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A COMPLETE College Reader

VOLUME ONE · NON-FICTION

Edited by John Holmes TUFTS COLLEGE AND Carroll S. Towle THE UNIVERSITY OF NEW HAMPSHIRE

In Consultation with William H. Hildreth OHIO STATE UNIVERSITY

Houghton Mifflin Company

BOSTON · NEW YORK · CHICAGO · DALLAS · ATLANTA · SAN FRANCISCO · The Riverside Press Cambridge

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The Riverside Press
CAMBRIDGE MASSACHUSETTS
PRINTED IN THE U.S.A.

Contents

Foreword: From the Huge Library of the World ix

Non-Fiction: *The Range of Human Interest* 1

1. Personal History 5

Home	*Henry Seidel Canby*	6
Growing Up in Oklahoma	*Marquis James*	10
On Going to Philadelphia	*Benjamin Franklin*	19
University Days	*James Thurber*	21
By Walden Pond	*Henry David Thoreau*	25
Autobiography	*Thomas Henry Huxley*	32
A Writer, God Forbid!	*Maxwell Goldberg*	37
Self-Portrait	*Archibald MacLeish*	43
California A South-Easter	*Richard Henry Dana*	45

2. People and Places 50

Tin Lizzie	*John Dos Passos*	51
Miss Opal Whiteley	*Elbert Bede*	56
Singer in Light—Charles J. Connick	*Rollo Walter Brown*	61
Carter Harrison	*Ernest Poole*	65
Customs of the Germans	*Cornelius Tacitus*	73
The Spouter-Inn	*Herman Melville*	77
Walden	*E. B. White*	81
Mister Roberts: Introduction	*Thomas Heggen*	85
Kennebec Crystals	*Robert P. Tristram Coffin*	89

3. Language and Thinking 93

Eggys or Eyren?	*William Caxton*	95
Idols of the Mind	*Sir Francis Bacon*	96
The Conventional Character of Language	*J. B. Greenough and G. L. Kittredge*	101
How We Know What We Know	*S. I. Hayakawa*	107
Four Kinds of Thinking	*James Harvey Robinson*	114
What Are Facts?	*Harold A. Larrabee*	120
Habits of Thought	*Robert H. Thouless*	127
"Government" vs "Business"	*Stuart Chase*	132
Emotional Meanings	*Robert H. Thouless*	138

4. Making Matters Clear		144
The Rope Trick Explained	*Robert Benchley*	146
Democracy	*Carl L. Becker*	147
Humor	*John Erskine*	148
Two Kinds of Whales	*Herman Melville*	153
The United States of America	*Avery O. Craven and Walter Johnson*	157
Can Science be Explained?	*Rudolph Flesch*	164
Tenants of the Soil	*Lorus J. Milne and Margery J. Milne*	167
On Being the Right Size	*J. B. S. Haldane*	174
Storm	*George R. Stewart*	177
5. Science and Scientific Method		184
Old and New Knowledge	*Sir Francis Bacon*	186
Proof that the Earth Moves	*Galileo Galilei*	189
Discoveries	*Sir Isaac Newton*	191
The Method of Scientific Investigation	*Thomas Henry Huxley*	194
Science	*Bertrand Russell*	198
Mathematics and the Good	*A. N. Whitehead*	208
The Solar System and Its Origin	*Fred L. Whipple*	216
The Scientific Meaning of Chance	*Gilbert N. Lewis*	223
6 Literature and the Arts		226
On Literary Taste	*Arnold Bennett*	228
The Patron and the Crocus	*Virginia Woolf*	236
The Personal History of *Strange Fruit*	*Lillian Smith*	238
Boston Mobs *Strange Fruit*	*Bernard DeVoto*	241
Farewell to Arms, A Review	*Henry Seidel Canby*	244
A Drama in Verse	*Joseph Wood Krutch*	248
Willa Cather's Novels of the Frontier: A Study in Thematic Symbolism	*Edward A. Bloom and Lillian D. Bloom*	249
Amphion's Lyre	*Lucien Price*	263
An American Portrait	*Thomas Hart Benton*	271
The Imperial Façade	*Lewis Mumford*	278
7. Meeting the Occasion		286
The Declaration of Independence		288
The Apology of Socrates	*Plato*	290

The American Scholar	*Ralph Waldo Emerson*	293
On the Murder of Lovejoy	*Wendell Phillips*	304
Letter to Alice Stone Blackwell	*Bartolomeo Vanzetti*	307
Address at the Opening of the Atlanta Exposition	*Booker T. Washington*	309
Letter to Lucy Christie Drage	*Alexander Woollcott*	311
Mary White	*William Allen White*	313
First Inaugural Address	*Franklin D. Roosevelt*	316
Thanksgiving Proclamation	*Governor Wilbur L. Cross*	318
8. Making History Alive		319
Every Man His Own Historian	*Carl L. Becker*	321
You Are Not Forgotten	*John Holmes*	330
Wonderful Words of Life	*Earnest Elmo Calkins*	336
The Great Fire of London	*Samuel Pepys*	342
The Execution of Queen Mary	*James Anthony Froude*	347
The Heights of Abraham	*Francis Parkman*	350
The Boston Massacre	*Esther Forbes*	361
The Pilgrim Ship	*Archie Binns*	365
The Run	*Marquis James*	372
Hurry, Honyocker!	*Joseph Kinsey Howard*	377
Last Page Out of Homer	*Robert P. Tristram Coffin*	383
9. Opinion and Points of View		386
What is Opinion?	*Randolph Bourne*	388
What Christians Believe	*C. S. Lewis*	390
A Plan for Education	*Thomas Jefferson*	396
The Attractions of Stupidity	*Howard Mumford Jones*	398
Of the Old and New Systems of Government	*Thomas Paine*	401
Bosses and Machines	*Edward J. Flynn*	408
Good Newspapers and Bad	*William Allen White*	417
Moronia	*Eleanor Rowland Wembridge*	422
Who is Loyal to America?	*Henry Steele Commager*	428
The Insane Root	*Rebecca West*	434
10. Problems and the Future		444
From *Ecclesiastes*		445
The Idea of Progress	*William Ralph Inge*	449
Whither Mankind?	*Charles A. Beard*	462

CONTENTS

The Future of Man as an Inhabitant of the Earth	*Kirtley F. Mather*	472
Palamedes	*Alexander Weinstein*	482
The Real Problem is in the Hearts of Men	*Albert Einstein*	497
Hiroshima	*John Hersey*	500
About the Authors in This Book		iii

Foreword

From the Huge Library of the World

I

TEN THOUSAND BOOKS are published in this country every year. Millions of words fill magazines and newspapers. Thousands of manuscripts are written that will never see the light of print. One sits down to read an article, a reminiscence, an essay, but he will never catch up with all the words being written even as he reads. Last year, and for ten years, and for hundreds of years men have written more than man can read. Thus limited, one may only browse in the huge library of the world, content with the chance of a fresh and exciting discovery. Eager to know the great past and the living present, yet fearful of wasting time and strength, one may seek the help of readers who have read and discarded, read and praised, read and found themselves moved, informed, awakened. This book provides that help, and saves that waste. Its two volumes contain something of everything, from past and present. That is why we have called it *A Complete College Reader.*

The complete college reader is also a human being, the undergraduate or his instructor, turning these pages. He is not, as the dictionary says, "entire, full, whole, finished, ended, concluded, and without defect." But he can, if he has curiosity and energy, move toward the completeness no one ever reaches or really wishes to reach, that ideal of well-rounded knowledge all desire. The everlasting journey is happier than the impossible arrival could ever be. The complete college reader is the experienced traveler. He or she knows the sort of thing the informative essay tells, the excitement which close-reasoned argument arouses, the intimate revelation good biography can give. He has had both the world as in his time, as Chaucer said, and everything of its own kind good. This reader knows the difference between the reach and purpose of a long report like John Hersey's *Hiroshima,* a plea for sanity like Henry Steele Commager's "Who is Loyal to America?" and a bit of fooling like Benchley's "The Rope Trick Explained." The mind of the complete college reader stretches to contain Tacitus, Haldane, Galileo, and Herman Melville. This reader is a happy reader, as well as a shrewd one. He has taken down from the endless shelves of the world's good writing the best of its biography, its natural and political history, and its humor.

When Izaak Walton wrote *The Compleat Angler,* he did not think that he had included each and every rule, trick, and fundamental law for the fisherman. He simply meant that here in one book was God's plenty of instances of what might happen on the stream, given a line, a hook, and the possibility of fish. We learn by instance and by implication, not by the rule-book. Angling is an ancient skill, at its best always personal and beyond code or demonstration. Reading is likewise a solitary pleasure, to be learned by search, with the guidance of an Izaak Walton, or, in this case, the compilers of this book. Those who have fished the world's streams have useful hints to offer, though no one can be told how good reading must be enjoyed, or where the good reading is for sure, and at what season.

The word "reader," then, has a double sense It is the one who reads, and it is the book. The book is "complete" insofar as it represents many types of writing — non-fiction, in this volume — many forms and lengths and modes. It is complete in that it includes, in the non-fiction, a rich range from personal history on through exposition and occasional writing to probings of the future; it ranges in time from Plato to James Thurber and in subject from hymns to the atomic bomb.

II

More than anything else we may accomplish with this book, we wish to open the life of heart and mind, of history and reason and experience, of language and will and science, to new readers. All readers are new readers, and all minds and hearts can be opened wider. True, there are other ways worth following. Matthew Arnold wished to discover and promote the reading of "the best that has been thought and said in the world." And others, to avoid this limitation to the historically important, or representative, have offered what they like, and still like after much re-reading. One looks toward the past, the other inward, on himself. Our view is out, toward you, the reader of this book.

But in any book of selections, the readings must be both respected and enjoyed. They must, first of all, have something to say, out of experience, knowledge, feeling, or observation great enough, or strong and fresh enough, to make us wish to follow where they lead. The writers must be, in their way, like Henry James's ideal, on whom "nothing is lost"; they must have been alive in the world. Or they should be like Wordsworth's poet, who was "a man pleased with his own passions and volitions, and who rejoices more than other men in the spirit of life that is in him." People attract and hold listeners and readers when they are moved by the spirit of the true amateur, the man deeply and joyfully alive; this is one bond between writer and reader. Editors and critics at their best are on the watch for the amateur, the writer moved by this spirit of freshness.

It is additional satisfaction to find in the writer a literate ease, to know that he does not depend on the heat of his emotion or the novelty of his experience alone. He is a doctor, lawyer, merchant, chief, explorer, sociologist, or physical scientist. He orders, selects, and words his thoughts with the skill that hides all art. He echoes no one. He is not "literary." He simply writes well, and is his eloquent self — Jefferson or Thoreau, Marquis James or Bertrand Russell. Much can be learned of how these things are done, and the wise reader will seek to know all that he can.

The reader may expect, then, to encounter man alive, man speaking, repre-

senting himself in his philosophy, his vocabulary, and in his very rhythms. His explanation, or his story, is a singleness of thought and language; it cannot but be single, dictated as it is from within. This is the man the editor has sought out wherever he is in the huge library of the world.

III

Within the parts of this first volume of *A Complete College Reader* are to be found variations that explore in all directions. The English novelist, Ford Madox Ford, has defined prose style as a "constant succession of tiny surprises." And William Blake says, "The great and golden rule of art, as well as of life, is this: — That the more distinct, sharp, and wiry the bounding line, the more perfect the work of art." Our book has its sharply defined boundaries — for instance, the sections into which we have divided the non-fiction: "People and Places," "Language and Thinking," "Meeting the Occasion," "Problems and the Future," and others. Within those bounding lines the reader discovers a succession of surprises. There is style in compilation, as surely as in writing. This style should have the same rhythms, modulations, and developed melodies that good prose style has, though here the units are not words but essays, letters, speeches, and reports.

Benjamin Franklin's famous account of his arrival in Philadelphia, in the opening section of the book, is suddenly turned and seen in the light of Thoreau's days at Walden Pond. Then in a wholly different manner, Archibald MacLeish writes his autobiography, a poet and public man in modern times; then we listen far back to Richard Henry Dana describing a south-easter off the California coast. Playing over all these passages is the light of the human spirit, keyed in this particular group to a note of direct, simple, individual expression. We feel a happy achievement of wholeness, a successful composition, in the items in "Meeting the Occasion." The headnote sounds the theme; that now and then in life a man is unexpectedly called on to write or say something for which all his life has prepared him. Who ever knows when or how this occasion will come? Socrates met the occasion, as did Ralph Waldo Emerson, and the drafters of the Declaration of Independence. The great spirit and the great occasion come together, and the result is memorable. These and the other pieces in this section of the book demonstrate, and set boundaries, and lift surprises from page to page for the "complete reader."

This book is made of many books, and of the best. Ample as it is, ranging as it does through time, and mind, and history, and place, and the human spirit, it completes the man reading. The poet Hopkins said, "Complete Thy creature dear O where it fails."

IV

Some of the surprises in this book are those that cut across the bounding lines. There are links, cross-ties, comparisons. Thoreau's account of his days at Walden Pond strike an echo of curious modern interest in E. B. White's "Walden," a diary kind of report we have put into "People and Places." One knows more about William Allen White, reading first about "Good Newspapers and Bad," out of his life's work on the *Emporia Gazette*, and then from the small classic he wrote when his daughter Mary was killed. Innumerable parallels suggest themselves: Caxton's two words for eggs and Chase and Hayakawa's words and meanings; progress as seen by Weinstein and Dean Inge; conflict and war as these things looked to Francis Parkman, Einstein, and

the bored sailors on Thomas Heggen's *U.S.S. Reluctant;* loyalty as explored by Commager and Rebecca West.

Like a bright web of many-colored strands crossed and inter-crossed, the American scene runs in and out of the pattern. We see James Thurber struggling with a microscope in a botany lab in Ohio. We see the storm George Stewart describes sweeping over the deserts and mountains of California. Or we trace vivid and quite different colors in Marquis James's memory of growing up in Oklahoma, or the life-story of Charles Connick, or Esther Forbes on the Boston Massacre. The strands run under and behind the pattern of the book — Wilbur Cross's proclamation of Thanksgiving is woven with Ernest Elmo Calkins' "Wonderful Words of Life" — the words of hymns — and with Tom Paine on government, and the rhythm of an ordered life at home as Henry Canby felt it. The succession of surprises within the bounding lines works more and more at the reader's imagination the more he traces through the woven structure.

V

An important part of the structure is the biographies printed at the end of the book, beams of light aimed at the scores of authors here assembled, playing across their lives to identify and differentiate them. Necessity reduces each sketch to six or eight lines. Plato gets little more in space and words than, let us say, the author of *Mister Roberts,* or the compilers of this book; Einstein, Dos Passos, Newton, and DeVoto face the light of attention equally as the beam swings on from Bacon and Beard to Whitehead and Woollcott.

The study of good writing is the study of the human spirit. The reader needs the sense of time and place around and behind each figure whose words he adds to his own long store. These notes are a final element of the compilers' style, a weaving tighter still of the multiple strands of life. They link back and forth with the other ties suggested. They tell the reader what he may or may not expect of any author, and best of all, they lead him to more reading.

A complete reader makes a beginning in his college years. A lifetime is not long enough to finish the house for which he then lays the foundations and puts up corner timbers. Yet it is in the college years that he makes the plans and squares the corners. This reader — this book — plots the area within which a great and rewarding framework of thinking, experience, and imagination may be erected. On it may be laid walls, and roof, and the windows that open toward time past and to come. In this sense, this book is complete: it is a handbook for the apprentice carpenter, who puts up the shelves, year by year, that will hold for him the huge library of the world.

JOHN HOLMES

CARROLL S. TOWLE

Acknowledgments

The making of such a book as this one is largely memory and labor on the part of the compilers: the memory of cherished reading, and the labor of gathering the actual texts, and obtaining permission to use copyright material. For this we take full responsibility, and make a simultaneous bow from the campus at Durham, New Hampshire, and the campus at Medford, Massachusetts. Our own college libraries have been of great help in locating books and answering queries.

Among the writers, we are especially indebted to Archibald MacLeish for adding new material to his "Self-Portrait," which appears here for the first time; to Prof. Paul Flint, of Tufts College, for offering Caxton's "Egges and Eyren;" to Josephine Young Case, for reading the preface to her long poem, and making important corrections in fact and punctuation, so that our version is exactly as the author desires it; to Prof. Maxwell Goldberg, of the University of Massachusetts, for proffering his autobiographical "A Writer, God Forbid," which we would not otherwise have found; to David McCord, for assistance in locating the origins of some of the light verse, and more particularly for giving us his long poem, "Dawn Stone," which appears here for the first time in any book; to Lucien Price, for arranging for the inclusion of "Amphion's Lyre;" to Dr. Marston Balch, of Tufts College, for suggestions that shaped the writing of the drama introduction, "Curtain-Time, Eight-Thirty;" to Arthur Harris, Max and Fredelle Maynard, for story suggestions; and to the estate of Willa Cather, which generously made possible the first use of any one of her novels in any anthology, an achievement of which we are understandably proud. We are grateful, too, for the timely discovery of the Blooms' paper on Miss Cather's pioneer novels, without which our book would have been incomplete.

All formal acknowledgments of permission to use copyright material are made elsewhere in this book. But at the completion of the work, the editors have a natural gratitude to Shakespeare, Ibsen, Melville, Franklin, James, Donne, Hopkins, and Anonymous, without whom our book could not be what it is. Our students listened to our preliminary drafts of the several prefaces, and their reactions guided us in revision. We cannot help feeling that this year's students in our respective colleges have learned something about the making of an anthology, and we are thankful for their patience with our enthusiasm. Richard Butwell, Loftin Elvey, Raymond Fremmer, Thomas Macy, and Donald Simonds, undergraduates at Tufts College, did valuable research for the biographical notes. Dorothy Towle and Doris Holmes read proof expertly and tirelessly. And all anthologists know how very much of the success of any book is owed to their publishers, from the editor immediately responsible, and his staff, to the designer and compositor. To these, and the host of people who have helped us in all ways, we feel and give our gratitude. We are ready now to face our readers.

JOHN HOLMES

CARROLL S. TOWLE

A COMPLETE

College Reader

VOLUME ONE

Non-Fiction

The Range of Human Interest

PEOPLE have always liked to tell stories. They have loved to make up new versions of old tales and have created dreams of men and happenings that might have been. They have enjoyed the making of verse, too—patterns of sound and images and rhythm. And in some of our greatest literature fiction and verse have been powerfully united to express some of man's highest thoughts and deepest feelings.

Yet much that has endured and is properly read and studied as good writing and as literature is neither fiction nor verse. Consider Bunyan's *Grace Abounding*, Lamb's "Dream Children," John Locke's *Concerning Human Understanding*, Thomas DeQuincey's "On the Knocking at the Gate in Macbeth," and Emerson's "The American Scholar."

For men have many things to say that must be said in other ways than verse or story. These utterances may be called literature or they may not. That question would have mattered little to Bacon, writing on adversity, or Huxley, explaining the vast history in a piece of chalk. What matters more is that the style serve as an instrument for just those things the author has to say. These may be almost anything, for the uses of non-fiction prose are myriad.

