1; SLAVERY 2c

Divine love: *see* GOD 5h; GOOD AND EVIL 2a; INFINITY 7c; LOVE 5–5c

Divine nature: *see* GOD 1a, 4–5i, 9a–9b(2); ONE AND MANY 6–6b; OPPOSITION 2e; SIGN AND SYMBOL 5f

Divine power: *see* GOD 5c; INFINITY 7b

Divine providence: *see* GOD 7b / *see also* CAUSE 7c; CHANCE 2b; FATE 4; GOD 12; HISTORY 5a; LIBERTY 5a–5b; MAN 9b–9b(3); PROPHECY 1b–1c; WILL 7c

Divine rewards and punishments: *see* GOD 1c, 5i; IMMORTALITY 4; VIRTUE AND VICE 8c / *see also* ETERNITY 4d; HAPPINESS 7c–7c(2); IMMORTALITY 5e–5f; PUNISHMENT 5d–5c(2); SIN 6c–6e

Divine right of kings: *see* MONARCHY 2c

Divine truth: *see* TRUTH 2d

Divine unity and simplicity: *see* GOD 4b; ONE AND MANY 6a–6c

Divine will: *see* GOD 5g; WILL 4–4b / *see also* FATE 4; LIBERTY 5a; MIND 10g; WILL 7c

Divine wisdom: *see* WISDOM 1d

Divinity of kings: *see* MONARCHY 2a

Divisibility and indivisibility (*math., phys.*): *see* CHANGE 5b; ELEMENT 3a, 5a–5b; INFINITY 3b, 4b; MATHEMATICS 2c; MECHANICS 3a; ONE AND MANY 2b, 3a–3a(4); QUANTITY 2, 4c, 6a, 7; SPACE 3a

Division (*log.*): *see* DEFINITION 2a; DIALECTIC 2a(2); OPPOSITION 1c(1)–1c(2)

Division (*math.*): *see* INFINITY 3a; MATHEMATICS 4a; QUANTITY 4b

Division of labor: *see* LABOR 4–4c; PROGRESS 3a; STATE 5c; WEALTH 3a

Divorce: *see* FAMILY 4e

Dogma (*theol.*): *see* RELIGION 6c(1)–6c(2); THEOLOGY 4b–4c, 4c / *see also* GOD 7–9f; LOGIC 4f; OPINION 4–4b; RELIGION 1–1b(3), 6b; THEOLOGY 2; TRUTH 4a

Dogmatism: *see* KNOWLEDGE 5c / *see also* METAPHYSICS 4a; OPINION 4b; PHILOSOPHY 6b; SCIENCE 1b, 4c; THEOLOGY 5

Doing and making: *see* KNOWLEDGE 6e(2); PRUDENCE 2b / *see also* KNOWLEDGE 8a; LABOR 2–2b; SCIENCE 3–3b; VIRTUE AND VICE 2a(2)

Dole (*econ.*): *see* LABOR 7e; WEALTH 8d

Domestic economy: *see* FAMILY 3–3b; LABOR 5a; WEALTH 2, 3d

Domestication of animals: *see* ANIMAL 12a

Doubt: *see* KNOWLEDGE 5d; OPINION 3b / *see also* JUDGMENT 9; KNOWLEDGE 5c; NECESSITY AND CONTINGENCY 4a; TRUTH 7a

Drama: *see* POETRY 4a–4b, 7–8b

Dream-analysis: *see* MEMORY AND IMAGINATION 8e / *see also* LANGUAGE 10; MEMORY AND

IMAGINATION 8d–8d(2); SIGN AND SYMBOL 6a

Dreams: *see* MEMORY AND IMAGINATION 8–8e; PROPHECY 3c; SIGN AND SYMBOL 6a / *see also* DESIRE 5a, 6c; LANGUAGE 10; MIND 7b; RELATION 4f; SIGN AND SYMBOL 5b

Drugs: *see* MEDICINE 3d(2)

Dualism (*philos.*): *see* PRINCIPLE 1b / *see also* BEING 5, 7b(2); FORM 4; GOD 5d–5e, 11; MATTER 2d, 3a, 6; WORLD 3–3b

Ducts (*biol.*): *see* ANIMAL 5a

Duration: *see* CHANGE 5a; INFINITY 3e; TIME 1, 6a–6b

Duties (*econ.*): *see* STATE 9a; WEALTH 4g, 9e(2)

Duty: *see* CH 19: DUTY; *and* GOOD AND EVIL 3b(1); HAPPINESS 3; LOVE 3c; PLEASURE AND PAIN 8b; VIRTUE AND VICE 6a; WILL 8d / *see also* JUSTICE 3, 6b, 7; LAW 6a; MIND 9c; NECESSITY AND CONTINGENCY 5a(2); STATE 8a

Dynamics, subject matter of: *see* MECHANICS 5b–6e / *see also* ASTRONOMY 8c(2)–8c(3); CHANGE 7–7d; NATURE 2d; QUANTITY 5c–5e; SPACE 2c

E

Earth: *see* ASTRONOMY 2b, 5, 9d; ELEMENT 3b; MECHANICS 7d / *see also* ASTRONOMY 8a, 12; MATTER 1b; MECHANICS 4a; OPPOSITION 3b; WORLD 6a

Eccentricity (*astron.*): *see* ASTRONOMY 9c

Ecclesiastical government: *see* GOVERNMENT 1b; RELIGION 3c(1)–3c(2)

Eclipse: *see* ASTRONOMY 9a–9b

Ecology, subject matter of: *see* ANIMAL 10, 11a–11b; EVOLUTION 5c; LIFE AND DEATH 4; MAN 7b; STATE 4–4c / *see also* EVOLUTION 5a; OPPOSITION 3e

Economic democracy: *see* LABOR 7f; LIBERTY 2d / *see also* DEMOCRACY 4a(2); JUSTICE 8–8d; LIBERTY 6b; OLIGARCHY 5c; PROGRESS 3b; REVOLUTION 5–5c; SLAVERY 5a–5b; STATE 2d; WEALTH 9d, 9f, 9h

Economic determinism: *see* HISTORY 4a(2); WEALTH 11

Economic freedom: *see* LABOR 7f; LIBERTY 2d, 6b; SLAVERY 4–5b / *see also* DEMOCRACY 4a(2); JUSTICE 8–8d; OLIGARCHY 5c; PROGRESS 3b; REVOLUTION 5–5c; STATE 2d; WEALTH 9d

Economic goods: *see* GOOD AND EVIL 4d; JUSTICE 8a–8b; NATURE 5b; NECESSITY AND CONTINGENCY 5e; WEALTH 1, 10b

Economic justice: *see* DEMOCRACY 4a(2); JUSTICE 8–8d; LABOR 7–7f; LIBERTY 2d; SLAVERY 4–5b / *see also* OLIGARCHY 4–6; PROGRESS 3b; REVOLUTION 5–5c; STATE 2d; WEALTH 9f, 9h

Economic necessities: *see* LABOR 6b; NATURE 5b; NECESSITY AND CONTINGENCY 5e; WEALTH 10b

Economic power: *see* LABOR 7–7f; LIBERTY 2d; OLIGARCHY 5c; REVOLUTION 5a–5b / *see also* DEMOCRACY 4a(2); HISTORY 4a(2); JUSTICE 8c–8c(2); STATE 2d

Economic slavery: *see* JUSTICE 8c(1); LABOR 7c(1), 7d; LIBERTY 2d; SLAVERY 4–5b

Economic systems: *see* DEMOCRACY 4a(2); WEALTH 3d, 6a, 9c / *see also* FAMILY 3–3b; LABOR 5–5d; REVOLUTION 5b; SLAVERY 4–4c; STATE 2d

Economics, science of: *see* WEALTH 9 / *see also* PHILOSOPHY 2c; SCIENCE 3a

Economics, subject matter of: *see* CH 99: WEALTH; *and* FAMILY 3–3b; LABOR 4–7f; NATURE 5b / *see also* NECESSITY AND CONTINGENCY 5e; PROGRESS 3–3c; REVOLUTION 4–5c; STATE 2d; WAR AND PEACE 5c

Eden (*theol.*): *see* MAN 9b–9b(1); SIN 3a

Education: *see* CH 20: EDUCATION; *and* ART 6b; BEAUTY 6; CITIZEN 6; DEMOCRACY 6; HISTORY 2; KNOWLEDGE 9a–9b; LAW 6d; LOGIC 3–4f; STATE 7d, 8c; VIRTUE AND VICE 4b / *see also* ARISTOCRACY 5; ART 9a, 10a; ASTRONOMY 4; COURAGE 6; CUSTOM AND CONVENTION 5b; FAMILY 2c, 5b; GOD 6c(1); LANGUAGE 8; MIND 4a–4b; PHILOSOPHY 5; PLEASURE AND PAIN 4c(2), 10a; POETRY 5a, 9a; PROGRESS 6d; PUNISHMENT 3a; RHETORIC 6; WAR AND PEACE 10c

Effect and cause: *see* CAUSE 1b; CHANGE 3; REASONING 5b(3); RELATION 5a(1); TIME 5a–5b

Ego, id, and super-ego (*psychol.*): *see* MAN 4; SOUL 2b

Egoism: *see* LOVE 1c, 2a, 2b(2)

Elasticity: *see* MECHANICS 5c

Election (*pol.*): *see* DEMOCRACY 5b(3); GOVERNMENT 1h / *see also* CITIZEN 4; CONSTITUTION 9b; OPINION 7b

Election (*theol.*): *see* CHANCE 2b; FATE 4; GOD 7f; LIBERTY 5c; SIN 6a; WILL 7c

Electricity: *see* MECHANICS 7e–7e(5); SPACE 2c

Electrochemistry: *see* MECHANICS 7e(2)

Electrodynamics: *see* MECHANICS 7e–7e(5)

Electrostatics: *see* MECHANICS 7e–7e(1)

Element: *see* CH 21: ELEMENT; *and* INFINITY 4b; MATTER 2; OPPOSITION 3b; PRINCIPLE 1a / *see also* CHANGE 9a, 10a; ONE AND MANY 2b–2c, 3a(3)

Elimination (*biol.*): *see* ANIMAL 5f

Ellipse: *see* ASTRONOMY 8c(2); MECHANICS 5f(1); QUANTITY 3b(2)

Emanation (*philos.*): *see* BEING 2–2a; MIND 10b; ONE AND MANY 1a; SOUL 4c; WORLD 4d

Emancipation of slaves: *see* REVOLUTION 4a; SLAVERY 3c

Embryology: *see* ANIMAL 9–9e; EVOLUTION 6c, 7b(1)

Eminent domain: *see* WEALTH 7d(2)

Emotion: *see* CH 22: EMOTION; *and* ART 8; OPINION 2a; PLEASURE AND PAIN 4a; POETRY 6–6b; RHETORIC 4b; VIRTUE AND VICE 5a / *see also* ANIMAL 1a(3); DESIRE 3b(1), 3d; EDUCATION 5e; FAMILY 7d; LIBERTY 3a; MEMORY AND IMAGINATION 1d; MIND 9b; OPPOSITION 4b; SENSE 3e; WILL 1, 2b(2)

Empire and imperialism: *see* LIBERTY 6c; MONARCHY 5–5b; REVOLUTION 7; SLAVERY 6d; STATE 9f, 10b; TYRANNY 6; WAR AND PEACE 6a / *see also* DEMOCRACY 7b; GOVERNMENT 5b; REVOLUTION 2c

Empirical or experimental science: *see* EXPERIENCE 5–5c; LOGIC 4b; MECHANICS 2a; PHYSICS 2–4d; REASONING 6c; SCIENCE 1b, 1c, 4–7b / *see also* ASTRONOMY 2a; CAUSE 5b; DEFINITION 6b; HYPOTHESIS 4d; INDUCTION 5; PHILOSOPHY 1c; REASONING 5b(3); TRUTH 4c

Empiricism: *see* EXPERIENCE 2–4b; IDEA 2c–2f, 6e; INDUCTION 5; SENSE 5–5c / *see also* DEFINITION 6b; IDEA 1c; KNOWLEDGE 5c, 6c(4); LOGIC 4b; MEDICINE 2a; PHILOSOPHY 3a; PHYSICS 4b–4c

Employment and unemployment: *see* LABOR 7e; WEALTH 6e, 8c

End of the world: *see* GOD 7h; PROPHECY 4d; WORLD 8

Endocrinology: *see* ANIMAL 5c

Ends and means: *see* CAUSE 4; GOOD AND EVIL 5c; RELATION 5a(2); WILL 2c(2)–2c(3) / *see also* GOOD AND EVIL 4b; JUDGMENT 3; ONE AND MANY 5b; PRINCIPLE 4a; PRUDENCE 3a, 4b; REASONING 5e(3)

Energy: *see* MECHANICS 6e

Engineering: *see* PHYSICS 5; SCIENCE 1b(1) / *see also* ART 6c, 9b; KNOWLEDGE 8a; SCIENCE 3b

Enjoyment: *see* ART 7–7a; BEAUTY 4; DESIRE 2d; GOOD AND EVIL 4b; PLEASURE AND PAIN 4c–4d, 6d; WILL 2c(1)–2c(2)

Enthymeme: *see* REASONING 5d; RHETORIC 4c(2)

Environment: *see* ANIMAL 10, 11b; LIFE AND DEATH 4; MAN 7b / *see also* EVOLUTION 5c, 6b; HISTORY 4a(2); MEDICINE 3d(1); STATE 4–4c

Envy: *see* EMOTION 2a; SIN 2c(1)

Epic: *see* POETRY 4a, 8a(1)

Epicureanism: *see* GOOD AND EVIL 3d; HAPPINESS 2b(2); PLEASURE AND PAIN 6a, 7, 7b; TEMPERANCE 6b

Epicycle (*astron.*): *see* ASTRONOMY 8c(2), 9a–9c

Epidemics: *see* MEDICINE 7

Epistemology, science of: *see* EXPERIENCE 4–4b; KNOWLEDGE 5c, 5e; METAPHYSICS 4b

Epistemology, subject matter of: *see* EXPERIENCE 2c, 4–4b; IDEA 1–3c; JUDGMENT 8–10; KNOWLEDGE 1–7d; MIND 5–5b; TRUTH 1–4d; UNIVERSAL AND PARTICULAR 2–4f

Epoch: *see* TIME 8b / *see also* HISTORY 4a(3), 4b; PROGRESS 1c

Equality (*math.*): *see* QUANTITY 1b; SAME AND OTHER 3d

Equality and inequality (*pol.*): *see* DEMOCRACY 4a–4a(2); JUSTICE 5; TYRANNY 5a / *see also* CITIZEN 2c–3; LABOR 7c(2); LIBERTY 1f; LOVE 4a; REVOLUTION 3a

Equant (*astron.*): *see* ASTRONOMY 8c(2)

Equations: *see* MATHEMATICS 4c

Equilibrium: *see* MECHANICS 5a–5c, 6a

Equinoxes (*astron.*): *see* ASTRONOMY 9e

Equity: *see* JUSTICE 10d; LAW 5h; UNIVERSAL AND PARTICULAR 6c

Equivocal and univocal: *see* IDEA 4b(4); LANGUAGE 5a; SAME AND OTHER 4c; SIGN AND SYMBOL 3b–3d, 4a–4c

Eristic (*log.*): *see* LOGIC 5

Error: *see* MIND 5a; REASONING 3b–3c; SENSE 4d–4d(2); TRUTH 3d–3d(3); WILL 3b(2)

Eschatology (*theol.*): *see* GOD 7g–7h, 9f; IMMORTALITY 5c, 5g; PROPHECY 4d; WORLD 8

Essence or nature (*metaph.*): *see* BEING 7a, 8c–8d; DEFINITION 1a; FORM 1a–1b, 2a, 2c–2c(3); NATURE 1a–1a(2), 4a–4b / *see also* FORM 3–3c; GOD 4a; KNOWLEDGE 6a(2); ONE AND MANY 3b–3b(1), 3b(3); REASONING 5b(5); SAME AND OTHER 3a; SCIENCE 4b; UNIVERSAL AND PARTICULAR 2a–2c

Essential and accidental: *see* BEING 8d–8c; NECESSITY AND CONTINGENCY 3a–3c; ONE AND MANY 3b(1); SAME AND OTHER 3a / *see also* CHANCE 1a, 2a; NATURE 3c(1)

Estimative power (*psychol.*): *see* EMOTION 1c; HABIT 3b; SENSE 3b(2), 3d(3)

Eternal happiness: *see* ETERNITY 4d; GOD 6c(4); HAPPINESS 7–7d; IMMORTALITY 5f; LOVE 5a(2); MIND 4f; WILL 7d

Eternal law: *see* LAW 2, 3a–3a(2); WORLD 1c / *see also* CAUSE 7c; GOD 7c; JUSTICE 11a

Eternity: *see* CH 23: ETERNITY; *and* ASTRONOMY 8c(1); CHANGE 13, 15a, 15c; FORM 2b; GOD 4d; TIME 2–2c; TRUTH 5; WORLD 4a, 4e(2) / *see also* ELEMENT 5a; IDEA 1e; IMMORTALITY 6c; KNOWLEDGE 6a(1); PUNISHMENT 5e(1); SIN 6d

Ether (*phys.*): *see* MECHANICS 6d(2), 7a(4); SPACE 2c

Ethics, science of: *see* DUTY 3; GOOD AND EVIL 6d; KNOWLEDGE 6e–6e(2); PHILOSOPHY 2a, 2c; SCIENCE 3a / *see also* DEFINITION 6c; HAPPINESS 3; JUDGMENT 3; LOGIC 4c; METAPHYSICS 2d; PRINCIPLE 4–4b; REASONING 5e–5e(3), 6d; TRUTH 2c

Ethics, subject matter of: *see* COURAGE 1–2, 4; DUTY 1–8; GOOD AND EVIL 3–6c; HAPPINESS 1–5b; JUSTICE 1–5; PLEASURE AND PAIN 6–8b; PRUDENCE 1–5c; TEMPERANCE 1–4; VIRTUE AND VICE 1–6c / *see also* DESIRE 6a–6b; EDUCATION 4–4d; EMOTION 4–4c; HABIT 5b–5d; HONOR 2a–2c; IMMORTALITY 4; KNOWL-

EDGE 8b–8b(4); LIBERTY 3–3d; MIND 9c–9d; NATURE 5a; ONE AND MANY 5c; WILL 8–8e; WISDOM 2b–2c

Eucharist (*theol.*): *see* GOD 9e; RELIGION 2c; SIGN AND SYMBOL 5c

Eudaemonism (*philos.*): *see* DUTY 2; HAPPINESS 3

Eugenics: *see* FAMILY 6b

Even and odd: *see* QUANTITY 4a

Evidence (*log.*): *see* PRINCIPLE 2–2b(2); TRUTH 1a / *see also* IDEA 3b, 6d; KNOWLEDGE 6d(3); LOGIC 4c; OPINION 3b; PRINCIPLE 5

Evil: *see* GOOD AND EVIL 1d, 2b, 3f, 6b; SIN 1; VIRTUE AND VICE 4e(2); WORLD 6d / *see also* KNOWLEDGE 8b(1) OPINION 6a; PLEASURE AND PAIN 6e; WILL 2b(1)–2b(2), 8b(1); WISDOM 2b

Evolution (*biol.*): *see* CH 24: EVOLUTION; *and* ANIMAL 8a; MAN 8c; PROGRESS 2

Example (*log.*): *see* INDUCTION 4b; RHETORIC 4c(1)

Exchange (*econ.*): *see* JUSTICE 8, 8b; LABOR 4a; WEALTH 1–4g, 5a, 5c, 7c

Exchange-value: *see* WEALTH 4a

Excretion (*biol.*): *see* ANIMAL 5f

Executive (*pol.*): *see* GOVERNMENT 3, 3e–3e(2); LAW 7e; MONARCHY 1b(3) / *see also* CONSTITUTION 2a; DEMOCRACY 5c; JUSTICE 9d; PRUDENCE 6a; STATE 8–8d

Exegesis: *see* LANGUAGE 12; RHETORIC 2d; SIGN AND SYMBOL 5c; THEOLOGY 4b; WORLD 4e(3)

Exemplar ideas: *see* FORM 1a; GOD 5f; IDEA 1e

Exile: *see* PUNISHMENT 4b(2)

Existence: *see* BEING 1, 5–6, 7a, 8f; GOD 4a / *see also* CAUSE 7a; FORM 2a; IDEA 6a; JUDGMENT 8c; KNOWLEDGE 6a(3); MATHEMATICS 2b; MATTER 3a–3b; METAPHYSICS 2a; NECESSITY AND CONTINGENCY 2–2d; OPPOSITION 2a; REASONING 5b(5)

Expediency: *see* JUSTICE 4; TRUTH 8b; WAR AND PEACE 3b

Experience: *see* CH 25: EXPERIENCE; *and* FORM 1c; GOD 6c(3); MECHANICS 2a; PHILOSOPHY 3a; PHYSICS 4a–4d; SCIENCE 5a; SENSE 5b–5c / *see also* ART 5; DIALECTIC 2c; EDUCATION 5f; GOOD AND EVIL 6b; HABIT 3d; IDEA 2b, 2g; KNOWLEDGE 6b(1); MEMORY AND IMAGINATION 1a, 3c, 6a; MIND 1g(1); ONE AND MANY 4b; OPINION 2d; PHILOSOPHY 6c; PRINCIPLE 3b; REASONING 5b(3)

Experiment: *see* EXPERIENCE 5–5c; PHYSICS 4–4d; SCIENCE 1b / *see also* INDUCTION 2, 5; LOGIC 4b; MECHANICS 2a; QUANTITY 6c; SCIENCE 5a; SOUL 5b

Expert: *see* OPINION 7a; STATE 8d(3)

Expiation (*theol.*): *see* IMMORTALITY 5d; LABOR 1c; PUNISHMENT 5e(2); SIN 6e

Explanation and description (*log.*): *see* CAUSE 5–5d; HYPOTHESIS 4–4b; PHYSICS 2b; SCIENCE 4c / *see also* ASTRONOMY 2b, 3–3b; MECHANICS 2c, 7a, 7c(1)

Exploitation (*econ.*): *see* JUSTICE 8c(1); LABOR 7c–7c(3); SLAVERY 4c; WEALTH 6d(2) / *see also* LABOR 1f, 5c, 6a–6b, 8; MONARCHY 5b; REVOLUTION 4a; WEALTH 8c, 10d

Exploration (*log.*): *see* EXPERIENCE 5a; LOGIC 4b; PHYSICS 4b; SCIENCE 5b

Export and import: *see* LIBERTY 2c; STATE 9a; WEALTH 4g, 9c–9d

Expropriation (*econ.*): *see* WEALTH 6b, 8c

Extension: *see* BEING 7b(4); MATTER 2; SPACE 1a / *see also* MAN 3a; MATHEMATICS 2; MIND 2d; ONE AND MANY 3b(4); QUANTITY 1; SPACE 1c

Extension and thought (*philos.*): *see* BEING 7b(4); FORM 2d; MAN 3a; MIND 1b; ONE AND MANY 3b(4)

External goods: *see* GOOD AND EVIL 4d; HAPPINESS 2b(1); VIRTUE AND VICE 6c; WEALTH 10a

Extinction of species: *see* EVOLUTION 5a(2)

Extreme unction (*theol.*): *see* GOD 9e; RELIGION 2c; SIGN AND SYMBOL 5c

F

Fact: *see* HISTORY 3a; KNOWLEDGE 6a(3); SCIENCE 4a, 5b; SENSE 4b

Faction (*pol.*): *see* DEMOCRACY 5b(4); OPPOSITION 5a; STATE 5d(2)

Factory system: *see* FAMILY 3b; LABOR 4c; REVOLUTION 4b; WEALTH 3d

Faculties (*psychol.*): *see* LIFE AND DEATH 3; MAN 4–5a; SOUL 2–2c(3) / *see also* ANIMAL 1a(1)–1a(4); HABIT 2b; KNOWLEDGE 6b–6b(4); QUALITY 2a; VIRTUE AND VICE 2a

Faith or belief (*theol.*): *see* GOD 6c(2); KNOWLEDGE 6c(5); OPINION 4–4b; RELIGION 1–1b(3); TRUTH 4a; VIRTUE AND VICE 8d(1); WILL 3b(3) / *see also* HABIT 5e(3), LOGIC 4f; MIND 5c; PHILOSOPHY 6c; RELIGION 6b–6d; THEOLOGY 2, 4b; WAR AND PEACE 2b; WISDOM 1c

Fall of man (*theol.*): *see* MAN 9b(2); SIN 3b–3c; WILL 7e(1)

Fallacy (*log.*): *see* REASONING 3b–3c; SIGN AND SYMBOL 4b; TRUTH 3d(3)

Fallibility: *see* MIND 5a; SENSE 4d

Falling bodies (*phys.*): *see* MECHANICS 5e(2) / *see also* CHANGE 7b, 7c(2); NATURE 2d

Falsity: *see* DEFINITION 1c; IDEA 6f; JUDGMENT 10; KNOWLEDGE 4a; REASONING 3c; SENSE 4d–4d(2); TRUTH 2–3d(3)

Fame: *see* HONOR 1–5d / *see also* COURAGE 5; HAPPINESS 2b(4); IMMORTALITY 6b

Family: *see* CH 26: FAMILY; *and* DUTY 9; EDUCATION 4b; JUSTICE 7; LOVE 2b(4); STATE 5b; VIRTUE AND VICE 4d(1) / *see also* EDUCATION 8a; LABOR 5a; MONARCHY 4a; NECESSITY AND

CONTINGENCY 5b; ONE AND MANY 5d; PLEASURE AND PAIN 10a; SLAVERY 4a; STATE 1b; WEALTH 2, 3d

Fantasy (*psychol.*): *see* DESIRE 5a; IDEA 3c; MEMORY AND IMAGINATION 5, 7b, 8c

Farming: *see* ART 9a; LABOR 5b; WEALTH 3c

Fasting: *see* RELIGION 2e

Fate: *see* CH 27: FATE; *and* CHANCE 2b; CHANGE 15b; HISTORY 4a(1); LIBERTY 5a; PROPHECY 1a; WILL 7b-7c

Fatherhood and motherhood: *see* FAMILY 6–6b, 6d, 7d / *see also* DUTY 9; EDUCATION 4b; JUSTICE 7; VIRTUE AND VICE 4d(1)

Fault: *see* PUNISHMENT 2–2a; SIN 6a / *see also* EMOTION 4c; FATE 2; PUNISHMENT 2b; SIN 4a; 6b; VIRTUE AND VICE 4a

Fear: *see* COURAGE 3; EMOTION 2a, 3c(3), 5a–5c; IMMORTALITY 1; LAW 6a; LIFE AND DEATH 8c; POETRY 6b; STATE 3f

Federation or federal union: *see* GOVERNMENT 5d; ONE AND MANY 5e; REVOLUTION 2c, 6b; STATE 10e

Feeble-mindedness: *see* MAN 5b

Fertility (*biol.*): *see* ANIMAL 8c(5); EVOLUTION 5c

Feudalism: *see* LABOR 5b; STATE 10c; WEALTH 6a

Fiction (*log.*): *see* BEING 7d(5); HYPOTHESIS 4a; IDEA 3c

Field theory (*phys.*): *see* MECHANICS 6d(2), 7d(2), 7e(3); SPACE 2c

Figure (*math.*): *see* MATHEMATICS 2; QUALITY 3b; QUANTITY 3–3e(2), 5a; SPACE 3c

Figures of speech: *see* RHETORIC 2a

Final cause, finality: *see* CAUSE 1a, 6; CHANCE 3; DESIRE 1; GOD 5b; GOOD AND EVIL 1a; NATURE 3c(3) / *see also* PHYSICS 2b; REASONING 5b(4); SCIENCE 4c; WORLD 1c, 6d

Fine art: *see* ART 4, 7–7b, 10–10b; POETRY 1–8c; VIRTUE AND VICE 4d(4)

Fire: *see* ELEMENT 3b; OPPOSITION 3b

First and second causes: *see* CAUSE 1b, 7b; CHANGE 14; GOD 5a / *see also* ANGEL 2a; NATURE 3c(4); RELATION 5a(1)

First and second impositions: *see* SIGN AND SYMBOL 2a

First and second intentions: *see* IDEA 3a; SIGN AND SYMBOL 2b

First philosophy: *see* BEING 4a; MATTER 4b; METAPHYSICS 1; PHILOSOPHY 2b; SCIENCE 1a(2); THEOLOGY 3a; WISDOM 1a

First principles: *see* HAPPINESS 3; PHILOSOPHY 3b; PRINCIPLE 3–5 / *see also* INDUCTION 3; KNOWLEDGE 3; OPPOSITION 2a; PRINCIPLE 2b(2); TRUTH 3c

Fixation (*psychol.*): *see* DESIRE 4b; LOVE 2a(3)

Fixed capital: *see* WEALTH 6c

Fixed stars: *see* ASTRONOMY 9e

Fluids: *see* MECHANICS 5b

Fluxions: *see* INFINITY 3b; MATHEMATICS 4d; MECHANICS 3d; QUANTITY 7

Foetus: *see* ANIMAL 9a–9d

Folly: *see* WISDOM 1d, 2a, 4

Food: *see* ANIMAL 6a, 9f; MEDICINE 3d(1) / *see also* ANIMAL 5e, 6b; LIFE AND DEATH 4

Foolhardiness: *see* COURAGE 2

Force (*phys.*): *see* MECHANICS 6d–6d(3); OPPOSITION 3d; QUANTITY 5e/*see also* ASTRONOMY 3b, 8c(3), 10b; CHANGE 7b, 7c(1)–7c(2), 7c(4)–7d; MECHANICS 1b, 2c, 4a, 5a–6c, 6e, 7d(2), 7e(3); NATURE 2d; PHYSICS 2b; SPACE 2c

Force (*pol.*): *see* GOVERNMENT 1d; JUSTICE 1a, 9f; LAW 1c; REVOLUTION 1a, 2b, 3b, 5b; TYRANNY 7; WAR AND PEACE 1, 6–6a / *see also* CONSTITUTION 8a; DEMOCRACY 2a; DESIRE 7a(2); EMOTION 5b–5c; GOVERNMENT 3b; HAPPINESS 2b(6); LAW 5, 6a–6b, 7d; MONARCHY 3b; OLIGARCHY 5c; OPPOSITION 5b–5c; PUNISHMENT 4a; STATE 5d–5d(2), 9e–9e(2); TYRANNY 1a, 1c; WAR AND PEACE 10–10g

Forced labor: *see* LABOR 1c; PUNISHMENT 4b(3); SLAVERY 3a

Foreign policy: *see* GOVERNMENT 5a / *see also* STATE 9e–9e(2); WAR AND PEACE 6–6b, 10g, 11c

Foreknowledge or foresight: *see* KNOWLEDGE 5d(5); PROPHECY 1a–1b, 2–2c; TIME 6f

Forgetting: *see* MEMORY AND IMAGINATION 2e–2e(4); SIGN AND SYMBOL 6b

Form (*metaph.*): *see* CH 28: FORM; *and* BEING 7c(3); CHANGE 2a; IDEA 1a; NATURE 1a(2); ONE AND MANY 3b(3); UNIVERSAL AND PARTICULAR 2a, 6a / *see also* ART 2b; BEING 7b(2); KNOWLEDGE 5a(2); MATTER 1a; SAME AND OTHER 2a, 3a; SOUL 1b, 3a, 3c; SPACE 4a; TIME 6c

Form and matter: *see* ART 2b; BEING 7c(3); CHANGE 2a; FORM 2c(1); KNOWLEDGE 5a(2); NATURE 1a(2); PRINCIPLE 1b; SOUL 3c; UNIVERSAL AND PARTICULAR 6a / *see also* BEING 7b(2); DEFINITION 1d; FORM 1d(2), 2c(3), 3c; MATTER 1a, 4b; ONE AND MANY 3b(3); REASONING 3a

Forms of government: *see* GOVERNMENT 2–2e; JUSTICE 9c; REVOLUTION 2a; WAR AND PEACE 5b; WEALTH 9f / *see also* ARISTOCRACY 2–2e; CONSTITUTION 1, 3–3b, 5–5b; DEMOCRACY 2b–3c; LAW 7a; MONARCHY 1a(1), 1b–1b(2), 4–4e(4); OLIGARCHY 2; TYRANNY 2–2c, 5–5d

Formula: *see* MATHEMATICS 3d; MECHANICS 3c

Fornication: *see* LOVE 2a; SIN 2c(1)

Fortitude: *see* CH 13: COURAGE / *see also* HONOR 5c; PLEASURE AND PAIN 8a; TEMPERANCE 1a; VIRTUE AND VICE 2a–2a(1); WAR AND PEACE 10c

Fortuitousness: *see* CHANCE 1b; WORLD 4c

Fortune: *see* CHANCE 6–6b / *see also* CHANCE 2–2b; FATE 3; PROPHECY 1a

Fossils: *see* EVOLUTION 6a

Fractions: *see* MATHEMATICS 4a; QUANTITY 4b

Franchise or suffrage: *see* CITIZEN 3; CONSTITUTION 5a; DEMOCRACY 4a(1), 5b(2); LABOR 7d; OLIGARCHY 5a; SLAVERY 5a–5b / *see also* CITIZEN 2b; FAMILY 5b; GOVERNMENT 1h; JUSTICE 9e; PROGRESS 4c; SLAVERY 6c

Fraternity: *see* CITIZEN 8; JUSTICE 9b; LOVE 2b–2b(4), 4a, 4c; MAN 11b; STATE 3e; WAR and PEACE 11b

Free trade: *see* LIBERTY 2c; STATE 9a; WEALTH 4g, 9c–9d

Free will: *see* WILL 4b–8a / *see also* CAUSE 3, 7c; HISTORY 4a(1); LIBERTY 1c; MIND 9d; NATURE 2f; PUNISHMENT 2a; SIN 6a

Freedom (*econ., pol.*): *see* DEMOCRACY 4a–4a(2); JUSTICE 6–6c; LABOR 7f; LIBERTY 1–2d, 6–6c; PROGRESS 4c; SLAVERY 4–6d / *see also* CUSTOM AND CONVENTION 7d; DEMOCRACY 2; DIALECTIC 2d(2); FATE 6; HISTORY 4a(1); LABOR 3b, 7c(1); LAW 4c; OPINION 5–5b; POETRY 9b; PROGRESS 6e; RELIGION 6e; REVOLUTION 3a; SLAVERY 2c–2d; TRUTH 8d; TYRANNY 5–5c, 8; WAR AND PEACE 6b; WILL 7a–7b

Freedom (*ethics, psychol.*): *see* CAUSE 3; LIBERTY 3a–3d; MIND 9d; NATURE 2f, 3c(2); NECESSITY AND CONTINGENCY 5a–5a(3); WILL 4b–8a / *see also* CAUSE 7c; DIALECTIC 2d(2); FATE 3; GOOD AND EVIL 3b; HABIT 6c; HISTORY 4a(1); MAN 1a; METAPHYSICS 2d; MIND 1e(3); PRUDENCE 4a; PUNISHMENT 2a; SIN 6a; VIRTUE AND VICE 5c

Freedom (*metaph., theol.*): *see* LIBERTY 4–5d; WILL 4b–5c, 7c–7e(2) / *see also* CAUSE 3; DIALECTIC 2d(2); FATE 3–4; GOD 4e, 7b, 7f; HISTORY 5a; NATURE 3c(4)

Freedom and causality: *see* CAUSE 3; LIBERTY 4b; NATURE 2f, 3c(2); WILL 5c

Freedom of association: *see* CONSTITUTION 7b; DEMOCRACY 4b; LABOR 7c(2); LIBERTY 1g; TYRANNY 5a

Freedom of conscience and worship: *see* LIBERTY 2b; RELIGION 6c

Freedom of thought and expression: *see* KNOWLEDGE 9b; LIBERTY 2a; OPINION 5b; PROGRESS 6e; TRUTH 8d / *see also* ART 10b; CONSTITUTION 7b; DEMOCRACY 4b; EDUCATION 8c; LIBERTY 1g; POETRY 9b

Friction (*phys.*): *see* MECHANICS 5d

Friendship: *see* LOVE 2b–2b(4), 3a, 3d–4c / *see also* ANIMAL 12c; FAMILY 7c; HAPPINESS 2b(5); HONOR 2e; JUSTICE 3; PLEASURE AND PAIN 7a; SAME AND OTHER 5; STATE 3e; TRUTH 8c; VIRTUE AND VICE 6e

Function (*biol.*): *see* ANIMAL 3d; LIFE AND DEATH 2–3b / *see also* ANIMAL 1b, 2b; EVOLUTION 3a

Function (*math.*): *see* MATHEMATICS 3c

Funeral rites: *see* LIFE AND DEATH 8d

Future: *see* KNOWLEDGE 5a(5); NECESSITY AND CONTINGENCY 4c; PROPHECY 1a; TIME 3–3b, 6f; TRUTH 3b(2)

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Games: *see* EDUCATION 3; HABIT 5a; PLEASURE AND PAIN 4d

Gas: *see* MECHANICS 5b

Genealogy: *see* ANIMAL 2a; EVOLUTION 1a, 6b; MAN 8c

General names: *see* IDEA 4b(2)–4b(3); SIGN AND SYMBOL 2d; UNIVERSAL AND PARTICULAR 2c, 5a

General will (*pol.*): *see* WILL 10c / *see also* DEMOCRACY 4b; GOVERNMENT 1h; JUSTICE 9a; WILL 10a

Generalization: *see* IDEA 5d; INDUCTION 1–1a; SCIENCE 4d; UNIVERSAL AND PARTICULAR 4f / *see also* EXPERIENCE 2b; MEMORY AND IMAGINATION 3c; PHYSICS 4b; PRINCIPLE 3b

Generation and corruption: *see* ANIMAL 8b–8d; CHANGE 10–10b; ELEMENT 3c / *see also* ART 2a; ASTRONOMY 10a; ETERNITY 4b; FORM 1d(2); LIFE AND DEATH 7; MATTER 1b; WORLD 4e(1)

Generosity: *see* JUSTICE 3; LOVE 1c; WEALTH 10e(1)

Genetic method: *see* DEFINITION 2d; IDEA 6e

Genetics (*biol.*): *see* ANIMAL 10; EVOLUTION 2–2b

Genius: *see* MAN 6a; MIND 4a; WAR AND PEACE 10d

Gentile: *see* GOD 8a; MAN 7c; RELIGION 6d

Genus and species (*log.*): *see* DEFINITION 2b; IDEA 4b(3); OPPOSITION 1c(2); RELATION 5a(4); SAME AND OTHER 3a(1)–3a(3); SIGN AND SYMBOL 3c(2); UNIVERSAL AND PARTICULAR 5b / *see also* ANIMAL 2a; DIALECTIC 2b(1); EVOLUTION 1b; FORM 3c; IDEA 5d; NATURE 1a(1)

Geocentric hypothesis: *see* ASTRONOMY 2b

Geography, subject matter of: *see* ANIMAL 11a; EVOLUTION 5c, 6b; HISTORY 4a(2); MAN 7b; STATE 4b

Geology: *see* EVOLUTION 6a

Geometry, science of: *see* MATHEMATICS 1; MECHANICS 3c / *see also* ASTRONOMY 4; EDUCATION 5d; MATHEMATICS 1c; SPACE 4a

Geometry, subject matter of: *see* MATHEMATICS 4b; QUANTITY 3–3e(2); SPACE 3c–3d / *see also* ART 6b; MECHANICS 3c; QUANTITY 6b; SAME AND OTHER 3b, 3d

Gestation: *see* ANIMAL 9e

Ghosts: *see* SOUL 3e

Glands: *see* ANIMAL 5c

Glory (*theol.*): *see* GOD 4h; HONOR 6–6b

Gluttony: *see* SIN 2c(1); TEMPERANCE 2

God or gods: *see* CH 29: GOD; CH 79: RELIGION; *and* BEAUTY 7a; CAUSE 7–7d; CHANGE 15c; DUTY 11; EDUCATION 7a; ETERNITY 3; GOOD AND EVIL 2–2b; HAPPINESS 7d; HISTORY 5–5b; HONOR 6a; INFINITY 7–7d; JUSTICE 11–11b; KNOWLEDGE 5a(1); LANGUAGE 12; LAW 3b–3b(2); LIBERTY 5a–5d; LOVE 5–5c; MAN 10a, 11–11c; MATTER 3d; NATURE 3c(4); ONE AND MANY 1b, 6a–6c; SIGN AND SYMBOL 5f; SIN 1; WILL 4–4b; WISDOM 1d / *see also* ANGEL 1, 7–7b; ART 2c; ASTRONOMY 6, 12; CITIZEN 7; DESIRE 7b; FATE 1, 4; IDEA 1c; KNOWLEDGE 7a; MAN 3b; MIND 10e–10g; NATURE 1b; OPPOSITION 2d; PROPHECY 3d; RELATION 2–3; SAME AND OTHER 6; SIGN AND SYMBOL 5a; VIRTUE AND VICE 8d–8e; WILL 7c–7d; WORLD 3–3b

Golden age: *see* LABOR 1a; MAN 9a; PROGRESS 1c; TIME 8b

Good and evil: *see* CH 30: GOOD AND EVIL; *and* BEAUTY 1a; BEING 3–3b; CUSTOM AND CONVENTION 5a; GOD 5h; KNOWLEDGE 8b(1), 8b(4); MATTER 5; NATURE 5–5d; OPINION 6a; OPPOSITION 2d; PLEASURE AND PAIN 6–6e; RELATION 5a(2); VIRTUE AND VICE 4e(2); WILL 8b–8b(2); WISDOM 2b–2c / *see also* DESIRE 2b; DUTY 1–2; GOD 4f, 5b; HAPPINESS 2b–2b(7); JUDGMENT 3; LOVE 1d; RELATION 6c; RHETORIC 5b; SIN 1; TRUTH 1c; UNIVERSAL AND PARTICULAR 7b; WEALTH 10a; WORLD 6d

Good works (*theol.*): *see* SIN 7

Government: *see* CH 12: CONSTITUTION; CH 31: GOVERNMENT; *and* ART 9d; DEMOCRACY 5–5c; FAMILY 2b; REVOLUTION 2a; STATE 2c; TYRANNY 5–5c; WAR AND PEACE 11a, 11d / *see also* ARISTOCRACY 6; CAUSE 7c; GOD 7c; HAPPINESS 5b; JUSTICE 9c; LAW 1c, 7a; MIND 9e; MONARCHY 1a–1b(3); OLIGARCHY 1; PLEASURE AND PAIN 10b; PROGRESS 4a; RELIGION 3c(2), 4a; REVOLUTION 3c–3c(3); STATE 1b; 6a; WAR AND PEACE 5b; WEALTH 9d–9f; WORLD 1c

Government by law and government by men: *see* CONSTITUTION 1; LAW 7a; MONARCHY 1a(1); TYRANNY 5–5c / *see also* ARISTOCRACY 4; CITIZEN 2a–2b; LIBERTY 1d

Government ownership: *see* WEALTH 7d(2), 8a / *see also* DEMOCRACY 4a(2); JUSTICE 8a; LABOR 7b; REVOLUTION 4b

Governmental controls and regulations: *see* ART 10b; EDUCATION 8c; LIBERTY 2a, 2c; PLEASURE AND PAIN 9; POETRY 9b; TEMPERANCE 5c; WEALTH 9d

Grace (*theol.*): *see* GOD 7d; HABIT 5e(1); LIBERTY 5c; NATURE 6b; VIRTUE AND VICE 8b; WILL 7e(2) / *see also* CAUSE 7d; HAPPINESS 7a; LAW 3b(2); MAN 9b(3); MIND 5c; SIN 3a, 4d, 7

Grammar, science of: *see* EDUCATION 5d; LANGUAGE 7–8; LOGIC 3a; RHETORIC 1b

Grammar, subject matter of: *see* JUDGMENT 5a; LANGUAGE 4–6; SIGN AND SYMBOL 2–3d; TIME 6d; UNIVERSAL AND PARTICULAR 5a / *see also* DEFINITION 3; IDEA 4a

Gravitation, gravity: *see* ASTRONOMY 3b; MECHANICS 6a–6b, 6d(1)–6d(2); SPACE 2c

Greed: *see* DESIRE 7a(3); SIN 2c(1); WEALTH 10c, 10e(3)

Greek and barbarian: *see* MAN 7c / *see also* CUSTOM AND CONVENTION 7b; STATE 9b

Gregariousness: *see* STATE 1a

Grief: *see* PLEASURE AND PAIN 4a

Growth and decay (*biol.*): *see* ANIMAL 7; CHANGE 8b / *see also* ANIMAL 9c; LIFE AND DEATH 3a; MAN 4a; SOUL 2c(1)

Guilds (*econ.*): *see* LABOR 7c(2); STATE 1d; WEALTH 3d

Guilt: *see* PUNISHMENT 2a, 3c; SIN 5–6b

Gymnastics: *see* EDUCATION 3; HABIT 5a

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Habit: *see* CH 32: HABIT / *see also* ANIMAL 1d; DESIRE 3b(2); NATURE 2c; PRINCIPLE 3a(1); QUALITY 2a; VIRTUE AND VICE 1e; WILL 3a(2), 8c

Habitat: *see* ANIMAL 11–11b; EVOLUTION 6b

Hades: *see* PUNISHMENT 5e(1)

Hallucination: *see* MEMORY AND IMAGINATION 5c; SENSE 4d(2)

Happiness: *see* CH 33: HAPPINESS; *and* DUTY 2; GOOD AND EVIL 5a; KNOWLEDGE 8b(4); LABOR 1b; LIBERTY 3d; LOVE 3a; PHILOSOPHY 4a; PLEASURE AND PAIN 7; VIRTUE AND VICE 1d; WISDOM 2c / *see also* GOD 4h; HONOR 2b; JUSTICE 4; STATE 2f; TEMPERANCE 3; WAR AND PEACE 5a; WEALTH 10a

Harmony: *see* BEAUTY 1c; JUSTICE 1b; MAN 5; MEDICINE 4; RELATION 5c

Hate: *see* EMOTION 2a; LOVE 1a–1b, 1f

Health: *see* LIFE AND DEATH 5a; MEDICINE 4, 6a

Hearing: *see* SENSE 3a, 3b(1), 3c(1); SPACE 4c

Heart: *see* ANIMAL 5b

Heat: *see* MECHANICS 7c–7c(2), 7e(4)

Heaven: *see* ANGEL 4; ETERNITY 4d; HAPPINESS 7c(2); IMMORTALITY 5f

Heavenly bodies: *see* ANGEL 2a; ASTRONOMY 8–12; CHANGE 7c(4), 10c; ETERNITY 4b; MATTER 1b; SOUL 1a; WORLD 6a

Hedonism: *see* DUTY 2; GOOD AND EVIL 3d; PLEASURE AND PAIN 6a / *see also* DESIRE 5c, 7a(1); HAPPINESS 2b(2); TEMPERANCE 6b

Hegemonies (*pol.*): *see* STATE 9e(2)

Heliocentric hypothesis: *see* ASTRONOMY 2b

Hell: *see* ETERNITY 4d; HAPPINESS 7c(3); IMMORTALITY 5e; PUNISHMENT 5d, 5e(1); SIN 6d

Heredity: *see* ANIMAL 9g–10; EVOLUTION 3–3e; HABIT 3e

Heresy: *see* RELIGION 6c(1); THEOLOGY 4e

Hermeneutics (*theol.*): *see* LANGUAGE 12; RHETORIC 2d; SIGN AND SYMBOL 5e; THEOLOGY 4b; WORLD 4e(3)

Hero: *see* HISTORY 4a(4); HONOR 5–5d; LIFE AND DEATH 8c / *see also* COURAGE 5; HONOR 3a; LOVE 3d; TEMPERANCE 6a; WAR AND PEACE 8

Heterogeneity: *see* SAME AND OTHER 3a(3)

Hierarchy and continuity (*philos.*): *see* BEING 3a; LIFE AND DEATH 2–3b; NATURE 3b; RELATION 5a(4)–5b; WORLD 6b / *see also* ANIMAL 1b–1c, 2c; EVOLUTION 3c, 4a, 4c, 7b; GOOD AND EVIL 1b; MAN 1a–1c; SENSE 2–2c

Histology: *see* ANIMAL 3a

History, discipline of: *see* CH 34: HISTORY; *and* LOGIC 4c; MEMORY AND IMAGINATION 7b; PHILOSOPHY 1d; POETRY 5b; RHETORIC 2c; SCIENCE 2b / *see also* EDUCATION 4d; EXPERIENCE 6b; MEMORY AND IMAGINATION 3d; VIRTUE AND VICE 4d(4)

History, historian: *see* ARISTOCRACY 7; ART 12; ASTRONOMY 13; CITIZEN 9; CONSTITUTION 10; EDUCATION 9; FAMILY 8; GOVERNMENT 6; HISTORY 4–5b; KNOWLEDGE 10; LABOR 8; LAW 8; MEDICINE 7; MONARCHY 6; OLIGARCHY 6; PHILOSOPHY 7; PROGRESS 1–1c, 3–6e; RELIGION 7; RHETORIC 7; STATE 10–10c; WEALTH 12 / *see also* CAUSE 8; CHANCE 6b; DIALECTIC 2d(2); EVOLUTION 7c; FATE 6; HONOR 5d; LIBERTY 6–6c; MAN 9b(3)–9c; MIND 10f(1); NATURE 4c; NECESSITY AND CONTINGENCY 5f; OPPOSITION 5–5c; PROGRESS 4b; STATE 2a(3); TIME 8–8b; WEALTH 11; WILL 7b

Holy orders (*theol.*): *see* RELIGION 3c(1) / *see also* GOD 9e; RELIGION 2c; SIGN AND SYMBOL 5c

Homogeneity: *see* SAME AND OTHER 3a(1)