This book shows a number of these uses. Dean Inge examines the concept of progress, and finds it a false guide in our ideas of ourselves and our world. Harold A. Larrabee attempts to lay a sound foundation for knowledge by showing us what a fact is. Others define democracy or humor, distinguish idle from constructive thinking, show how our words mislead our judgments and our acts. Still others are concerned with politics, religion, youth, the under-privileged; with science, literature, their own lives and the lives of others, past and present. Definition and judgment, explanation and satire, personal history, biography, argument, prophecy, the expression of a mood—many are the needs of men for good non-fiction prose.

And what of the reader? What is his pleasure and his task? Two main things

are asked of him: first, that he be curious and willing to respond with an energy equal to that of the writer. Even the unwilling listener can be forced to hear, at least to hear something. But the writer's words are silent on a page until the reader comes to them. He can be won, often; and if the writer is to succeed, he must be. If, to begin with, the reader goes half way, something may come of it. And on rereading, something more.

Beyond this, the reader must come with an open mind, with no preconceived notions about what the writer is going to do or how he should go about his task. Hard and fast notions about what a writer "ought to be doing" get in the way of what he does, and lessen its impact. The passion to classify and the wish to be "scientific" too often blind us, and we feel it is our business to decide whether a work is an *essay* or an *article*. Could it, because it was printed on a certain page in a newspaper, be called an *editorial*? Read a few issues of any large daily and see how varied is the nature of "editorials." The old term *essay* has been so modified that we wonder why John Locke called his long treatise an *Essay Concerning Human Understanding*—and for that matter why Charles Lamb called his charming little "essay" "A Dissertation Upon Roast Pig." We speak of "creative" writing, hardly knowing what we mean (is it drama, fiction, and verse?) or whether the rest should be "recreative" or "non-creative." The old division into exposition, argument, description, and narration seems better at first glance, though description is a criminal at large that no one can describe. And is the compartment known as "exposition" anything but an arrangement of sliding doors, to enlarge, admit, or shut out impulsively? The old act of convenience by which all prose was divided into four parts could not be "scientific." Why did we act as though it was? Or as though it mattered?

One should read not to classify but to understand. One should ask, "What is this author saying? Is it true? Is it worth saying? Does he say it well?" It is far more scientific to carry with us, not a nest of pigeon-holes, but an understanding of what all kinds of writing have in common. Prose or verse, we have to take another's words as they come to us, word after word, building up sentences and paragraphs in a time sequence. For language, like music, works in the medium of time, as painting and sculpture work in space, and theatre in time and space together. So, speaking with scientific baldness, a piece of writing is a time sequence of language units properly or improperly arranged to create a desired effect.

One test of this sequence comes through reading aloud, or silently with the mind's ear, to hear the sound and rhythm of the words. Good writing will always meet this test and will have the ring of speech. Another important test is clarity. For words are not merely effects of sound and rhythm but stimuli for ideas. They are helpful stimuli only when we know them and get from them what the writer meant us to get. Almost impatiently we insist that the reference of each word be as clear, as precise as language can make it. We will not be misled, or left at sea. We must participate, and we must keep in touch. A third test, allied to this, is order. We like to feel that we have come in at the proper beginning, that the writer is doing the only right thing in taking up these points in just this order. We always want to know exactly where we are along our journey; we should never feel "lost." And finally looking back, as from a high hill, we should feel that we

have arrived and that we clearly see the wisdom of taking the path we have been asked to follow.

All this is a hard task for a writer, even when he is dealing with the commonplace. But like Pope's "sure return of oft-expected rhyme," mere statement of the obvious, suggested by the words as they occur, in easy grammar and expected —this cannot be enough, in any kind of writing. The reader wants something to happen. He wants something to happen *to him.* When he has finished reading—when the author has finished with him—he will not, ideally, be as he was before. He will be greater in knowledge, in wisdom, in stature. It may be that what he thought was comic is really tragic, or at least pathetic. It may be that he has deeper insight into the illogical behavior of nations, of men, and of himself. He may be seeing the problems of others—of statesmen, teachers, parents, students—as he has never seen them. Perhaps he gets no more than the pleasure of "what oft was thought but ne'er so well expressed." Whatever the thing that has happened, in some way great or small a change has been wrought in the reader. His horizon has expanded, his perspective changed, or perhaps his curiosity has been aroused. Otherwise for him the writing is not good. A definition in a dictionary may not be as exciting or revealing as Bertrand Russell's concept of the place of science in the life of man, but it does add something to the reader's knowledge. That excellent historian and wielder of words, Carl L. Becker, has by his definition of democracy clarified many a reader's thinking. To do so was his only aim, and all his skill in ordering his thoughts and phrasing them was bent upon it. Call the piece exposition, argument, or even description—what does it matter? The point is that it leaves the reader somehow changed. It is good writing. In a high sense it has achieved a useful purpose.

The pattern of words and sentences and larger units, obedient to the general sequence in time, will take the reader on one of two kinds of journey. One is through events in time and space, an illusion of actual happenings. So Robert P. Tristram Coffin lets us experience the launching of a wooden ship. George Stewart, in "Storm," gives us an almost cosmic view of weather across a continent. And James Anthony Froude makes us live through the last hours of Mary Queen of Scots. These writers, and many, many more, expand the poor sequence of our lives into a larger dimension. The second kind of journey is not through time and space but into a world of thought, where events are ruled not by chronology but by the more difficult laws of reason. James Harvey Robinson takes up four kinds of thinking each in order, going from the most primitive to the most advanced. Rudolph Flesch asks, "Can Science Be Explained?" and tells in detail the kinds of explanations possible, beginning with the simplest. J. B. S. Haldane shows us why some creatures are small and others large: because their skeletons, hearts, lungs, and other organs each function in a body of such and such a size. One can imagine each of these pieces we have mentioned written by the other method. But it wasn't. Each subject was alive and interesting to the writer just as it now appears. Each piece grew from an inner compulsion, and the journey for the reader was pre-determined in its nature by the imaginative and intellectual experience of the author's search for the right way.

The test of the journey through time and space lies in what happens to the reader. If he merely has the feeling of "and then" or "one thing after another,"

and if he comes out feeling "so what?" at the end of "Storm," then George Stewart has failed with him. Except in writing which aims merely to pass the time, narrative is hardly an end in itself. Nor has Froude succeeded unless he has brought the reader to feel the irony of Queen Mary's magnificent attempt to brave out death itself.

Likewise, the journey into thought is good if it opens steadily toward a destination worth reaching. If facts are jumbled or the argument has gaps, if points are added to points like simple *a-b-c,* and there is a sense of addition only but of no conclusion to emerge, the journey fails. No grace of language or fluidity of style can take the place of this sure unfolding of a complex meaning. Flesch might have said, "Can science be explained? Why, yes and no. Two kinds of explanation can be made, for readers on different levels of understanding." But if he succeeds in what he actually wrote, the reader feels this conclusion steadily growing within himself, and at each step he sees just why it must be so, how he came here, and just which way this path of thought must lead him next. This is the reader's journey and what happens in him, though nothing "happens" in the usual story sense.

Whatever the writer's method, phrase follows phrase, sentences and paragraphs lead into one another with one intent: to bring the reader to a certain end. The writer has already made this journey, perhaps many times, before he writes a word. It is a good journey, and has left him with something he *must* say. And so he summons all his skill in thought and language to translate without loss of power his fascination with the journey and the outcome. The basis is always sincerity, a firm belief in what he has to say, and a sincerity of mood maintained from first to last. For one false note may mar the whole. If he has taken a journey of reasoning, the writer imitates the course of his own reasoning with no fundamental change but with all the economy of art.

Finally, good writing conveys a feeling of maturity, which comes out somewhat like this. When we like something we read, we feel that it is right—that there may have been other ways of putting it but not better ways, and we are satisfied. When this happens, we must have felt somehow that the author had challenged his mood, his reasoning, and the very idea itself. If we like "Storm," or "Mr. Roberts," or "Growing Up in Oklahoma," we feel that the author has challenged his understanding of weather, war, or boyhood and found that it stood the test. And we feel that he must have challenged and tested his way of presenting his subject, too, and found that the ordinary "class theme" way, or any other way than the one he chose, was wrong for the thoughts and facts and mood he wanted to express. Stewart must have asked himself the worth of his fascinated preoccupation with the weather, and Heggen must have tried and tried again for just the phrase to carry all the boredom of his war—until he hit upon the *U.S.S. Reluctant.* For these pieces, and for a host of others, sincerity proves the enterprise worth while before a single word is written. As it comes to the reader, it is a matured sincerity, which has come through the testing and still lives in written words.

Sometimes, of course, the writer's considered judgment on method, and content, and even his very purpose, will not be the reader's. There may seem better ways; or worse than this, the reading may seem to have been wasted time. The journey

may have seemed an old one, or a silly one ending in a maze of briars or maybe at the starting point again. If so, there are regrets all round, including the editors', naturally. But try it again some time. Sometimes one is not quite "ready" for a piece of writing. Meanwhile there is always something else to read, and of course it doesn't have to be a story in order to be creative and good. Non-fiction prose can transcend the special interest and the merely utilitarian purpose even as it serves this purpose, and so may take its honored place beside the poem and the story.

1

Personal History

This is *my* life, says the writer. This is what happened to *me*. It is not hard to understand the interest in self, for it is paramount much of the time in all of us. But to enlist and hold the sympathies of another is not easy. We love to talk about ourselves, but who will listen, and why? Yet a great deal of personal history gets told, we do like to read it, and we read it with no great effort. Even the use of "I" is not too great an obstacle to live participation, though some autobiographers have thought so and have talked about themselves in the third person.

The personal history we enjoy comes generally from good storytellers, not dull and merely informative chroniclers. Out of his life the writer picks those things to tell which shed most light upon him as he sees himself: he *selects* his material wisely, perhaps in the light of a theme. Often, like James Thurber, he writes with humor or with wit, showing detached amusement at himself. Thoreau, in the livelier portions of *Walden*, defends a thesis which modifies the account of his life by the pond. Henry Seidel Canby keeps his own and our attention steadily on the home that was, and on its felt rhythms, which he imitates. The point of view of the boy is there, but tempered by the interest in what the author calls "a contribution to history."

Aside from the give and take of human drama, perhaps the finest fruit of personal history is the sense it gives of period and environment. Marquis James's "Growing Up in Oklahoma" is the vivid portrayal of one boy's growing, even to the youthful idiom of words like "scrumptious." But well to the foreground is the story of his home town Enid, itself growing up in the age of icehouses, bicycles, *The Youth's Companion*, and the new gas-driven buggies. Through the imperturbable straight narrative of his life-adventure, Ben Franklin becomes a representative American, moving through the mores of the young country to fame and fortune. Maxwell Goldberg's fine story of himself as the young writer is rich with the implications of immigrant philosophy and endeavor in the same America two centuries later. Such are the more than incidental aspects of personal history sincerely told, without apology or vanity. One hardly knows how much these writers are aware of

this broad canvas larger than themselves. But it is there, sketched in around the best of them. At its best, perhaps, the outstanding qualities of personal history are vividness and a sense of intimacy.

Home[1]

Henry Seidel Canby

"God bless our home," which I can just remember in worsted tapestry, framed in jigsaw walnut, and hung on a spare-room wall, never meant "God make our home a happy one." The blessing was asked upon virtues which were often more conducive to moral conduct and material success than happiness. And indeed it was not a superior quality of happiness that distinguished the pre-Ford, pre-radio, pre-boarding school home from our perches between migrations. Those who read their social history in fiction will remember how many nineteenth century novels deal with unhappy homes—tyrannical or stuffy homes, homes that were prisons or asylums for the suppressed and inhibited. Toward the end of the century parents, like Jehovah as the churches preached him, began to soften. Homes were happier then, I believe, than in the previous generation, for the gradual democratizing of life had worked itself indoors and was subtly changing the atmosphere of both sitting room and kitchen. There was more give and take between parents and children, more liberty, and more cheerfulness.

It was confidence, however, not happiness, that made the great difference between then and now, a confidence that reached down below comfort or pleasure into stability itself. My cousins, who tiptoed around the chair of an old-fashioned, self-willed father, never knew from day to day what his authority might require of them. Their manners and their careers were both whipped into them. Yet they had this same confidence, and would be sure as I, with a memory of a happy and easy-going home, that something solid and valuable has been lost by our children.

In our town, and I think in the American nineties generally, home was the most impressive experience in life. Our most sensitive and our most relaxed hours were spent in it. We left home or its immediate environment chiefly to work, and neither radio nor phonograph brought the outer world into its precincts. Time moved more slowly there, as it always does when there is a familiar routine with a deep background of memory. Evening seemed spacious then, with hour upon hour in which innumerable intimate details of picture, carpet, wall paper, or well-known pointing shadow were printed upon consciousness. When bicycles came in and flocks of young people wheeled through twilight streets past and past again the porches where the elders were sitting, it was the first breakaway from home, a warning of the new age, but then more like a flight of May flies round and round their hatching place.

The home came first in our consciousness and thus in our culture, clubs, civic life, business, schools, society being secondary, and success there, except in money making, a work of supererogatory virtue. The woman who could not make a home, like the man who could not support one, was condemned, and not tacitly. Not size, nor luxury, nor cheerfulness, nor hospitality made a home. The ideal was subtler. It must be a house where the family wished to live even when they disliked each other, it must take on a kind of corporate life and become a suitable environment for its diverse inhabitants. Hence a common tragedy in our town, often noted, though seldom traced to its causes, was the slow crushing of a family by its

[1] From *The Age of Confidence*, by Henry Seidel Canby, published by Farrar and Rinehart, and reprinted by the kind permission of the author.

home. The sprawling house, such as they built in the early eighties, grew and grew until parents, aunts, grandparents, children all had their districts and retiring places in its wings and stories. Though the family might quarrel and nag the home held them all, protecting them against the outside world and each other. Deaths came, children migrated, taxes went up, repairs became numerous, yet still the shrinking remnant of the family held on from use and wont, or deep affection, until in a final scene of depleted capital or broken health, the hollow shell of the home collapsed on a ruined estate and fiercely quarreling heirs.

So often tragedy at the end, the home of the nineties was quite as often idyllic, if not ideal, in its best years. It had a quality which we have lost. We complain today of the routine of mechanical processes, yet routine in itself is very persuasive to the spirit, and has attributes of both a tonic and a drug. There was a rhythm in the pre-automobile home that is entirely broken now, and whose loss is perhaps the exactest index of the decline of confidence in our environment. Life seems to be sustained by rhythm, upset by its changes, weakened by its loss. An apartment house with a car at the door, though comfort summarized, has no rhythm, except for a broken, excited syncopation, or the spondaic movement of boredom.

Our houses moved with felt rhythms, not set, not identical, yet so sensible that what one felt first in a strange home was the tempo of life there. We were away for brief intervals only, at home long enough to be harmonized, and even the heads of families, whose working hours were incredible in their length, seemed never to lose their conditioning by the home. If business and the home lived by different ethical standards, as was commonly said, it may be because the worker was a different man outside the rhythm of the house. And women lived almost exclusively within.

It was this familiar movement, this routine with a certainty of repetition, that inspired a confidence in a patterned universe missing today. (Our love of nature helped too—more of this in a later chapter.) The European peasant got it from the cycles of the soil, and this also made him a different creature from the artifacts of industrialism. There was a slur upon boarders in our town and upon the strays who lived in hotel suites or the transients who moved from rent to rent. They were not quite like us, even though sometimes more cheerful; they had no home. We could have said, with equal truth, that they lacked something of confidence in tomorrow and in circumstance, which, in spite of the common incidence of misfortune or disaster, we held with a tenacity not easily explained by religion or philosophy.

Most of us in the late eighties and the nineties still lived in squarish houses of red or painted brick, heavily corniced with wood at the top, or mansarded, with porches at front and back, and painted iron fences between the lawns and the brick sidewalks with their rows of buttonwoods or Norway maples. There were a few old houses of lovelier lines, and many bizarrities of Italian, Greek, Queen Anne, and Egyptian inspiration, or of bastard Gothic pointed with gray slate. All, except the very oldest, had spacious, high-ceilinged rooms, hung with chandeliers recently converted to electricity, and trimmed with dark, polished walnut which also spiralled down giant stairways, and were upholstered wherever possible. Golden oak in the very latest houses relieved the gloom by substituting the frivolous for the dignified.

It is possible to describe what that generation would have called, say about 1890, an ideal home. The hall was broad and deep, a waiting place hung with steel prints and furnished with benches, stiff chairs, and a hat rack. It was Main Street, meant for traffic. On the right the parlor, on the left the sitting room. The parlor was for decorum. It was the largest room in the house, and the least used, with the most massive tables, the biggest pictures, and the showiest chairs. Mirrors at each end gave it an illusion of still greater spaciousness, and between them the piano which, when used for practising, admitted the only disorder allowed in that room. On the center table were the more pretentious gift books, for show, not reading. Indeed there is a whole literature of gift

books, all illustrated and bound in stamped leather, the only reason for whose existence was the parlor table. They came in and went out with it and many a childish knuckle has been rapped for opening them with smutty fingers. It was a sign of change in the times when in thousands of homes parlors were made over into "living rooms." The date, which was the late nineties, is more significant than many better remembered.

Across the hall was the sitting room, smaller, cosier, with easier chairs, bookcases, a tall brass lamp, a gas stove in the corner (fireplaces had not yet come back except as tiled ornaments for the hall where of course no one ever used them), and an air of comfort and usability. Here the family sat and friends were entertained (company went into the parlor). Here were the magazines, the books to be read, the cat, the dog, and the children studying after supper. This was the heart of the home.

The dining room, again, was formal, family portraits on the wall, a china cupboard out of which glinted what never was used even on the grandest occasion. Morning sun in the dining room was one of the specifications, as important as the sideboard and the serving table. The pantry was built up to the high ceilings in tiers of shelves and closets on and in which were kept that incredible clutter of household china and glass which every family seemed to accumulate. There was a drawer labelled "cake," another "bread," and a lead-lined sink with cockroach poison on the edges. The kitchens sprawled — coal stoves, laundry tubs, tables for baskets, tables for rolling dough, hooks and closets for a forest of tinware, and so on out into the shed with its tables and bins and closets. And in the cellar more bins, more shelves, a cold room, and a bricked in furnace as big as a funeral vault.

The main stairs followed a curving serpent of black walnut to a long upstairs hall off which opened vast bedrooms. The bath room was here (often the only one) with doors in at least two directions, accessible to all. The parents' room would be an upstairs sitting room also, with a desk somewhere spilling with small change and account books, and at the further end a vast walnut bed whose back rose to the ceiling, a cliff of polished veneer topped by a meaningless escutcheon. Other monumental pieces of black walnut flanked it at either side, and at the foot was a crib for the smallest child, or a green plush sofa for naps.

Across the hall would be the spare rooms, usually "blue" and "red," as in the White House, very bleak and usually shrouded in sheets. On their walls the outmoded pictures collected: "Old Swedes' Church," by Robert C., "Scenes on the Brandywine," "Pauline" on glass. Guests in those days usually went home at night.