Honesty: *see* DUTY 7; TRUTH 8a

Honor: *see* CH 35: HONOR; *and* HAPPINESS 2b(4): STATE 9c; VIRTUE AND VICE 6d / *see also* COURAGE 5; IMMORTALITY 6b; JUSTICE 9e; LABOR 1e; LOVE 2c; SIGN AND SYMBOL 1e; WAR AND PEACE 6b

Hope: *see* COURAGE 3; EMOTION 2a; HABIT 5e(3); VIRTUE AND VICE 8d(2)

Human bondage: *see* LIBERTY 3a; SLAVERY 7 / *see also* DESIRE 5–5c; EMOTION 4a(1); MAN 5a; OPPOSITION 4a; TYRANNY 5d

Human nature: *see* CH 51: MAN / *see also* ANIMAL 1c–1c(2); GOD 3f; GOOD AND EVIL 3a; HAPPINESS 4a; INFINITY 6–6b; MIND 3a; NATURE 5a; PROGRESS 1b; SIN 3c; SOUL 3b; STATE 1a

Humility: *see* VIRTUE AND VICE 8f

Humours (*biol.*): *see* MEDICINE 5d(1); OPPOSITION 3b, 4b

Husband and wife: *see* FAMILY 4a–4b, 4e, 5a, 7a, 7c; LOVE 2b(4), 2d

Hybridism (*biol.*): *see* EVOLUTION 3c

Hybris: *see* SIN 4c

Hydrodynamics: *see* MECHANICS 5b

Hydrostatic: *see* MECHANICS 5b

Hyperbola (*math.*): *see* QUANTITY 3b(4)

Hypostasis: *see* MIND 10b; ONE AND MANY 1a; WORLD 4d

Hypostatic union: *see* ONE AND MANY 6c

Hypothesis: *see* CH 36: HYPOTHESIS; *and* ASTRONOMY 2b; MECHANICS 2b; SCIENCE 5e / *see also* DIALECTIC 2a(2); EXPERIENCE 5a–5b; MATHEMATICS 3a; PHYSICS 4b; PRINCIPLE 3c–3c(3); SCIENCE 4a, 4e

Hypothetical and categorical (*log.*): *see* HYPOTHESIS 5; JUDGMENT 6d; REASONING 2b

Hypothetical imperative (*ethics*): *see* JUDGMENT 3; NECESSITY AND CONTINGENCY 5a(2)

Hysteria: *see* EMOTION 3c(1) / *see also* MEDICINE 6b, 6c(2)–6d

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Id, ego, and super-ego (*psychol.*): *see* MAN 4; SOUL 2b

Idea: *see* CH 37: IDEA; *and* MEMORY AND IMAGINATION 5b, 6c(1); MIND 1d(1)–1d(2), 4d(2); RELATION 4e–4f; SENSE 5a; TRUTH 3b(1) / *see also* BEAUTY 7c; BEING 7d(2); DEFINITION 1b; ETERNITY 4c; FORM 1a, 2b; GOD 5f; KNOWLEDGE 6a(3), 6c(3); MEMORY AND IMAGINATION 2c, 3a; PRINCIPLE 2a(1); SIGN AND SYMBOL 1b; TIME 5c; UNIVERSAL AND PARTICULAR 2a–2c, 4b–4d

Ideal and real (*metaph.*): *see* BEING 7d–7d(5); IDEA 6a; MATHEMATICS 2b / *see also* FORM 2a; IDEA 3c; RELATION 1a; SPACE 3b; UNIVERSAL AND PARTICULAR 2a–2b

Ideal state: *see* GOVERNMENT 2e; STATE 6–6b

Identification (*psychol.*): *see* DESIRE 4b; LOVE 2a(3)

Identity and diversity (*metaph.*): *see* SAME AND OTHER 1–3d / *see also* ONE AND MANY 2a; PRINCIPLE 3a(3); SOUL 1d

Idolatry: *see* GOD 14; RELIGION 6a

Ignorance: *see* KNOWLEDGE 4a; TRUTH 3d(2)

Illusion: *see* MEMORY AND IMAGINATION 2e(4); SENSE 4d(2); SPACE 4c; TIME 6b; TRUTH 3d(2)

Image (*psychol.*): *see* ELEMENT 5e; IDEA 1c, 2e–2f; MEMORY AND IMAGINATION 5–5b, 6c(1); SENSE 1d; SIGN AND SYMBOL 1b; UNIVERSAL AND PARTICULAR 4d

Imageless thought: *see* MEMORY AND IMAGINATION 6d

Imagination: *see* MEMORY AND IMAGINATION 1–1d, 5–7b; MIND 1a(2) / *see also* ANIMAL 1a(2); ART 5; BEING 8a; DESIRE 5a; EXPERIENCE 2a; IDEA 2f; KNOWLEDGE 4c; MATTER

4c; MIND 1b(1); REASONING 1c; SENSE 3b(2), 3d(2); TRUTH 3a(2)

Imitation: *see* ART 3; FORM 1d(1); MEDICINE 2b; NATURE 2a; POETRY 1a–1b; SAME AND OTHER 4a

Immanence and transcendence (*theol.*): *see* GOD 5d–5e; NATURE 1b; ONE AND MANY 1b; RELATION 3; WORLD 3–3b

Immateriality: *see* ANGEL 2b; GOD 4c; KNOWLEDGE 5a(2); MATTER 3c; MIND 2a; SOUL 3–3e

Immaturity: *see* FAMILY 6c; LIFE AND DEATH 6c; MAN 6c

Immediate inference: *see* JUDGMENT 7b; REASONING 4a

Immortality: *see* CH 38: IMMORTALITY; *and* SOUL 4b / *see also* ELEMENT 5f; HONOR 2d; METAPHYSICS 2d; SOUL 4d–4d(1)

Immutability: *see* CHANGE 15–15c; ETERNITY 1, 4c; FORM 1a; GOD 4d; TIME 2, 2c; TRUTH 5

Impeachment: *see* CONSTITUTION 7b

Impenetrability: *see* MATTER 2a; SPACE 1d

Imperialism and empire: *see* LIBERTY 6c; MONARCHY 5–5b; REVOLUTION 7; SLAVERY 6d; STATE 9f, 10b; TYRANNY 6; WAR AND PEACE 6a / *see also* DEMOCRACY 7b; GOVERNMENT 5b; REVOLUTION 2c

Imperishability: *see* ANGEL 3c; BEING 7b(3); CHANGE 10c; ELEMENT 5a; ETERNITY 4a–4b / *see also* ASTRONOMY 8a; CHANGE 15–15c; ETERNITY 1, 4c; FORM 1a; GOD 4d; MATTER 1b; TIME 2, 2c; TRUTH 5; WORLD 4a, 6a

Impiety: *see* GOD 3b; PROPHECY 5; RELIGION 2g

Impositions (*log.*): *see* SIGN AND SYMBOL 2a

Impossibility and possibility: *see* BEING 7d(1); NECESSITY AND CONTINGENCY 1; POETRY 8a(2); WILL 4b

Impression (*psychol.*): *see* SENSE 1d

Imprisonment: *see* PUNISHMENT 4b(2)

Inadequate ideas and knowledge: *see* IDEA 3b; KNOWLEDGE 6d(3); OPINION 3b

Inanimate and animate: *see* CAUSE 2; CHANGE 6c, 8–10b; LIFE AND DEATH 2 / *see also* NATURE 3b; WORLD 6b

Incarnation (*theol.*): *see* GOD 9b–9b(3); MAN 11c; MIND 4f; ONE AND MANY 6c

Incest: *see* FAMILY 4d

Incommensurability (*math.*): *see* MATHEMATICS 2c; QUANTITY 6a

Incontinence: *see* DESIRE 5c; TEMPERANCE 1c

Incorporeality: *see* ANGEL 2b; GOD 4c; KNOWLEDGE 5a(2), 6a(1); MATTER 3c; MIND 2a; SOUL 3–3e

Incorruptibility (*metaph.*): *see* ANGEL 3c; BEING 7b(3); CHANGE 10c; ELEMENT 5a; ETERNITY 4a–4b / *see also* ASTRONOMY 8a; CHANGE 15–15c; ETERNITY 1, 4c; FORM 1a; GOD 4d; MATTER 1b; TIME 2, 2c; WORLD 4a, 6a

Increase: *see* ANIMAL 7; CHANGE 8–8b

Indecision (*psychol.*): *see* WILL 9b

Indefinables: *see* DEFINITION 1c; PRINCIPLE 2a(3); RELATION 4a; UNIVERSAL AND PARTICULAR 4c

Independence (*pol.*): *see* GOVERNMENT 5; LIBERTY 1b, 6c; REVOLUTION 7; STATE 9d

Independent and dependent being: *see* BEING 7b, 7b(4); NECESSITY AND CONTINGENCY 2–2b / *see also* CAUSE 7a; GOD 4a, 5e; NATURE 1b, 3c(4); ONE AND MANY 1a–1b; WORLD 3–3b

Indigence: *see* LABOR 7e; WEALTH 8c

Individual (*pol.*): *see* CITIZEN 1; GOOD AND EVIL 5d; HAPPINESS 5a–5b; HISTORY 4a(4); STATE 2f

Individual differences: *see* ANIMAL 10; MAN 6–6c; MIND 4a / *see also* ANIMAL 8c(1); HAPPINESS 4a; NATURE 1a(1); SLAVERY 2a; WILL 9–9a

Individuality (*metaph.*): *see* MATTER 1c; UNIVERSAL AND PARTICULAR 3, 4c / *see also* FORM 3b; KNOWLEDGE 6a(2); NATURE 1a(1); UNIVERSAL AND PARTICULAR 1

Indivisibility (*math., phys.*): *see* ELEMENT 3a, 5a; ONE AND MANY 2b; TIME 3c

Induction: *see* CH 39: INDUCTION; *and* PRINCIPLE 3b; REASONING 4c, 6c–6d; RHETORIC 4c(1); SCIENCE 5d; SENSE 5b / *see also* EXPERIENCE 2b; KNOWLEDGE 6c(2); LOGIC 1b; PHILOSOPHY 3c; PHYSICS 4b

Industrial arts: *see* ART 9b; LABOR 2b

Industrial revolution: *see* REVOLUTION 4b; WEALTH 12

Industry, industrial system: *see* WEALTH 3d / *see also* ART 9b; FAMILY 3b; LABOR 5, 5c–5d; REVOLUTION 4b

Inertia: *see* CHANGE 7d; MATTER 2a; MECHANICS 1b

Infallibility (*psychol.*): *see* TRUTH 3d(1)

Infamy: *see* HONOR 3b

Infancy: *see* ANIMAL 9f–9g; FAMILY 6c; LIFE AND DEATH 6c; LOVE 2a(2); MAN 6c

Inference (*log.*): *see* CH 77: REASONING / *see also* EXPERIENCE 2d; HYPOTHESIS 2, 5; IDEA 5b; INDUCTION 1b, 4–4b; INFINITY 2c; KNOWLEDGE 6c(2); LOGIC 4–4f; NECESSITY AND CONTINGENCY 4e(2); OPINION 2c; OPPOSITION 1e; RHETORIC 4c–4c(2); TRUTH 3b(3)–3c; UNIVERSAL AND PARTICULAR 5d

Infidel: *see* RELIGION 6d

Infinitesimal: *see* INFINITY 3b; MATHEMATICS 4d; QUANTITY 7

Infinity: *see* CH 40: INFINITY; *and* BEING 2a; DESIRE 7–7b; ETERNITY 2; GOD 4e; QUANTITY 7; SPACE 3a; TIME 2b / *see also* BEING 7b(4); ELEMENT 5b; ETERNITY 1; JUDGMENT 6b; KNOWLEDGE 5a(4); LIBERTY 5d; MATHEMATICS 4d; TRUTH 2d; WORLD 4a

Infused ideas: *see* IDEA 2a

Infused virtues: *see* HABIT 5e(2); VIRTUE AND VICE 8e

Inheritance (*econ.*): *see* WEALTH 7c

Inhibition (*psychol.*): *see* DESIRE 6b; WILL 9b

Injustice: *see* CH 42: JUSTICE / *see also* LABOR 7–7f; LAW 6c; MONARCHY 5b; OLIGARCHY 5a; PUNISHMENT 4c; REVOLUTION 6–6b; SLAVERY 3d; TRUTH 8a; TYRANNY 1b; WAR AND PEACE 3a; WEALTH 10d

Innate ideas: *see* IDEA 2b; KNOWLEDGE 6c(3); MEMORY AND IMAGINATION 3a; MIND 4d(2)

Innocence (*theol.*): *see* JUSTICE 1b; KNOWLEDGE 7c; MAN 9b(1); MIND 4f; SIN 3a

Insanity and sanity: *see* EMOTION 3a; MAN 5b; MEDICINE 6a; MIND 8–8c; ONE AND MANY 3b(5); PUNISHMENT 2b

Insignificant speech: *see* LANGUAGE 5b

Inspiration (*aesth.*): *see* ART 5; POETRY 3

Inspiration (*theol.*): *see* EDUCATION 7a; GOD 6c(1)–6c(2); IDEA 2a; KNOWLEDGE 6c(5); LANGUAGE 11–12; MEMORY AND IMAGINATION 8a; PROPHECY 1b; RELIGION 1b(1)

Instability (*pol.*): *see* ARISTOCRACY 3; CONSTITUTION 7a; DEMOCRACY 7–7c; OLIGARCHY 3–3a; REVOLUTION 3c

Instantaneity: *see* TIME 3c

Instinct: *see* HABIT 3–3e / *see also* ANIMAL 1d; DESIRE 3a; EMOTION 1c; EVOLUTION 3b; LIFE AND DEATH 8a-8b; LOVE 2a(1); SENSE 3d(3); WILL 3a(2)

Instruments: *see* ASTRONOMY 2a; QUANTITY 6c; SCIENCE 6a

Insurrection: *see* LAW 6c; REVOLUTION 1–2b, 3–3b, 6a; WAR AND PEACE 2a, 4b

Integer (*math.*): *see* QUANTITY 4–4b

Intellect or intelligence: *see* CH 58: MIND; *and* ANIMAL 1c(2); KNOWLEDGE 6b(3); MAN 1a–1c, 4c; ONE AND MANY 4a; SOUL 3b / *see also* ANGEL 2–2a, 3d; ANIMAL 1a(2); ASTRONOMY 8b; ELEMENT 5f; EVOLUTION 7b(3); GOD 4g; HABIT 5c–5d; IDEA 6a-6b; INFINITY 6b; SENSE 1a–1b; SOUL 1c, 2c(3); VIRTUE AND VICE 2a(2)

Intellectual gifts (*theol.*): *see* HABIT 5e(2); VIRTUE AND VICE 8e; WISDOM 1c

Intellectual virtues: *see* HABIT 5d; VIRTUE AND VICE 2a, 2a(2) / *see also* ART 1; PRUDENCE 1, 2c; SCIENCE 1a(1); WISDOM 2a

Intelligible and sensible: *see* BEING 7e, 8a–8b; EXPERIENCE 4a; FORM 3a; GOOD AND EVIL 4a; KNOWLEDGE 6a(1), 6a(4); MATTER 1c; MIND 1a(1); UNIVERSAL AND PARTICULAR 4d

Intentional and accidental: *see* PUNISHMENT 2a; VIRTUE AND VICE 5c; WILL 3a–3a(2)

Intentional being: *see* IDEA 6a–6b / *see also* BEING 7d; FORM 2a; KNOWLEDGE 1; ONE AND MANY 4f; SAME AND OTHER 4a; SIGN AND SYMBOL 1b

Intentions (*log.*): *see* IDEA 3a; SIGN AND SYMBOL 2b

Interbreeding: *see* EVOLUTION 3c

Interest (*econ.*): *see* JUSTICE 8d; WEALTH 4c, 5e, 6d(1)

Intermediate varieties: *see* EVOLUTION 5a(2)

International law: *see* LAW 4g; WAR AND PEACE 11c

International relations: *see* GOVERNMENT 5–5a; JUSTICE 9f; STATE 9–9e(2); WAR AND PEACE 4a / *see also* GOVERNMENT 5d; LAW 4g; LIBERTY 1b; NECESSITY AND CONTINGENCY 5d; WAR AND PEACE 3b, 7, 11c–11d

International trade: *see* LIBERTY 2c; STATE 9a, 9c; WEALTH 4g

Interpretation: *see* RHETORIC 2d; SIGN AND SYMBOL 4c / *see also* LANGUAGE 12; POETRY 8c; PROPHECY 3a; SIGN AND SYMBOL 5c

Intolerance: *see* RELIGION 6d–6e; STATE 5d(1) / *see also* CUSTOM AND CONVENTION 7b

Introspection: *see* MAN 2a; MIND 6; SOUL 5a / *see also* IDEA 2d; WILL 5b(1)

Intuition: *see* IDEA 2c; KNOWLEDGE 6c(1)–6c(2); MEMORY AND IMAGINATION 6c(2); REASONING 1b; SENSE 1c / *see also* INDUCTION 1a; JUDGMENT 8a; KNOWLEDGE 6b(4); LOGIC 4d; MATHEMATICS 2a; MIND 1c(1); PHILOSOPHY 3c; PRINCIPLE 3b; SPACE 4a; TIME 6c; UNIVERSAL AND PARTICULAR 4a

Invention: *see* LABOR 1c; PHYSICS 5; PROGRESS 3c; SCIENCE 1b(1), 6a; WAR AND PEACE 10f

Investment (*econ.*): *see* WEALTH 3a

Involuntary: *see* ANIMAL 4b; VIRTUE AND VICE 4c(1); WILL 3a(1) / *see also* KNOWLEDGE 8b(2); PUNISHMENT 2a

Irrationality (*math.*): *see* MATHEMATICS 2c; QUANTITY 6a

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Joy: *see* EMOTION 2a; HAPPINESS 7c(2); PLEASURE AND PAIN 4a

Judaism: *see* GOD 7–8e; LAW 3b–3b(1); RELIGION 3a / *see also* EDUCATION 7–7b; PROPHECY 2c, 4a–4c

Judgment: *see* CH 41: JUDGMENT; *and* IDEA 5a, 6f; MIND 1a(3); NECESSITY AND CONTINGENCY 4e(1); OPPOSITION 1d–1d(2); RELATION 4b; TRUTH 3b(2); UNIVERSAL AND PARTICULAR 5c / *see also* BEAUTY 5; BEING 4b; EXPERIENCE 2d, 6a; INFINITY 2b; KNOWLEDGE 6c(2); MIND 1c(2); PRINCIPLE 2b–2b(3); PRUDENCE 5a; SENSE 1c; TRUTH 3c; VIRTUE AND VICE 5b

Judicial process: *see* GOVERNMENT 3d(2); JUSTICE 10d; LAW 5g–5h, 8–9; PRUDENCE 6b; UNIVERSAL AND PARTICULAR 6c

Judiciary: *see* GOVERNMENT 3d–3d(2) / *see also* CONSTITUTION 7b; DEMOCRACY 5c; GOVERNMENT 3

Jurisprudence: *see* PRUDENCE 6b / *see also* DUTY 3; LAW 8; LOGIC 4e; PHILOSOPHY 2c; SCIENCE 3a

Jury (*pol.*): *see* LAW 5g

Just price: *see* JUSTICE 8b; WEALTH 10d

Justice: *see* CH 42: JUSTICE; *and* CONSTITUTION 5a; DEMOCRACY 3a, 4a(2); DUTY 7; GOD 5i; GOOD AND EVIL 3e; LABOR 7–7f; LIBERTY 1e; PUNISHMENT 4c, 5c–5e(2); REVOLUTION 6–7; VIRTUE AND VICE 2a(1); WAR AND PEACE 11b; WEALTH 10d / *see also* ARISTOCRACY 1b; CONSTITUTION 2b; GOVERNMENT 1c; HONOR 4b; LAW 4e, 5c, 5g–5h, 6c; LOVE 3c, 4b; PLEASURE AND PAIN 8b; PUNISHMENT 2; RELIGION 2; REVOLUTION 3a; RHETORIC 5b; SLAVERY 3d; STATE 3c, 9c; TEMPERANCE 1a; TYRANNY 1b; VIRTUE AND VICE 3b; WAR AND PEACE 3a–3b; 6b; WILL 8c

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Kinds (*log.*): *see* DEFINITION 2b; EVOLUTION 1b, 2b; INFINITY 5a; KNOWLEDGE 6a(2); NATURE 1a(1); RELATION 5a(4); SAME AND OTHER 2a; UNIVERSAL AND PARTICULAR 1

Kinematics: *see* ASTRONOMY 8c(2); CHANGE 7c(1)

Kinetics: *see* MECHANICS 5b–6c / *see also* ASTRONOMY 8c(2)–8c(3); CHANGE 7–7d; NATURE 2d; QUANTITY 5c–5e; SPACE 2c

King, kingship: *see* CH 59: MONARCHY; *and* GOVERNMENT 1g(1); LAW 6b, 7e; REVOLUTION 3c(1); TYRANNY 2a, 4a, 5c

Knowledge: *see* CH 43: KNOWLEDGE; *and* EXPERIENCE 3–4b; GOD 5f; GOOD AND EVIL 6a-6d; HAPPINESS 2b(7); MATHEMATICS 1c; MATTER 4–4d; NECESSITY AND CONTINGENCY 4a; OPINION 1–3c; SAME AND OTHER 4a; SCIENCE 1a–2b, 4–4c; SENSE 4a; TRUTH 3–3d(3); VIRTUE AND VICE 1a; WISDOM 1a / *see also* ANGEL 3d; ART 6b-6c; BEING 8–8f; CAUSE 5–5d; DIALECTIC 2a(1); EDUCATION 4a, 5a–5b; FORM 3-4; GOD 6c–6c(4); HISTORY 1; LANGUAGE 7; MEMORY AND IMAGINATION 3–3d, 6a; METAPHYSICS 1; MIND 9a; PHILOSOPHY 1; PHYSICS 1; POETRY 5–5b; PRINCIPLE 2–2b(3); UNIVERSAL AND PARTICULAR 4–4f

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Labor: *see* CH 44: LABOR; *and* JUSTICE 8b–8c(2); PROGRESS 3a–3b; WEALTH 4d / *see also* LIBERTY 2d; OPPOSITION 5b; PUNISHMENT 4b(3); REVOLUTION 5a; SLAVERY 4a–4c, 5b; STATE 5c; WEALTH 3a, 6d(2), 6e, 7b(1), 8c, 9h, 10d, 11

Labor legislation: *see* LABOR 7a

Labor organization: *see* LABOR 7c(2); STATE 1d

Labor theory of value: *see* LABOR 6d; WEALTH 4d

Lactation: *see* ANIMAL 9f

Laissez-faire economy: *see* LIBERTY 2c; STATE 9a; WEALTH 9c–9d

Land (*econ.*): *see* WEALTH 3b–3c, 7b(2)

Language: *see* CH 45: LANGUAGE; *and* SIGN AND SYMBOL 1a, 1d, 1f, 3a, 4–4c / *see also* IDEA 4a; JUDGMENT 5a; LOGIC 3a; MEMORY AND IMAGINATION 8d(2); POETRY 8b; TIME 6d

Last end (*ethics, theol.*): *see* GOOD AND EVIL 5c; HAPPINESS 3, 7, 7b–7c; ONE AND MANY 5b; PRINCIPLE 4a

Last Judgment: *see* GOD 7h; IMMORTALITY 5c; PROPHECY 4d

Law: *see* CH 46: LAW; *and* CONSTITUTION 1, 2b; CUSTOM AND CONVENTION 6–6b; EMOTION 5c; JUSTICE 10–10d; LIBERTY 1d; NECESSITY AND CONTINGENCY 5c; PRUDENCE 6b; REASONING 5c(2); UNIVERSAL AND PARTICULAR 6c; VIRTUE AND VICE 4d(3); WAR AND PEACE 11a; WILL 10b / *see also* DEMOCRACY 4a; DUTY 5; EDUCATION 4c; GOVERNMENT 3c–3c(2); HABIT 7; MIND 9e; PLEASURE AND PAIN 9; PUNISHMENT 4a, 4c–4d; REVOLUTION 6a–6b; STATE 3b(2)–3d

Law of contradiction: *see* LOGIC 1a; OPPOSITION 2a; PRINCIPLE 1c, 3a(3); TRUTH 3c

Law of nations: *see* LAW 4g

Laws of motion: *see* CHANGE 7d; MECHANICS 1b / *see also* ASTRONOMY 8c(3); MECHANICS 5c(1)-5f(2), 6d–6d(3)

Laws of nature: *see* NATURE 3a; SCIENCE 4d / *see also* INDUCTION 5; MECHANICS 1b

Laws of thought: *see* JUDGMENT 7a–7b; LOGIC 1a; OPPOSITION 1d(1); PRINCIPLE 1c, 3a(3); REASONING 2a–2a(2); 4a

Lawyer: *see* LAW 9

Leaders, leadership: *see* DEMOCRACY 2b; HISTORY 4a(4); HONOR 5b / *see also* ARISTOCRACY 5–6; CONSTITUTION 9a; EDUCATION 8d; HONOR 3a; MONARCHY 1b(3), 3a; PHILOSOPHY 4c; RHETORIC 1c; STATE 8–8d; VIRTUE AND VICE 7c