The stair banister to the third floor was scratched by children's slidings. This was where freedom began. There was the boy's room and the girl's room, indistinguishable in furnishing (cast-offs mostly) but differing in the kind of disorder, and an alcove at the end of the hall for doll houses, and mineral or birds' eggs collections. On the other side of the hall, last relic of the self-contained age of our grandparents, a "lumber room," with its bench, tools, oddments for repairs and plumbing, the rest of the floor space carrying a *massif* of family trunks piled up on each other in buttes and mesas. Last of all a cubicle where the visiting sempstress slept and some drawers for her scanty clothes. (She came of the *good* "plain people," and kept up her tiny remnant of gentry by gifts of big red apples to the children.) Here freedom ended, since the next door led to the servants' quarters (white only, the black slept outside) and no one, not even a parent, was supposed to trespass there except on monthly inspections of the sanitation.

Such was the house, which lived by a rhythm in which all these familiar backgrounds had their part. Morning was early, in the winter dark and cold, with faint gurglings from the radiators and faint breaths of warmth from the registers, too late for comfortable dressing. Earlier, in bed, one heard the slender rattle of chains on the heavy storm door, the distant whisk-whisk as Isaac, the waiter, swept the front porch — or, if it were an old-fashioned Quaker house, the soft slop-slush of wet cloths over the marble

steps which had to be polished each morning. The faint joyous barks of the dog released, the first street cars banging down the hill – then, through the open window, sunlight pale on the far away river, then bright on the carpet – the double gong ringing stridently – seven struck high and clear on the old clock far below—and a rush downstairs for breakfast.

A meal that, no snack. No fruit then, until strawberries, cantaloupes, or peaches were ripe, then in vast platters – but oatmeal and milk that was still foamy from the milkman's crook-necked cans, hot rolls or beaten biscuit, chops or scrapple or sausages with hashed potatoes, eggs as a side dish, waffles three times a week. A Quaker blessing first, heads down but no word spoken. A full meal to all, then a scurry of children for coats and hats, the buggy at the door for father, hard-tired bicycles bumping down the pavement, green bags of school books swung against the trees.

Quiet in the home when the mother left with her basket to join the housewives of all the first families shopping down the long row of wagon tilts backed against the curb of the street market, and spilling with greens, vegetables, ducks, chickens, and bunches of wild flowers. When she had gone the child left behind heard the faint moaning spirituals of Isaac in the pantry polishing the silver, "O Lo-ad, O my Lo-ad," more distant and fainter the creak of the cook's laughter. The house was a personality, inscrutable, like God. It was the other half of ego, without which the ego was only a sense of existence, it was external reality familiarly incarnate. It was something so embracing yet so intimate that a word could name it only by indirection and overtones. It was home.

And while the slow synthetic beat of the house pulsed in a tempo so well known that the senses responded subconsciously, knowing the hours of the day or night, the dawn hours being different appreciably from those near midnight or in the sleepiest afternoon, many subsidiary rhythms joined or separated their quicker or slower motions. In the yard at afternoon the children had their moments of idle wandering or dreamy meditation, or sudden impulses to frenzied play, or hours of quiet industry in the sand pile or on the bending branches of the cherry trees. Sounds from within sank to the squeak of a cleaning cloth or the polite laugh of a guest in the parlor, then rose, crescendo, until by supper at six the whole house was again alive with activity. As night deepened the tempo gently slackened. Children's feet dragged upward to bed, the street noises sank to quiet, murmurs above stairs drowsed down until the clocks rang the hour through a silent house, and the head of the household, bolting the shutters, chaining the storm door, locking the front door, side door, back door, climbed the stairs, and set the silver basket on its shelf with the revolver and the watchman's rattle, a ritual act (since burglaries were most rare) celebrating the inviolability of the home.

I once rose at dawn and tiptoeing out into the silent street, saw those familiar houses relaxed and off their guard. There was no human life about, no dogs even were stirring; it was still dusky but clear. The slant light from the brightening East shone on the brick façades and overhanging cornices as upon faces, glinting with windows like eyes. And each one of those houses became the individual it was, an organism, hunched and humorous, or with open arms and serene forehead, a personality which recalled the family it sheltered and yet seemed to have its own life, dominating theirs. I was seeing, with that irrational and fleeting clairvoyance peculiar to youth, an environment incarnate in contorted brick and mortar, feeling in those crouching house people a grudging security offered to inmates who shaped their spirits accordingly. And in that moment the insipid smile of the Judge's mansard across the way, the reticent severity of the doctor's wooden mansion behind its trees, the brutal simplicity of the brick cube that housed the iron master and his brother, the coquettish insincerity of the minister's turrets of *fin de siècle*, and the toothy grin of the talkative widow's cornice, seemed more real than the sleeping inmates, so real that they mocked those that they sheltered, and were indeed grotesque symbols of the power of Things protecting and coercing the impressionable

spirit of Life. Then the sun rose, looking up at our own house, bland, familiar, welcoming, surcharged with secret comforts. I shrugged away philosophy.

That feeling of a daily rhythm, in which each hour had its characteristic part, in a house where change came slowly and which was always home, nourished, if did not create, the expectancy of our generation that the norm of life was repetition and therefore security. Our house, with the tall two-hundred year old clock ticking at its heart, sank into the subconsciousness and became a sense of stability and permanence. It was a proof of a friendly universe, to which memory could always return. When a home was closed on our street, its shutters flapping, its blinds pulled awry to show empty floors and bare walls, we pitied the family that had lost their external self. The homeless, like the landless men of the Middle Ages, seemed to have no country.

The family made the home, yet the home, when it was made, had its own laws. Thus while the relaxing of family ties in the present era has had its powerful effect upon the home, the auto, the radio, commuting, boarding school, and apartment life have struck direct at the laws which made the laws of the home and on through to the family. It is the latter cause which seems more fundamental. Confidence is a habit which must be acquired young and from an environment that is constant and rhythmically continuous. The kaleidoscopic patterns of life today are more exciting and probably liberate the intelligence when there is an intelligence to be liberated; but the pattern they make is seldom realized by youth which turns and twists and darts in an environment which to its seeing never once makes a whole. Home life in the nineties could be very sweet, and often profoundly dull, and sometimes an oppressive weight of routine inescapable; security was often bought at a ruinous price; yet what conditioned reflexes it set up! The peace movement of the early nineteen hundreds, naïvely confident amidst a world in arms, was an attempt to make that world our home, our American home. Nor was heaven exempt from the home-making activities of the American family. We sang lustily in church —

There we shall rest,
There we shall rest,
In our Father's House,
In our Father's House.

The Age of Confidence got the habit of security in its homes.

· Growing Up in Oklahoma[1]

MARQUIS JAMES

ONE DAY it turned out that we were rich. Papa had won a big case. He bought a new buggy and new harness for Tom and there were five hundred dollars left over. With outlaws getting scarcer, that was a lot of money for a lawyer to have all at once. Much of his pay would come in the shape of a town lot or a cow or a steer or a sow; groceries at Mr. Peter Bowers's, clothes at Meibergen & Godschalk's, or having a horse shod by Mr. Hackett the blacksmith. Nearly all our crops were put in and gathered by farmers working off fees. (Farmer, instead of settler, was getting to be the word.)

As with the gambler's dollar, the question was what to do with this money. Papa always had to do something with money; Mama said it burned holes in his pockets. Of course we could build the new front addition and have a stairway. But Mama was not for that. She wanted to "stock the farm"; buy brood mares and Guernsey cows and raise colts and calves. The front addi-

[1] From *The Cherokee Strip* by Marquis James. Copyright 1945 by Marquis James. Reprinted by permission of The Viking Press, Inc., New York.

tion could wait. Here was a chance to start a stock farm, like her father's in Missouri. And, yes, I could have my pony and saddle.

The prospect of a pony won me to Mama's side. Otherwise I'd have been for the new front addition – in order to get the stairs. I had been very disappointed over what happened to the rock quarry, which had represented Papa's latest attempt to provide the addition. The rock quarry was opened in the ravine which he had crossed on horseback in the Run. Papa thought that the red stone beneath the gravel would be capital for building. It was fun to watch the blasters drill holes and fill them with dynamite, and the stonecutters with chisels and mauls work the rough masses into smooth, regular shapes. The first stones were taken in low, broad-tired small-wheeled wagons to Enid where they were putting up a new building on the Square. But Papa's stone never went into that building. There came a rain and a terrible freeze and some of those red rocks cracked, just sitting there in the street.

As it happened I did not get my pony because Papa decided to use the money to build the icehouse. Mama was simply thunderstruck. She said it didn't freeze hard enough in the Strip. Papa said it froze hard enough to crack rock. He went on to say how much money was spent in Enid in one summer to buy ice which was shipped all the way from Wichita. It was enough to get all the stock anybody should ever want.

What Papa did he did fast. Work on the icehouse started right away. The grandeur of the undertaking enthralled me. Half a dozen mule teams and two-wheel scrapers began widening and throwing a dam across Boggy Creek. The driver of a two-wheel scraper can be a lordly personage. Coat off and cuffs turned back, Papa was in their midst, directing. His quiet tones formed a contrast to the "Gees!" and "Haws!" and "Git-along-thars!" of the mule skinners. The result of this labor was the largest body of water I had ever seen. On the bank rose the icehouse, with double walls filled with cinders. It was as high as the Rex Hotel, and in an unfinished state a marvelous thing to climb.

As if this was not enough excitement for one summer, the East Bottom was planted in cotton. The Negro family that had charge of it lived in the boys' house and did their cooking in the back yard. This tribe took in all ages from a gray-wooled "uncle" to a pickaninny playing in the dust between the rows. I shall never forget the bright hues of the garments or the bright laughter of those colored people. Or their singing in the evenings. There was a boy and a girl about my age. During cotton-picking time I worked with them because I enjoyed their company. When the cotton was hauled away, with the last of the family perched on the last wagonload, our place seemed silent and empty.

And there stood the icehouse: empty, and also silent – after a summer of hammering and sawing and bustle of building. We waited for ice. It happened, though, that there was no ice that winter – only a twister that took a corner of the roof off the icehouse. So ended a year worthy of note. A man more given to boasts than my father might have made something of it: not only was he the sole person to raise cotton or to cut ice in Garfield County, but he tried both at practically the same time.

The icehouse roof was repaired, though I did not pay much attention to it, for that was the summer I herded cattle, or at any rate cows – milch cows from town. Of a summer, townfolks pastured their cows in the country and boys found employment driving the herds to and fro, morning and evening. There were several herds in the pasture. My schoolmate Jay Radcliffe drove one. Leonard Bacon drove another. Leonard's father was a preacher who ran a dairy. He had two thumbs on one of his hands.

As the pasture was fenced, all I had to do was to keep an eye on the bull. Often a town boy or two would spend the day with me to save himself a trip. We would practice riding tricks and throwing lariats. In the evening when the other boys returned, some mounted and some afoot, all the town cows would be rounded up and the different herds cut out and started on the road with some distance between herds to keep them from

mixing together again. For this work a pony would have been a handy thing. All I had was Billy. The experience should have made me quite a rider for a kid, but it didn't. Billy had the hardest gait of any horse I have ever been on. He trotted at nearly any pace, indicating an early training which his disreputable looks belied. A sustained trot is an unnatural gait for a horse, and one that must be taught. Your western cow pony trotted a few steps and broke into an easy lope (it differs from the eastern canter) that was like sitting in a rocking chair.

The next winter it froze and froze good. Papa took no chances. At the first cold snap he put men on the pond with pumps to keep water on the surface of the ice so that the freezing weather would thicken it faster. In that way we got ten-inch ice. The cutters worked night and day, fearing a thaw. It was a spectacle people drove from town to see. Every now and then a cutter would fall in and then dry out by the crackling fire on the bank. The icehouse was filled to the rafters.

That was not all that happened that winter. The Wichita people who had been selling ice in Enid at fancy prices began to build a branch plant in town. When Mama heard of that, she started to set hens on a scale she had never attempted before. Some lumber left over from repairing the icehouse roof was used to make a great shed for the brooders.

We bought an ice wagon and a team of horses as big and sleek as brewery-truck horses. The wagon was the most gaily painted apparition I had seen on wheels outside a circus. We also bought a second team and a smaller wagon, but this was merely a farm wagon made over. My first trips in the big wagon were made on Saturdays. By the time school let out for the summer I was able to drive the team anywhere except downhill: I was not strong enough to set the brake. As there were only two hills in Enid, East Hill and South Hill, I took to driving fairly regularly, leaving the man to ride the back step and carry ice into the houses.

This occupation gave me a feeling of importance I had not known before. On my high seat, handling the reins that lay on the flat backs of the team, I felt superior to the run of other boys for the first time in my life. There were usually boys following the wagon for a piece of ice to suck. I do not believe the note of respect in their tones was altogether a fancy of mine, for until now ice in summer was a thing few people saw in Enid. Not that my powers of fancy had been entirely overcome by the magnificence of reality. My imagination would change the ice wagon into a stagecoach.

Leaving Enid and turning into the quarter-line road between the Utsler and the old Howell claims, you made your way along a ledge – wall of a canyon on one side, foaming river on the other. Prime place for a holdup or ambush, specially this trip with all that gold dust aboard. On the straight stretch just before Horseshoe Bend the nigh leader r'ars. Arrow in his rump. Injuns! I cracks my whip an' we hits the Bend at a dead run, two wheels in the air. . . .

My self-esteem does not seem to have suffered from the fact that there was an ice wagon other than ours on Enid's hot and dusty streets: the wagon of the "artificial" ice company. That wagon was driven by a man. The artificial wagon driver spread lies about our ice. He said it came from dirty creek water with wigglers in it. The men on our wagons told people the artificial ice was slow poison. You just had to go to the plant and smell the stinking stuff they made it of.

There was a good deal of argument as to whose ice was colder, and therefore would last longer. It stood to reason that ours was colder, having been frozen in practically zero weather. Still, some people wouldn't believe it until Mr. John Reilly made his experiment. Mr. Reilly bought a hundred-pound cake of our ice and a hundred-pound cake of the artificial ice and put them side by side on the walk in front of his Kentucky Whiskey House. All afternoon long people stood around and watched the melting cakes. Bets were made as to which would go first. When night came it looked like a dead heat. But the test wasn't over yet. Next morning our cake was twice the size of the artificial cake, which proved that there was something

about man-made ice that couldn't stand the night air. We were officially declared the winner and wagers were paid on that basis. Several years later I heard Mr. Sam Evans, the druggist, tell what it was about the night air that affected the artificial ice. Some of Papa's friends had poured a kettle of boiling water on it.

As this wasn't publicly known at the time, the artificial-ice people cut the price of their ice. We cut the price of ours. They cut again and we cut again.

We sold all our ice, but at such low prices there was no money to put ice in the icehouse during the coming winter should it freeze hard enough to make any. So Papa retired from the ice business.

But while Papa had been selling ice at a loss, Mama sold poultry and eggs at a profit. She had always done this to make her pin money. That summer she went into the business in earnest and sold a thousand chickens, turkeys, and ducks. They brought in a good deal; but it was not enough. The icehouse took our claim and the best of the town lots. When told that we were moving to Enid I am not so sure but that I was more glad than sorry. The summer on the ice wagon had sharpened my taste for metropolitan life.

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One of the first things I noticed about town life was the need for money. As a country boy I had been accustomed to spend money whenever in town. As I did not go too often, my funds were usually equal to the demands on them. But being in town every day I soon ran out of cash.

The second floor of the Cogdal-McKee building solved this problem. Tenants saw to the sweeping of their rooms, but Mr. Cogdal kept the hall and the front stairs swept. For twenty-five cents a week I swept them every few days, and the only person who complained that they were not clean enough was Mama. Papa paid me a quarter a week for sweeping his office and cleaning his spittoons. Mr. Charlie swept the office of Moore & Moore, but I cleaned the spittoons at the pump in back for five cents each. Mr. Sturgis slept in his office and swept it. Judge Roach paid two-and-a-half cents apiece for cleaning the spittoons in the Police Court room. I could not complain over the reduced rate because there were so many of them and I cleaned them so often.

The Western Union office was almost as fascinating as Police Court, and our building was never shut of the clack of the instruments. The telephone had seemed marvelous enough when they put one on the wall of Papa's office and I could talk to Jay Radcliffe clear out on East Hill. But one who understood the code could talk on the telegraph to Fort Worth or Kansas City. Mr. Seward, the manager, said that the company gave him no money for cleaning spittoons. I offered to clean them for nothing if he would teach me the Morse code. He said he would see about it. I began cleaning the Western Union spittoons and sure enough one day Mr. Seward wrote out the alphabet with a Morse sign after each letter. Had it been a guide to buried treasure I don't think I could have taken better care of that piece of yellow paper.

Another place I made myself handy was Parker's bookstore. Mr. Parker would let me sit on the back stoop and read secondhand books from his shelves: Oliver Optic, A. G. Henty, *The Prince and the Pauper,* the endless *Elsie Dinsmore* series, *Black Beauty, Beautiful Joe* and *The Great Northfield Bank Robbery & Other Daring Deeds of Jesse James;* also old copies of the comic magazines *Life* and *Puck* and *Judge* and of the funny papers with the doings of Happy Hooligan, Foxy Grandpa, and Buster Brown.

There was more to Enid, of course, than the Cogdal-McKee block. I had driven the ice wagon all over Jonesville (as they called the part of town that rightly belonged to Walter Cook) and the Kenwood and Weatherly additions on the West Side. But it was funny the things you *didn't* see from the ice wagon. I suppose that was because the wagon stuck to the streets, mostly. Alleys were the place to see things. You looked in the back doors.

Take the front door of Mr. Fred Luft's harness shop on Broadway, as they called E Street now. Well, on the sidewalk was a rather life-like dummy of a dappled-gray

gelding. Sometimes Mr. Luft would have a nice set of single harness on it, sometimes a saddle and bridle. This was all very well to see once or twice, but the novelty wore off. The same with Mr. Luft's show windows: just harness and saddles and the gear that went with them. But look in Mr. Luft's back door from the alley and you could see him and Mr. Daniels working on a set of harness or a saddle. You saw them cut and punch and rivet and shape and stitch the leather. A thing took form under your eyes. You went back in a day or so and what had been just a saddletree was half a saddle. You went back later and there it was, done; and a beauty.

That was it. From the back doors you could see people make things. You could see Uncle John Dollar making a pair of boots or Mr. Divers mixing his colors and painting a sign. At the Model Carriage Works you could see them fashion spokes and assemble a wheel. Jack McCutcheon, the tinker, soldered pots and pans and fixed umbrellas, guns, and bicycles. It was something to see him take a Colt apart, cut a new spring and put the parts together again, and snap the trigger to show that the Colt worked.

Looking in the back door of the Enid Bakery you could see Mrs. Oligschleger bake bread, taking loaves by the dozen from an oven you could have shoved a barn door in. Mrs. Oligschleger and her husband spoke German to each other. It was the first I knew that anyone except Indians and Mexicans spoke a language different from ours. I asked Mr. Oligschleger to teach me German.

"I got other things to do," he said, though his wife did most of the work.

Mrs. Oligschleger taught me to count to ten and to ask for bread or cake in German. When her husband was around she would make signs for me to go away. When he wasn't around she would tell me about life in Germany when she was a girl and sometimes give me a cooky.

On reading of a man who spoke sixteen languages I, too, resolved to become a great linguist. Having at my command a few words of Cherokee, Osage, Comanche, Spanish and German, I imagined the rest should be easy. I got to telling boys that, counting English, I spoke seven languages already. The seventh was what I called the "deef-and-dumb language." You talked it with your fingers. The accomplishment I had learned from Deefy, a smelly old deaf-mute who lived in a hovel near the Old Government Springs and read all the time. He would read anything straight through – a seed catalogue or anything else.

In the back of Bumstead's ice-cream parlor they made ice cream in the biggest freezer you ever saw. It took two boys my size to turn the handle. Sometimes I would be one of those boys, and we'd each get a dish of ice cream for doing it.

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That summer Mama and I went to Chicago to visit my sisters. The pictures in *Scribner's Monthly* had been no hoax, no glorified left-handed monkey-wrench proposition to fool a country boy. There they were in breath-taking reality: the elevated railway; theaters; the Masonic Temple, which was the highest building in the world (we went on the roof and looked down); Marshall Field's; Lake Michigan and the ships (we took a trip to Milwaukee on one named *Christopher Columbus*); the menagerie in Lincoln Park; the Field Museum. Some of the most vivid impressions of a city that I possess at this day were acquired in Chicago in 1901.

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Another source of reading matter was the Enid Public Library, which occupied a second-floor room on the south side of the Square. Jay Radcliffe and I would go there together on our bikes, returning books or calling for them for our mothers. Miss Jennie Kelso, the librarian, would suggest books which she thought might interest us personally. There were not many chairs in the library so usually we boys would sit on the floor and go over the books Miss Jennie had recommended. I don't know whether it was she or Mama who put me on the track of Froissart's *Chronicles* which did much to further my interest in history. My mother's favorite reading was history, historical novels,

memoirs and biography. She would often tell me stories from what she read. In that way I had learned something of presidents other than James A. Garfield. My favorites were George Washington (though he seemed a little too good to be true, never having told a lie), Andrew Jackson (for his refusal to clean the British officer's boots), Abraham Lincoln (he was such a good wrestler), and Andrew Johnson (the runaway apprentice).

Abraham Lincoln was brought a little closer than the others because Mama had met him. Mr. Lincoln had not been elected President, though folks were talking about it. Mama's class at school got up a tableau in which girls took the part of the different states. When they got ready to give the tableau, who should happen along but Abraham Lincoln in the tow of Congressman Shanks, whose daughter was Mama's closest friend in the class. Later they roomed together at college. After the tableau each little girl was presented to Mr. Lincoln. Mama said she would have forgotten all about it except that Mr. Lincoln went to the White House. During the Civil War the family used to speak of the time Rachel had shaken hands with President Lincoln.

I was anxious to get to the seventh grade in school so I could study Barnes's history of America, which began with Columbus. You used the same book in the eighth grade. There you began with the Revolutionary War. By the time I was in the fifth or sixth grade I had got hold of a very ragged copy of Barnes and read it all through. In high school they studied three Barnes's histories, as I recall. One was an ancient history, beginning with the Egyptians and ending with the Romans; another a European history; and the third an advance history of the United States. I got copies of these from Harold Houston, who went to high school, and read the most interesting parts.

On a Fourth of July, Mr. Henry Sturgis came by in a carriage to take my parents and me to a barbecue in the country where Mr. Sturgis was going to deliver the oration of the day. While driving along, Papa and Mr. Sturgis got to discussing the battle of Waterloo. I spoke up to say that Napoleon would have won had not Blücher shown up.

"What was that, Marquis?" asked Mr. Sturgis.

I repeated what I had said and he corrected my pronunciation of Blücher's name. I thought that was all he wanted. In reading I ran on to so many names you seldom heard in ordinary talk and I was unsure of how to say many of them. Mr. Sturgis asked other questions about the battle and about Napoleon, some of which it seems that I was able to answer, Napoleon being a favorite of mine.

"How old are you, Marquis?" Mr. Sturgis asked.

"Nearly twelve," I said.

"Judge," Mr. Sturgis said to Papa, "not many twelve-year-olds could answer those questions."

It was pleasant to know that my reading of history constituted something out of the ordinary. Thereafter at the post office and about the lawyers' offices I would make a point of showing off my learning. On my twelfth birthday Papa gave me an eight-volume history of the United States by Edward S. Ellis, and, on the following Christmas, Ridpath's *History of the World* in nine volumes. I read Ellis all through, skipping only the dry parts about the tariff and such. In Ridpath I bogged down and wound up by using the pictures as guides to the good parts like the Gunpowder Plot, the massacre of St. Bartholomew, the voyages of Sir Francis Drake, and the gorier incidents of the French Revolution.

Mr. Temple Houston never came from Woodward without dropping in at Papa's office. Mr. Houston still wore his hair long and he wore high-heeled boots with his pants over them. You could see the bulge his gun made under his coat. Lawyers didn't usually carry guns any more. I was trying out my history on Mr. Temple Houston when Papa asked what I knew about General Sam Houston of Texas.

This must have been before I had finished Ellis, for, beyond the fact that Mr. Howell had spoken of him favorably, I couldn't think of a thing about General Sam Houston of Texas.

"Temple, had you known our Mr. Howell, you'd esteem that as a compliment to your father," Papa said.

Pretty soon I got hold of a book that told about General Sam Houston of Texas; also Daniel Boone, Davy Crockett, James Bowie and others—all in the one book.

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When I was in the sixth grade Enid's schools were given an overhauling. Extra bright kids were advanced a grade and extra dumb ones put back. Grades were divided into A and B classes—A for the smart kids and B for the "retarded" pupils. I went in class B.

News of this degradation was withheld from my parents until the next monthly report card made further concealment impossible. Mama gave me a sure-enough scolding, rattling on at a great rate. I was really more pained by the way Papa took it. He just said, in his slow way, that he was "disappointed."

The trouble was arithmetic and grammar. My thick skull for mathematics was a source of humiliation. For a year or two I slaved over the subject. As a spur I announced my intention of becoming a civil engineer. The results of these efforts were peculiar. Occasionally I would come up with the solution of a complicated problem—and then miss a string of simple ones. This created suspicions that I had been helped with the hard problem. So, in the end, I just gave up mathematics.

Grammar I wasn't obliged to give up, not having paid it any mind to begin with. I had no intention of doing so now. My position on grammar was that it served no useful purpose. This business of learning which words were verbs and which words nouns; what was the subject of a sentence and what the predicate; and that mumbo-jumbo about moods and tenses—there seemed no more sense to it than learning the alphabet backward (which one teacher required her kids to do). My teachers and my parents said grammar was necessary, to know how to speak and write properly. *Bushwa.* As often as any other kid I was asked to read my compositions before the class.

So I decided to haul off and be a poet. I wrote a poem and dropped it into the slot in the door of the Democrat office. At the end of the week when the paper came out there was my poem—printed!—with my name in caps and small caps at the bottom. How very kind of old Mr. Moore to have taken the extra trouble to reach into the upper case to set my name. I tried to repay him by going around and distributing a couple of sticks of type.

I watched Mr. Moore distribute the type in which my first published lines had been set. I cannot quite get into language my feeling on seeing my poem thus physically dispersed into its elements. There they lay in the case, the letters of lead which had spelled the words that had made my poem—their identities lost, their association in *my* poem gone the way of earthly things. Ah, but the letters were still there. Along with all the other 8 point in the whole *Democrat* office they awaited an opportunity to display to the world the very next thing I should write.

After I had reached the seventh grade, one evening my teacher, Miss Allen, asked if she could see me after school. This was a common enough occurrence. Usually it meant trouble.

This time Miss Allen began to speak of my verses. She said I had talent—a perception of the obvious I thought remarkable only because it came from a schoolteacher.

"On Monday morning," continued Miss Allen, "you may move your seat over into the A class."

Seven A! Gee!

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"February 16 [1905] Bright and fair. I read 'Ralph Raymond's Heir' and finished 'Cap Baileys Heir.' I wrote a fine poem about Harry. I was invited to attend a Surprise party for tomorrow evening. I don't think I will go. I want to read."

The implication that I preferred staying home and reading to going to any old party indicates that I was still under the spell of a bluff I had thrown for the benefit of Eva Britton. I wanted her to think me different from the run of boys who were crazy to go to parties. Eva Britton was the prettiest and the most popular girl in the seventh grade.

Her father was one of the first early settlers to prosper sufficiently to move to town and give his children "advantages." The Brittons lived on Maine Street, a couple of blocks from us, in the house Banker Fleming had vacated to go to the West Side. Their porch had more scroll work on it than any other porch in Enid.

Naturally, I went to the party, which was at Maud Luther's. "Dan, Jay, Eugene, Wilk and I met down at the bridge. Then came the girls. We took them to Luther's house. We started to play Clap In and Clap Out and after we had played a while Mrs. Luther told us to come in the back parlor and there she gave each of us an orange and a piece of cake and a popcorn ball. When we finished eating we played Wink on the Sly. Eva would always wink at me and I would always wink at her. When the party broke up Dan and I and Eugene took the girls home. We took Ruby home and then we were going to take some of the rest of the girls home and we met Mr. Britton and he made Eva go home with him. What a shame."

When I wrote that we "took" the girls to Luther's and "took" them home, I was making conscious use of a word high-school boys employed in connection with their social activities. We Central kids discharged our functions as escorts in this manner. Bound for a mixed gathering, the boys would meet at some convenient spot, such as the Broadway bridge, which the girls would have to pass. The girls would get together somewhere else and all in a bunch approach our rendezvous, as if by accident. Then we would proceed together—the girls in one bunch walking ahead giggling mysteriously and the boys walking just behind shoving each other and saying things for the girls to overhear. In the same way we "took" girls home, the boys keeping together until the last girl had been trailed to her front gate.

Maud Luther's party touched off a stimulating social season, with a party about every other Saturday night. Never before had a Sunday suit of mine seen such service in Enid, and on party nights I would black my shoes and comb my hair without being told. I bought a high-standing celluloid collar, acknowledged the last word in elegance. The only trouble was I could hardly turn my head around. If my diary is reliable it was at Enos Shaw's that we first played post office. The girls shrieked and some of the older boys snickered knowingly at the mention of the name. Pretty soon I found out why. It was a kissing game. Well, it was neither as bad as you might think nor so wonderful as I'd heard it cracked up to be —this kissing a girl.

Not only did I grace these worldy affairs with my presence (and my celluloid collar); I took a hand in the promotion and the management of some of them. This was a devious and underhand business, with the particular object of keeping the company congenial by the exclusion of rivals. To this end old alliances were broken and fresh attachments formed for nearly every party. Sometimes I came out on top as a result of these manipulations; sometimes I fell the victim of another manager's artful schemes.

When Eugene Dwelle began talking of giving a party a problem of transportation arose, for Gene lived in the country. We found a hayrack that we could use. Now we needed two horses. Papa said he would pay for the hire of one if I could scare up the other. My deadly rival for Eva Britton's favor, Taylor Lyons, came forward with an offer of a second horse. This I considered an act of inexcusable presumption. Gene hadn't even sent out his invitations, and he had promised that should I get a second horse there would be no invitation for Taylor Lyons. But as I couldn't raise the extra horse Gene had to invite Taylor.

Then things took an unpredicted turn. Eva accepted the invitation of another boy to go to a church social on the night of Gene's party. That, I said to myself, sure leaves old Taylor in the soup. But it didn't leave me in the soup because my fancy had been caught by a new girl in our class whom I shall call Mary. I told my diary that Eve was just too fickle for any use.

On the ride out to Gene's I drove and Mary sat beside me. She asked if I could drive with one hand. "Why, sure," I said, thinking that a funny question. Mary took

my free hand in hers. Playing pleased-and-displeased at the party Mary kissed me in a way that left no room for doubt that there were things about kissing I had undervalued until then. Not long before the party broke up Gene took some of us boys to the barn to look at a new colt. Going back to the house we passed Taylor Lyons and Mary under the grape arbor. "Oh, take that lantern away," she said. "The light hurts my eyes." On the way to town it was Taylor's turn to drive. Mary sat with him.

"Well, I don't care," concludes my diary's account of the evening's events. "Taylor is going away next month. Tanned my cat hide today. Tattoed my name on my arm and my initials on my thumb."

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A salutary result of the association with Karl Green was the improvement of my pool game. The practice I got on his table made me a winner at Waumpie Washburn's. The time was when I had had no more ambition to become a pool shark than I had to become a saloon loafer. When the saloons went with the coming of statehood, the church people continued to agitate for the closing of the pool halls. I had been brought up with the notion that a pool hall was a sinkhole of sin. After prohibition some of them became blind tigers. But there were at least two pool halls in Enid that were neither blind tigers nor, so far as I could see, sinkholes of sin.

One was the Salty Dog, owned by Bill Kimmell who also managed the Railroaders, Enid's professional baseball club. The ball players who hung out there were, of course, drawing cards for the Salty Dog. Scores of all the games in the Western Association were posted by innings. The last summer that Papa was alive I got to going there to watch the score board. One afternoon Papa came in. He sat down beside me and asked how the games were going. He didn't say a thing about finding me in a pool hall. A few afternoons later I was at his office. Pushing aside the papers on his desk he removed his spectacles and said: "Boy, let's walk over to the Salty Dog, have a Doctor Pepper and watch the games for a while."

Another pool hall where you couldn't buy whiskey was Waumpie Washburn's, the hangout of the high-school boys. A stock greeting to the proprietor was, "Anything for me, Waumpie?" for Mr. Washburn served as a medium of communication, always carrying in his head half a dozen messages: Kendrick wants Francisco to leave the catcher's mitt; Harp wants his Cicero pony back from whoever took it; Counts wants to know if Goltry can get the auto for the Congenial dance.

The *Quill* was practically edited at Waumpie Washburn's. Dates were made over his telephone. We rolled poker dice for boxes of candy for our girls, to see whether we paid double or nothing. Suppose a fellow'd been stung three or four times running. Waumpie'd slide a box of chocolates across the top of the glass case. "On the house," he'd say. Days before an important dance we'd carry our girls' programs to Waumpie's and swap them around and fill them out.

Now and then something outside the orbits of our personal concerns would be worthy of attention—as when Claude, who played for the house, was taking on an out-of-town shark or maybe some home product who played a good-enough game of pool to make it interesting. Claude had the most desirable wardrobe of any person of my immediate acquaintance: three or four Klassy Kut suits and a different fancy vest with pearl buttons for every day in the week. Claude took his opposition over more often than it took him over. One night a member of the Dirty Dozen from a bootlegging hall down the street took Claude over, though. Waumpie was sore—not because Claude'd lost but because Waumpie's orders were that you couldn't play a Dirty Dozener in his hall. Several of us remonstrated. Claude ought to have a chance to get even.

"Nope," said Waumpie. "I run a decent joint. Haven't had a kick from any of you boys' folks yet." He knocked wood. "But I will have it the Dozen gets to flocking here."

Waumpie wouldn't let Claude play any of us kids for money: only practice, loser paying for the game. Claude would take endless pains demonstrating complicated

shots. The last time I saw one of our old crowd he was playing for the house in a hall on Olive Street in St. Louis.

A good many of us aspired to a wardrobe like Claude's, but Horace Copple was the only one who realized that aspiration. This was because Copple's father took out in trade the cost of a good deal of advertising in his throw-away newspaper, the *Square Deal.* I can recall no other year of my life when clothes filled so prominent a niche in the scheme of things. Originating in the colleges, if my memory serves, the overnight transformation of young men's suits was like that from grub to butterfly. What had been coat, pants and vest, undeserving of more detailed mention, blossomed into a gorgeous ensemble. The pants were peg top: they stood out from the hip on either side as if you had a couple of summer squash, small ends down, in your pockets. From this extensive circumference the legs tapered to three-inch cuffs worn high enough to show about two inches of socks. The cuffs were so snug that you had to put your pants on before your box-toed shoes. The coats were more intricate works of art: long and dipped in front almost to the knees. Pockets had ornamental flaps, and there were other trimmings. And if you could set this off with a fancy vest—

Boys who had never given a clothing-store window a second glance would hang out in front of Meibergen and Godschalk's and Harry B. Woolf's discussing the relative merits of Hart, Schaffner and Marx, Kuppenheimer Clothes, and Society Brand. It was generally conceded, however, that the epitome of refinement was achieved by Klassy Kut alone.

Luck was with me or the financial stringency at home would have made it impossible to keep up with the real swell dressers. In the first place Sister Zoe sent me a suit from Chicago--a Society Brand costing more than most Enid boys' suits cost. It offered in richness what Klassy Kut had in style. Along in the spring I needed another suit, and calculated my chances to acquire a Klassy Kut. They were twenty fish and up. All I could scrape together was nine dollars, for which I managed, in a little store off the Square, to bag a pretty fair imitation, the merchant taking my overcoat in trade. That handsome garment had been purchased from Jay Radcliffe for five dollars. As his brother Earle had worn it for four years at the University of Oklahoma, you can see that it was saturated in campus tradition. In my day a young fellow with a healthy circulation didn't have much use for an overcoat in Oklahoma.

One did come in handy, though, when you took a spin in an automobile. That old plains wind would sure go through you. A lap robe over your knees wasn't enough. The important thing, naturally, was to see that none of the girls got a chill. Yes, the motor car was sure changing things; it was going to change our whole civilization, Herschel Goltry said oracularly. . . .

On Going to Philadelphia[1]

BENJAMIN FRANKLIN

IT RAIN'D very hard all the day, I was thoroughly soak'd, and by noon a good deal tired; so I stopt at a poor inn, where I staid all night, beginning now to wish that I had never left home. I cut so miserable a figure, too, that I found, by the questions ask'd me, I was suspected to be some runaway servant, and in danger of being taken up on that suspicion. However, I proceeded the next day, and got in the evening to an inn, within eight or ten miles of Burlington, kept by one Dr. Brown. He entered into conversation with me while I took some refreshment, and, finding I had read a little, became

[1] From *The Autobiography of Benjamin Franklin.*

very sociable and friendly. Our acquaintance continu'd as long as he liv'd. He had been, I imagine, an itinerant doctor, for there was no town in England, or country in Europe, of which he could not give a very particular account. He had some letters, and was ingenious, but much of an unbeliever, and wickedly undertook, some years after, to travestie the Bible in doggrel verse, as Cotton had done Virgil. By this means he set many facts in a very ridiculous light, and might have hurt weak minds if his work had been published; but it never was.

At his house I lay that night, and the next morning reach'd Burlington, but had the mortification to find that the regular boats were gone a little before my coming, and no other expected to go before Tuesday, this being Saturday; wherefore I returned to an old woman in the town, of whom I had bought gingerbread to eat on the water, and ask'd her advice. She invited me to lodge at her house till a passage by water should offer; and being tired with my foot travelling, I accepted the invitation. She, understanding I was a printer, would have had me stay at that town and follow my business, being ignorant of the stock necessary to begin with. She was very hospitable, gave me a dinner of ox-cheek with great good will, accepting only of a pot of ale in return; and I thought myself fixed till Tuesday should come. However, walking in the evening by the side of the river, a boat came by, which I found was going towards Philadelphia, with several people in her. They took me in, and, as there was no wind, we row'd all the way; and about midnight, not having yet seen the city, some of the company were confident we must have passed it, and would row no farther; the others knew not where we were; so we put toward the shore, got into a creek, landed near an old fence, with the rails of which we made a fire, the night being cold, in October, and there we remained till daylight. Then one of the company knew the place to be Cooper's Creek, a little above Philadelphia, which we saw as soon as we got out of the creek, and arriv'd there about eight or nine o'clock on the Sunday morning, and landed at the Market Street wharf.