Leagues (*pol.*): *see* STATE 9e(2); WAR AND PEACE 11c

Learning and teaching: *see* EDUCATION 5–5f / *see also* DEMOCRACY 6; IDEA 5d; KNOWLEDGE 9a; LANGUAGE 8; MEMORY AND IMAGINATION 3a; PLEASURE AND PAIN 4c(2); POETRY 5a; RELIGION 5c; VIRTUE AND VICE 4b

Legislative process, legislators: *see* GOVERNMENT 3c(2); LAW 5d / *see also* CONSTITUTION 6; KNOWLEDGE 8c; LAW 1c

Legislature: *see* GOVERNMENT 3c–3c(2) / *see also* CONSTITUTION 7b; DEMOCRACY 5c; GOVERNMENT 3

Legitimacy (*pol.*): *see* GOVERNMENT 1c–1d

Leisure: *see* LABOR 1b, 3b, 7c(1); MAN 9a

Lever: *see* MECHANICS 5a

Lex talionis: *see* PUNISHMENT 1b

Liberal arts: *see* ART 4, 6b; ASTRONOMY 4; EDUCATION 2; LANGUAGE 7–8; LOGIC 3–3b; MATHEMATICS 1b; RHETORIC 1b

Liberal education: *see* ASTRONOMY 4; EDUCATION 2, 5b–5d; LOGIC 3; MATHEMATICS 1b; RHETORIC 6

Liberalism: *see* JUSTICE 6–6e; LIBERTY 1–2d, 3d, 6–6b; PROGRESS 6c; RELIGION 6e; TYRANNY 5–5c

Liberty (*econ., pol.*): *see* DEMOCRACY 4a–4a(2); JUSTICE 6–6e; LABOR 7f; LIBERTY 1–2d, 6–6c; PROGRESS 4c; SLAVERY 4–6d / *see also* CUSTOM AND CONVENTION 7d; DEMOCRACY 2; DIALECTIC 2d(2); FATE 6; HISTORY 4a(1); KNOWLEDGE 9b; LABOR 3b, 7c(1); LAW 4c; OPINION 5–5b; POLITY 9b; PROGRESS 6c; RELIGION 6e; REVOLUTION 3a; SLAVERY 2c–2d; TRUTH 8d; TYRANNY 5–5c, 8; WAR AND PEACE 6b; WILL 7a–7b

Liberty (*ethics, psychol.*): *see* CAUSE 3; LIBERTY 1c, 3a–3d; MIND 9d; NATURE 2f, 3c(2); NECESSITY AND CONTINGENCY 5a–5a(3); WILL 4b–8a / *see also* CAUSE 7c; DIALECTIC 2d(2); FATE 3; GOOD AND EVIL 3b; HABIT 6c; HISTORY 4a(1); MAN 1a; METAPHYSICS 2d; MIND 1e(3); PRUDENCE 4a; PUNISHMENT 2a; SIN 6a; VIRTUE AND VICE 5c

Liberty (*metaph., theol.*): *see* LIBERTY 4–5d; WILL 4b–5c, 7c–7e(2) / *see also* CAUSE 3; DIALECTIC 2d(2); FATE 3–4; GOD 4e, 7b, 7f; HISTORY 5a; NATURE 3c(4)

Liberty and necessity: *see* LIBERTY 4a–4b; NATURE 2f; NECESSITY AND CONTINGENCY 5a–5a(3); WILL 5a–6a, 7b / *see also* CAUSE 3; FATE 2–3, 5–6; HISTORY 4a(1); NATURE 3c(2); WEALTH 11

Liberty of conscience: *see* LIBERTY 2b; RELIGION 6c

Libido: *see* DESIRE 2a; HABIT 3a

License (*pol.*): *see* JUSTICE 6d; LIBERTY 1e

Life: *see* CH 48: LIFE AND DEATH; *and* CAUSE 2; CHANGE 6c, 8–10b; SOUL 1b, 2c–2c(3) / *see also* ANIMAL 1a–1a(5); ELEMENT 5e–5f; EVOLUTION 4a, 4c; MECHANICS 4c

Life instinct: *see* LIFE AND DEATH 8a

Life span: *see* LIFE AND DEATH 6–6b

Light: *see* MECHANICS 7a–7a(4)

Likeness and difference: *see* QUALITY 4c; SAME AND OTHER 2c, 3c

Limit (*math.*): *see* INFINITY 3b; MATHEMATICS 4d

Limited and absolute government: *see* CONSTITUTION 1; LAW 7a; MONARCHY 1a–1a(2); TYRANNY 5–5c / *see also* CITIZEN 2b; CONSTITUTION 3a; GOVERNMENT 1b; MONARCHY 4d–4e(4); SLAVERY 6b 6d

Limited monarchy: *see* CONSTITUTION 3a; GOVERNMENT 2b; MONARCHY 1b(2), 4d(3), 4e(4)

Line (*math.*): *see* QUANTITY 3a–3c, 3d(2)

Liquids: *see* MECHANICS 5b

Loan: *see* JUSTICE 8d; WEALTH 5d–5e

Local government (*pol.*): *see* GOVERNMENT 5c

Local motion (*phys.*): *see* CHANGE 6–6b, 7–7d; MATTER 2b; MECHANICS 1b, 5d–5f(2), 6c; NATURE 2d; QUANTITY 5c; SPACE 2a, 2b(2) / *see also* ANIMAL 4a, 5–5g; ELEMENT 5g; LIFE AND DEATH 2

Locomotion (*biol.*): *see* ANIMAL 1a(4), 4–4c; LIFE AND DEATH 2–3b

Logic, science of: *see* CH 49: LOGIC; *and* DIALECTIC 2c(1) / *see also* ART 4, 6b; ASTRONOMY 4; LANGUAGE 7; MATHEMATICS 1a–1b; METAPHYSICS 3c; RHETORIC 1b

Logic, subject matter of: *see* HYPOTHESIS 5; IDEA 4–4c; INDUCTION 1–4a; INFINITY 2–2c; JUDGMENT 5–7c; NECESSITY AND CONTINGENCY 4e–4e(2); OPPOSITION 1–1c; REASONING 2 4f; SIGN AND SYMBOL 1–4e; TRUTH 3b–3c, 3d(3); UNIVERSAL AND PARTICULAR 5–5d / *see also* CH 15: DEFINITION; *and* ASTRONOMY 2a–2c; LOGIC 1a; UNIVERSAL AND PARTICULAR 2–2c

Longevity: *see* HAPPINESS 2b(1); LIFE AND DEATH 6a–6b

Love: *see* CH 50: LOVE; *and* DESIRE 1, 3c; FAMILY 7a; GOD 3c, 5h; KNOWLEDGE 4d; SAME AND OTHER 5; VIRTUE AND VICE 6e / *see also* ANGEL 3c; BEAUTY 3; BEING 3b; FAMILY 7c–7d; GOOD AND EVIL 1a; HAPPINESS 2b(5); JUSTICE 3; LAW 3b(2); OPPOSITION 4d; PLEASURE AND PAIN 7a; RELATION 5a(2); STATE 3e; TRUTH 8c; VIRTUE AND VICE 8d(3)

Loyalty: *see* DUTY 10; HONOR 2a, 2e; LOVE 3c, 4b; STATE 3c / *see also* COURAGE 7–7c; HONOR 3b; OPPOSITION 4d

Lucidity (*psychol.*): *see* MIND 8a

Lungs: *see* ANIMAL 5d

Lust: *see* LOVE 2a; TEMPERANCE 2 / *see also* DESIRE 5c, 7a(1); EMOTION 2a, 4a(1); PLEASURE AND PAIN 6c; SIN 2c(1)

Luxuries: *see* NATURE 5b; NECESSITY AND CONTINGENCY 5e; TEMPERANCE 5b; WEALTH 10b

Lying: *see* TRUTH 8a–8b

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Machine: *see* LABOR 2b; MECHANICS 5a; PHYSICS 5; SCIENCE 1b(1); WEALTH 3a / *see also* ANIMAL 1c; MECHANICS 4c; REVOLUTION 4b; WEALTH 1, 3d; WORLD 1b

Macrocosm and microcosm: *see* MAN 10e; WORLD 2

Madness: *see* EMOTION 3a; MAN 5b; MEDICINE 6a; MIND 8a

Magnanimity: *see* HONOR 2c; WEALTH 10c

Magnetism: *see* MECHANICS 7d–7d(2), 7e(3)

Magnificence: *see* WEALTH 10c

Magnitude: *see* INFINITY 3b; MATHEMATICS 2, 2c; ONE AND MANY 3a(1); QUANTITY 2, 6–6a / *see also* QUANTITY 3–3e(2)

Majority opinion: *see* DEMOCRACY 3b; OPINION 7a

Majority rule: *see* CONSTITUTION 9b; DEMOCRACY 2–2b, 5b(1); GOVERNMENT 1h; OPINION 7b; TYRANNY 2c; WILL 10a / *see also* CONSTITUTION 9–9a; DEMOCRACY 3b, 4b, 5a, 5b(2)–5b(3)

Making and doing: *see* KNOWLEDGE 6e(2); PRUDENCE 2b / *see also* KNOWLEDGE 8a; LABOR 2–2b; SCIENCE 3–3b; VIRTUE AND VICE 2a(2)

Mammals: *see* ANIMAL 9f

Man: *see* CH 51: MAN; *and* ANGEL 4; ANIMAL 1c–1c(2); ELEMENT 5f; EVOLUTION 7–7c; GOD 3f; GOOD AND EVIL 3a; INFINITY 6–6b; KNOWLEDGE 7d; LIFE AND DEATH 6b–6c; MIND 3–3c; NATURE 5a; ONE AND MANY 3b(4); REASONING 1a; SENSE 2c; SIN 3c; SOUL 3b; STATE 1a, 3b(1); WORLD 2

Manicheanism: *see* GOOD AND EVIL 1d, 2b; OPPOSITION 2d

Manners: *see* CUSTOM AND CONVENTION 2–7b

Manual work: *see* EDUCATION 3; HABIT 5a; LABOR 3a

Manufacturing: *see* ART 9b; REVOLUTION 4b; WEALTH 3d

Manumission: *see* SLAVERY 3c

Market price: *see* WEALTH 4c, 4c

Marriage: *see* FAMILY 4–4e, 7a, 8; LOVE 2d

Martyrs, martyrdom: *see* COURAGE 5; LIFE AND DEATH 8c; RELIGION 6d; TRUTH 8e

Masochism: *see* PLEASURE AND PAIN 8c; PUNISHMENT 6

Mass (*phys.*): *see* MECHANICS 1a, 6b, 6d(1); QUANTITY 5d

Master and slave: *see* SLAVERY 1, 2b, 3b

Materialism (*philos.*): *see* ELEMENT 5–5h; MATTER 3a, 6 / *see also* ANIMAL 1c; FORM 4; MAN 3c; MECHANICS 4, 4b–4c; MIND 2e; SOUL 3d; WEALTH 11; WORLD 1b

Mathematical objects: *see* BEING 7d(3); MATHEMATICS 2–2c; MATTER 1c; NECESSITY AND CONTINGENCY 4d; QUANTITY 1, 2–3, 4; SPACE 5

Mathematical physics, science of: *see* MATHEMATICS 5b; PHYSICS 1b, 3; SCIENCE 5c / *see also* ASTRONOMY 2c; EXPERIENCE 5c; HYPOTHESIS 4–4d; MECHANICS 3–3d; QUANTITY 6, 6c

Mathematical physics, subject matter of: *see* ASTRONOMY 8c(2)–8c(3), 9–9f; CHANGE 7–7d; MATTER 2b; MECHANICS 5–7e(5); OPPOSITION 4d; QUANTITY 5–5e; RELATION 6a; SPACE 2a, 2c; WORLD 1b

Mathematical symbols: *see* MATHEMATICS 3d; MECHANICS 3c

Mathematics, science of: *see* CH 52: MATHEMATICS; *and* HYPOTHESIS 3; LOGIC 4a; NECESSITY AND CONTINGENCY 4d; PHYSICS 3; REASONING 6b; SCIENCE 5c; SPACE 3d, 4a; TIME 6c; TRUTH 4c / *see also* ASTRONOMY 2c; DEFINITION 6a; EDUCATION 5d; EXPERIENCE 5c; MATTER 4b; MECHANICS 3; METAPHYSICS 3b; NATURE 4b; PHILOSOPHY 1b; PHYSICS 1b

Mathematics, subject matter of: *see* INFINITY 3–3c; MATHEMATICS 2–2c, 4–4d; MECHANICS 3–3d; QUANTITY 2–4c, 6–6b / *see also* CHANCE 4; RELATION 5a(3); SPACE 3c–3d

Mating: *see* ANIMAL 8c(4); EVOLUTION 5b

Matrimony: *see* FAMILY 4–4e, 7a, 8; GOD 9e; LOVE 2d; RELIGION 2c

Matter: *see* CH 53: MATTER; *and* BEING 7c(3); CHANGE 2a; FORM 2c(1); INFINITY 4–4c; MECHANICS 1a; NATURE 1a(2); ONE AND MANY 3a(3) / *see also* ART 2b; ASTRONOMY 8a; CHANGE 6d; ELEMENT 3–3d, 5a–5b; ETERNITY 4b; EVOLUTION 4a; FORM 1d(2), 2a, 3c; HABIT 1b; KNOWLEDGE 5a(2); MIND 2–2c; ONE AND MANY 3a, 3b(4); PRINCIPLE 1b; QUALITY 1, 3d; QUANTITY 1; SOUL 3c–3d; SPACE 1a; UNIVERSAL AND PARTICULAR 6a; WORLD 6a

Matter and form: *see* ART 2b; BEING 7c(3); CHANGE 2a; FORM 2c(1); KNOWLEDGE 5a(2); NATURE 1a(2); PRINCIPLE 1b; SOUL 3c; UNIVERSAL AND PARTICULAR 6a / *see also* BEING 7b(2); FORM 1d(2), 2c(3), 3c; MATTER 1a, 4b; ONE AND MANY 3b(3); REASONING 3a

Maturity: *see* LIFE AND DEATH 6c; MAN 6c / *see also* FAMILY 6c, 6e; PUNISHMENT 2b

Maxims of reason: *see* PRINCIPLE 2b(3)

Mean (*ethics*): *see* VIRTUE AND VICE 1c / *see also* COURAGE 1–2; JUSTICE 5; PRUDENCE 3b, 3e; TEMPERANCE 1, 1b

Meaning or significance: *see* CH 85: SIGN AND SYMBOL; *and* IDEA 4a, 6a; LANGUAGE 3a, 5a–5b; RHETORIC 2d; SAME AND OTHER 4c

Means and ends: *see* CAUSE 4; GOOD AND EVIL 5c; RELATION 5a(2); WILL 2c–2c(3) / *see also* GOOD AND EVIL 4b; JUDGMENT 3; ONE AND MANY 5b; PRINCIPLE 4a; PRUDENCE 3a, 4b; REASONING 5e(3)

Means of production (*econ.*): *see* LABOR 7b; WEALTH 8a, 8c

Measurement: *see* MATHEMATICS 5a; QUANTITY 6–6c / *see also* ASTRONOMY 2a, 7; CHANGE 5a; EXPERIENCE 5c; MECHANICS 3a, 3d, 7c(2), 7e(5); PHYSICS 3, 4d; QUANTITY 3d(1), 3e(1), 5e; SCIENCE 5c; SPACE 3d; TIME 4

Mechanics, science of: *see* ASTRONOMY 8c(3); MECHANICS 1–4c

Mechanics, subject matter of: *see* ASTRONOMY 8c–8c(3); MECHANICS 5–7e(5)

Mechanism (*philos.*): *see* MECHANICS 4–4c / *see also* ANIMAL 1e; ELEMENT 5e–5h; MAN 3c; MIND 2e; WORLD 1b

Medication: *see* MEDICINE 3d(2)

Medicine, science of: *see* MEDICINE 1–3b / *see also* ART 9a; EXPERIENCE 3a

Medicine, subject matter of: *see* LIFE AND DEATH 5–5c; MEDICINE 3c–7 / *see also* EMOTION 3d; MIND 8b; SIGN AND SYMBOL 4e

Medium (*phys.*): *see* MECHANICS 5d, 6d(2), 7d(2); 7c(3); SPACE 2c

Memory: *see* KNOWLEDGE 6b(2), 6c(3); MEMORY AND IMAGINATION 1–4b / *see also* ANIMAL 1a(2); EXPERIENCE 2a; IDEA 2e; INDUCTION 2; MATTER 4c; MEMORY AND IMAGINATION 8b; REASONING 1c; RELATION 4f; SENSE 3b(2), 3d(2), 5a; SIGN AND SYMBOL 6b; TIME 6a, 6e; TRUTH 3a(2)

Menial labor: *see* LABOR 3b

Mental disease: *see* DESIRE 6c; EMOTION 3a; MAN 5b; MEDICINE 6–6d; MEMORY AND IMAGINATION 2e(3); MIND 8–8c; ONE AND MANY 3b(5)

Mental work: *see* LABOR 3a

Mercantilism (*econ.*): *see* WEALTH 9c

Mercenaries: *see* WAR AND PEACE 10b

Mercy: *see* GOD 5i; JUSTICE 11a; VIRTUE AND VICE 8f

Messiah: *see* GOD 8e; PROPHECY 4c

Metaphor: *see* SIGN AND SYMBOL 3c(1), 4d / *see also* GOD 6a; RHETORIC 2a; SIGN AND SYMBOL 5f

Metaphysics, science of: *see* CH 57: METAPHYSICS; *and* BEING 4a; LOGIC 1; MATHEMATICS 1a; MATTER 4b; PHILOSOPHY 2b; PHYSICS 1a, 2a; SCIENCE 1a(2); THEOLOGY 3a; WISDOM 1a / *see also* DEFINITION 6a; LOGIC 4d; NATURE 4b; REASONING 6a; THEOLOGY 4a; TRUTH 4c

Metaphysics, subject matter of: *see* CH 7: BEING; *and* CAUSE 1–1b, 7a–7b; FORM 2–2d; GOD 2b–2c, 6b; GOOD AND EVIL 1–1d; IDEA 6–6f; LIBERTY 4–4b; MATTER 3–3d; MIND 10–10f(2); NECESSITY AND CONTINGENCY 2–2d; ONE AND MANY 1–1c; OPPOSITION 2–2c; PRINCIPLE 1–1c; SAME AND OTHER 1 2e; UNIVERSAL AND PARTICULAR 1–3 / *see also* ANGEL 2; CHANGE 15a; ETERNITY 1–1b, 4c; IMMORTALITY 2; KNOWLEDGE 5–5a(6), 6a–6a(4); NATURE 1–1c, 2f; QUALITY 1; QUANTITY 1; RELATION 1–1d

Metempsychosis: *see* IMMORTALITY 5a; SOUL 4d(1)

Meteors: *see* ASTRONOMY 9f

Method of exhaustion (*math.*): *see* INFINITY 3b; MATHEMATICS 4d; MECHANICS 3d

Methodology: *see* ASTRONOMY 2–2c; DIALECTIC 2a(2), 2b(2); HISTORY 3–3b; KNOWLEDGE 5d–5e; LOGIC 4–4f; MAN 2b(2); MATHEMATICS 3–3d; MECHANICS 2–2c; METAPHYSICS 2c; PHILOSOPHY 3–3d; PHYSICS 4–4d; PROGRESS 6d; SCIENCE 5–5e; THEOLOGY 4c; TRUTH 3d(3)

Metre: *see* POETRY 8b

Middle term (*log.*): *see* IDEA 5b; REASONING 2a(1)–2a(2)

Might (*pol.*): *see* JUSTICE 9f; TYRANNY 1a

Militarism: *see* WAR AND PEACE 7–8

Military arts and profession: *see* ART 9c; STATE 8d(1); WAR AND PEACE 10–10g

Military preparedness: *see* STATE 9e(1); WAR AND PEACE 7

Military strategy and tactics: *see* WAR AND PEACE 10d

Military training: *see* WAR AND PEACE 10c / *see also* COURAGE 6; STATE 9e(1)

Militia: *see* DEMOCRACY 7c; WAR AND PEACE 10b

Millenium (*theol.*): *see* PROPHECY 4d

Mind: *see* CH 58: MIND; *and* ANIMAL 1c; KNOWLEDGE 6b(3)–6b(4); MAN 1a–1c; ONE AND MANY 4a; SOUL 1c, 3b / *see also* ANGEL 3d; ANIMAL 1c(2); ASTRONOMY 8b; CHANGE 6d; EDUCATION 5–5f; ELEMENT 5f; EVOLUTION 7b(3); EXPERIENCE 2–2d; FORM 2a; GOD 4g; HABIT 5c–5d, 6b; IDEA 1d–2h, 6a–6b; INFINITY 6b; JUDGMENT 1; MAN 4c; MATTER 4d; MEDICINE 6–6d; SENSE 1a–1b, 1d; SIGN AND SYMBOL 1b; SOUL 2c(3); VIRTUE AND VICE 2a(2)

Mind, or soul, and body: *see* MAN 3a–3a(2); MATTER 2d; MIND 2–2e; ONE AND MANY 3b(4); SOUL 1b–1c, 4b / *see also* BEING 7b(2); FORM 2d; IMMORTALITY 5b; LIFE AND DEATH 1; MAN 2b(3); MATTER 4c–4d; MEDICINE 5d(2), 6c(1); MIND 4e; SOUL 3c, 4d–4d(4)

Minimum wage: *see* LABOR 6b

Minorities, minority representation: *see* CONSTITUTION 9–9b; DEMOCRACY 5b(1); OPINION 7b; STATE 5d(1)

Miracles: *see* CAUSE 7d; GOD 7e; NATURE 3c(4); RELIGION 1b(2); SIGN AND SYMBOL 5b

Missing link: *see* EVOLUTION 7b(2)

Mixed constitution (*pol.*): *see* ARISTOCRACY 2b; CONSTITUTION 5b; DEMOCRACY 3a; GOVERNMENT 2b

Mixed regime (*pol.*): *see* CONSTITUTION 3a–3b; DEMOCRACY 3b; GOVERNMENT 2b; MONARCHY 1b(1), 4d(3), 4e(4)

Mixture (*phys.*): *see* CHANGE 9a; ELEMENT 3d

Mob-rule: *see* DEMOCRACY 2a; OPINION 7b; TEMPERANCE 5b; TYRANNY 2c

Mobility or motility (*biol.*): *see* ANIMAL 1a(4); LIFE AND DEATH 3b

Modal opposition (*log.*): *see* NECESSITY AND CONTINGENCY 4c(1); OPPOSITION 1d(2)

Modality (*log.*): *see* JUDGMENT 6c; NECESSITY AND CONTINGENCY 4e–4e(2); OPPOSITION 1d(2); REASONING 2b, 3d

Moderation: *see* EMOTION 4b(1); TEMPERANCE 1; VIRTUE AND VICE 1c

Modernity: *see* TIME 8b

Modes or modifications (*metaph.*): *see* BEING 7b, 7b(6); MIND 1c–1c(2), 10e; NECESSITY AND CONTINGENCY 2d

Momentum (*phys.*): *see* MECHANICS 6c; QUANTITY 5c

Monarchy: *see* CH 59: MONARCHY; *and* GOVERNMENT 1g(1), 2–2e; REVOLUTION 3c(1); TYRANNY 2a, 4a / *see also* ARISTOCRACY 2a; CONSTITUTION 3a; DEMOCRACY 2b, 3c; HONOR 4a; JUSTICE 9c; LAW 6b, 7e; OLIGARCHY 2; TYRANNY 5c; VIRTUE AND VICE 7d

Monasticism: *see* RELIGION 3d; VIRTUE AND VICE 8g; WEALTH 10c(2)

Monetary standards: *see* WEALTH 5b

Money: *see* WEALTH 5–5c / *see also* JUSTICE 8d; SIGN AND SYMBOL 1e; WEALTH 4b, 7b(3)

Monism: *see* BEING 7b(4); MATTER 3a, 3c; MIND 2e, 10f; ONE AND MANY 1–1b; OPPOSITION 2c; PRINCIPLE 1b; WORLD 3a, 4c–4d

Monogamy: *see* FAMILY 4a

Monopoly (*econ.*): *see* WEALTH 4f / *see also* OPPOSITION 5a; STATE 9a

Monotheism: *see* GOD 2–2d

Moon: *see* ASTRONOMY 9b, 12; MECHANICS 5f–5f(2)

Moral education: *see* EDUCATION 4–4d; VIRTUE AND VICE 4b–4d(4) / *see also* ART 10a; COURAGE 6; CUSTOM AND CONVENTION 5b; DUTY 4a; EMOTION 5c; GOVERNMENT 2d; LAW 6d; PLEASURE AND PAIN 10a; POETRY 9a; PRUDENCE 3b; PUNISHMENT 1c, 3–3c; STATE 7c; TEMPERANCE 4, 5c; VIRTUE AND VICE 7a