I have been the more particular in this description of my journey, and shall be so of my first entry into that city, that you may in your mind compare such unlikely beginnings with the figure I have since made there. I was in my working dress, my best cloaths being to come round by sea. I was dirty from my journey; my pockets were stuff'd out with shirts and stockings, and I knew no soul nor where to look for lodging. I was fatigued with travelling, rowing and want of rest, I was very hungry; and my whole stock of cash consisted of a Dutch dollar, and about a shilling in copper. The latter I gave the people of the boat for my passage, who at first refus'd it, on account of my rowing; but I insisted on their taking it. A man being sometimes more generous when he has but a little money than when he has plenty, perhaps thro' fear of being thought to have but little.

Then I walked up the street, gazing about till near the market-house I met a boy with bread. I had made many a meal of bread, and, inquiring where he got it, I went immediately to the baker's he directed me to, in Second Street, and ask'd for bisket, intending such as we had in Boston; but they, it seems, were not made in Philadelphia. Then I asked for a three-penny loaf, and was told they had none such. So not considering or knowing the difference of money, and the greater cheapness nor the names of his bread, I bade him give me three-penny worth of any sort. He gave me, accordingly, three great puffy rolls. I was surpriz'd at the quantity, but took it, and, having no room in my pockets, walk'd off with a roll under each arm, and eating the other. Thus I went up Market Street as far as Fourth Street, passing by the door of Mr. Read, my future wife's father; when she, standing at the door, saw me, and thought I made, as I certainly did, a most awkward, ridiculous appearance. Then I turned and went down Chestnut Street and part of Walnut Street, eating my roll all the way, and, coming round, found myself at Market Street wharf, near the boat I came

in, to which I went for a draught of the river water; and, being filled with one of my rolls, gave the other two to a woman and her child that came down the river in the boat with us, and were waiting to go farther.

Thus refresh'd, I walk'd again up the street, which by this time had many clean-dressed people in it, who were all walking the same way. I joined them, and thereby was led into the great meeting-house of the Quakers near the market. I sat down among them, and, after looking round awhile and hearing nothing said, being very drowsy thro' labor and want of rest the preceding night, I fell fast asleep, and continu'd so till the meeting broke up, when one was kind enough to rouse me. This was, therefore, the first house I was in, or slept in, in Philadelphia.

Walking again down toward the river, and, looking in the faces of people, I met a young Quaker man, whose countenance I lik'd, and, accosting him, requested he would tell me where a stranger could get lodging. We were then near the sign of the Three Mariners. "Here," says he, "is one place that entertains strangers, but it is not a reputable house; if thee wilt walk with me, I'll show thee a better." He brought me to the Crooked Billet in Water Street. Here I got a dinner; and, while I was eating it, several sly questions were asked me, as it seemed to be suspected from my youth and appearance, that I might be some runaway.

After dinner, my sleepiness return'd, and being shown to a bed, I lay down without undressing, and slept until six in the evening, was call'd to supper, went to bed again very early, and slept soundly till next morning. Then I made myself as tidy as I could, and went down to Andrew Bradford the printer's. I found in the shop the old man his father, whom I had seen at New York, and who, travelling on horseback, had got to Philadelphia before me. He introduc'd me to his son, who receiv'd me civilly, gave me a breakfast, but told me he did not at present want a hand, being lately supply'd with one; but there was another printer in town, lately set up, one Keimer, who, perhaps, might employ me; if not, I should be welcome to lodge at his house, and he would give me a little work to do now and then till fuller business should offer.

University Days[1]

JAMES THURBER

I PASSED all the other courses that I took at my University, but I could never pass botany. This was because all botany students had to spend several hours a week in a laboratory looking through a microscope at plant cells, and I could never see through a microscope. I never once saw a cell through a microscope. This used to enrage my instructor. He would wander around the laboratory pleased with the progress all the students were making in drawing the involved and, so I am told, interesting structure of flower cells, until he came to me. I would just be standing there. "I can't see anything," I would say. He would begin patiently enough, explaining how anybody can see through a microscope, but would always end up in a fury, claiming that I could *too* see through a microscope but just pretended that I couldn't. "It takes away from the beauty of flowers anyway," I used to tell him. "We are not concerned with beauty in this course," he would say. "We are concerned solely with what I may call the *mechanics* of flars." "Well," I'd say, "I can't see anything." "Try it just once again," he'd say, and I would put my eye to the microscope and see nothing at all, except now

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and again a nebulous milky substance—a phenomenon of maladjustment. You were supposed to see a vivid, restless clockwork of sharply defined plant cells. "I see what looks like a lot of milk," I would tell him. This, he claimed, was the result of my not having adjusted the microscope properly, so he would readjust it for me, or rather, for himself. And I would look again and see milk.

I finally took a deferred pass, as they called it, and waited a year and tried again. (You had to pass one of the biological sciences or you couldn't graduate.) The professor had come back from vacation brown as a berry, bright-eyed, and eager to explain cell-structure again to his classes. "Well," he said to me, cheerily, when we met in the first laboratory hour of the semester, "we're going to see cells this time, aren't we?" "Yes, sir," I said. Students to right of me and to left of me and in front of me were seeing cells; what's more, they were quietly drawing pictures of them in their notebooks. Of course, I didn't see anything.

"We'll try it," the professor said to me, grimly, "with every adjustment of the microscope known to man. As God is my witness, I'll arrange this glass so that you see cells through it or I'll give up teaching. In twenty-two years of botany, I—" He cut off abruptly for he was beginning to quiver all over, like Lionel Barrymore, and he genuinely wished to hold onto his temper; his scenes with me had taken a great deal out of him.

So we tried it with every adjustment of the microscope known to man. With only one of them did I see anything but blackness or the familiar lacteal opacity, and that time I saw, to my pleasure and amazement, a variegated constellation of flecks, specks, and dots. These I hastily drew. The instructor, noting my activity, came back from an adjoining desk, a smile on his lips and his eyebrows high in hope. He looked at my cell drawing. "What's that?" he demanded, with a hint of a squeal in his voice. "That's what I saw," I said. "You didn't, you didn't, you *did*n't!" he screamed, losing control of his temper instantly, and he bent over and squinted into the microscope. His head snapped up. "That's your eye!" he shouted. "You've fixed the lens so that it reflects! You've drawn your eye!"

Another course that I didn't like, but somehow managed to pass, was economics. I went to that class straight from the botany class, which didn't help me any in understanding either subject. I used to get them mixed up. But not as mixed up as another student in my economics class who came there direct from a physics laboratory. He was a tackle on the football team, named Bolenciecwcz. At that time Ohio State University had one of the best football teams in the country, and Bolenciecwcz was one of its outstanding stars. In order to be eligible to play it was necessary for him to keep up in his studies, a very difficult matter, for while he was not dumber than an ox he was not any smarter. Most of his professors were lenient and helped him along. None gave him more hints, in answering questions, or asked him simpler ones than the economics professor, a thin, timid man named Bassum. One day when we were on the subject of transportation and distribution, it came Bolenciecwcz's turn to answer a question. "Name one means of transportation," the professor said to him. No light came into the big tackle's eyes. "Just any means of transportation," said the professor. Bolenciecwcz sat staring at him. "That is," pursued the professor, "any medium, agency, or method of going from one place to another." Bolenciecwcz had the look of a man who is being led into a trap. "You may choose among steam, horse-drawn, or electrically propelled vehicles," said the instructor. "I might suggest the one which we commonly take in making long journeys across land." There was a profound silence in which everybody stirred uneasily, including Bolenciecwcz and Mr. Bassum. Mr. Bassum abruptly broke this silence in an amazing manner. "Choo-choo-choo," he said, in a low voice, and turned instantly scarlet. He glanced appealingly around the room. All of us, of course, shared Mr. Bassum's desire that Bolenciecwcz should stay abreast of the class in economics, for the Illinois game, one of the hardest and most important of the season, was only a week off. "Toot, toot, toot-tooooooot!" some student with a deep voice

moaned, and we all looked encouragingly at Bolenciecwcz. Somebody else gave a fine imitation of a locomotive letting off steam. Mr. Bassum himself rounded off the little show. "Ding, dong, ding, dong," he said hopefully. Bolenciecwcz was staring at the floor now, trying to think, his great brow furrowed, his huge hands rubbing together, his face red.

"How did you come to college this year, Mr. Bolenciecwcz?" asked the professor. "*Chuf* fa Chuffa, *Chuf* fa chuffa."

"M'father sent me," said the football player.

"What on?" asked Bassum.

"I git an 'lowance," said the tackle, in a low, husky voice, obviously embarrassed.

"No, no," said Bassum. "Name a means of transportation. What did you *ride* here on?"

"Train," said Bolenciecwcz.

"Quite right," said the professor. "Now, Mr. Nugent, will you tell us—"

If I went through anguish in botany and economics—for different reasons—gymnasium work was even worse. I don't even like to think about it. They wouldn't let you play games or join in the exercises with your glasses on and I couldn't see with mine off. I bumped into professors, horizontal bars, agricultural students, and swinging iron rings. Not being able to see, I could take it but I couldn't dish it out. Also, in order to pass gymnasium (and you had to pass it to graduate) you had to learn to swim if you didn't know how. I didn't like the swimming pool, I didn't like swimming, and I didn't like the swimming instructor, and after all these years I still don't. I never swam but I passed my gym work anyway, by having another student give my gymnasium number (978) and swim across the pool in my place. He was a quiet, amiable blonde youth, number 473, and he would have seen through a microscope for me if we could have got away with it, but we couldn't get away with it. Another thing I didn't like about gymnasium work was that they made you strip the day you registered. It is impossible for me to be happy when I am stripped and being asked a lot of questions. Still, I did better than a lanky agricultural student who was cross-examined just before I was. They asked each student what college he was in—that is, whether Arts, Engineering, Commerce, or Agriculture. "What college are you in?" the instructor snapped at the youth in front of me. "Ohio State University," he said promptly.

It wasn't that agricultural student but it was another a whole lot like him who decided to take up journalism, possibly on the ground that when farming went to hell he could fall back on newspaper work. He didn't realize, of course, that that would be very much like falling back full-length on a kit of carpenter's tools. Haskins didn't seem cut out for journalism, being too embarrassed to talk to anybody and unable to use a typewriter, but the editor of the college paper assigned him to the cow barns, the sheep house, the horse pavilion, and the animal husbandry department generally. This was a genuinely big "beat," for it took up five times as much ground and got ten times as great a legislative appropriation as the College of Liberal Arts. The agricultural student knew animals, but nevertheless his stories were dull and colorlessly written. He took all afternoon on each of them, on account of having to hunt for each letter on the typewriter. Once in a while he had to ask somebody to help him hunt. "C" and "L," in particular, were hard letters for him to find. His editor finally got pretty much annoyed at the farmer-journalist because his pieces were so uninteresting. "See here, Haskins," he snapped at him one day. "Why is it we never have anything hot from you on the horse pavilion? Here we have two hundred head of horses on this campus—more than any other university in the Western Conference except Purdue—and yet you never get any real lowdown on them. Now shoot over to the horse barns and dig up something lively." Haskins shambled out and came back in about an hour; he said he had something. "Well, start it off snappily," said the editor. "Something people will read." Haskins set to work and in a couple of hours brought a sheet of typewritten paper to the desk; it was a two-hundred-word story about some disease that had broken out among the horses. Its opening sentence was simple but arresting. It

read: "Who has noticed the sores on the tops of the horses in the animal husbandry building?"

Ohio State was a land grant university and therefore two years of military drill was compulsory. We drilled with old Springfield rifles and studied the tactics of the Civil War even though the World War was going on at the time. At 11 o'clock each morning thousands of freshmen and sophomores used to deploy over the campus, moodily creeping up on the old chemistry building. It was good training for the kind of warfare that was waged at Shiloh but it had no connection with what was going on in Europe. Some people used to think there was German money behind it, but they didn't dare say so or they would have been thrown in jail as German spies. It was a period of muddy thought and marked, I believe, the decline of higher education in the Middle West.

As a soldier I was never any good at all. Most of the cadets were glumly indifferent soldiers, but I was no good at all. Once General Littlefield, who was commandant of the cadet corps, popped up in front of me during regimental drill and snapped, "You are the main trouble with this university!" I think he meant that my type was the main trouble with the university but he may have meant me individually. I was mediocre at drill, certainly—that is, until my senior year. By that time I had drilled longer than anybody else in the Western Conference, having failed at military at the end of each preceding year so that I had to do it all over again. I was the only senior still in uniform. The uniform which, when new, had made me look like an interurban railway conductor, now that it had become faded and too tight, made me look like Bert Williams in his bellboy act. This had a definitely bad effect on my morale. Even so, I had become by sheer practise little short of wonderful at squad manoeuvres.

One day General Littlefield picked our company out of the whole regiment and tried to get it mixed up by putting it through one movement after another as fast as we could execute them: squads right, squads left, squads on right into line, squads right about, squads left front into line, etc. In about three minutes one hundred and nine men were marching in one direction and I was marching away from them at an angle of forty degrees, all alone. "Company, halt!" shouted General Littlefield, "That man is the only man who has it right!" I was made a corporal for my achievement.

The next day General Littlefield summoned me to his office. He was swatting flies when I went in. I was silent and he was silent too, for a long time. I don't think he remembered me or why he had sent for me, but he didn't want to admit it. He swatted some more flies, keeping his eyes on them narrowly before he let go with the swatter. "Button up your coat!" he snapped. Looking back on it now I can see that he meant me although he was looking at a fly, but I just stood there. Another fly came to rest on a paper in front of the general and began rubbing its hind legs together. The general lifted the swatter cautiously. I moved restlessly and the fly flew away. "You startled him!" barked General Littlefield, looking at me severely. I said I was sorry. "That won't help the situation!" snapped the General, with cold military logic. I didn't see what I could do except offer to chase some more flies toward his desk, but I didn't say anything. He stared out the window at the faraway figures of co-eds crossing the campus toward the library. Finally, he told me I could go. So I went. He either didn't know which cadet I was or else he forgot what he wanted to see me about. It may have been that he wished to apologize for having called me the main trouble with the university; or maybe he had decided to compliment me on my brilliant drilling of the day before and then at the last minute decided not to. I don't know. I don't think about it much any more.

By Walden Pond[1]

HENRY DAVID THOREAU

WHEN I wrote the following pages, or rather the bulk of them, I lived alone, in the woods, a mile from any neighbor, in a house which I had built myself, on the shore of Walden Pond, in Concord, Massachusetts, and earned my living by the labor of my hands only. I lived there two years and two months. At present I am a sojourner in civilized life again.

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I see young men, my townsmen, whose misfortune it is to have inherited farms, houses, barns, cattle, and farming tools; for these are more easily acquired than got rid of. Better if they had been born in the open pasture and suckled by a wolf, that they might have seen with clearer eyes what field they were called to labor in. Who made them serfs of the soil? Why should they eat their sixty acres, when man is condemned to eat only his peck of dirt? Why should they begin digging their graves as soon as they are born. They have got to live a man's life, pushing all these things before them, and get on as well as they can. How many a poor immortal soul have I met well-nigh crushed and smothered under its load, creeping down the road of life, pushing before it a barn seventy-five feet by forty, its Augean stables never cleansed, and one hundred acres of land, tillage, mowing, pasture, and wood-lot! The portionless, who struggle with no such unnecessary inherited encumbrances, find it labor enough to subdue and cultivate a few cubic feet of flesh.

But men labor under a mistake. The better part of the man is soon plowed into the soil for compost. By a seeming fate, commonly called necessity, they are employed, as it says in an old book, laying up treasures which moth and rust will corrupt and thieves break through and steal. It is a fool's life, as they will find when they get to the end of it if not before.

[1] From *Walden.*

Finding that my fellow-citizens were not likely to offer me any room in the court house, or any curacy or living anywhere else, but I must shift for myself, I turned my face more exclusively than ever to the woods, where I was better known. I determined to go into business at once, and not wait to acquire the usual capital, using such slender means as I had already got. My purpose in going to Walden Pond was not to live cheaply nor to live dearly there, but to transact some private business with the fewest obstacles; to be hindered from accomplishing which for want of a little common sense, a little enterprise and business talent, appeared not so sad as foolish.

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Near the end of March, 1845, I borrowed an axe and went down to the woods by Walden Pond, nearest to where I intended to build my house, and began to cut down some tall, arrowy white pines, still in their youth, for timber. It is difficult to begin without borrowing, but perhaps it is the most generous course thus to permit your fellowmen to have an interest in your enterprise. The owner of the axe, as he released his hold on it, said that it was the apple of his eye; but I returned it sharper than I received it. It was a pleasant hillside where I worked, covered with pine woods, through which I looked out on the pond, and a small open field in the woods where pines and hickories were springing up. The ice in the pond was not yet dissolved, though there were some open spaces, and it was all dark-colored and saturated with water. There were some slight flurries of snow during the days that I worked there; but for the most part when I came out on to the railroad, on my way home, its yellow sand-heap stretched away gleaming in the hazy atmosphere, and the rails shone in the spring sun, and I heard the lark and peewee and other birds already come to commence another year with us.

They were pleasant spring days, in which the winter of man's discontent was thawing as well as the earth, and the life that had lain torpid began to stretch itself. One day, when my axe had come off and I had cut a green hickory for a wedge, driving it with a stone, and had placed the whole to soak in a pond-hole in order to swell the wood, I saw a striped snake run into the water, and he lay on the bottom, apparently without inconvenience, as long as I stayed there, or more than a quarter of an hour; perhaps because he had not yet fairly come out of the torpid state. It appeared to me that for a like reason men remained in their present low and primitive condition; but if they should feel the influence of the spring of springs arousing them, they would of necessity rise to a higher and more ethereal life. I had previously seen the snakes in frosty mornings in my path with portions of their bodies still numb and inflexible, waiting for the sun to thaw them. On the 1st of April it rained and melted the ice, and in the early part of the day, which was very foggy, I heard a stray goose groping about over the pond and cackling as if lost, or like the spirit of the fog.

So I went on for some days cutting and hewing timber, and also studs and rafters, all with my narrow axe, not having many communicable or scholar-like thoughts, singing to myself,—

> Men say they know many things;
> But lo! they have taken wings,—
> The arts and sciences,
> And a thousand appliances:
> The wind that blows
> Is all that anybody knows.

. . . . .

Before winter I built a chimney, and shingled the sides of my house, which were already impervious to rain, with imperfect and sappy shingles made of the first slice of the log, whose edges I was obliged to straighten with a plane.