Moral judgment: *see* CUSTOM AND CONVENTION 5a; GOOD AND EVIL 3c, 6d; JUDGMENT 3

Moral law: *see* LAW 3a(1), 4a, 4d; LIBERTY 3c; PRINCIPLE 4b; WILL 2b(1), 5b(3)

Moral philosophy or science: *see* DUTY 3; GOOD AND EVIL 6d; KNOWLEDGE 6c–6e(2); PHILOSOPHY 2a, 2c; SCIENCE 3a / *see also* DEFINITION 6c; HAPPINESS 3; JUDGMENT 3; LOGIC 4e; METAPHYSICS 2d; PRINCIPLE 4–4b; REASONING 5e–5c(3), 6d; TRUTH 2c

Moral philosophy or science, subject matter of: *see* COURAGE 1–2, 4; DUTY 1–8; GOOD AND EVIL 3–6c; HAPPINESS 1–5b; JUSTICE 1–5; PLEASURE AND PAIN 6–8b; PRUDENCE 1–5c; TEMPERANCE 1–4; VIRTUE AND VICE 1–6e / *see also* DESIRE 6a–6b; EDUCATION 4–4d; EMOTION 4–4c; HABIT 5b–5d; HONOR 2a–2c; IMMORTALITY 4; KNOWLEDGE 8b–8b(4); LIBERTY 3–3d; MIND 9c–9d; NATURE 5a; ONE AND MANY 5c; WILL 8–8e; WISDOM 2b–2c

Moral virtue: *see* VIRTUE AND VICE 1–6e / *see also* COURAGE 1, 4; DESIRE 6a; HABIT 5b; HAPPINESS 2b(3); JUSTICE 1c–1d; KNOWLEDGE 8b(1); LAW 6d; LIBERTY 3c; LOVE 3a–3b; MIND 9c; ONE AND MANY 5a; PLEASURE AND PAIN 8a; PRUDENCE 3–3b; PUNISHMENT 3–3b; TEMPERANCE 1–1a; WILL 8c; WISDOM 2b

Morality: *see* GOOD AND EVIL 3–3f; VIRTUE AND VICE 4c–4e(3) / *see also* CUSTOM AND CONVENTION 5a; DUTY 1, 4a; EMOTION 4–4c; HAPPINESS 3; IMMORTALITY 4; JUDGMENT 3; KNOWLEDGE 8b–8b(4); LAW 3a(1), 4a–4d; METAPHYSICS 2d; ONE AND MANY 5a–5c; OPINION 6–6b; PLEASURE AND PAIN 6–6c; PRINCIPLE 4–4b; RELATION 6c; UNIVERSAL AND PARTICULAR 7b; VIRTUE AND VICE 6–6e; WILL 8–8e

Morphology: *see* ANIMAL 2b; EVOLUTION 6c

Mortal sin: *see* SIN 2c–2c(1)

Motherhood and fatherhood: *see* FAMILY 6–6b, 6d, 7d / *see also* DUTY 9; EDUCATION 4b; JUSTICE 7; VIRTUE AND VICE 1d(1)

Motion: *see* CHANGE 1–7d; MATTER 2b; MECHANICS 1–1c, 5d–5f(2) / *see also* ANIMAL 4–4c; ASTRONOMY 8c–8c(3); MECHANICS 4–4c, 6c; NATURE 2d; ONE AND MANY 3a(2); OPPOSITION 3c; QUANTITY 5b–5c; RELATION 6a; SPACE 2–2c; TIME 1

Motion and rest: *see* CHANGE 4; OPPOSITION 3c

Motivation: *see* ANIMAL 4b; DESIRE 2c; GOOD AND EVIL 3c; SENSE 3e; WILL 2b–2b(2), 3a–3a(2) / *see also* EMOTION 3a, 4a(1); LOVE 1c–1f; PUNISHMENT 2a

Multiplication: *see* MATHEMATICS 4a; QUANTITY 4b

Multitude (*math.*): *see* INFINITY 3a, 5a; MATHEMATICS 2, 2c; QUANTITY 2, 4–4c, 6, 7

Music: *see* ASTRONOMY 3a; EDUCATION 4d; POETRY 7d; VIRTUE AND VICE 4d(4) / *see also* ART 7–7b, 10–10b; ASTRONOMY 4

Mutability: *see* BEING 5; CHANGE 1; NECESSITY AND CONTINGENCY 2c

Mutation (*biol.*): *see* EVOLUTION 3e

Mystery (*theol.*): *see* THEOLOGY 3c

Mystical body of Christ: *see* GOD 9d; RELIGION 3b

Mysticism: *see* EXPERIENCE 7; GOD 6c(3); WISDOM 1c

Myths, mythology: *see* DIALECTIC 2a(2); HISTORY 1; PHILOSOPHY 1d; POETRY 2; SIGN AND SYMBOL 4d / *see also* HAPPINESS 2; LABOR 1a; MAN 9a; MONARCHY 2d; TIME 8b; WORLD 4b

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Names of God: *see* GOD 6a; SIGN AND SYMBOL 5f

Naming, names: *see* SIGN AND SYMBOL 2–3d; UNIVERSAL AND PARTICULAR 2c, 5a

Narration: *see* HISTORY 3; POETRY 4a, 7–7d, 8a–8a(3)

National budget: *see* GOVERNMENT 4; WEALTH 9e(1)

National defense: *see* STATE 9e(1); WAR AND PEACE 3a, 7

National state: *see* STATE 10d

National wealth: *see* STATE 7a; WEALTH 9–9c

Natura naturans, natura naturata: *see* NATURE 1b; WORLD 3a

Natural and artificial: *see* ART 2–3; NATURE 2a; ONE AND MANY 3b(2); POETRY 1a / *see also* ART 9a; BEAUTY 2; MEDICINE 2b; WEALTH 1

Natural and conventional: *see* CUSTOM AND CONVENTION 1; NATURE 2b / *see also* JUSTICE 9a; LANGUAGE 2–2b; NECESSITY AND CONTINGENCY 5c; SIGN AND SYMBOL 1–1f; SLAVERY 2, 3; STATE 3b–3d

Natural and supernatural: *see* GOD 1a, 6c–13; KNOWLEDGE 6c(5) / *see also* CAUSE 7b–7d; HABIT 5e–5e(3); OPINION 4a; RELIGION 1b–1b(3), 6f; SIGN AND SYMBOL 5b; THEOLOGY 2; VIRTUE AND VICE 2b

Natural and unnatural: *see* NATURE 2c

Natural and violent motion: *see* CHANGE 7b; MECHANICS 5e(2)–5f; NATURE 2d; OPPOSITION 3c; SPACE 2a

Natural desire: *see* DESIRE 3a; HABIT 3a / *see also* HAPPINESS 1, 7b; KNOWLEDGE 2; LIFE AND DEATH 8a–8b; NATURE 5b

Natural language: *see* LANGUAGE 2a

Natural law (*jurisp.*): *see* LAW 2, 3a(1), 4–4h, 5c, 7c / *see also* DUTY 5; JUSTICE 6a, 9a, 10a; NECESSITY AND CONTINGENCY 5c; PRINCIPLE 4b; PRUDENCE 2c; SLAVERY 2c; STATE 3b(2)

Natural liberty: *see* LIBERTY 1a–1b

Natural price: *see* WEALTH 4d–4e

Natural resources. *see* WEALTH 3a

Natural rights: *see* JUSTICE 6–6e; LAW 4e, 7c; LIBERTY 1a, 1f–2d / *see also* CITIZEN 4; DEMOCRACY 4b; FAMILY 2c, 5b; LAW 2, 4c; OPINION 5a; PROGRESS 4c; RELIGION 6c; REVOLUTION 6–6b; SLAVERY 3d; TYRANNY 5a

Natural science: *see* MAN 2b–2b(4); MECHANICS 4; METAPHYSICS 3b; NATURE 4b; PHILOSOPHY 1c; PHYSICS 2–4d; REASONING 6c; SCIENCE 1b, 1c–2, 4–7b / *see also* ASTRONOMY 2–2c; CAUSE 5–5d; DEFINITION 6b; EXPERIENCE 3–3b, 5–5c; HYPOTHESIS 4–4d; INDUCTION 5; LOGIC 4b; MECHANICS 2–2c; MEDICINE 2a; MEMORY AND IMAGINATION 3c; PROGRESS 6b; SIGN AND SYMBOL 4d; TRUTH 4c

Natural selection (*biol.*): *see* EVOLUTION 5a(1)–5b

Natural slavery: *see* SLAVERY 2–2d

Natural theology, science of: *see* THEOLOGY 2–3c / *see also* METAPHYSICS 1; PHILOSOPHY 1a; WISDOM 1a

Nature and nurture: *see* NATURE 2c

Nature or essence (*metaph.*): *see* BEING 7a, 8c–8d; DEFINITION 1a; FORM 1a–1b, 2a, 2c–2c(3); NATURE 1a–1a(2), 4a–4b / *see also* FORM 3–3c; GOD 4a; KNOWLEDGE 6a(2); ONE AND MANY 3b–3b(1), 3b(3); REASONING 5b(5); SAME AND OTHER 3a; SCIENCE 4b; UNIVERSAL AND PARTICULAR 2a–2c

Nature or world: *see* CH 102: WORLD; *and* NATURE 1b, 2f 3c(4) / *see also* ASTRONOMY 5; ELEMENT 5h; GOD 11; ONE AND MANY 1b; RELATION 3, 5b

Navies: *see* WAR AND PEACE 10e

Necessities (*econ.*). *see* CUSTOM AND CONVENTION 7c; NATURE 5b, NECESSITY AND CONTINGENCY 5e; WEALTH 10b

Necessity (*poet.*): *see* POETRY 8a(2)

Necessity and contingency (*log.*): *see* JUDGMENT 6c; NECESSITY AND CONTINGENCY 4–4e(2); OPPOSITION 1d(2); REASONING 3d / *see also* KNOWLEDGE 6d(1)–6d(2); NATURE 1a(1); OPINION 1; SCIENCE 4b; SIGN AND SYMBOL 4e; TIME 6f

Necessity and contingency (*philos.*): *see* NECESSITY AND CONTINGENCY 1–3c / *see also* CHANCE 1a, 2a; FATE 3; GOD 4a; KNOWLEDGE 6a(1); NATURE 1a(1), 3c(1); OPINION 1; SCIENCE 4b

Necessity and liberty: *see* LIBERTY 4a–4b; NATURE 2f; NECESSITY AND CONTINGENCY 5a–5a(3); WILL 5a–6a, 7b / *see also* CAUSE 3; FATE 2–3, 5–6; HISTORY 4a(1); NATURE 3c(2); WEALTH 11

Need (*biol.*): *see* DESIRE 2a; HABIT 3a

Negation and affirmation (*log.*): *see* INFINITY 2b; JUDGMENT 6b, 7a; OPPOSITION 1d(1); REASONING 2a(2)

Negative and positive (*log.*): *see* BEING 1; IDEA 4c; INFINITY 2a; OPPOSITION 1a, 1c(1)

Negligence: *see* PUNISHMENT 2a

Nervous system and brain: *see* ANIMAL 5g; MEMORY AND IMAGINATION 1b; MIND 1g(2), 2c(1); SENSE 3a

Neurology, subject matter of: *see* ANIMAL 5g; MEDICINE 6c(1); MEMORY AND IMAGINATION 1b, 2e(3); SENSE 3a

Neurosis: *see* DESIRE 6b–6c; EMOTION 3c–3c(4); LOVE 2a(2)–2a(4); MAN 5b; MEDICINE 5d(2), 6b–6c(2), MIND 8b; OPPOSITION 4c; SIGN AND SYMBOL 6c / *see also* DUTY 4b; MEMORY AND IMAGINATION 2e(2); PLEASURE AND PAIN 8c; PUNISHMENT 6; SIN 5; WILL 9b

New Law (*theol.*): *see* LAW 3b, 3b(2)

Nobility, nobles: *see* ARISTOCRACY 1, 7; STATE 5c

Nominal definition: *see* DEFINITION 1a

Nominalism: *see* BEING 8c; DEFINITION 1a; UNIVERSAL AND PARTICULAR 2c

Non-being (*metaph.*): *see* BEING 1; OPPOSITION 2c

Normal and abnormal: *see* NATURE 2e

Normative judgment: *see* BEAUTY 5; CUSTOM AND CONVENTION 5a, 9a; GOOD AND EVIL 6d; JUDGMENT 3; ONE AND MANY 5c; PRINCIPLE 4b; RELATION 6c; UNIVERSAL AND PARTICULAR 7b; VIRTUE AND VICE 4e(2)

Noumena and phenomena (*philos.*): *see* BEING 7e; EXPERIENCE 4a; KNOWLEDGE 6a(4); NATURE 2f; SOUL 5a

Noun: *see* LANGUAGE 4a; TIME 6d

Nous: *see* MIND 10b

Number: *see* INFINITY 3a; MATHEMATICS 2; MECHANICS 3a; ONE AND MANY 2a; QUANTITY 4–4c / *see also* BEING 7d(3); MATHEMATICS 2a–2c, 4a, 4c; QUANTITY 2, 5b, 6, 7; SIGN AND SYMBOL 5d; TIME 6c

Nutrition: *see* ANIMAL 5e, 6–6b, 9b, 9f / *see also* LIFE AND DEATH 3a; MAN 4a; MEDICINE 3d(1); SOUL 2c(1)

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Oaths: *see* DUTY 7; TRUTH 8a

Obedience: *see* DUTY 9; FAMILY 6d; GOD 3d; JUSTICE 10b; LAW 6a; RELIGION 3d; REVOLUTION 6a; VIRTUE AND VICE 8g

Object-fixation (*psychol.*): *see* DESIRE 4b; LOVE 2a(3)

Objective and subjective: *see* BEAUTY 5; CUSTOM AND CONVENTION 5a, 9a–9b; DIALECTIC 2d(1); GOOD AND EVIL 6d; ONE AND MANY 5c; QUALITY 6c; RELATION 6b–6c; UNIVERSAL AND PARTICULAR 7–7c

Obligation: *see* CH 19: DUTY / *see also* HAPPINESS 3; JUSTICE 1c, 3, 6b; LAW 6a; LOVE 3c; OPPOSITION 4d; PLEASURE AND PAIN 8b; WILL 8d

Observation: *see* PHYSICS 4a; SCIENCE 5a–5b / *see also* ASTRONOMY 2a; EXPERIENCE 5a–5c; INDUCTION 5; LOGIC 4b; MECHANICS 2a; PHYSICS 3; QUANTITY 6c

Obsessions or compulsions (*psychol.*): *see* EMOTION 3c(2); SIGN AND SYMBOL 6c; WILL 9b

Occupation: *see* EDUCATION 6; LABOR 3–3f; MEDICINE 3d(1)

Odd and even: *see* QUANTITY 4a

Oedipus complex: *see* FAMILY 7d

Office (*pol.*): *see* CONSTITUTION 4; GOVERNMENT 1g(2) / *see also* CONSTITUTION 2a; GOVERNMENT 3–3e(2); OLIGARCHY 5a; TYRANNY 5c

Old age: *see* LIFE AND DEATH 5, 6c; MAN 6c

Old Law (*theol.*): *see* GOD 8c; LAW 3b–3b(1)

Oligarchy: *see* CH 62: OLIGARCHY; *and* DEMOCRACY 3a; SLAVERY 5b; TYRANNY 2b / *see also* ARISTOCRACY 2d; CITIZEN 2c; CONSTITUTION 5a; DEMOCRACY 4a(1); GOVERNMENT 2a–2c; LIBERTY 2d; OPPOSITION 5b; WEALTH 7a, 9h

Omens: *see* PROPHECY 3b; SIGN AND SYMBOL 5b

Omnipotence: *see* GOD 5c; INFINITY 7b

Omnipresence: *see* GOD 5d / *see also* NATURE 1b; ONE AND MANY 1b; WORLD 3a

Omniscience: *see* GOD 5f; INFINITY 7d

One and many: *see* CH 63: ONE AND MANY; *and* BEING 2–2b; DEFINITION 1d; FORM 2c(3); OPPOSITION 2b; SAME AND OTHER 1–2b, 3–3d; UNIVERSAL AND PARTICULAR 2–2c / *see also* DIALECTIC 3a; FORM 3b; GOD 5d–5e; MIND 10b; NATURE 1b; RELATION 1d; UNIVERSAL AND PARTICULAR 1; WORLD 4d

Ontology: *see* CH 7: BEING; *and* METAPHYSICS 2a

Opinion (*log.*): *see* CUSTOM AND CONVENTION 9a–9b; DIALECTIC 2a(1), 2b; KNOWLEDGE 4b; NECESSITY AND CONTINGENCY 4a; OPINION 1–4b; PRINCIPLE 3c(2); TRUTH 2e; WILL 3b(1) / *see also* CHANCE 4; DESIRE 5b; EMOTION 3b; GOOD AND EVIL 6d; JUDGMENT 9; KNOWLEDGE 6d(1)–6d(3); PHILOSOPHY 6b; RELATION 6b; SCIENCE 7a; TRUTH 7a; UNIVERSAL AND PARTICULAR 7a

Opinion (*pol.*): *see* OPINION 5–5b, 7a–7b

Opposition (*biol., phys.*): *see* OPPOSITION 3–3e / *see also* CHANGE 2b, 4; EVOLUTION 5a, 5b; MECHANICS 6d(3); QUALITY 4a–4b

Opposition (*econ., pol.*): *see* OPPOSITION 5–5d / *see also* CUSTOM AND CONVENTION 3; LABOR 7c(1); STATE 5d–5d(2), 9b; WAR AND PEACE 2c

Opposition (*ethics, psychol.*): *see* OPPOSITION 4–4e / *see also* DESIRE 4a; DUTY 6; EMOTION 2c, 4a; LIBERTY 3d; LOVE 3c; MAN 5–5a; PLEASURE AND PAIN 8b

Opposition (*log.*): *see* OPPOSITION 1–1e / *see also* DIALECTIC 3b–3c; IDEA 4c; JUDGMENT 7a; NECESSITY AND CONTINGENCY 4e(1); REASONING 5c; SAME AND OTHER 3a(2)

Opposition (*metaph.*): *see* OPPOSITION 2–2e

Oppression: *see* LABOR 7c(1); LIBERTY 6b; REVOLUTION 4a; SLAVERY 6–6d; TYRANNY 8

Optics: *see* MECHANICS 7a–7a(4)

Optimism and pessimism: *see* PROGRESS 1b–1c / *see also* HISTORY 4b

Opulence (*econ.*): *see* LABOR 4a; PROGRESS 3a; STATE 7a; WEALTH 9a–9c

Oracles: *see* LANGUAGE 12; PROPHECY 2b, 3a

Oratory, orator: *see* CH 81: RHETORIC / *see also* DIALECTIC 5; EMOTION 5d; INDUCTION 4b; LANGUAGE 8; LOGIC 3b; PLEASURE AND PAIN 10b; REASONING 5d; STATE 8d(2); TRUTH 4d

Orbits (*astron.*): *see* ASTRONOMY 8c(2), 9a–9d, 9f; MECHANICS 5f–5f(2)

Order: *see* RELATION 5–5c; TIME 5–5d / *see also* BEAUTY 1a; GOOD AND EVIL 1b, 5–5d; NATURE 3–3c(4); WORLD 1c

Organ (*biol.*): *see* ANIMAL 3c, 4c–5g, 8c(2); MEMORY AND IMAGINATION 1b; SENSE 3a

Organism: *see* LIFE AND DEATH 1–2; SOUL 1b / *see also* CAUSE 2; CHANGE 6c, 8b, 9b; WORLD 1a

Origin of species: *see* EVOLUTION 4–5c

Original justice (*theol.*): *see* JUSTICE 1b; MAN 9b(1); SIN 3a

Original sin: *see* SIN 2a, 3–3e, 4a / *see also* GOD 9c; HAPPINESS 7a; MAN 9b(2); PUNISHMENT 5b; SIN 6b; VIRTUE AND VICE 8a; WILL 7e(1)

Orthodoxy: *see* RELIGION 6c(1)

Ostracism (*pol.*): *see* PUNISHMENT 4b(2)

Over-reaction (*psychol.*): *see* DESIRE 6c; EMOTION 3a

Oviparous reproduction: *see* ANIMAL 9a

Ovum: *see* ANIMAL 8c(3)

Ownership: *see* WEALTH 7–8a / *see also* JUSTICE 8a; LABOR 7b; LAW 4h; OLIGARCHY 4–5c; OPPOSITION 5b; SLAVERY 2b

P

Pain: *see* PLEASURE AND PAIN 1–4a, 4c, 7a, 8a, 8c, 10–10b / *see also* CHANGE 12a; EMOTION 1a; LABOR 1c; PUNISHMENT 1a, 5c; VIRTUE AND VICE 5a; WILL 2b(2)

Paleontology: *see* EVOLUTION 6a, 7b(2)

Pantheism: *see* GOD 11; NATURE 1b; ONE AND MANY 1b; WORLD 3a

Parabola (*math.*): *see* QUANTITY 3b(3)

Paradise: *see* ETERNITY 4d; HAPPINESS 7c–7c(2); IMMORTALITY 5f; MAN 9b–9b(1); SIN 3a

Parallax (*astron.*): *see* SPACE 3d

Parallelogram of forces (*phys.*): *see* MECHANICS 6d(3); OPPOSITION 3d

Parallels (*math.*): *see* INFINITY 3c; QUANTITY 3a

Paralogism (*log.*): *see* DIALECTIC 3c; SOUL 5a

Parameters (*math.*): *see* QUANTITY 6b

Pardon (*pol.*): *see* JUSTICE 9g

Parents and children: *see* FAMILY 6–6c, 7b–7d; VIRTUE AND VICE 4d(1) / *see also* DUTY 9; EDUCATION 4b, 8a; FAMILY 2a–2c; LOVE 2b(4); PLEASURE AND PAIN 10a

Part and whole: *see* ONE AND MANY 2c, 3b(1)–3b(2), 4e; UNIVERSAL AND PARTICULAR 1

Participation (*metaph.*): *see* FORM 1d(1); MATTER 1a; SAME AND OTHER 2b

Particles (*phys.*): *see* MECHANICS 4a

Particular: *see* UNIVERSAL AND PARTICULAR 1, 3, 4d–4c, 5–6c / *see also* FORM 3b; IDEA 4b(2); JUDGMENT 6a; MATTER 1c; MEMORY AND IMAGINATION 5b; ONE AND MANY 1c; OPINION 1; SENSE 1b

Parts of speech: *see* LANGUAGE 4a; TIME 6d

Parturition: *see* ANIMAL 9e

Party (*pol.*): *see* DEMOCRACY 5b(4) / *see also* OPPOSITION 5a; STATE 5d(2)

Passion: *see* CH 22: EMOTION / *see also* DESIRE 4–7a(3); LIBERTY 3a; MEMORY AND IMAGINATION 1d; MIND 9b; OPINION 2a; OPPOSITION 4a–4b; PLEASURE AND PAIN 4a; POETRY 6–6b; RHETORIC 4b; SENSE 3e; SLAVERY 7; WILL 1

Passion and action (*metaph.*): *see* CHANGE 3; TIME 5a

Past: *see* TIME 3–3b / *see also* KNOWLEDGE 5a(5); MEMORY AND IMAGINATION 3b; TIME 6d–6e

Paternalism (*pol.*): *see* MONARCHY 4a, 4e(1); SLAVERY 6b

Patient (*med.*): *see* MEDICINE 1

Patriotism: *see* LOVE 4b; STATE 3e

Peace (*pol.*): *see* WAR AND PEACE 11–11d / *see also* JUSTICE 9f; LAW 1a; REVOLUTION 1a; STATE 9e–9e(2); WAR AND PEACE 6b

Pedagogy: *see* EDUCATION 5a–5b, 5d; PLEASURE AND PAIN 10a

Penal institutions: *see* PUNISHMENT 4b(2)

Penance (*theol.*): *see* RELIGION 2f; SIN 4e / *see also* GOD 9e; RELIGION 2c

Pendulum: *see* MECHANICS 5e(2)–5f(1)

Penology: *see* LAW 6e(2)–6e(3); PUNISHMENT 1c–1d, 4b–4b(4), 4d

Peonage: *see* LABOR 5b; SLAVERY 4b

People: *see* DEMOCRACY 4b; GOVERNMENT 1g(3); MONARCHY 4e(3); STATE 2c; TYRANNY 5c; WILL 10a

Perception, percept: *see* SENSE 1d, 3c(4), 3d(1), 4b, 4d(1)–4d(2); TRUTH 3a(1) / *see also* KNOWLEDGE 6b(1); PRINCIPLE 2b(1); QUALITY 6b; SPACE 4b–4c; TIME 6a–6c; TRUTH 3d(1)–3d(2); UNIVERSAL AND PARTICULAR 1d

Perdition (*theol.*): *see* ETERNITY 4d; HAPPINESS 7c(3); IMMORTALITY 5c; PUNISHMENT 5d, 5e(1); SIN 6d

Perfection (*metaph.*): *see* GOOD AND EVIL 1b / *see also* BEING 3a; GOD 4f; GOOD AND EVIL 2; MATTER 3b