I have thus a tight shingled and plastered house, ten feet wide by fifteen long, and eight-feet posts, with a garret and a closet, a large window on each side, two trap-doors, one door at the end, and a brick fireplace opposite. The exact cost of my house, paying the usual price for such materials as I used, but not counting the work, all of which was done by myself, was as follows; and I give the details because very few are able to tell exactly what their houses cost, and fewer still, if any, the separate cost of the various materials which compose them:—

Boards	$8.03½,	mostly shanty boards
Refuse shingles for roof and sides	4.00	
Laths	1.25	
Two second-hand windows with glass	2.43	
One thousand old bricks	4.00	
Two casks of lime	2.40	That was high
Hair	0.31	More than I needed
Mantle-tree iron	0.15	
Nails	3.90	
Hinges and screws	0.14	
Latch	0.10	
Chalk	0.01	
Transportation	1.40	I carried a good part on my back.
In all	$28.12½	

These are all the materials, excepting the timber, stones, and sand, which I claimed by squatter's right. I have also a small woodshed adjoining, made chiefly of the stuff which was left after building the house.

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By surveying, carpentry, and day-labor of various other kinds in the village in the meanwhile, for I have as many trades as fingers, I had earned $13.34. The expense of food for eight months, namely, from July 4th to March 1st, the time when these estimates were made, though I lived there more than two years,—not counting potatoes, a little green corn, and some peas, which I had raised, nor considering the value of what was on hand at the last date,—was

Rice	$1.73½	
Molasses	1.73	Cheapest form of the saccharine
Rye meal	1.04¾	
Indian meal	0.99¾	Cheaper than rye
Pork	0.22	

Flour	0.88	Costs more than Indian meal, both money and trouble.
Sugar	0.80	
Lard	0.65	
Apples	0.25	
Dried apple	0.22	
Sweet potatoes	0.10	
One pumpkin	0.06	
One watermelon	0.02	
Salt	0.03	

All experiments which failed

Yes, I did eat $8.74, all told; but I should not thus unblushingly publish my guilt, if I did not know that most of my readers were equally guilty with myself, and that their deeds would look no better in print. The next year I sometimes caught a mess of fish for my dinner, and once I went so far as to slaughter a woodchuck which ravaged my bean-field, —effect his transmigration, as a Tartar would say,—and devour him, partly for experiment's sake; but though it afforded me a momentary enjoyment, notwithstanding a musky flavor, I saw that the longest use would not make that a good practice, however it might seem to have your woodchucks ready dressed by the village butcher.

Clothing and some incidental expenses within the same dates, though little can be inferred from this item, amounted to

	$8.40¾
Oil and some necessary utensils	2.00

So that all the pecuniary outgoes, excepting for washing and mending, which for the most part were done out of the house, and their bills have not yet been received,—and these are all and more than all the ways by which money necessarily goes out in this part of the world,—were

House	$28.12½
Farm one year	14.72½
Food eight months	8.74
Clothing, etc., eight months	8.40¾
Oil, etc., eight months	2.00
In all	$61.99¾

I address myself now to those of my readers who have a living to get. And to meet this I have for farm produce sold

	$23.44
Earned by day-labor	13.34
In all	$36.78,

which subtracted from the sum of the outgoes leaves a balance of $25.21¾ on the one side,—this being very nearly the means with which I started, and the measure of expenses to be incurred,—and on the other, beside the leisure and independence and health thus secured, a comfortable house for me as long as I choose to occupy it.

These statistics, however accidental and therefore uninstructive they may appear, as they have a certain completeness, have a certain value also. Nothing was given me of which I have not rendered some account. It appears from the above estimate, that my food alone cost me in money about twenty-seven cents a week. It was, for nearly two years after this, rye and Indian meal without yeast, potatoes, rice, a very little salt pork, molasses, and salt; and my drink, water. It was fit that I should live on rice, mainly, who loved so well the philosophy of India. To meet the objections of some inveterate cavillers, I may as well state, that if I dined out occasionally, as I always had done, and I trust shall have opportunities to do again, it was frequently to the detriment of my domestic arrangements. But the dining out, being, as I have stated, a constant element, does not in the least affect a comparative statement like this.

I learned from my two years' experience that it would cost incredibly little trouble to obtain one's necessary food, even in this latitude; that a man may use as simple a diet as the animals, and yet retain health and strength. I have made a satisfactory dinner, satisfactory on several accounts, simply off a dish of purslane (Portulaca oleracea) which I gathered in my cornfield, boiled and salted. I give the Latin on account of the savoriness of the trivial name. And pray what more can a reasonable man desire, in peaceful times, in ordinary noons, than a sufficient number of ears of green sweet corn boiled, with the addition of salt? Even the little variety which I used was a yielding to the demands of appetite, and not of health. Yet men have

come to such a pass that they frequently starve, not for want of necessaries, but for want of luxuries; and I know a good woman who thinks that her son lost his life because he took to drinking water only.

The reader will perceive that I am treating the subject rather from an economic than a dietetic point of view, and he will not venture to put my abstemiousness to the test unless he has a well-stocked larder.

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I made a study of the ancient and indispensable art of breadmaking, consulting such authorities as offered, going back to the primitive days and first invention of the unleavened kind, when from the wildness of nuts and meats men first reached the mildness and refinement of this diet, and travelling gradually down in my studies through that accidental souring of the dough which, it is supposed, taught the leavening process, and through the various fermentations thereafter, till I came to "good, sweet, wholesome bread, the staff of life."

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Thus I could avoid all trade and barter, so far as my food was concerned, and having a shelter already, it would only remain to get clothing and fuel. The pantaloons which I now wear were woven in a farmer's family,—thank Heaven there is so much virtue still in man; for I think the fall from the farmer to the operative as great and memorable as that from the man to the farmer;—and in a new country, fuel is an encumbrance. As for a habitat, if I were not permitted still to squat, I might purchase one acre at the price for which the land I cultivated was sold —namely, eight dollars and eight cents. But as it was, I considered that I enhanced the value of the land by squatting on it.

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For more than five years I maintained myself thus solely by the labor of my hands, and I found that, by working about six weeks in a year, I could meet all the expenses of living. The whole of my winters, as well as most of my summers, I had free and clear for study. I have thoroughly tried school-keeping, and found that my expenses were in proportion, or rather out of proportion, to my income, for I was obliged to dress and train, not to say think and believe, accordingly, and I lost my time into the bargain. As I did not teach for the good of my fellow-men, but simply for a livelihood, this was a failure. I have tried trade; but I found that it would take ten years to get under way in that, and that then I should probably be on my way to the devil. I was actually afraid that I might by that time be doing what is called a good business. When formerly I was looking about to see what I could do for a living, some sad experience in conforming to the wishes of friends being fresh in my mind to tax my ingenuity, I thought often and seriously of picking huckleberries; that surely I could do, and its small profits might suffice, —for my greatest skill had been to want but little,—so little capital it required, so little distraction from my wonted moods, I foolishly thought. While my acquaintances went unhesitatingly into trade or the professions, I contemplated this occupation as most like theirs; ranging the hills all summer to pick the berries which came in my way, and thereafter carelessly dispose of them; so to keep the flocks of Admetus. I also dreamed that I might gather the wild herbs, or carry evergreens to such villagers as loved to be reminded of the woods, even to the city, by hay-cart loads. But I have since learned that trade curses everything it handles; and though you trade in messages from heaven, the whole curse of trade attaches to the business.

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In short, I am convinced, both by faith and experience, that to maintain one's self on this earth is not a hardship but a pastime, if we will live simply and wisely; as the pursuits of the simpler nations are still the sports of the more artificial. It is not necessary that a man should earn his living by the sweat of his brow, unless he sweats easier than I do.

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When first I took up my abode in the woods, that is, began to spend my nights as well as days there, which, by accident, was

on Independence Day, or the Fourth of July, 1845, my house was not finished for winter, but was merely a defence against the rain, without plastering or chimney, the walls being of rough, weather-stained boards, with wide chinks, which made it cool at night. The upright whitehewn studs and freshly planed door and window casings gave it a clean and airy look, especially in the morning, when its timbers were saturated with dew, so that I fancied that by noon some sweet gum would exude from them. To my imagination it retained throughout the day more or less of this auroral character, reminding me of a certain house on a mountain which I had visited a year before. This was an airy and unplastered cabin, fit to entertain a travelling god, and where a goddess might trail her garments. The winds which passed over my dwelling were such as sweep over the ridges of mountains, bearing the broken strains, or celestial parts only, of terrestrial music. The morning wind forever blows, the poem of creation is uninterrupted; but few are the ears that hear it. Olympus is but the outside of the earth everywhere.

The only house I had been the owner of before, if I except a boat, was a tent, which I used occasionally when making excursions in the summer, and this is still rolled up in my garret; but the boat, after passing from hand to hand, has gone down the stream of time. With this more substantial shelter about me, I had made some progress toward settling in the world. This frame, so slightly clad, was a sort of crystallization around me, and reacted on the builder. It was suggestive somewhat as a picture in outlines. I did not need to go outdoors to take the air, for the atmosphere within had lost none of its freshness. It was not so much within-doors as behind a door where I sat, even in the rainiest weather. The Harivansa says, "An abode without birds is like a meat without seasoning." Such was not my abode, for I found myself suddenly neighbor to the birds; not by having imprisoned one, but having caged myself near them. I was not only nearer to some of those which commonly frequent the garden and the orchard, but to those wilder and more thrilling songsters of the forest which never, or rarely, serenade a villager,—the wood thrush, the veery, the scarlet tanager, the field sparrow, the whip-poor-will, and many others.

I was seated by the shore of a small pond, about a mile and a half south of the village of Concord and somewhat higher than it, in the midst of an extensive wood between that town and Lincoln, and about two miles south of that our only field known to fame, Concord Battle Ground; but I was so low in the woods that the opposite shore, half a mile off, like the rest, covered with wood, was my most distant horizon. For the first week, whenever I looked out on the pond it impressed me like a tarn high up on the side of a mountain, its bottom far above the surface of other lakes, and, as the sun arose, I saw it throwing off its nightly clothing of mist, and here and there, by degrees, its soft ripples or its smooth reflecting surface was revealed, while the mists, like ghosts, were stealthily withdrawing in every direction into the woods, as at the breaking up of some nocturnal conventicle. The very dew seemed to hang upon the trees later into the day than usual, as on the sides of mountains.

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Both place and time were changed, and I dwelt nearer to those parts of the universe and to those eras in history which had most attracted me. Where I lived was as far off as many a region viewed nightly by astronomers. We are wont to imagine rare and delectable places in some remote and more celestial corner of the system, behind the constellation of Cassiopeia's Chair, far from noise and disturbance. I discovered that my house actually had its site in such a withdrawn, but forever new and unprofaned, part of the universe. If it were worth the while to settle in those parts near to the Pleiades or the Hyades, to Aldebaran or Altair, then I was really there, or at an equal remoteness from the life which I had left behind, dwindled and twinkling with as fine a ray to my nearest neighbor, and to be seen only in moonless nights by him. Such

was that part of creation where I had squatted:—

"There was a shepherd that did live
And held his thoughts as high
As were the mounts whereon his flocks
Did hourly feed him by."

What should we think of the shepherd's life if his flocks always wandered to higher pastures than his thoughts?

Every morning was a cheerful invitation to make my life of equal simplicity, and I may say innocence, with Nature herself. I got up early and bathed in the pond; that was a religious exercise, and one of the best things which I did. They say that characters were engraven on the bathing tub of King Tching-thang to this effect: "Renew thyself completely each day; do it again, and again, and forever again." I can understand that. Morning brings back the heroic ages. I was as much affected by the faint hum of a mosquito making its invisible and unimaginable tour through my apartment at earliest dawn, when I was sitting with door and windows open, as I could be by any trumpet that ever sang of fame. It was Homer's requiem; itself an Iliad and Odyssey in the air, singing its own wrath and wanderings. There was something cosmical about it; a standing advertisement, till forbidden, of the everlasting vigor and fertility of the world. The morning, which is the most memorable season of the day, is the awakening hour.

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I went to the woods because I wished to live deliberately, to front only the essential facts of life and see if I could not learn what it had to teach, and not, when I came to die, discover that I had not lived. I did not wish to live what was not life, living is so dear; nor did I wish to practise resignation, unless it was quite necessary. I wanted to live deep and suck out all the marrow of life, to live so sturdily and Spartan-like as to put to rout all that was not life, to cut a broad swath and shave close, to drive life into a corner, and reduce it to its lowest terms, and, if it proved to be mean, why then to get the whole and genuine meanness of it, and publish its meanness to the world; or if it were sublime, to know it by experience, and be able to give a true account of it in my next excursion. For most men, it appears to me, are in a strange uncertainty about it, whether it is of the devil or of God, and have *somewhat hastily* concluded that it is the chief end of man here to "glorify God and enjoy him forever."

Still we live meanly, like ants; though the fable tells us that we were long ago changed into men; like pygmies we fight with cranes; it is error upon error, and clout upon clout, and our best virtue has for its occasion a superfluous and evitable wretchedness. Our life is frittered away by detail.

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What is a course of history or philosophy, or poetry, no matter how well selected, or the best society, or the most admirable routine of life, compared with the discipline of looking always at what is to be seen? Will you be a reader, a student merely, or a seer? Read your fate, see what is before you, and walk on into futurity.

I did not read books the first summer; I hoed beans. Nay, I often did better than this. There were times when I could not afford to sacrifice the bloom of the present moment to any work, whether of the head or hands. I love a broad margin to my life. Sometimes, in a summer morning, having taken my accustomed bath, I sat in my sunny doorway from sunrise till noon, rapt in a revery, amidst the pines and hickories and sumachs, in undisturbed solitude and stillness, while the birds sang around or flitted noiseless through the house, until by the sun falling in at my west window, or the noise of some traveller's wagon on the distant highway, I was reminded of the lapse of time. I grew in those seasons like corn in the night, and they were far better than any work of the hands would have been. They were not time subtracted from my life, but so much over and above my usual allowance.

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My house was on the side of a hill, immediately on the edge of the larger wood, in the midst of a young forest of pitch pines

and hickories, and half a dozen rods from the pond, to which a narrow footpath led down the hill. In my front yard grew the strawberry, blackberry, and life-everlasting, johnswort and goldenrod, shrub oaks and sand cherry, blueberry and groundnut. Near the end of May, the sand cherry (*Cerasus pumila*) adorned the sides of the path with its delicate flowers arranged in umbels cylindrically about its short stems, which last, in the fall, weighed down with good-sized and handsome cherries, fell over in wreaths like rays on every side. I tasted them out of compliment to Nature, though they were scarcely palatable. The sumach (*Rhus glabra*) grew luxuriantly about the house, pushing up through the embankment which I had made, and growing five or six feet the first season. Its broad pinnate tropical leaf was pleasant though strange to look on. The large buds, suddenly pushing out late in the spring from dry sticks which had seemed to be dead, developed themselves as by magic into graceful green and tender boughs, an inch in diameter; and sometimes, as I sat at my window, so heedlessly did they grow and tax their weak joints, I heard a fresh and tender bough suddenly fall like a fan to the ground, when there was not a breath of air stirring, broken off by its own weight. In August, the large masses of berries, which, when in flower, had attracted many wild bees, gradually assumed their bright velvety crimson hues, and by their weight again bent down and broke the tender limbs.

As I sit at my window this summer afternoon, hawks are circling about my clearing; the tantivy of wild pigeons, flying by twos and threes athwart my view, or perching restless on the white pine boughs behind my house, gives a voice to the air; a fish hawk dimples the glassy surface of the pond and brings up a fish; a mink steals out of the marsh before my door and seizes a frog by the shore; the sedge is bending under the weight of the reed-birds flitting hither and thither; and for the last half-hour I have heard the rattle of railroad cars, now dying away and the reviving like the beat of a partridge, conveying travellers from Boston to the country.

Now that the cars are gone by and all the restless world with them, and the fishes in the pond no longer feel their rumbling, I am more alone than ever. For the rest of the long afternoon, perhaps, my meditations are interrupted only by the faint rattle of a carriage or team along the distant highway.

Sometimes, on Sundays, I heard the bells, the Lincoln, Acton, Bedford, or Concord bell, when the wind was favorable, a faint, sweet, and, as it were, natural melody, worth importing into the wilderness. At a sufficient distance over the woods this sound acquires a certain vibratory hum, as if the pine needles in the horizon were the strings of a harp which it swept. All sound heard at the greatest possible distance produces one and the same effect, a vibration of the universal lyre, just as the intervening atmosphere makes a distant ridge of earth interesting to our eyes by the azure tint it imparts to it. There came to me in this case a melody which the air had strained, and which had conversed with every leaf and needle of the wood, that portion of the sound which the elements had taken up and modulated and echoed from vale to vale. The echo is, to some extent, an original sound, and therein is the magic and charm of it. It is not merely a repetition of what was worth repeating in the bell, but partly the voice of the wood; the same trivial words and notes sung by a wood-nymph.

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Late in the evening I heard the distant rumbling of wagons over bridges,—a sound heard farther than almost any other at night,—the baying of dogs, and sometimes again the lowing of some disconsolate cow in a distant barn-yard. In the meanwhile all the shore rang with the trump of bullfrogs, the sturdy spirits of ancient wine-bibbers and wassailers, still unrepentant, trying to sing a catch in their Stygian lake,—if the Walden nymphs will pardon the comparison, for though there are almost no weeds, there are frogs there,—who would fain keep up the hilarious rules of their old festal tables, though their voices have waxed hoarse and solemnly grave, mocking at mirth, and the wine has lost its flavor, and become only

liquor to distend their paunches, and sweet intoxication never comes to drown the memory of the past, but mere saturation and waterloggedness and distention. The most aldermanic, with his chin upon a heart-leaf, which serves for a napkin to his drooling chaps, under this northern shore quaffs a deep draught of the once scorned water, and passes round the cup with the ejaculation *tr-r-r-oonk*, *tr-r-roonk*, *tr-r-r-oonk!* and straightway comes over the water from some distant cove the same password repeated, where the next in seniority and girth has gulped down to his mark; and when this observance has made the circuit of the shores, then ejaculates the master of the ceremonies, with satisfaction, *tr-r-r-oonk!* and each in his turn repeats the same down to the least distended, leakiest, and flabbiest paunched, that there be no mistake; and then the bowl goes round again and again, until the sun disperses the morning mist, and only the patriarch is not under the pond, but vainly bellowing *troonk* from time to time, and pausing for a reply.

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This is a delicious evening, when the whole body is one sense, and imbibes delight through every pore. I go and come with a strange liberty in Nature, a part of herself. As I walk along the stony shore of the pond in my shirt-sleeves, though it is cool as well as cloudy and windy, and I see nothing special to attract me, all the elements are unusually congenial to me. The bullfrogs trump to usher in the night, and the note of the whip-poor-will is borne on the rippling wind from over the water. Sympathy with the fluttering alder and poplar leaves almost takes away my breath; yet, like the lake, my serenity is rippled but not ruffled. These small waves raised by the evening wind are as remote from storm as the smooth reflecting surface. Though it is now dark, the wind still blows and roars in the wood, the waves still dash, and some creatures lull the rest with their notes. The repose is never complete. The wildest animals do not repose, but seek their prey now; the fox, and skunk, and rabbit, now roam the fields and woods without fear. They are Nature's watchmen,—links which connect the days of animated life.

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The indescribable innocence and beneficence of Nature,—of sun and wind and rain, of summer and winter,—such health, such cheer, they afford forever! and such sympathy have they ever with our race, that all Nature would be affected, and the sun's brightness fade, and the winds would sigh humanely, and the clouds rain tears, and the woods shed their leaves and put on mourning in midsummer, if any man should ever for a just cause grieve. Should I not have intelligence with the earth? Am I not partly leaves and vegetable mould myself?

Autobiography[1]

Thomas Henry Huxley

I WAS BORN about eight o'clock in the morning on the 4th of May, 1825, at Ealing, which was, at that time, as quiet a little country village as could be found within half-a-dozen miles of Hyde Park Corner. Now it is a suburb of London with, I believe, 30,000 inhabitants. My father was one of the masters in a large semi-public school which at one time had a high reputation. I am not aware that any portents preceded my arrival in this world, but, in my childhood, I remember hearing a traditional account of the manner in which I lost the chance of an endowment of great practical value. The windows of my mother's room were open, in con-

[1] From *Autobiography* by Thomas Henry Huxley, published by Appleton-Century-Crofts, Inc.

sequence of the unusual warmth of the weather. For the same reason, probably, a neighboring beehive had swarmed, and the new colony, pitching on the window-sill, was making its way into the room when the horrified nurse shut down the sash. If that well-meaning woman had only abstained from her ill-timed interference, the swarm might have settled on my lips, and I should have been endowed with that mellifluous eloquence which, in this country, leads far more surely than worth, capacity, or honest work, to the highest places in Church and State. But the opportunity was lost, and I have been obliged to content myself through life with saying what I mean in the plainest of plain language, than which, I suppose, there is no habit more ruinous to a man's prospects of advancement.

Why I was christened Thomas Henry I do not know; but it is a curious chance that my parents should have fixed for my usual denomination upon the name of that particular Apostle with whom I have always felt most sympathy. Physically and mentally I am the son of my mother so completely—even down to peculiar movements of the hands, which made their appearance in me as I reached the age she had when I noticed them ——that I can hardly find any trace of my father in myself, except an inborn faculty for drawing, which unfortunately, in my case, has never been cultivated, a hot temper, and that amount of tenacity of purpose which unfriendly observers sometimes call obstinacy.

My mother was a slender brunette, of an emotional and energetic temperament, and possessed of the most piercing black eyes I ever saw in a woman's head. With no more education than other women of the middle classes in her day, she had an excellent mental capacity. Her most distinguishing characteristic, however, was rapidity of thought. If one ventured to suggest she had not taken much time to arrive at any conclusion, she would say, "I cannot help it: things flash across me." That peculiarity has been passed on to me in full strength; it has often stood me in good stead; it has sometimes played me sad tricks, and it has always been a danger. But, after all, if my time were to come over again, there is nothing I would less willingly part with than my inheritance of mother wit.

I have next to nothing to say about my childhood. In later years my mother, looking at me almost reproachfully, would sometimes say, "Ah! you were such a pretty boy!" whence I had no difficulty in concluding that I had not fulfilled my early promise in the matter of looks. In fact, I have a distinct recollection of certain curls of which I was vain, and of a conviction that I closely resembled that handsome, courtly gentleman, Sir Herbert Oakley, who was vicar of our parish, and who was as a god to us country folk, because he was occasionally visited by the then Prince George of Cambridge. I remember turning my pinafore wrong side forwards in order to represent a surplice, and preaching to my mother's maids in the kitchen as nearly as possible in Sir Herbert's manner, one Sunday morning when the rest of the family were at church. That is the earliest indication I can call to mind of the strong clerical affinities which my friend Mr. Herbert Spencer has always ascribed to me, though I fancy they have for the most part remained in a latent state.

My regular school training was of the briefest, perhaps fortunately, for though my way of life has made me acquainted with all sorts and conditions of men, from the highest to the lowest, I deliberately affirm that the society I fell into at school was the worst I have ever known. We boys were average lads, with much the same inherent capacity for good and evil as any others; but the people who were set over us cared about as much for our intellectual and moral welfare as if they were baby-farmers. We were left to the operation of the struggle for existence among ourselves, and bullying was the least of the ill practices current among us. Almost the only cheerful reminiscence in connection with the place which arises in my mind is that of a battle I had with one of my classmates who had bullied me until I could stand it no longer. I was a very slight lad, but there was a wild-cat element in me which, when roused, made up for lack of weight, and I licked my adversary effectually.

However, one of my first experiences of the extremely rough-and-ready nature of justice, as exhibited by the course of things in general, arose out of the fact that I—the victor—had a black eye, while he—the vanquished—had none, so that I got into disgrace and he did not. We made it up, and thereafter I was unmolested. One of the greatest shocks I ever received in my life was to be told a dozen years afterwards by the groom who brought me my horse in a stable-yard in Sydney that he was my quondam antagonist. He had a long story of family misfortune to account for his position, but at that time it was necessary to deal very cautiously with mysterious strangers in New South Wales, and on inquiry I found that the unfortunate young man had not only been "sent out," but had undergone more than one colonial conviction.

As I grew older, my great desire was to be a mechanical engineer, but the fates were against this and, while very young, I commenced the study of medicine under a medical brother-in-law. But, though the Institute of Mechanical Engineers would certainly not own me, I am not sure that I have not all along been a sort of mechanical engineer *in partibus infidelium*. I am now occasionally horrified to think how very little I ever knew or cared about medicine as the art of healing. The only part of my professional course which really and deeply interested me was physiology, which is the mechanical engineering of living machines; and, notwithstanding that natural science has been my proper business, I am afraid there is very little of the genuine naturalist in me. I never collected anything, and species work was always a burden to me; what I cared for was the architectural and engineering part of the business, the working out of the wonderful unity of plan in the thousands and thousands of diverse living constructions, and the modifications of similar apparatuses to serve diverse ends. The extraordinary attraction I felt towards the study of the intricacies of living structure nearly proved fatal to me at the outset. I was a mere boy—I think between thirteen and fourteen years of age—when I was taken by some older student friends of mine to the first *post mortem* examination I ever attended. All my life I have been most unfortunately sensitive to the disagreeables which attend anatomical pursuits, but on this occasion my curiosity overpowered all other feelings, and I spent two or three hours in gratifying it. I did not cut myself, and none of the ordinary symptoms of dissection-poison supervened, but poisoned I was somehow, and I remember sinking into a strange state of apathy. By way of a last chance, I was sent to the care of some good, kind people, friends of my father's, who lived in a farmhouse in the heart of Warwickshire. I remember staggering from my bed to the window on the bright spring morning after my arrival, and throwing open the casement. Life seemed to come back on the wings of the breeze, and to this day the faint odor of wood-smoke, like that which floated across the farm-yard in the early morning, is as good to me as the "sweet south upon a bed of violets." I soon recovered, but for years I suffered from occasional paroxysms of internal pain, and from that time my constant friend, hypochondriacal dyspepsia, commenced his half century of co-tenancy of my fleshly tabernacle.

Looking back on my *Lehrjahre*, I am sorry to say that I do not think that any account of my doings as a student would tend to edification. In fact, I should distinctly warn ingenuous youth to avoid imitating my example. I worked extremely hard when it pleased me, and when it did not—which was a very frequent case—I was extremely idle (unless making caricatures of one's pastors and masters is to be called a branch of industry), or else wasted my energies in wrong directions. I read everything I could lay hands upon, including novels, and took up all sorts of pursuits to drop them again quite as speedily. No doubt it was very largely my own fault, but the only instruction from which I ever obtained the proper effect of education was that which I received from Mr. Wharton Jones, who was the lecturer on physiology at the Charing Cross School of Medicine. The extent and precision of his knowledge impressed me greatly, and the severe exactness of his method of lecturing

was quite to my taste. I do not know that I have ever felt so much respect for anybody as a teacher before or since. I worked hard to obtain his approbation, and he was extremely kind and helpful to the youngster who, I am afraid, took up more of his time than he had any right to do. It was he who suggested the publication of my first scientific paper—a very little one—in the *Medical Gazette* of 1845, and most kindly corrected the literary faults which abounded in it, short as it was; for at that time, and for many years afterwards, I detested the trouble of writing, and would take no pains over it.

It was in the early spring of 1846 that, having finished my obligatory medical studies and passed the first M.D. examination at the London University, -though I was still too young to qualify at the College of Surgeons,—I was talking to a fellow-student (the present eminent physician, Sir Joseph Fayrer), and wondering what I should do to meet the imperative necessity for earning my own bread, when my friend suggested that I should write to Sir William Burnett, at that time Director-General for the Medical Service of the Navy, for an appointment. I thought this rather a strong thing to do, as Sir William was personally unknown to me, but my cheery friend would not listen to my scruples, so I went to my lodgings and wrote the best letter I could devise. A few days afterwards I received the usual official circular acknowledgement, but at the bottom there was written an instruction to call at Somerset House on such a day. I thought that looked like business, so at the appointed time I called and sent in my card, while I waited in Sir William's ante-room. He was a tall, shrewd-looking old gentleman, with a broad Scotch accent—and I think I see him now as he entered with my card in his hand. The first thing he did was to return it, with the frugal reminder that I should probably find it useful on some other occasion. The second was to ask whether I was an Irishman. I suppose the air of modesty about my appeal must have struck him. I satisfied the Director-General that I was English to the backbone, and he made some inquiries as to my student career, finally desiring me to hold myself ready for examination. Having passed this, I was in Her Majesty's Service, and entered on the books of Nelson's old ship, the *Victory*, for duty at Haslar Hospital, about a couple of months after I made my application.

My official chief at Haslar was a very remarkable person, the late Sir John Richardson, an excellent naturalist, and far-famed as an indomitable Arctic traveler. He was a silent, reserved man, outside the circle of his family and intimates; and, having a full share of youthful vanity, I was extremely disgusted to find that "Old John," as we irreverent youngsters called him, took not the slightest notice of my worshipful self either the first time I attended him, as it was my duty to do, or for some weeks afterwards. I am afraid to think of the lengths to which my tongue may have run on the subject of the churlishness of the chief, who was, in truth, one of the kindest-hearted and most considerate of men. But one day, as I was crossing the hospital square, Sir John stopped me, and heaped coals of fire on my head by telling me that he had tried to get me one of the resident appointments, much coveted by the assistant surgeons, but that the Admiralty had put in another man. "However," said he, "I mean to keep you here till I can get you something you will like," and turned upon his heel without waiting for the thanks I stammered out. That explained how it was I had not been packed off to the west coast of Africa, like some of my juniors, and why eventually, I remained altogether seven months at Haslar.

After a long interval, during which "Old John" ignored my existence almost as completely as before, he stopped me again as we met in a casual way, and, describing the service on which the *Rattlesnake* was likely to be employed, said that Captain Owen Stanley, who was to command the ship, had asked him to recommend an assistant surgeon who knew something of science; would I like that? Of course I jumped at the offer. "Very well, I give you leave; go to London at once and see Captain Stanley." I went, saw my future commander, who was very civil to me, and promised to ask that I should be appointed to his ship, as in due time I was. It

is a singular thing that, during the few months of my stay at Haslar, I had among my messmates two future Directors-General of the Medical Service of the Navy (Sir Alexander Armstrong and Sir John Watt-Reid), with the present President of the College of Physicians and my kindest of doctors, Sir Andrew Clark.

Life on board Her Majesty's ship in those days was a very different affair from what it is now, and ours was exceptionally rough, as we were often many months without receiving letters or seeing any civilized people but ourselves. In exchange, we had the interest of being about the last voyagers, I suppose, to whom it could be possible to meet with people who knew nothing of firearms—as we did on the south coast of New Guinea—and of making acquaintance with a variety of interesting savage and semi-civilized people. But apart from experience of this kind and the opportunities offered for scientific work, to me, personally, the cruise was extremely valuable. It was good for me to live under sharp discipline; to be down on the realities of existence by living on bare necessaries; to find out how extremely well worth living life seemed to be when one woke up from a night's rest on a soft plank, with the sky for canopy and cocoa and weevily biscuit the sole prospect for breakfast; and, more especially, to learn to work for the sake of what I got for myself out of it, even if it all went to the bottom and I along with it. My brother officers were as good fellows as sailors ought to be and generally are, but, naturally, they neither knew nor cared anything about my pursuits, nor understood why I should be so zealous in pursuit of the objects which my friends, the middies, christened "Buffons," after the title conspicuous on a volume of the *Suites à Buffon,* which stood on my shelf in the chart room.

During the four years of our absence, I sent home communication after communication to the "Linnean Society," with the same result as that obtained by Noah when he sent the raven out of his ark. Tired at last of hearing nothing about them, I determined to do or die, and in 1849 I drew up a more elaborate paper and forwarded it to the Royal Society. This was my dove, if I had only known it. But owing to the movements of the ship, I heard nothing of that either until my return to England in the latter end of the year 1850, when I found that it was printed and published, and that a huge packet of separate copies awaited me. When I hear some of my young friends complain of want of sympathy and encouragement, I am inclined to think that my naval life was not the least valuable part of my education.

Three years after my return were occupied by a battle between my scientific friends on the one hand and the Admiralty on the other, as to whether the latter ought, or ought not to act up to the spirit of a pledge they had given to encourage officers who had done scientific work by contributing to the expense of publishing mine. At last the Admiralty, getting tired, I suppose, cut short the discussion by ordering me to join a ship, which thing I declined to do, and as Rastignac, in the *Père Goriot* says to Paris, I said to London, *à nous deux.* I desired to obtain a Professorship of either Physiology or Comparative Anatomy, and as vacancies occurred I applied, but in vain. My friend, Professor Tyndall, and I were candidates at the same time, he for the Chair of Physics, and I for that of Natural History in the University of Toronto, which, fortunately, as it turned out, would not look at either of us. I say fortunately, not from any lack of respect for Toronto, but because I soon made up my mind that London was the place for me, and hence I have steadily declined the inducements to leave it, which have at various times been offered. At last, in 1854, on the translation of my warm friend Edward Forbes, to Edinburgh, Sir Henry de la Beche, the Director-General of the Geological Survey, offered me the post Forbes had vacated of Paleontologist and Lecturer on Natural History. I refused the former point blank, and accepted the latter only provisionally, telling Sir Henry that I did not care for fossils, and that I should give up Natural History as soon as I could get a physiological post. But I held the office for thirty-one years, and a large part of my work has been paleontological.

At that time I disliked public speaking, and had a firm conviction that I should break down every time I opened my mouth. I believe I had every fault a speaker could have (except talking at random or indulging in rhetoric), when I spoke to the first important audience I ever addressed, on a Friday evening at the Royal Institution, in 1852. Yet, I must confess to having been guilty, *malgré moi,* of as much public speaking as most of my contemporaries, and for the last ten years it ceased to be so much of a bugbear to me. I used to pity myself for having to go through this training, but I am now more disposed to compassionate the unfortunate audiences, especially my ever-friendly hearers at the Royal Institution, who were the subjects of my oratorical experiments.

The last thing that it would be proper for me to do would be to speak of the work of my life, or to say at the end of the day whether I think I have earned my wages or not. Men are said to be partial judges of themselves. Young men may be, I doubt if old men are. Life seems terribly foreshortened as they look back, and the mountain they set themselves to climb in youth turns out to be a mere spur of immeasurably higher ranges when, by failing breath, they reach the top. But if I may speak of the objects I have had more or less definitely in view since I began the ascent of my hillock, they are briefly these: To promote the increase of natural knowledge and to forward the application of scientific methods of investigation to all the problems of life to the best of my ability, in the conviction which has grown with my growth and strengthened with my strength, that there is no alleviation for the sufferings of mankind except veracity of thought and of action, and the resolute facing of the world as it is when the garment of make-believe by which pious hands have hidden its uglier features is stripped off.

It is with this intent that I have subordinated any reasonable, or unreasonable, ambition for scientific fame which I may have permitted myself to entertain to other ends; to the popularization of science; to the development and organization of scientific education; to the endless series of battles and skirmishes over evolution; and to untiring opposition to that ecclesiastical spirit, that clericalism, which in England, as everywhere else, and to whatever denomination it may belong, is the deadly enemy of science.

In striving for the attainment of these objects, I have been but one among many, and I shall be well content to be remembered, or even not remembered, as such. Circumstances, among which I am proud to reckon the devoted kindness of many friends, have led to my occupation of various prominent positions, among which the Presidency of the Royal Society is the highest. It would be mock modesty on my part, with these and other scientific honors which have been bestowed upon me, to pretend that I have not succeeded in the career which I have followed, rather because I was driven into it than of my own free will; but I am afraid I should not count even these things as marks of success if I could not hope that I had somewhat helped that movement of opinion which has been called the New Reformation.

A Writer, God Forbid![1]

MAXWELL H. GOLDBERG

I SHALL never forget my mother's consternation when she discovered that I had the itch to write.

[1] Reprinted from *The Menorah Journal* by the kind permission of Henry Hurwitz, Editor, and of the author.

For years much of the burden of the family support fell to my mother. Though troubled by sickness, she tackled hard jobs to make both ends meet—or at least prevent them from getting too far apart. She kept store. She ran a boarding house for workers

in shoe factories and textile mills; and for itinerant ice harvesters with their huge appetites, broad stories, coarse laughter, and hob-nailed boots that pock-marked the floors. She was a midwife and practical nurse; and a foster-mother to delinquent children picked up by the police on city streets and turned over to welfare agencies. She ran a convalescent home for charity patients newly discharged from hospitals. On the side, she helped grow a large garden, milked a cow, and did many other jobs far beyond her strength and health.

And why? Partly because she and my father were caught in the predicament that troubled millions of other immigrants—poor, handicapped by a strange language and strange ways, trying to make a go of it in an indifferent, often hostile land. Partly because of my father's frail health: an engraver and watchmaker, he suffered recurrent illness which impaired his sight and sometimes made him give up his work. But greatly, as my mother saw it, because of my father's preoccupation with impractical writing, much of it Yiddish verse.

So my mother early determined that the future wife of her son would be spared her own hardships: if she could prevent it, her son would not become, God forbid, a man of mere books or words.

Oddly enough, my father agreed. At any rate, he did not protest. For one thing, he himself had early known and nominally accepted parental condemnation of verse-making. The rabbi of his native Russian village had written a poem in honor of my paternal grandfather's birthday. It was in Hebrew, the language of God and of the learned in Israel, and much had been made of it by the flattered recipient. My father, then a youngster, was duly impressed. He would follow suit. The next year he himself wrote a birthday poem for his father and put it on the table by his father's plate. At mealtime he waited expectantly. His father glanced at the poem and tossed it aside with the curt comment: "Don't be a *badchen.*"

A *badchen* was like the gleeman of old English times—a jester and a singer of songs at festive occasions. Sometimes he was an original wit and creator of folk poetry and song. Usually he just warmed up stale jokes, trying to give them local point, and sang songs that others had composed. He stood low on the social scale, was looked down upon by the solid members of the community.

Unlike the rabbi's verses, my father's birthday greetings were written in Yiddish, the vulgar tongue, the idiom of the ballad-monger and clown. Hence the harsh treatment accorded their young author. This rebuke cast a permanent shadow upon my father's poetic aspirations. He could not shake off his own father's derogation of verse-making as frivolous and vulgar.