Perjury: *see* TRUTH 8a

Perpendiculars (*math.*): *see* QUANTITY 3a

Perpetual motion: *see* MECHANICS 6c

Perpetuation of the species: *see* IMMORTALITY 6a

Person (*pol.*): *see* LAW 7f; STATE 2a(2), 2f

Person (*theol.*): *see* RELATION 2

Personal identity: *see* MEMORY AND IMAGINATION 4a; SAME AND OTHER 1b; SOUL 1d

Personal or actual sin: *see* SIN 2a, 4–4c

Personification: *see* ANIMAL 13; ASTRONOMY 12; NATURE 6a

Perspective: *see* SPACE 4c

Persuasion: *see* RHETORIC 1–5b / *see also* DIALECTIC 5; EMOTION 5d; INDUCTION 4b; LANGUAGE 8; OPINION 2c; PLEASURE AND PAIN 10b; REASONING 5d

Perversions (*psychol.*): *see* LOVE 2a(2), 2a(4); PLEASURE AND PAIN 8c; PUNISHMENT 6

Pessimism and optimism: *see* PROGRESS 1b–1c / *see also* HISTORY 4b

Phantasm: *see* IDEA 2e–2f; MEMORY AND IMAGINATION 5–5b, 6c(1); MIND 1a(2); SENSE 5a; UNIVERSAL AND PARTICULAR 4d

Phenomena and noumena (*philos.*): *see* BEING 7e; EXPERIENCE 4a; KNOWLEDGE 6a(4); NATURE 2f; SOUL 5a

Philosopher king: *see* MONARCHY 2b; PHILOSOPHY 4c; STATE 6a

Philosophy, philosopher: *see* CH 66: PHILOSOPHY; *and* METAPHYSICS 1–2d; SCIENCE 1a–1a(2), 1c; TRUTH 8e; WISDOM 3 / *see also* CAUSE 5b; DEFINITION 6b–6c; DIALECTIC 4; HISTORY 1; HYPOTHESIS 2; LIFE AND DEATH 8c; LOGIC 4d; MATHEMATICS 1b; MATTER 4b; METAPHYSICS 4a–4b; PHYSICS 1–1b; POETRY 5b; PRINCIPLE 3c–3c(3); PROGRESS 6b; REASONING 6a, 6c–6d; RHETORIC 1a, 2c; SENSE 5–5c; SIGN AND SYMBOL 4–4e; THEOLOGY 2–3c, 4a; TRUTH 4c

Philosophy of history, subject matter of: *see* HISTORY 4–4c; LIBERTY 6a; PROGRESS 1–1c, 4b; WILL 7b / *see also* CHANCE 6b; EVOLUTION 7c; FATE 6; HONOR 5d; LIBERTY 6–6c; MAN 9b–9c; MIND 10f(1); NATURE 4c; NECESSITY AND CONTINGENCY 5f; OPPOSITION 5–5c; PROGRESS 1–1c, 4b; STATE 2a(3); TIME 8–8b; WEALTH 11; WILL 7b

Philosophy of nature: *see* MECHANICS 4; METAPHYSICS 3b; PHILOSOPHY 2a–2b; PHYSICS 1–2b; REASONING 6c

Philosophy of nature, subject matter of: *see* CH 8: CAUSE; CH 21: ELEMENT; *and* ASTRONOMY 3–3b, 7–10b; BEING 5; CHANGE 1–11, 13–15c; ETERNITY 1–2; FORM 1–1d(2); INFINITY 1–1b, 4–5b; MATTER 1–3d; MECHANICS 4–4c; NATURE 1–1c, 3–3c(4); NECESSITY AND CONTINGENCY 3–3c; ONE AND MANY 3a–3a(4); OPPOSITION 3–3d; QUANTITY 5–5e; SPACE 1–3b; TIME 1–5b

Phobias (*psychol.*): *see* EMOTION 3c(3); SIGN AND SYMBOL 6c

Phylogenetic series: *see* EVOLUTION 1a

Physical education: *see* EDUCATION 2–3

Physician: *see* MEDICINE 1, 2c

Physics, science of: *see* CH 67: PHYSICS; *and* MATHEMATICS 5b; MECHANICS 4 / *see also* ASTRONOMY 2–2c; EXPERIENCE 5–5c; HYPOTHESIS 4–4d; INDUCTION 5; LOGIC 4b; MATHEMATICS 1a; MECHANICS 2–2c; METAPHYSICS 3b; NATURE 4b; PHILOSOPHY 1c; REASONING 6c; SCIENCE 1b–1b(2), 5–5e; TRUTH 4c

Physics, subject matter of: *see* ASTRONOMY 8a–9f; CHANGE 7–7c(4); ELEMENT 3–3d; MECHANICS 1b, 5–7e(5); QUANTITY 5–5e; SPACE 2–2c

Physiocrats (*econ.*): *see* WEALTH 9c

Physiology, science of: *see* MAN 2b(3)

Physiology, subject matter of: *see* ANIMAL 3d, 4c–9g; EMOTION 1b; EVOLUTION 7b(1); MEMORY AND IMAGINATION 1b; SENSE 3a

Piety: *see* DUTY 11; GOD 3a, 3c–3e; JUSTICE 11b; RELIGION 2–2f

Pity: *see* EMOTION 2a; POETRY 6b

Place: *see* CHANGE 7a; SPACE 1b, 2a, 6

Plagues: *see* MEDICINE 7

Plane geometry: *see* QUANTITY 3a–3d(1)

Planets: *see* ASTRONOMY 9c; MECHANICS 3b, 5f–5f(2)

Plants: *see* ANIMAL 1b; LIFE AND DEATH 3–3a; SENSE 2a; SOUL 2c(1) / *see also* CHANGE 10b; EVOLUTION 4–4d; LIFE AND DEATH 4, 6a; MAN 4a

Play: *see* HABIT 5a; PLEASURE AND PAIN 4d

Pleasure and pain: *see* CH 68: PLEASURE AND PAIN; *and* GOOD AND EVIL 3d; HAPPINESS 2b(2); VIRTUE AND VICE 5a, 6b / *see also* ART 7a; BEAUTY 4; CHANGE 12a; DESIRE 2b, 2d, 7a(1); DUTY 2; EMOTION 1a; KNOWLEDGE 8b(4); LABOR 1c, 3c; LOVE 1b, 2b(3); MIND 1e(2); POETRY 1a; PUNISHMENT 1a; SENSE 6; WILL 2b(2)

Pleasure principle: *see* PLEASURE AND PAIN 8b

Plenum (*phys.*): *see* SPACE 2b(1), 2b(3)

Plot (*poet.*): *see* POETRY 7–7b, 8a(3)

Poetic truth: *see* MEMORY AND IMAGINATION 7b; POETRY 8a(2); TRUTH 4b

Poetic unities: *see* POETRY 8a(1)

Poetics, science of: *see* PHILOSOPHY 2c; POETRY 8–8c

Poetry, poet: *see* CH 69: POETRY; *and* ART 7–8, 10–12; BEAUTY 1–1d, 5–6; EDUCATION 4d; TRUTH 4b / *see also* ART 1; HISTORY 1; LANGUAGE 9; MEMORY AND IMAGINATION 3d, 7b; PHILOSOPHY 1d; SCIENCE 2b; VIRTUE AND VICE 4d(4)

Point (*math.*): *see* ONE AND MANY 2b

Political and royal government: *see* ARISTOCRACY 4; CITIZEN 2b; CONSTITUTION 1, 3b; LAW 7a; MONARCHY 1a–1a(1); TYRANNY 5–5c

Political economy, science of: *see* WEALTH 9–9a

Political economy, subject matter of: *see* FAMILY 3b; LIBERTY 2c; STATE 2d, 4b; WEALTH 9–9h

Political office: *see* CONSTITUTION 4; GOVERNMENT 1g(2) / *see also* CONSTITUTION 2a; GOVERNMENT 3–3e(2); OLIGARCHY 5a; TYRANNY 5c

Political parties: *see* DEMOCRACY 5b(4) / *see also* OPPOSITION 5a; STATE 5d(2)

Political prudence or wisdom: *see* DEMOCRACY 3b; PRUDENCE 6a; STATE 8d; WISDOM 1b / *see also* EXPERIENCE 6b; KNOWLEDGE 8c; MONARCHY 2b; PHILOSOPHY 4c

Politics, political philosophy or science: *see* ART 9d; KNOWLEDGE 8c; LOGIC 4e; PHILOSOPHY 2c; RHETORIC 1c; SCIENCE 3a; STATE 8d–8d(3)

Politics, political philosophy or science, subject matter of: *see* CH 3: ARISTOCRACY; CH 11: CITIZEN; CH 12: CONSTITUTION; CH 16: DEMOCRACY; CH 31: GOVERNMENT; CH 59: MONARCHY; CH 62: OLIGARCHY; CH 90: STATE; CH 95: TYRANNY; CH 98: WAR AND PEACE; *and* JUSTICE 1–6e, 9–10d; LAW 6–7f; LIBERTY 1–2d; PUNISHMENT 4–4d; REVOLUTION 1–3c(3), 6–7; WEALTH 9–9h

Polygamy: *see* FAMILY 4a

Polytheism: *see* ANGEL 1; GOD 1–1c

Poor laws: *see* WEALTH 8d

Popular sovereignty: *see* DEMOCRACY 4b; GOVERNMENT 1g(3); MONARCHY 4e(3); STATE 2c; TYRANNY 5c; WILL 10a

Population: *see* STATE 4c

Positive and negative (*log.*): *see* BEING 1; IDEA 4c; INFINITY 2a; OPPOSITION 1a, 1c(1)

Positive law: *see* LAW 2, 5–5h / *see also* CUSTOM AND CONVENTION 6a; JUSTICE 6b, 10a, 10d; LAW 3b–3b(2), 4f, 7c; NECESSITY AND CONTINGENCY 5c; PUNISHMENT 4c

Possibility and impossibility: *see* BEING 7d(1); NECESSITY AND CONTINGENCY 1; POETRY 8a(2); WILL 4b

Posterior and prior: *see* RELATION 5a; TIME 5b

Postulate, postulation (*log.*): *see* CUSTOM AND CONVENTION 9b; HYPOTHESIS 3 / *see also* MATHEMATICS 3a; OPINION 2c; PRINCIPLE 3c(2)

Potentiality and actuality (*metaph.*): *see* BEING 7c–7c(3); FORM 2c(1); INFINITY 4c; MATTER 1–1a / *see also* HABIT 1a; INFINITY 1b; MATTER 3b; MIND 2b; QUANTITY 7; TIME 5b

Poverty: *see* LABOR 7c; WEALTH 8, 8c–8d, 10c(1)–10c(2) / *see also* OPPOSITION 5b; WEALTH 9g, 10d

Power (*pol.*): *see* GOVERNMENT 1d; JUSTICE 1a, 9f; LAW 1c; OLIGARCHY 5c; REVOLUTION 1a, 2b, 3a–3b, 5b; TYRANNY 1a, 1c, 7; WAR AND PEACE 1, 6–6a / *see also* CONSTITUTION 8a; DEMOCRACY 2a; DESIRE 7a(2); EMOTION 5b–5c; GOVERNMENT 3b; HAPPINESS 2b(6); LAW 5, 6a–6b, 7d; MONARCHY 1a(2), 3b; OPPOSITION 5b–5c; PUNISHMENT 4a; STATE 5d–5d(2), 9c–9e(2); VIRTUE AND VICE 7d; WAR AND PEACE 10–10g

Powers (*psychol.*): *see* HABIT 2b; LIFE AND DEATH 3; MAN 4–5a; QUALITY 2a; SOUL 2a, 2c–2c(3)

Practical and speculative: *see* KNOWLEDGE 6c(1)–6e(2); MIND 9a; PHILOSOPHY 2a; PRUDENCE 2a; SCIENCE 3a; THEOLOGY 3b, 4d; TRUTH 2c; WISDOM 1b

Practical judgment: *see* JUDGMENT 2–3; PRUDENCE 5a / *see also* EXPERIENCE 6a; GOOD AND EVIL 5b

Practical philosophy or science: *see* KNOWLEDGE 6e(1)–6e(2); PHILOSOPHY 2a, 2c; SCIENCE 3a / *see also* DEFINITION 6c; JUDGMENT 3; LOGIC 4e; METAPHYSICS 2d; NATURE 4b; REASONING 6d; THEOLOGY 3b, 4d

Practical reason: *see* MIND 9a / *see also* DUTY 5; LOGIC 4e; MIND 1e(3), 9b–9d; PRUDENCE 1–2c, 5–5c; REASONING 5e–5e(3); THEOLOGY 3b; WILL 3b(3), 5a(4), 5b(2)–5b(3)

Practice: *see* EDUCATION 3–4; HABIT 4–4b; VIRTUE AND VICE 4c

Praise and blame: *see* HONOR 1, 3a–3b, 4c; VIRTUE AND VICE 4d(2) / *see also* COURAGE 5; PLEASURE AND PAIN 10a–10b; PUNISHMENT 3a; RHETORIC 3a

Prayer: *see* GOD 3e; RELIGION 2a

Preaching: *see* RELIGION 5a

Precession of equinoxes: *see* ASTRONOMY 9e

Preconscious: *see* MIND 7c

Predestination (*theol.*): *see* CHANCE 2b; FATE 4; GOD 7f; SIN 6a; WILL 7c

Predicables (*log.*): *see* DIALECTIC 2b(1) / *see also* BEING 8d; DEFINITION 2b–2c

Predicaments (*log.*): *see* BEING 7b–7b(1), 7b(6); IDEA 4b(3); QUALITY 1; QUANTITY 1; RELATION 1a, 4c

Predicate and subject (*log.*): *see* IDEA 5a; JUDGMENT 5b; RELATION 4b

Predication: *see* JUDGMENT 5b

Prediction (*log.*): *see* HYPOTHESIS 4b; KNOWLEDGE 5a(5); MEDICINE 3c; PHYSICS 2b; SCIENCE 5e; TIME 6f

Pregnancy: *see* ANIMAL 9–9e

Prehistory, prehistoric man: *see* EVOLUTION 7c; MAN 9c; TIME 8a

Prejudice: *see* OPINION 2a / *see also* CUSTOM AND CONVENTION 7b; STATE 5d(1)

Premise and conclusion (*log.*): *see* NECESSITY AND CONTINGENCY 4c(2); REASONING 2–2c; TRUTH 3b(3) / *see also* DEFINITION 5; DIALECTIC 3b–3c; JUDGMENT 8a; KNOWLEDGE 6c(2); PRINCIPLE 2a(2)–2a(3), 2b(2), 3a–3b

Present: *see* TIME 3–3c, 6d

Pressure of air: *see* MECHANICS 5b

Prestige: *see* HONOR 1, 3–3b, 4b–4c

Prevarication: *see* TRUTH 8a–8b

Price (*econ.*): *see* JUSTICE 8b; WEALTH 4a, 4c, 4e, 5c, 10d / *see also* JUSTICE 8d; LABOR 6a; WEALTH 3b, 4d, 4f, 5e

Pride: *see* EMOTION 2a; HONOR 2c; SIN 2c(1), 4c

Priest, priesthood: *see* EDUCATION 7b; PROPHECY 2b; RELIGION 3c(1)

Primary and secondary qualities: *see* QUALITY 2b, 3a, 6c; QUANTITY 1a; SENSE 3c(3), 4c

Prime matter: *see* BEING 7c(2); FORM 2c(3); INFINITY 4c; MATTER 1a; SPACE 1c / *see also* BEING 7c(3); FORM 1d(2); MATTER 3b, 3d; WORLD 4e(3)

Prime mover: *see* CAUSE 7b; CHANGE 14; GOD 5a / *see also* ANGEL 2a; CAUSE 1b; NATURE 3c(4); RELATION 5a(1); WORLD 4e(2)

Prime number: *see* QUANTITY 4a

Primitive man: *see* EVOLUTION 7c; MAN 9c

Prince: *see* EDUCATION 8d; GOVERNMENT 1g(1), 5; JUSTICE 9d; LAW 6b; MONARCHY 1a–1a(2), 3a–3b; PRUDENCE 6a; STATE 2c, 8–8d(3); TYRANNY 5c; WAR AND PEACE 10a

Principle: *see* CH 70: PRINCIPLE; *and* CHANGE 2; ELEMENT 2; HAPPINESS 3; KNOWLEDGE 3;

LOGIC 1a; OPPOSITION 3a; REASONING 5b(1); SCIENCE 4a / *see also* DEFINITION 5; FORM 1b, 4; GOD 5a–5b; GOOD AND EVIL 5a; HYPOTHESIS 3; IDEA 1d; INDUCTION 3; JUDGMENT 8a; KNOWLEDGE 6c(2); LIFE AND DEATH 1; MATHEMATICS 3a; METAPHYSICS 2b; OPINION 2c, 6b; PHYSICS 2a; SIN 4c; THEOLOGY 4b; TRUTH 3c, 4c, 7a

Prior and posterior: *see* RELATION 5a; TIME 5b

Prisons: *see* PUNISHMENT 4b(2)

Private property: *see* JUSTICE 8a; WEALTH 7d(1), 8b / *see also* LABOR 7b; OLIGARCHY 4; REVOLUTION 4b; WEALTH 7a

Privation (*metaph.*): *see* BEING 1; CHANGE 2b; DESIRE 2a; GOOD AND EVIL 1d; MATTER 1a; OPPOSITION 2c–2d

Privilege (*pol.*): *see* CITIZEN 4; DEMOCRACY 4a(1); OLIGARCHY 4 / *see also* JUSTICE 9c; LABOR 7d; LAW 6b; MONARCHY 1a(2); REVOLUTION 3a

Probability and certainty: *see* JUDGMENT 9; KNOWLEDGE 6d(1) 6d(2); NECESSITY AND CONTINGENCY 4a; OPINION 3b; SCIENCE 4e; TRUTH 2c / *see also* CHANCE 4; DIALECTIC 3b; KNOWLEDGE 5c; MATHEMATICS 1c; POETRY 8a(2); REASONING 3d; SCIENCE 1a; SIGN AND SYMBOL 4c; TRUTH 4d, 7a

Procreation: *see* ANIMAL 8–9e; CHANGE 10b / *see also* LIFE AND DEATH 3a; MAN 4a; SOUL 2c(1)

Production, productivity (*econ.*): *see* ART 9b; LABOR 5–5d; REVOLUTION 4b; WEALTH 3–3d, 6a, 7c, 9d / *see also* JUSTICE 8, 8c–8c(2); LABOR 1e, 2–2b, 3e, 4a; WEALTH 1

Production and action: *see* KNOWLEDGE 6e(2); PRUDENCE 2b / *see also* ART 6c; KNOWLEDGE 8a; LABOR 2–2b; SCIENCE 3–3b; VIRTUE AND VICE 2a(2)

Profanation: *see* RELIGION 2g

Professions, professional education: *see* EDUCATION 2, 6 / *see also* EDUCATION 5a; LAW 9; MEDICINE 1, 2c; STATE 8c; WAR AND PEACE 10, 10c

Profit (*econ.*): *see* JUSTICE 8c(2); WEALTH 4c, 6d–6e

Prognosis (*med.*): *see* MEDICINE 3c, 5c; SIGN AND SYMBOL 4e

Progress: *see* CH 71: PROGRESS; *and* ART 12; CUSTOM AND CONVENTION 8; DEMOCRACY 4d; EVOLUTION 4d; GOVERNMENT 6; HISTORY 4a(3), 4b; KNOWLEDGE 10; OPPOSITION 5d; SCIENCE 6–6b; STATE 2a(3); TRUTH 6; VIRTUE AND VICE 9; WEALTH 12 / *see also* CITIZEN 9; CONSTITUTION 10; LABOR 1e; LIBERTY 6a; REVOLUTION 1a, 5c; SLAVERY 6c; STATE 10f

Projectiles: *see* MECHANICS 3b, 5f–5f(1)

Projections (*psychol.*): *see* DESIRE 4b

Proletariat (*econ.*): *see* LABOR 5c, 7c(3); REVOLUTION 4a, 5a–5b; WEALTH 8c / *see also* JUSTICE 8c(1); LABOR 4b, 7c(1); OPPOSITION 5b; SLAVERY 4c, 5b; WEALTH 9h

Promises: *see* DUTY 7

Promulgation of law: *see* LAW 1d

Proof: *see* CH 77: REASONING; *and* DEFINITION 5; IMMORTALITY 2; INDUCTION 1b; MATHEMATICS 3a–3b; PRINCIPLE 3a–3a(3); TRUTH 3b(3) / *see also* BEING 8d; JUDGMENT 8a; KNOWLEDGE 6c(2); OPINION 2c; OPPOSITION 1c; RHETORIC 4c–4c(3); SCIENCE 5d–5e; SIGN AND SYMBOL 4b; TRUTH 7a

Propaganda: *see* RHETORIC 1c, 3–5b, 7; STATE 8d(2); TRUTH 8b

Proper and common names (*log.*): *see* SIGN AND SYMBOL 2d; UNIVERSAL AND PARTICULAR 5a

Proper and common sensibles (*psychol.*): *see* QUALITY 2b; SENSE 3c(3)

Property (*econ.*): *see* JUSTICE 8a; LABOR 7b; OLIGARCHY 4–5c; WEALTH 7–8b, 9f, 10d / *see also* LABOR 7c(1); LAW 4h; NATURE 5b; OPPOSITION 5b; SLAVERY 2b

Property (*log.*): *see* BEING 8d; DEFINITION 2b; DIALECTIC 2b(1); NATURE 1a–1a(1); NECESSITY AND CONTINGENCY 2d; SIGN AND SYMBOL 4e

Prophecy: *see* CH 72: PROPHECY; *and* MEMORY AND IMAGINATION 8a; RELIGION 1b(3); SIGN AND SYMBOL 5b / *see also* ASTRONOMY 11; EDUCATION 7b; GOD 8c; LANGUAGE 10, 12; WORLD 8

Propitiation: *see* GOD 3e; RELIGION 2d

Proportion, proportionality: *see* BEAUTY 1c; MATHEMATICS 4c; QUANTITY 1b, 6b; RELATION 1d, 5a(3); SAME AND OTHER 3b / *see also* IDEA 4b(4); REASONING 4f; SAME AND OTHER 3c(1); SIGN AND SYMBOL 3d

Proportional representation: *see* DEMOCRACY 5b(1) / *see also* CONSTITUTION 9b; DEMOCRACY 5b(3); GOVERNMENT 1h

Proposition (*log.*): *see* JUDGMENT 5–10; NECESSITY AND CONTINGENCY 4c(1); OPPOSITION 1d–1d(2); RELATION 4b; TRUTH 3b(2); UNIVERSAL AND PARTICULAR 5c / *see also* HYPOTHESIS 5; IDEA 5a, 6f; INFINITY 2b; PRINCIPLE 2b–2b(3)

Prose and verse: *see* POETRY 8b

Prosperity (*econ.*): *see* LABOR 4a; PROGRESS 3a; STATE 7a; WEALTH 9a–9c

Protective system or protectionism (*econ.*): *see* STATE 9a; WEALTH 4g, 9c

Providence (*theol.*): *see* CAUSE 7c; GOD 7b–7c; NATURE 3c(4); WILL 7c / *see also* CHANCE 2b; GOD 12; HISTORY 5a; PROGRESS 1a; PROPHECY 1b–1c

Prudence or practical wisdom: *see* CH 73: PRUDENCE; *and* COURAGE 4; EXPERIENCE 6a; KNOWLEDGE 8b(3); VIRTUE AND VICE 2a–2a(2) / *see also* GOOD AND EVIL 6a; JUDGMENT

3; PRINCIPLE 4a; REASONING 5c–5c(3); STATE 8d; TRUTH 2c; VIRTUE AND VICE 3b, 5b; WILL 2c(3); WISDOM 1b, 2a–2b

Psychiatry, subject matter of: *see* DUTY 4b; EMOTION 3–3a, 3c–3c(4); MAN 5b; MEDICINE 5d(2), 6–6c(2); MEMORY AND IMAGINATION 2c(3)–2e(4), 5c; MIND 8–8c; ONE AND MANY 3b(5); PLEASURE AND PAIN 8c; PUNISHMENT 6; SENSE 4d(2); SIN 5; WILL 9b

Psychoanalysis, subject matter of: *see* DESIRE 4–4d, 6b–6c; EMOTION 3–3d; FAMILY 7d; LOVE 2a–2a(4); MEDICINE 5d(2), 6–6d; MEMORY AND IMAGINATION 8d–8e; MIND 7c, 8b; OPPOSITION 4c; SIGN AND SYMBOL 6–6c / *see also* DESIRE 2a, 3b(2), 5a; DUTY 4b; HABIT 3a; LANGUAGE 10; LIFE AND DEATH 8a–8b; MAN 4, 5b; MEMORY AND IMAGINATION 2e(2), 5c; MIND 7; ONE AND MANY 3b(5); PLEASURE AND PAIN 8b–8c; PUNISHMENT 6; SIN 5; SOUL 2b; WILL 9b

Psychology, science of: *see* MAN 2b–2b(4); SOUL 5–5b / *see also* LOGIC 1; METAPHYSICS 3b; MIND 6; PHILOSOPHY 2b; RHETORIC 1b; SCIENCE 1a(2)–1b

Psychology, subject matter of: *see* CH 56: MEMORY AND IMAGINATION; CH 84: SENSE; *and* DESIRE 2–3d; EMOTION 1–3d; HABIT 1–5d; MAN 1–5b; MEDICINE 6–6d; MIND 1–8c; PLEASURE AND PAIN 1–5; SOUL 1–4b; WILL 1–6c

Psychoneurosis: *see* DESIRE 6b–6c; EMOTION 3c–3c(4); LOVE 2a(2)–2a(4); MAN 5b; MEDICINE 5d(2), 6b–6c(2); MIND 8b; OPPOSITION 4c; SIGN AND SYMBOL 6c / *see also* DUTY 4b; MEMORY AND IMAGINATION 2e(2); PLEASURE AND PAIN 8c; PUNISHMENT 6; SIN 5; WILL 9b

Psychopathology, subject matter of: *see* DESIRE 6c; DUTY 4b; EMOTION 3–3a, 3c–3c(4); LOVE 2a(2)–2a(4); MAN 5b; MEDICINE 6–6d; MEMORY AND IMAGINATION 2e(3)–2e(4), 5c; MIND 8–8c; ONE AND MANY 3b(5); OPPOSITION 4c; PLEASURE AND PAIN 8c; PUNISHMENT 6; SIGN AND SYMBOL 6c; SIN 5; WILL 9b

Psychophysical law: *see* SENSE 3c(2)

Psychosis: *see* EMOTION 3a; MAN 5b; MEDICINE 6–6c(2); MIND 8–8c; ONE AND MANY 3b(5)

Psychotherapy: *see* EMOTION 3d; MEDICINE 6d; MEMORY AND IMAGINATION 8e

Puberty: *see* LIFE AND DEATH 6c; MAN 6c

Public administration: *see* GOVERNMENT 3e–3e(2); LAW 7e; MONARCHY 1b(3)

Public domain: *see* WEALTH 7d(2), 8a

Public education: *see* EDUCATION 8a–8b; FAMILY 2c; STATE 7d

Public finance: *see* GOVERNMENT 4; WEALTH 9e–9e(2)

Public office: *see* ARISTOCRACY 6; CONSTITUTION 2a, 4; GOVERNMENT 1g(2); JUSTICE 9e; OLIGARCHY 5a; STATE 8–8a; TYRANNY 5c; VIRTUE AND VICE 7c

Public opinion: *see* EDUCATION 4c; HONOR 4c; OPINION 6a, 7–7b / *see also* CONSTITUTION 9a; CUSTOM AND CONVENTION 9a; DEMOCRACY 2–2b, 3b, 5b(1); TYRANNY 2c

Public ownership: *see* JUSTICE 8a; LABOR 7b; WEALTH 7d(2), 8a

Public welfare: *see* GOOD AND EVIL 5d; HAPPINESS 5–5b; JUSTICE 1e; LAW 1a; LOVE 4b; STATE 2f / *see also* ART 10b; CITIZEN 1; JUSTICE 1c; LABOR 3f; MONARCHY 3a; TEMPERANCE 5a; WEALTH 9a

Punishment: *see* CH 74: PUNISHMENT; *and* EMOTION 5c; GOD 5i; JUSTICE 9g, 10c; LABOR 1c; LAW 6e(3); SIN 6–6e; VIRTUE AND VICE 4d(2)

Purgation (*psychol.*): *see* ART 8; DESIRE 4d; POETRY 6b

Purgatory (*theol.*): *see* IMMORTALITY 5d; PUNISHMENT 5d, 5e(2); SIN 6e

Purification (*theol.*): *see* GOD 9e; IMMORTALITY 5d; PUNISHMENT 5e(2); RELIGION 2c–2d, 2f; SIN 3e, 4e, 6e

Purpose: *see* CAUSE 6; CHANCE 3; DEFINITION 2e; DESIRE 2c; GOOD AND EVIL 1a, 5c; JUDGMENT 4; NATURE 3c(3); PRINCIPLE 4a; VIRTUE AND VICE 5c; WILL 2c(2), 3a(2)

Q

Quadrivium: *see* ASTRONOMY 4; EDUCATION 5d; MATHEMATICS 1b

Quality: *see* CH 75: QUALITY; *and* CHANGE 9–9b; ELEMENT 3a; MATTER 2c; MECHANICS 1a, 4b; OPPOSITION 3b; QUANTITY 1a; SAME AND OTHER 3c; SENSE 3c(3), 4c / *see also* BEING 7b(6); CHANGE 6; HABIT 2; MAN 6a

Quantity: *see* CH 76: QUANTITY; *and* CHANGE 8–8b; INFINITY 3–3c; MATHEMATICS 2c; MECHANICS 4b; QUALITY 3–3a; RELATION 5a(3); SAME AND OTHER 3d / *see also* ELEMENT 3a; INFINITY 1b, 4a; MATHEMATICS 2; ONE AND MANY 3a–3a(4); SPACE 1c, 3–3d, 5; TIME 1

R

Race, racial differences (*biol.*): *see* ANIMAL 2a; EVOLUTION 1b, 2b; MAN 7–7b; SLAVERY 2a; STATE 5d(1)

Radiation: *see* MECHANICS 7c(1); SPACE 2c

Rashness: *see* COURAGE 2

Ratio (*math.*): *see* MATHEMATICS 4c; QUANTITY 6b; RELATION 5a(3)

Rationality (*psychol.*): *see* ANIMAL 1c(2); MAN 1a–1b, 4c; MIND 3a; SOUL 1c, 2c(3)

Rationalization (*psychol.*): *see* DESIRE 5b; EMOTION 3b; OPINION 2a

Raw materials (*econ.*): *see* WEALTH 3a

Real and ideal (*metaph.*): *see* BEING 7d–7d(5); IDEA 6a; MATHEMATICS 2b / *see also* FORM 2a; IDEA 3c; RELATION 1a; SPACE 3b; UNIVERSAL AND PARTICULAR 2a–2b

Real estate: *see* WEALTH 3b, 7b(2), 8a

Reality and appearance: *see* BEING 7e; DIALECTIC 2a(1) / *see also* BEING 3a, 5

Reality principle: *see* PLEASURE AND PAIN 8b

Reason: *see* ANIMAL 1c(2); KNOWLEDGE 6b(3)–6c(2); MAN 1–1c, 4c; MIND 1–9f; SENSE 1a; SOUL 2c(3) / *see also* DESIRE 6a; EMOTION 4a–4b(2); EVOLUTION 7b(3); HABIT 3c, 5c–5d; KNOWLEDGE 6c(5); LIBERTY 3b; OPINION 2d; PHILOSOPHY 6c; SENSE 5c; THEOLOGY 4c; TRUTH 4a; VIRTUE AND VICE 5b

Reasoning: *see* CH 77: REASONING; *and* DEFINITION 5; EXPERIENCE 2d; IDEA 5b; INDUCTION 1a–1b; INFINITY 2c; JUDGMENT 7b–7c; KNOWLEDGE 6c(2); LOGIC 1a, 4–4f; NECESSITY AND CONTINGENCY 4c(2); OPINION 2c; OPPOSITION 1e; TRUTH 3b(3)–3c; UNIVERSAL AND PARTICULAR 5d / *see also* DIALECTIC 2b, 3b–3c; HYPOTHESIS 2, 5; MIND 1a(3); NECESSITY AND CONTINGENCY 4d; ONE AND MANY 4c; RHETORIC 4c–4c(3); SENSE 1c; SIGN AND SYMBOL 4b, 4e; THEOLOGY 4c

Rebellion: *see* LAW 6c; OPPOSITION 5c; REVOLUTION 1a, 1c, 2a–2b, 3–3b, 6a–6b; WAR AND PEACE 2a, 4b / *see also* ARISTOCRACY 3; DEMOCRACY 7a; LIBERTY 6b–6c; OLIGARCHY 3–3b; REVOLUTION 3c–3c(3), 7; SLAVERY 3c; TYRANNY 8

Recall (*psychol.*): *see* IDEA 2e; MEMORY AND IMAGINATION 2b, 2d

Receptacle (*metaph.*): *see* FORM 1d(1); MATTER 1; SPACE 1a; WORLD 4b

Recognition: *see* MEMORY AND IMAGINATION 1a, 2d

Recollection: *see* IDEA 2e; MEMORY AND IMAGINATION 2b, 2d

Recreation: *see* PLEASURE AND PAIN 4d

Rectilinear motion: *see* CHANGE 7c(1); MECHANICS 5c–5c(2)

Redemption (*theol.*): *see* GOD 9c; SIN 3d / *see also* PROPHECY 4c; SIN 7

Reductio ad absurdum (*log.*): *see* PRINCIPLE 3a(2); REASONING 4d

Reflection (*phys.*): *see* MECHANICS 7a(1)

Reflection (*psychol.*): *see* IDEA 2d; MIND 1d(1); SENSE 1d; SOUL 5a; UNIVERSAL AND PARTICULAR 4a; WILL 5b(1)

Reflexes: *see* HABIT 3d; VIRTUE AND VICE 4e(1)

Reflexivity of mind: *see* IDEA 2d, 3a; MAN 2a; MIND 1f, 6; SOUL 5a; WILL 5b(1)

Reform (*econ., pol.*): *see* PROGRESS 3b, 4a–4c; REVOLUTION 1a / *see also* DEMOCRACY 4c; LABOR 7a; REVOLUTION 3a, 4–4b, 6a; WEALTH 12

Reformation and deterrence: *see* PUNISHMENT 1c–1d

Refraction: *see* MECHANICS 7a(1)

Refutation (*log.*): *see* REASONING 4e

Regimen (*med.*): *see* MEDICINE 3d(1)

Regression (*log.*): *see* INFINITY 2c

Regulative principles: *see* IDEA 1d; JUDGMENT 8d; PRINCIPLE 2b(3)

Reincarnation: *see* IMMORTALITY 5a; SOUL 4d(1)

Relation: *see* CH 78: RELATION; *and* BEING 7d(4); JUDGMENT 5c, 6d; SAME AND OTHER 3b–3d; SIGN AND SYMBOL 2c; TIME 5–5d / *see also* BEAUTY 1a, 1c; IDEA 6c; MATHEMATICS 2, 4c; QUALITY 4c; QUANTITY 1b, 3c, 3e(2), 4b; REASONING 4f; SIGN AND SYMBOL 3c(1); SPACE 3–3d

Relative and absolute (*philos.*): *see* RELATION 6–6c; UNIVERSAL AND PARTICULAR 7–7c / *see also* BEAUTY 5; CUSTOM AND CONVENTION 9a; GOOD AND EVIL 6d; HISTORY 4c; OPINION 6a; TRUTH 7a–7b

Relative and absolute (*phys.*): *see* CHANGE 7c(3); RELATION 6a; SPACE 2a; TIME 1

Relativism: *see* BEAUTY 5; CUSTOM AND CONVENTION 5a, 9–9b; GOOD AND EVIL 6d; JUSTICE 1f; MAN 10b; OPINION 3c, 6a; RELATION 6b–6c; TRUTH 7a; UNIVERSAL AND PARTICULAR 7–7c

Religion: *see* CH 79: RELIGION; *and* DUTY 11; EDUCATION 7–7b; JUSTICE 11b; PHILOSOPHY 1a; PROPHECY 1d; SCIENCE 2a; SIGN AND SYMBOL 5–5f; TRUTH 4a; VIRTUE AND VICE 8–8g / *see also* CITIZEN 7; EDUCATION 2; EXPERIENCE 7; GOD 3–3e; HONOR 6a; LAW 3b–3b(2); LOVE 5a(1); OPINION 4–4b; PROPHECY 2c; STATE 7c; THEOLOGY 2; VIRTUE AND VICE 8g; WAR AND PEACE 2b; WILL 3b(3)

Religious community: *see* GOD 8a–8d, 9d; RELIGION 3a–4b / *see also* CITIZEN 7; HISTORY 5b; RELIGION 7; STATE 1d, 2g

Religious conversion: *see* RELIGION 5b

Religious education: *see* EDUCATION 2, 7–7b; RELIGION 5c

Religious faith or belief: *see* GOD 6c(2); KNOWLEDGE 6c(5); OPINION 4–4b; RELIGION 1b–1b(3); TRUTH 4a; VIRTUE AND VICE 8d(1); WILL 3b(3) / *see also* HABIT 5c(3); LOGIC 4f; MIND 5c; PHILOSOPHY 6c; RELIGION 6b, 6d, 6f; THEOLOGY 2, 4b; WAR AND PEACE 2b

Religious freedom: *see* LIBERTY 2b; RELIGION 6e / *see also* RELIGION 6c(1)–6c(2); THEOLOGY 4e

Religious life: *see* RELIGION 3–3d

Religious orders: *see* RELIGION 3c(1), 3d; VIRTUE AND VICE 8g

Reminiscence: *see* KNOWLEDGE 6c(3); MEMORY AND IMAGINATION 3a / *see also* EDUCATION 5c; IDEA 2b; REASONING 1c

Remorse: *see* DUTY 4b; PUNISHMENT 5c; SIN 5

Rent: *see* WEALTH 3b, 4c, 6d(1)

Renunciation: *see* DESIRE 6b; PLEASURE AND PAIN 7b; RELIGION 3d; TEMPERANCE 6a

Repentance: *see* PUNISHMENT 3c; RELIGION 2f; SIN 4e / *see also* DUTY 4b; GOD 9e; PUNISHMENT 5c; RELIGION 2c; SIN 5

Representation (*pol.*): *see* CONSTITUTION 9–9b; DEMOCRACY 5–5c / *see also* ARISTOCRACY 6; GOVERNMENT 1h; OPINION 7b; STATE 8a

Representatives: *see* CONSTITUTION 9a; DEMOCRACY 5a–5b; STATE 8a

Repression (*psychol.*): *see* DESIRE 6b–6c; EMOTION 3c–3c(4); MEDICINE 6c(2); MEMORY AND IMAGINATION 2c(2), 8d(1), 8c; MIND 8b; OPPOSITION 4c; SIGN AND SYMBOL 6a

Reproduction (*biol.*): *see* ANIMAL 8b–9e; CHANGE 10b / *see also* ART 2a; LIFE AND DEATH 3a; MAN 4a; SOUL 2c(1)

Republic, republican government: *see* CH 12: CONSTITUTION; *and* ARISTOCRACY 4; CITIZEN 2–2c; DEMOCRACY 5a–5c; LAW 7a–7b; LIBERTY 1d; MONARCHY 1a(1), 1b–1b(3), 4c, 4e(4); OLIGARCHY 1–2; TYRANNY 5–5d

Reputation: *see* COURAGE 5; HONOR 1, 3–3b, 4c; MONARCHY 3b; RHETORIC 4a

Resistance (*phys.*): *see* MECHANICS 5d

Respiration: *see* ANIMAL 5d; LIFE AND DEATH 3a

Responsibility: *see* PUNISHMENT 2–2b; SIN 6a–6b; WILL 5b(4)

Rest and motion: *see* CHANGE 4; OPPOSITION 3c

Restraint: *see* DESIRE 6b; EMOTION 4b–4b(2); PLEASURE AND PAIN 8a; TEMPERANCE 1; VIRTUE AND VICE 5a

Resurrection (*theol.*): *see* GOD 7g; IMMORTALITY 5g; SOUL 4d(3)

Retaliation: *see* JUSTICE 10c; PUNISHMENT 1b

Retention (*psychol.*): *see* MEMORY AND IMAGINATION 2a–2b, 2c–2e(3)

Retribution: *see* JUSTICE 10c; PUNISHMENT 1b

Retrogradation (*astron.*): *see* ASTRONOMY 9c

Revelation: *see* GOD 6c(1); LANGUAGE 12; RELIGION 1b(1); SIGN AND SYMBOL 5e; THEOLOGY 4b / *see also* GOD 2a; IMMORTALITY 3b; WORLD 4e(3)

Revenge: *see* JUSTICE 10c; PUNISHMENT 1b

Revenue: *see* GOVERNMENT 4; WEALTH 9e–9e(2)

Revolution: *see* CH 80: REVOLUTION; *and* CONSTITUTION 7–8b; DEMOCRACY 7a; LABOR 7c(3); LAW 6c; OLIGARCHY 3a–3b / *see also* ARISTOCRACY 3; GOVERNMENT 6; JUSTICE 10b; LAW 7d; LIBERTY 6b–6c; PROGRESS 3b; TYRANNY 8

Reward: *see* GOD 5i; HONOR 4b–4c; IMMORTALITY 4; JUSTICE 9e; PLEASURE AND PAIN 10a; PUNISHMENT 3a; VIRTUE AND VICE 4d(2), 8c

Rhetoric, science of: *see* CH 81: RHETORIC; *and* EMOTION 5d; INDUCTION 4b; PLEASURE AND PAIN 10b; RELIGION 5a; STATE 8d(2) / *see also* DIALECTIC 5; LANGUAGE 8; LOGIC 3b; OPINION 2c; TRUTH 4d

Right and wrong: *see* GOOD AND EVIL 3e

Righteousness: *see* GOD 8c; SIN 7

Rights: *see* JUSTICE 6–7; LAW 4c, 4e, 7c; LIBERTY 1g; WILL 8e / *see also* CITIZEN 4; CONSTITUTION 7b; DEMOCRACY 4b; DUTY 7; FAMILY 2c, 5b, 6d; JUSTICE 9f; LABOR 7b, 7c; LAW 2, 6a, 6c; LIBERTY 1a, 2a–2b; MONARCHY 2c; OLIGARCHY 4; OPINION 5a; PROGRESS 4c; RELIGION 6e; REVOLUTION 6–6b; SLAVERY 3d; TYRANNY 1a, 5a; WAR AND PEACE 3–3b

Risk (*econ.*): *see* WEALTH 6d(3)–6d(4)

Rituals: *see* GOD 3e; RELIGION 2–2g / *see also* GOD 8c, 9e; LAW 3b(1)–3b(2); SIGN AND SYMBOL 1c, 5c

Romantic love: *see* FAMILY 7a; LOVE 2c–2d

Royal and political government: *see* ARISTOCRACY 4; CITIZEN 2b; CONSTITUTION 1, 3b; LAW 7a; MONARCHY 1a–1a(1); TYRANNY 5–5c

Royal prerogative: *see* LAW 7e; MONARCHY 4d(3), 4e(4)

Rudimentary organs and functions: *see* EVOLUTION 6c, 7b(1)

Ruler, rule (*pol.*): *see* ARISTOCRACY 4–5; ART 9d; DEMOCRACY 2a–2b, 3b, 5b(1); EDUCATION 8d; GOVERNMENT 1–1h; JUSTICE 9d; KNOWLEDGE 8c; LAW 7a, 7e; MONARCHY 1a(2), 2–3b, 4e(1)–4e(2); PHILOSOPHY 4c; PRUDENCE 6a; RHETORIC 1c; STATE 5a, 8–8e; TEMPERANCE 5a; TYRANNY 1–1b; VIRTUE AND VICE 7d

S

Sacraments: *see* GOD 9e; RELIGION 2c; SIGN AND SYMBOL 5c / *see also* FAMILY 4b; SIN 2f, 3e, 4e

Sacred Scripture: *see* LANGUAGE 12; THEOLOGY 4b / *see also* GOD 6c(1); RELIGION 1b(1); RHETORIC 2d; SIGN AND SYMBOL 5e

Sacred theology, science of: *see* THEOLOGY 2, 4–4e / *see also* PHILOSOPHY 1a; RELIGION 6b, 6g; SCIENCE 2a; TRUTH 4a; WISDOM 1c

Sacrifice: *see* GOD 3e; RELIGION 2d, 2f; SIN 4e

Sacrilege: *see* RELIGION 2g

Sadism: *see* PLEASURE AND PAIN 8c; PUNISHMENT 6

Saint: *see* HAPPINESS 7c(2); HONOR 6b

Salvation: *see* GOD 9c; SIN 3d, 7 / *see also* HAPPINESS 7c(2); IMMORTALITY 5f; WILL 7e(2)

Same and other: *see* CH 82: SAME AND OTHER; *and* FORM 3b; SIGN AND SYMBOL 3b–3d; UNIVERSAL AND PARTICULAR 2a–2c / *see also* DIALECTIC 3a; ONE AND MANY 4f; QUALITY 4c; QUANTITY 1b; RELATION 1d; UNIVERSAL AND PARTICULAR 1

Sanctions: *see* LAW 5, 6a; PUNISHMENT 4a

Sanity and insanity: *see* EMOTION 3a; MAN 5b; MEDICINE 6a; MIND 8–8c; ONE AND MANY 3b(5); PUNISHMENT 2b

Satan: *see* ANGEL 5a–5b, 7, 7b; SIN 4b

Satellite: *see* ASTRONOMY 9b–9c

Satisfaction (*psychol.*): *see* DESIRE 2d; PLEASURE AND PAIN 6d

Savings: *see* WEALTH 6b

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Schisms (*theol.*): *see* RELIGION 6c(2)

Schizophrenia (*psychol.*): *see* ONE AND MANY 3b(5)

Schools: *see* EDUCATION 8b, 9

Science: *see* CH 83: SCIENCE; *and* ART 6–6c; EXPERIENCE 3, 3b, 5–5c; HABIT 5d; HISTORY 1; HYPOTHESIS 4–4d; INDUCTION 5; KNOWLEDGE 6d(1); LOGIC 4a–4b; MATTER 4b; MEMORY AND IMAGINATION 3c, 6d; METAPHYSICS 3b; NATURE 4b; NECESSITY AND CONTINGENCY 4a; ONE AND MANY 4d; OPINION 1, 4a; PHILOSOPHY 1–3d, 6a; PRINCIPLE 2b–3c(3); PROGRESS 3c, 6b, 6d; REASONING 5b–5b(2); RELIGION 6g; SENSE 5–5c; SIGN AND SYMBOL 4–4e; TRUTH 4a–4c; UNIVERSAL AND PARTICULAR 4f; VIRTUE AND VICE 2a(2); WISDOM 2a / *see also* ASTRONOMY 4; BEING 8c; CAUSE 5b; DEFINITION 6b–6c; DIALECTIC 4; KNOWLEDGE 4b, 6a(1), 6b(3), 8a, 10; MAN 2b–2b(4); MATHEMATICS 1; MECHANICS 4–4c; MEDICINE 2a; METAPHYSICS 1–2d; PHYSICS 2–2b; POETRY 8; THEOLOGY 4a, 4d; WEALTH 9

Scientific laws: *see* NATURE 3a; SCIENCE 4d; UNIVERSAL AND PARTICULAR 4f / *see also* ASTRONOMY 8c(3); CHANGE 7d; INDUCTION 5; MECHANICS 1b

Scientific method: *see* ASTRONOMY 2a–2c; EXPERIENCE 5–5c; HYPOTHESIS 4–4d; INDUCTION 5; MATHEMATICS 3–3d; MECHANICS 2–2c; PHYSICS 3–4d; SCIENCE 5–5c / *see also* CAUSE 5b; DEFINITION 6a–6c; INDUCTION 1b; LOGIC 4a–4b; PHYSICS 1b; PROGRESS 6d; REASONING 6–6d

Scourges: *see* SIN 6c

Scripture (*theol.*): *see* LANGUAGE 12; THEOLOGY 4b / *see also* GOD 6c(1); RELIGION 1b(1); RHETORIC 2d; SIGN AND SYMBOL 5e

Sea power: *see* WAR AND PEACE 10e

Season: *see* ASTRONOMY 7

Secants (*math.*): *see* QUANTITY 3c

Secession (*pol.*): *see* REVOLUTION 2c, 6b

Secondary and primary qualities: *see* QUALITY 2b, 3a, 6c; QUANTITY 1a; SENSE 3c(3), 4c

Secretions (*biol.*): *see* ANIMAL 5c, 8c(3)

Sects (*theol.*): *see* RELIGION 6c(2)

Sedition: *see* LAW 7d; REVOLUTION 1b

Self: *see* KNOWLEDGE 5a(6); SOUL 1d / *see also* MEMORY AND IMAGINATION 4a; ONE AND MANY 3b(5); SAME AND OTHER 1b

Self-consciousness: *see* MIND 7a / *see also* MAN 2a; MIND 1f, 6

Self-denial: *see* DESIRE 6b; PLEASURE AND PAIN 7b; RELIGION 3d; TEMPERANCE 6a

Self-esteem: *see* HONOR 2c

Self-evident truth: *see* JUDGMENT 8a; PRINCIPLE 2b(2), 3a(1)–3c(2), 5; REASONING 5b(1) / *see also* HABIT 5c; INDUCTION 3; KNOWLEDGE 6c(2); LOGIC 1a; MATHEMATICS 3a; OPINION 2c; PHILOSOPHY 3b; REASONING 1b; SCIENCE 4a; TRUTH 3c, 7a

Self-government: *see* DEMOCRACY 4b; GOVERNMENT 1h / *see also* GOVERNMENT 1g(3); LIBERTY 6c; MONARCHY 4e(2)–4e(3); REVOLUTION 7; TYRANNY 4b

Self-knowledge: *see* KNOWLEDGE 5a(6); MAN 2a; MIND 1f, 6; SOUL 5a

Self-love: *see* LOVE 2b(2)

Self-preservation: *see* LIFE AND DEATH 8a / *see also* ANIMAL 1d; HABIT 3a

Selling and buying: *see* JUSTICE 8b; STATE 9a; WEALTH 4–5c, 7c, 10d

Semantics: *see* SIGN AND SYMBOL 1–4e / *see also* LANGUAGE 3a, 5a, 6

Semen: *see* ANIMAL 8c(3)

Seminal reasons: *see* MEMORY AND IMAGINATION 3a

Senility: *see* LIFE AND DEATH 5, 6c; MAN 6c

Sensation: *see* SENSE 3c–3c(5); TRUTH 3a(1) / *see also* ELEMENT 5e; KNOWLEDGE 6b(1); MEMORY AND IMAGINATION 6c(2); PRINCIPLE 2a(1)

Sense: *see* CH 84: SENSE; *and* BEING 8a; IDEA 1c, 2b, 2e–2g; KNOWLEDGE 6b(1); MAN 4b; MATTER 4c; MEMORY AND IMAGINATION 1a, 3b; MIND 1a–1a(2), 1b(1), 1c(1); ONE AND MANY 4b; PRINCIPLE 2b(1); REASONING 1c; SOUL 2c(2); TRUTH 3a–3a(2) / *see also* ANIMAL 1a(1); CHANGE 11; DESIRE 3b(1); FORM 3a; LIFE AND DEATH 3b; MATTER 4a; PLEASURE AND PAIN 4b; SPACE 4c; TIME 6a; TRUTH 3d(1); UNIVERSAL AND PARTICULAR 4c

Sense-organs: *see* ANIMAL 5g; SENSE 3a

Sensible and intelligible: *see* BEING 7e, 8a–8b; EXPERIENCE 4a; FORM 3a; GOOD AND EVIL 4a; KNOWLEDGE 6a(1), 6a(4); MATTER 1c; MIND 1a(1); UNIVERSAL AND PARTICULAR 4d

Sensible qualities: *see* QUALITY 2a–2b, 6c; SENSE 3c(3)

Sensitive appetite: *see* ANIMAL 1a(3); DESIRE 3b(1); SENSE 3e

Sensitivity: *see* ANIMAL 1a(1); LIFE AND DEATH 3b; MAN 4b; SENSE 2–2c; SOUL 2c(2), 4a

Sensuality: *see* LOVE 2a; TEMPERANCE 2 / *see also* DESIRE 7a(1); EMOTION 4a(1); PLEASURE AND PAIN 6c; SIN 2b; SLAVERY 7

Sentence: *see* JUDGMENT 5a; LANGUAGE 4a

Separation of powers (*pol.*): *see* CONSTITUTION 7b; DEMOCRACY 5c; GOVERNMENT 3a; LIBERTY 1g

Serfdom: *see* LABOR 1f, 5b; REVOLUTION 4a; SLAVERY 4b, 5a

Servile arts: *see* ART 4; LABOR 1b, 3b

Sex, sexuality: *see* ANIMAL 8c–8c(5); DESIRE 2a; EVOLUTION 5b; LOVE 2a-2a(4), 2d; MAN 6b–6c

Sexual selection: *see* EVOLUTION 5b

Shame: *see* HONOR 2a, 3b

Shape: *see* MATHEMATICS 2; QUALITY 3b; QUANTITY 3–3c(2); SPACE 1b, 3c

Shrewdness: *see* PRUDENCE 3c

Sight: *see* SENSE 3a, 3b(1), 3c(1); SPACE 4c

Sign and symbol: *see* CH 85: SIGN AND SYMBOL; *and* DEFINITION 2c; IDEA 6a; LANGUAGE 10; MEMORY AND IMAGINATION 8d(1)–8e; PROPHECY 3b–3c / *see also* IDEA 4a; JUDGMENT 5a; MATHEMATICS 3d; MECHANICS 3c; MEDICINE 3c; RELIGION 1b(2); RHETORIC 2d; SAME AND OTHER 4c; TIME 6d; TRUTH 2b

Signate matter: *see* MATTER 1c; UNIVERSAL AND PARTICULAR 3

Signification: *see* IDEA 4a; JUDGMENT 5a; SIGN AND SYMBOL 2–2e; TRUTH 2b

Similarity: *see* QUALITY 4c; RELATION 1d, 4f; SAME AND OTHER 2c, 3b–3c; SIGN AND SYMBOL 3c(1)

Simple and complex (*log., metaph.*): *see* ELEMENT 1, 3a, 3d, 5a; ONE AND MANY 2b–2c, 4c; PRINCIPLE 2a–2a(3)

Simple and complex ideas (*psychol.*): *see* IDEA 2c, 2f; MIND 1d(1)–1d(2); ONE AND MANY 4c; SENSE 3c(4), 5a

Simultaneity: *see* RELATION 5a; TIME 5a, 5c–5d

Sin: *see* CH 86: SIN; *and* ANGEL 5a; HAPPINESS 7a; MAN 9b–9b(2); PUNISHMENT 5–6; VIRTUE AND VICE 8a; WILL 7e–7e(2) / *see also* GOD 9c; GOOD AND EVIL 2b, 3f; IMMORTALITY 5d; KNOWLEDGE 8b(1); LABOR 1c; LIBERTY 5c; RELIGION 2c–2d, 2f–2g

Singular (*log.*): *see* JUDGMENT 6a; UNIVERSAL AND PARTICULAR 5c

Sister and brother: see FAMILY 7c; LOVE 2b(4)

Size: *see* ANIMAL 7; ASTRONOMY 9a; CHANGE 8–8b; INFINITY 4a; SPACE 3d; WORLD 7

Skeletal structure: *see* ANIMAL 3b

Skepticism: *see* KNOWLEDGE 5c; OPINION 3c; PRINCIPLE 5; TRUTH 7–7b / *see also* CUSTOM AND CONVENTION 9b; PROGRESS 1c; RELATION 6b–6c; UNIVERSAL AND PARTICULAR 7a–7c

Skill: *see* ART 1; EXPERIENCE 3a / *see also* EDUCATION 3, 6; KNOWLEDGE 8a; LABOR 3a

Slave and master: *see* SLAVERY 1, 2b, 3b

Slavery (*econ., pol.*): *see* CH 87: SLAVERY; *and* JUSTICE 8c(1); LABOR 1f, 5a–5c, 7d; LIBERTY 2d; REVOLUTION 4a; WEALTH 7b(1) / *see also* CITIZEN 2c; CONSTITUTION 5a; DEMOCRACY 4a(1); LABOR 1b, 3b, 7c(1); LAW 4h; LIBERTY 6b–6c; NECESSITY AND CONTINGENCY 5d; OLIGARCHY 5a; STATE 5c; TYRANNY 5a; WILL 7a

Sleep: *see* ANIMAL 1a(5); LIFE AND DEATH 5b; MEMORY AND IMAGINATION 8b; MIND 7b

Sloth: *see* SIN 2c(1)

Smell: *see* SENSE 3a, 3b(1), 3c(1)

Social classes: *see* LABOR 4b, 7c(1), 7c(3); OPPOSITION 5b; REVOLUTION 5–5c; STATE 5a, 5c–5d(2); WAR AND PEACE 2c / *see also* DEMOCRACY 3a; OLIGARCHY 4, 5a

Social contract: *see* CONSTITUTION 6; CUSTOM AND CONVENTION 6a, REVOLUTION 6b; STATE 3d / *see also* CUSTOM AND CONVENTION 1; GOVERNMENT 1a; STATE 3g

Social environment: *see* CUSTOM AND CONVENTION 2, 5–5b, 7–7d, 9a; EDUCATION 4c; OPINION 6a; VIRTUE AND VICE 4d(3)

Social or practical science, method of: *see* DEFINITION 6c; LOGIC 4e; PHILOSOPHY 2a, 2c; REASONING 6d; SCIENCE 3a / *see also* HISTORY 1; MAN 2b, 2b(4); STATE 8d–8d(3); WEALTH 9

Social security: *see* LABOR 7c; WEALTH 8d

Socialism: *see* DEMOCRACY 4a(2); LABOR 5d, 7b; WEALTH 6a, 8a / *see also* JUSTICE 8a; LABOR 7c(3), 7f; PROGRESS 3b; REVOLUTION 4–4b; STATE 5d(2)

Society or community: *see* STATE 1–1d, 2b, 3a–3f, 5–5e / *see also* CUSTOM AND CONVENTION 7–7b; EMOTION 5a; FAMILY 1, 2a–2c; GOOD AND EVIL 5d; JUSTICE 9b; LAW 4b; LIBERTY 1b; LOVE 4–4c; MAN 9c; MEMORY AND IMAGINATION 4b; MIND 9e; NATURE 2b; NECESSITY AND CONTINGENCY 5b; ONE AND MANY 5d; OPPOSITION 5–5c; RELIGION 3–3d; WAR AND PEACE 1, 11a–11b

Sociology, subject matter of: *see* CUSTOM AND CONVENTION 6b–7c; FAMILY 1, 3a–4a, 4d–5a, 6d 6e, 7b, 8; LABOR 3b, 3d, 4b; MAN 7c, 9c; PROGRESS 5–6; STATE 1–1a, 1c, 4c, 5c / *see also* ART 12; CUSTOM AND CONVENTION 1–5a, 8, 9a; DUTY 9; GOOD AND EVIL 6d; HABIT 7; HISTORY 4a(2); HONOR 3b; LAW 5f; LIFE AND DEATH 8d; MEMORY AND IMAGINATION 4b; OPINION 6a; RELIGION 1a, 2b, 2d–2g, 3c(1), 7; SCIENCE 1b(2); SIGN AND SYMBOL 1e

Soldiers: *see* DEMOCRACY 7c; WAR AND PEACE 10b–10c

Solecism: *see* LANGUAGE 4b

Solid geometry: *see* QUANTITY 3d(2)–3e(2)

Solstice (*astron.*): *see* ASTRONOMY 7

Sophistry, sophist: *see* DIALECTIC 6; LOGIC 5; METAPHYSICS 4a; PHILOSOPHY 6b; REASONING 3c; RHETORIC 1a; TRUTH 8e; WISDOM 3

Sorites (*log.*): *see* REASONING 2c

Sorrow: *see* EMOTION 2a; PLEASURE AND PAIN 4a

Soul: *see* CH 88: SOUL; *and* ELEMENT 5f; IMMORTALITY 5a–5b; LIFE AND DEATH 1; MAN 3a–3a(1); ONE AND MANY 3b(4); WORLD 1a / *see also* ANIMAL 1a; ASTRONOMY 8b; ETERNITY 4a; EVOLUTION 7a; FORM 2d; GOOD AND EVIL 4c; MECHANICS 4c; MIND 2e, 4e; STATE 2a(1)

Soul, or mind, and body: *see* MAN 3a–3a(2); MATTER 2d; MIND 2–2e; ONE AND MANY 3b(4); SOUL 1b–1c, 4b / *see also* BEING 7b(2); FORM 2d; IMMORTALITY 5b; LIFE AND DEATH 1; MAN 2b(3); MATTER 4c–4d; MEDICINE 5d(2), 6c(1); MIND 4e; SOUL 3c, 4d–4d(4)

Sound: *see* MECHANICS 7b; SENSE 3c(3)

Sovereignty: *see* DEMOCRACY 4b; GOVERNMENT 1g–1g(3); ONE AND MANY 5e; STATE 2c, 9d; TYRANNY 5c; WILL 10a / *see also* LAW 4g, 6b; LIBERTY 1b, 6c; MONARCHY 4e(3)

Space: *see* CH 89: SPACE; *and* CHANGE 7a; INFINITY 3d; MECHANICS 1c, 5d, 6d(2); QUANTITY 5a; RELATION 6a; WORLD 7 / *see also* ASTRONOMY 3b, 5; ELEMENT 5c; EXPERIENCE 2c; FORM 1c, 1d(1); MATHEMATICS 1c, 2a, 5a; ONE AND MANY 3a(4); QUANTITY 2–3e(2), 6b–6c; WORLD 4b, 6a

Species and genus (*log.*): *see* DEFINITION 2b; IDEA 4b(3); OPPOSITION 1c(2); RELATION 5a(4); SAME AND OTHER 3a(1)–3a(3); SIGN AND SYMBOL 3c(2); UNIVERSAL AND PARTICULAR 5b / *see also* ANIMAL 2a; DIALECTIC 2b(1); EVOLUTION 1b; FORM 3c; IDEA 5d; NATURE 1a(1)

Specific gravity: *see* MECHANICS 6b

Spectrum: *see* MECHANICS 7a–7a(2)

Speculative and practical: *see* KNOWLEDGE 6e(1)–6e(2); MIND 9a; PHILOSOPHY 2a; PRUDENCE 2a; SCIENCE 3a; THEOLOGY 3b, 4d; TRUTH 2c; WISDOM 1b

Speech: *see* LANGUAGE 1–3c; MAN 1b

Sperm: *see* ANIMAL 8c(3)

Sphere (*math.*): *see* QUANTITY 3e–3e(2)

Spirit or spiritual substance: *see* ANGEL 2–4; BEING 7b(2); MAN 3a–3b; MIND 2a; SOUL 3–3c / *see also* CHANGE 10c; ETERNITY 4a; FORM 2d; HISTORY 4a(3); IMMORTALITY 5b; MATTER 2d; MIND 1d, 10c, 10f; ONE AND MANY 3b(4)

Spiritual sin: *see* SIN 2b

Spontaneity or fortuitousness: *see* CHANCE 1b; WORLD 4c

Spontaneous generation: *see* ANIMAL 8b; ASTRONOMY 10a; EVOLUTION 4a, 4c

Square of opposition (*log.*): *see* JUDGMENT 7a; OPPOSITION 1d(1)

Stability (*pol.*): *see* ARISTOCRACY 3; CONSTITUTION 7a; DEMOCRACY 7–7c; OLIGARCHY 3–3a; REVOLUTION 3c

Standard of living (*econ.*): *see* CUSTOM AND CONVENTION 7c; LABOR 6b; NECESSITY AND CONTINGENCY 5e; PROGRESS 3b; WEALTH 10b

Stars: *see* ASTRONOMY 9e; TIME 4

State: *see* CH 90: STATE; *and* CITIZEN 1–2c; CONSTITUTION 2a; EDUCATION 4c, 8–8c; EMOTION 5a; FAMILY 2–2c; GOOD AND EVIL 5d; GOVERNMENT 1–1h, 5–5a; HAPPINESS 5b; JUSTICE 9–10b; LAW 7–7f; LOVE 4b; MIND 9e, 10f(2); NATURE 5c; NECESSITY AND CONTINGENCY 5b; ONE AND MANY 5d; PROGRESS 4b; RELIGION 4–4b; VIRTUE AND VICE 7a / *see also* COURAGE 7a–7c; CUSTOM AND CONVENTION 1; DUTY 10; HISTORY 5b; HONOR 4–4c; LAW 1a; MAN 9c; NATURE 2b; REVOLUTION 5c, 6b; VIRTUE AND VICE 4d(3); WAR AND PEACE 4a, 10–10b, 11c–11d; WEALTH 4g

State of nature: *see* CUSTOM AND CONVENTION 1; GOVERNMENT 1a; LAW 4b, 4f–4h; LIBERTY 1b; MAN 9c; NATURE 2b; STATE 3c; WAR AND PEACE 1

State of war: *see* STATE 3c; WAR AND PEACE 1 / *see also* LAW 4b, 4f–4g; LIBERTY 1b; NATURE 2b

State rights (*pol.*): *see* GOVERNMENT 5d; ONE AND MANY 5e; REVOLUTION 6b; STATE 10e

Statesman, statecraft: *see* ARISTOCRACY 5–6; ART 9d; EDUCATION 8d; KNOWLEDGE 8c; PRUDENCE 6a; RHETORIC 1c; STATE 8d–8d(3); VIRTUE AND VICE 7d / *see also* COURAGE 7a; DEMOCRACY 2b, 3b, 6; EXPERIENCE 6b; GOVERNMENT 3c(2), 3d(2), 3e(2); JUSTICE 9d; MONARCHY 3a; PHILOSOPHY 4c; PLEASURE AND PAIN 10b; PROGRESS 4a; WAR AND PEACE 10a

Statics, subject matter of: *see* MECHANICS 5a–5b, 7e–7c(1)

Stereometry: *see* QUANTITY 3e(1)

Sterility: *see* ANIMAL 8c(5); EVOLUTION 3c, 5c

Stock (*econ.*): *see* WEALTH 6b, 7d(1)

Stoicism: *see* DESIRE 6b; EMOTION 4b(2); GOOD AND EVIL 3b–3b(2); MAN 10c; MIND 10a; NECESSITY AND CONTINGENCY 5a(3); PLEASURE AND PAIN 8b; WILL 8a–8b(2)

Strategy: *see* WAR AND PEACE 10d

Stream of consciousness: *see* IDEA 5e; MIND 1g(1)

Stress, strain (*phys.*): *see* MECHANICS 5c

Structure (*biol.*): *see* ANIMAL 2b, 3–3d; EVOLUTION 6c, 7b(1); LIFE AND DEATH 3b

Struggle for existence: *see* EVOLUTION 5a–5a(3); OPPOSITION 3c

Student and teacher: *see* EDUCATION 5a, 5f

Style: *see* POETRY 8b; RHETORIC 2b, 3c

Subalternation (*log.*): *see* JUDGMENT 7a; OPPOSITION 1d(1)

Subcontrary (*log.*): *see* JUDGMENT 7a; OPPOSITION 1d(1)

Subject, subjection (*pol.*): *see* CITIZEN 2b; SLAVERY 5a–6d; TYRANNY 4b–5b, 6 / *see also*

DEMOCRACY 4a–4a(1); GOVERNMENT 5b; LABOR 7d; LIBERTY 1f, 6c; MONARCHY 4e(1)–4e(2), 5–5b; PROGRESS 4c; REVOLUTION 7; STATE 5a, 10b

Subject and predicate (*log.*): *see* IDEA 5a; JUDGMENT 5b; RELATION 4b

Subjective and objective: *see* BEAUTY 5; CUSTOM AND CONVENTION 5a, 9a–9b; DIALECTIC 2d(1); GOOD AND EVIL 6d; ONE AND MANY 5c; QUALITY 6c; RELATION 6b–6c; UNIVERSAL AND PARTICULAR 7–7c

Subjectivism: *see* BEAUTY 5; CUSTOM AND CONVENTION 5a, 9–9b; GOOD AND EVIL 6d; OPINION 6a; RELATION 6b–6c; UNIVERSAL AND PARTICULAR 7–7c

Sublimation (*psychol.*): *see* ART 8; DESIRE 4d; LOVE 2a(3)

Sublime: *see* BEAUTY 1d

Subsidy (*econ.*): *see* WEALTH 4g

Subsistence (*econ.*): *see* LABOR 6b / *see also* CUSTOM AND CONVENTION 7c; NATURE 5b; NECESSITY AND CONTINGENCY 5e; WEALTH 10b

Substance and accident or attribute: *see* BEING 7b–7b(6); FORM 2c(2) / *see also* BEING 8c–8c; MATTER 1b; NECESSITY AND CONTINGENCY 2d; ONE AND MANY 3b(3); QUALITY 1, 3d; QUANTITY 1

Substantial and accidental change: *see* BEING 7b(5); CHANGE 6; MATTER 1b / *see also* CHANGE 7–10c

Substantial form: *see* FORM 2c(2)–2d; ONE AND MANY 3b(3); SOUL 1b

Substratum: *see* BEING 7b(5); FORM 1d(2); MATTER 1–1a, 2c / *see also* CHANGE 2a; QUALITY 1; QUANTITY 1

Succession (*log.*): *see* TIME 5b–5d

Succession (*pol.*): *see* MONARCHY 1c

Suffrage or franchise: *see* CITIZEN 3; CONSTITUTION 5a; DEMOCRACY 4a(1), 5b(2); LABOR 7d; OLIGARCHY 5a; SLAVERY 5a–5b / *see also* CITIZEN 2b; FAMILY 5b; GOVERNMENT 1h; JUSTICE 9c; PROGRESS 4c; SLAVERY 6c

Suicide: *see* LIFE AND DEATH 8b

Summum bonum: *see* GOOD AND EVIL 5a; HAPPINESS 3; MIND 1c(3) / *see also* GOOD AND EVIL 3d, 5c; PLEASURE AND PAIN 6a; PRINCIPLE 4a; RELATION 5a(2)

Sumptuary laws: *see* STATE 7c; TEMPERANCE 5c

Sun: *see* ASTRONOMY 9a / *see also* ASTRONOMY 2b, 7, 12; TIME 4

Super-ego, ego, and id (*psychol.*): *see* MAN 4; SOUL 2b

Superfoetation: *see* ANIMAL 9d

Supernatural and natural: *see* GOD 1a, 6c–13; KNOWLEDGE 6c(5) / *see also* CAUSE 7b–7d; HABIT 5e–5e(3); OPINION 4a; RELATION 1b–1b(3), 6f; SIGN AND SYMBOL 5b; THEOLOGY 2; VIRTUE AND VICE 2b

Supernatural gifts: *see* HABIT 5c(2); MIND 5c; VIRTUE AND VICE 8e / *see also* LANGUAGE 11; MAN 9b(1); SIN 3a; WISDOM 1c

Superposition (*math.*): *see* QUANTITY 6b

Superstition: *see* OPINION 4b; RELIGION 6a; SCIENCE 7a

Supplication: *see* RELIGION 2a

Supply and demand: *see* WEALTH 4e / *see also* LABOR 6a; WEALTH 4a, 4c, 4f, 6d(3), 6e

Supra-sensible: *see* BEING 7e; EXPERIENCE 4a; KNOWLEDGE 6a(4)

Surface (*math.*): *see* QUANTITY 3d–3d(2)

Surgery: *see* MEDICINE 3d(3)

Surplus value: *see* JUSTICE 8c(2); WEALTH 6d(2)

Survival of the fittest: *see* EVOLUTION 5a(1)

Syllogism: *see* HYPOTHESIS 5; ONE AND MANY 4c; REASONING 2–2c / *see also* IDEA 5b; JUDGMENT 7c; REASONING 5c(1); RHETORIC 4c(2)

Symbol, symbolism: *see* SIGN AND SYMBOL 1–1f, 5–6c / *see also* IDEA 6a; LANGUAGE 10; MATHEMATICS 3d; MECHANICS 3c; MEMORY AND IMAGINATION 8d–8d(2); PROPHECY 3b–3c

Symbolism of dreams: *see* LANGUAGE 10; MEMORY AND IMAGINATION 8d–8d(2); SIGN AND SYMBOL 6a

Symptoms: *see* MEDICINE 3c; SIGN AND SYMBOL 4c

Synderesis: *see* HABIT 5c; LAW 4a; PRINCIPLE 4

Syntax: *see* LANGUAGE 4a; TIME 6d

Synthesis and analysis (*log., math.*): *see* LOGIC 4d; MATHEMATICS 3c; PHILOSOPHY 3c; REASONING 5b(3), 6b

Synthetic and analytic judgments: *see* JUDGMENT 8b

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Tabula rasa (*psychol.*): *see* MIND 4d(1)

Tactics: *see* WAR AND PEACE 10d

Tangent (*math.*): *see* QUANTITY 3c

Tariffs (*econ.*): *see* STATE 9a; WEALTH 4g, 9c

Taste (*aesth.*): *see* ART 7b; BEAUTY 5; CUSTOM AND CONVENTION 9a; JUDGMENT 4; MIND 1e(2); NATURE 5d; PLEASURE AND PAIN 4c(1); POETRY 8a–8b; UNIVERSAL AND PARTICULAR 7c

Taste (*psychol.*): *see* SENSE 3a, 3b(1), 3c(1)

Taxation: *see* GOVERNMENT 4; WEALTH 9e(2)

Taxonomy: *see* ANIMAL 2–2a; DEFINITION 2–2d; EVOLUTION 1–1b

Teacher and student: *see* EDUCATION 5a, 5f

Teaching and learning: *see* EDUCATION 5–5f / *see also* DEMOCRACY 6; IDEA 5d; KNOWLEDGE 9a; LANGUAGE 8; MEMORY AND IMAGINATION 3a;

PLEASURE AND PAIN 4c(2); POETRY 5a; RELIGION 5c; VIRTUE AND VICE 4b

Technology: *see* ART 6c; KNOWLEDGE 8a; PHYSICS 5; PROGRESS 3c; SCIENCE 1b(1)–1b(2), 3b

Teleological judgment: *see* JUDGMENT 4

Teleology: *see* CAUSE 6; CHANCE 3; DESIRE 1; GOD 5b; GOOD AND EVIL 1a; JUDGMENT 4; NATURE 3c(3) / *see also* ASTRONOMY 3a; MECHANICS 2c; NECESSITY AND CONTINGENCY 3b; PHYSICS 2b; SCIENCE 4c

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