My father had himself rejected a career as scholar. His boyhood skill in Hebrew learning had once been tested by his mother's cousin, a rabbi and noted theologian. The judgment was: *this lad will be a sage in Israel.* So the parents decided that their delicate, nimble-minded darling would be trained for the rabbinate. With that in view they sent him to another relative, a lesser but competent scholar, who was to prepare him for the rabbinical studies.

A few weeks of that student life were enough. Not having sufficient food at home, the teacher, in accordance with ancient custom, arranged to have the pupil eat his meals, gratis, with a different family each day, the cycle to be repeated weekly. The fare was coarse and scant: in some of the poverty-stricken homes the lad was fed little more than watery soup and bread crusts. At night he slept on a hard bench in the same bare, ill-ventilated room which, by day, served as the study center. At the end of a few weeks, without so much as a good-bye to his relative and teacher—a double breach of decorum—he left the place and returned home.

His parents were chagrined. Their favorite son, upon whom they had counted to carry on the family rabbinical tradition, had betrayed their hopes. What to do with him now? They were in a quandary.

Not so my father. He had definite ideas. He had seen the poverty of Jewish scholars —even those with wide reputations—their

lives of dependence upon the uncertain charity of others. He had seen them patronized and humiliated by the well-to-do; he himself had eaten the table scraps thrown to them by the resentful poor. He had seen a sensitive, learned, high-minded young rabbi broken on the wheel of village prurience. He would have none of this. Had not the Sages themselves said: "Shun clerics; love works!" He would live that precept. He would become independent by work—with his own hands.

All right, his parents said. They would give him his fill—and more—of work, their *poyer* of a son. They apprenticed him to a blacksmith.

The young rebel soon found he had struck a poor bargain. It was one thing to dream of independence and joy through work. It was quite another actually to live the role. The work was dull and exhausting. So he became a bungler, neglecting the bellows when he was supposed to blow them hard; puffing the fires up into a hot blaze when they should be banked. The blacksmith, furious, told him to get the devil out of his shop and stay out.

When the prodigal came back home again, his parents were gratified. He had had a taste of earning his bread by the sweat of his brow; now he should be eager to return to the fold. He would go back to his studies.

But they were disillusioned soon enough. They had underestimated the force of their black sheep's revolt. He refused to return to his Hebrew teacher. He still wanted his freedom, and to maintain it by the work of his own two hands.

He proposed another apprenticeship—this time to an engraver. In the engraver's craft he saw a means at once of satisfying his artistic impulse and of working with his hands. It would not overtax his strength. It would eventuate not in words but in things. Besides, if he became master at his craft, he could travel into parts of the Russian Empire where Jews ordinarily were barred; thus he would escape the stifling confines of the ghetto.

He did not give his parents all these reasons; but he gave them enough so that they approved and arranged for his apprenticeship to an engraver. This time my father did not quit. He realized his hope of becoming a master engraver; he was permitted to travel widely in the practice of his art. Thus, new cultural as well as geographic vistas were open to him, and he felt himself a man of the world.

But it was not the travel alone that made my father feel thus. During his apprenticeship he had continued to explore an exciting route—surreptitiously ventured upon in his student days—of escape from rigid customs, restricted horizons and boredom. This road to freedom was the Enlightenment, the *Haskalah,* which had been moving eastward across the Russian Pale. Along its path fresh intellectual and social winds were blowing; and my father was one of the young ghetto-bound Jews who breathed these fresh winds and found them intoxicating. So late would he stay up reading secular literature—English, German, French, in translation; the stirring Russian literature in the original—that the frugal man under whom he was serving his apprenticeship, mindful of his oil as much as of my father's eyes, would put out the lamp and order him to bed.

The more my father read, the more convinced he was of the soundness of his flight from Hebrew studies—from what seemed to him sterile memorizing and anatomizing of Holy Writ and its endless exegesis, and the equally sterile hairsplitting of the talmudic dialectic. Enough of this futile verbalism and casuistry, this intellectual acrobatics in a vacuum. Enough of this bondage to ancient books and the doctrines of men and epochs long dead. Of what use all this febrile effort and tortured ingenuity? Why force outworn precepts—hardened in social molds long since crumbled—to serve as guides in a dynamic present with which they no longer had living relationship? Thus was he confirmed in his refusal to follow the course marked out by his parents.

Yet the habit of traditional Hebraic lore was far stronger within him than he realized. The memorized texts of Scripture, especially the Prophets—to his last day remembered verbatim, and the more precious to him since

he became almost blind—the learned and ingenious commentaries, the talmudic cruxes so hotly disputed around the seminar table in his student days—these often came back to fill him with nostalgia for the confined but ardent life of the traditional student.

At such times, even many years after he left the Old World and had become a citizen of the United States, he was likely to forget his engraving and watch repairing, his storekeeping, his practical responsibilities to wife and children, and lose himself among his sacred books. Or, becoming absorbed in a poetic vision, he would forget business and household chores until he had put the vision into verse.

Yet—officially, so to speak—my father continued to regard the seductive charms of study and verse-writing as a serious drawback to successful life, particularly in America with its worship of hustle and the goddess of getting on. So he concurred in my mother's decision that I was to be brought up a practical and efficient citizen, undistracted by the siren song of divine philosophy and the poetic muse.

A decision easier made than applied! Ever since early boyhood, literature to me had been "an appetite, a feeling, and a love." The same about learning. I had a hunger for it.

Had I been born and bred in the Old Country, as my father was, I should have wished, no doubt, to devote my life to Russian literature. That is what, at times, my father thought of doing and what he might have done had he not emigrated to America. Or were Yiddish as a literary medium intimate for me as it was for my father—who in his eighties still continued to write philosophic dialogues in Yiddish and even lyrical poems celebrating spring and youthful love—I should probably have sought my literary development and self-fulfillment in that language.

In any case, I came by my love of learning and literature quite naturally—quite traditionally. It was part of my heritage; and it was pervasive in the atmosphere of my superficially humdrum, workaday home. It was so in spite of my mother's watchful resistance to it—when, much to her dismay, she discovered it.

The manner of her discovery was this. She had bought me a pair of garters to hold up my long black stockings, then the fashion for boys; and with them had come a tablet of writing paper—about five inches wide by seven long, with sheets of several different colors.

Shortly after I got this treasure, a certain event made a deep impression on me. A neighboring girl and I were digging tunnels in her sandpile. Suddenly we heard the hurried irregular beatings of a bird's wings, and frantic staccato chirps. Then we saw Topsey, my playmate's dark-grey cat, dash with a sparrow in her mouth toward a lair under the long back porch of the house. We chased the cat. We followed her under the porch and cornered her at the farther end. But by a swift flanking movement, she slipped past us, got out from under the porch and dashed into the cellar. We pursued her there, slamming the door behind us. One of us finally seized the cat, and the other got the bird away.

It was dead. Sadly we put it in a little box and arranged a funeral. We placed the box on a little cart and covered it with flowers. Slowly we pulled the cart from the cellarway through the grape arbor—cool, shady, somber—to the nearby garden. There, in a shallow grave between rows of dahlia plants, we buried the little sparrow, with a piece of shingle and flowers strewn over the fresh-turned earth to mark the place.

My playmate's mother, a devout Christian Scientist, had explained to me not long before that only what was of God was real, that God was love, all-powerful, and therefore pain and evil were not real. That is how I understood what she had tried to tell me. But her teaching did not seem to jibe with the bloody episode of the cat and the bird. I asked my playmate how, if God was love and if God was all-powerful, the cat had been permitted to kill the bird. Did not God's love extend to the little sparrow? And, if it did, how could He have let it suffer and die? I got no satisfactory answer.

It was this exciting and disturbing experience of Nature red in tooth and claw, giving as it seemed to me the lie to the doctrine of the omnipotence of divine Charity, that I chronicled in simple words on the sheets of my new block of writing paper, while I "tended" store for my father. Then I proudly showed my masterpiece to the family. My sisters were delighted. My father started to praise me but checked himself and became non-committal. My mother was troubled. She saw me following in my father's footsteps; and she hated to have that happen.

She had me come to her, near enough to place a hand on my shoulder. She told me to look up into her eyes—dark, commanding—as she did whenever she wanted to make an indelible mark upon my mind. Then she said slowly, and with much suppressed agitation, in her plain, clear Litvak Yiddish "*Oi, mein Kind, kain Schreiber sollst du nit zein.* (O, my child, a writer you must not be.)"

Throughout my grade and high school years, in spite of my mother's earnest interdiction, I showed a zest for writing. My teachers often praised me, though in the eighth grade one of my classmates objected strenuously to a descriptive paper I read aloud in class. I had taken the artistic liberty of picturing details of a scene which were not visible from the point where I was supposed to be standing.

From the "grades" of a small town school I went to a large preparatory school with a long distinguished tradition in the classics. It was the Boston Latin School where the Washington's Birthday Exercises were conducted in the language of Cicero, and where one might still occasionally hear from the public platform Cicero's denunciation of Catiline delivered by a student—and not in translation. I suspect my mother did not realize how much emphasis this school placed upon literature and upon written and oral expression. She had been told it was an excellent school to prepare a boy for college. That was enough for her. But to me it became a series of welcome opportunities to indulge my love of literature and self-expression.

As a competitor for a senior prize I wrote a paper on visits to Boston by Presidents of the United States. In gathering the material I spent much time at the public library poking through the bulky files of Boston newspapers of the 1700's and 1800's. I liked the musty smells of old paper and print; and I was fascinated by the close-up reports of living events which, heretofore, I had seen only in the remote perspective and cold finality of historic fact. I felt so much the more an American. Also, this taste of the pleasures of antiquarian study gave me an added incentive to a life of scholarship.

Competing for another senior prize, I made a verse translation of an ode of Horace, the one to Torquatus. Its theme of Death, the irresistible leveler, with its emphasis upon the transiency of life—these became haunting emotional and imaginative experiences. Less than three years later, when my mother died, they took on a personal poignance which I tried to express in a poem.

Meanwhile I had become enamored of the German language and literature. A chief cause may have been that it sounded a great deal like the Yiddish in which my parents expressed themselves with such vividness, tang, and pungency. The result was that in the summer after my graduation, I started to translate, in prose, Schiller's *Wilhelm Tell*—stage directions, songs and all. Simultaneously, I worked on a narrative poem in which I wanted to tell a hair-raising, blood-curdling story based upon a dramatic episode in my mother's girlhood.

Her father was builder and owner of a brewery. He relied on his sons for assistance, especially in supervision of the night shifts. During one period when both sons were away, my mother, though only in her teens, tried to take their place. One such night a giant of a worker got drunk on high-powered raw liquor. It made him violent. He staggered toward my mother calling her a bitch of a Jew-murderer of Christ, and threatened to kill her. She dodged him and got away. This was the simple story I wanted to put into verse.

My mother herself had told it to me; she had made it gripping. For the fact was this: though most of her brothers and sisters were manufacturers, industrial chemists, engineers, physicians, and though she shared the family emphasis upon practical things, she also loved literature. She loved it more than she cared to admit; and, once started, she was an excellent storyteller, with a flair for sharp, often satiric, characterization which popped up in her casual talk. She applied animal names to people, and these names, usually derogatory, stuck. Sometimes it took years for the accuracy of her nicknames to be confirmed; yet confirmed they were. She also saw incidents in terms of dramatic conflict and so described them.

My mother could not help feeling proud of the scholastic and literary accomplishments of her boy. Indeed, a few weeks after my graduation something happened which encouraged the lively hope that now, at last, my mother would consent to a literary, or at least a scholarly, career for me.

It happened on a sultry afternoon. I was in my attic retreat on the third floor of our house. Oblivious of the heat which, right under the roof, was heaviest at that time of day, I was toiling at one of my "works." (That is what in secret I half-jokingly, half-seriously called them. Who could tell? Wouldn't it be a joke on those who refused to take my writings seriously if they did turn out to have—genius!)

The front doorbell rang, and I heard my mother at the door exclaim, "Oi, such a guest—really a guest! And special on this hot day! Come in, Rachel, come in!"

"Thank you, Aunt Zelda, I will."

"Sure, come in, and I'll bring you a drink—cold lemonade, with cookies I just baked fresh. Tell me, what brings you to walk all the way here on such a muggy day?"

"Well, I haven't seen any of you for a long time; and I thought it is a shame that relatives should live so near each other and be so distant. Relatives shouldn't be strangers."

"Yeh, yeh. That is right. Blood should be thicker than water. But all of us, we are so tangled up in our worries. It is easy to understand why we go more and more apart."

"Besides, I didn't get to Maxie's graduation exercises, and I came to congratulate him."

That's just like Cousin Rachel, I thought. Always considerate. Always kindhearted. Not high-hat. Not like some of my other cousins. Some of them were snobs—at least to us they seemed so.

We were the poor relations—the latecomers, the greenhorns. In the Old Country, my parents both had cultural status. As for my sisters and me, we had all been born in or near Boston, regarded at least by New Englanders as the cultural hub of the United States. Yet we felt we were still considered foreign—ghetto Jews from Eastern Europe.

That is how we felt. We exaggerated. We were over-sensitive and imagined condescension where none was intended. But with Rachel we did not even imagine condescension. She never gave us cause. She acted old-world, *hamisch,* homelike. She was one of us. She felt as we did; and she spoke our language. Some of the others spoke in efficient businesslike tones, sharp, clear and metallic. She still spoke with warmth and melody. She spoke with a Yiddish cry in her voice—even when she was happy, as though her heart had been constricted and it hurt to be happy. She was a favorite with me.

So I hurried downstairs and joined my mother and Rachel in the living room. Mother left to get the cookies and lemonade. Cousin Rachel congratulated me on my graduation and my prizes and honors. Mother returned with the refreshments. Rachel spoke of my class poem and asked me to read it aloud. With ill-concealed eagerness, I took a copy of the poem, which was being displayed on the mantle, and read it. I read it with much feeling as though I were again in the large auditorium of the Latin School declaiming the poem before the audience.

When I finished, my cousin's eyes were moist. Her voice was soft but intense as she said, "It has such feeling! And so young—only fifteen. Just imagine!—Oh, Aunt Zelda, you must be very proud of your Max. I know I am. He's a credit to all of us! Class poet

in the oldest public school in America—older even than Harvard! And just think: when he has gone through college, when he is older, what he will write!"

I looked over to my mother. Her eyes, too, were moist and very bright. Her face glowed. She did not trust herself to words. She just nodded.

There was a pause. Mother broke it.

"Look, Rachel, the lemonade. You are forgetting it. And on such a hot day. Drink, my niece, drink."

As for me, I joyfully crammed a cookie into my mouth and chewed it fast. I washed it down with big swallows of the lemonade. I almost choked. But I didn't care. I was too happy.

Self-Portrait [1]

ARCHIBALD MACLEISH

BORN MAY 7, 1892, in a wooden house with two round towers overlooking, from a clay bluff and a grove of oak trees, the waters of Lake Michigan.

Father a Scot, a Glasgow man, born a Presbyterian, ultimately a Baptist, always a devout Protestant; one of the early settlers of Chicago; fifty-four when I was born; a merchant: a tall, cold, rigorous man of very beautiful speech.

Mother a Connecticut woman, daughter of a Congregational minister, herself a graduate of Vassar and a teacher there; her family a seafaring family from the Connecticut coast about Norwich; very passionate people with some insanity among them; a very strong family resemblance from one generation to the next—small dark eyes and high cheek bones and similar voices; she was my father's third wife; intelligent and energetic and entirely selfless and beloved.

Four of us grew up—one to be killed flying over Belgium in the last weeks of the war. Public schools. Lake beach. Oak thickets.

Went to a fashionable Connecticut preparatory school for four years and hated it. Went to Yale. Regular undergraduate life: football team—swimming team—chairman of the literary magazine—Phi Beta Kappa—senior society. Began writing but learned little about it and had little life of my own. Went to Harvard Law School to avoid going to work; led my class in the last year; worked terribly hard because of the competition, but was never really good. Married Ada Hitchcock, who is a singer. This while I was in law school. Son born early in 1917. War; went abroad in a hospital unit so as to do the right thing but not be hurt. In France got shifted to the Field Artillery out of shame; few weeks at the front north of Meaux in June, July, 1918; sent home to take battery in new regiment of 155 G.P.F.'s: ended up a captain of F.A. at Camp Mead with no distinction but fact that my brother Kenneth had been a grand flier and had been killed. Taught for a year at Harvard to avoid (again) going to work. Wrote a little all the time, but it wasn't any good. One book of undergraduate verses published by the Yale Press while I was in France. Practiced law for three years in the office of Charles F. Choate, Jr., in Boston—trying cases mostly—and did pretty well, but couldn't write. Only one desire—to write the poems I wanted to write and not the poems I was writing. Winter of 1923, I decided to go to France anyway on what we had. Date the beginning of my more or less adult life from that year. Went in the fall of 1923 with two children. Lived in the Boulevard Saint-Michel and at St. Cloud and later in the rue du Bac. One summer in

[1] From *Portraits and Self Portraits*, collected and illustrated by Georges Schreiber. Copyright, 1936, by Georges Schreiber, and reprinted by his permission and that of Houghton Mifflin Company, publishers.

Normandy. After that on the Mediterranean —cruising a great deal. Went one spring for five months to Persia, going down through the central cities to Bushire and west along the Persian Gulf to Mohamara and back through Shiraz and Ispahan to Teheran. All this time reading—mostly French poetry and chiefly La Forgue, Rimbaud, Leon Paul Fargue, St. J. Perse, Valery. Also Eliot and Pound. Began writing in 1923. Houghton Mifflin published "The Happy Marriage," "The Pot of Earth," "Streets in the Moon."

Came home in 1928 and lived on a farm Published "Hamlet of A. MacLeish," which was written in France, and "New Found Land," part of which was written in this country. Started work on a poem about the Spanish conquistadores in Mexico, and spent some time in 1929 traveling alone through the *monte* and up from the coast over the route of Cortez to the Valley of Mexico. Met the depression head on in the winter of 1929-30, and started to support myself writing for *Fortune*. Traveled a good bit as a journalist—England and France, and Japan, and the American West. In the intervals of this kind of work wrote and published "Conquistador," a series of American scenes called "Frescoes for Mr. Rockefeller's City," a ballet of the building of the Union Pacific Railroad for the Monte Carlo Ballet Russe, a verse play of the bank panic of 1933, which succeeded or not in running for three nights, and a volume of short poems called "Public Speech."

(Editor's Note: Mr. MacLeish wrote this autobiographical sketch for "Portraits and Self-Portraits," in 1936. He did not say that "Conquistador" won him the Pulitzer prize for poetry in 1932. In 1949 he added the following paragraphs to bring the original material up to date.)

Lived through the nineteen-thirties like everybody else who knew what decade he was in. Part of the time you fought the enemy. Part of the time you wrangled with your fellow writers over who should do the fighting—writers or somebody else. Eventually you either resigned from your generation or got into the thing with both hands. First six or seven years pretty confused. Some were afraid to attack Franco, vicious as he was (is), because the Communists were attacking him too and a man might be (would be) "misunderstood." Some were afraid to speak out against the Communists because Franco's friends were hot after the Communists and no one wanted to wake up in that tumbled bed. Whole effort of both gangs was, as it still is, to make Americans choose between them. Have always believed myself there was a third choice considerably more decent than either—choice made on this Continent a hundred and fifty years ago and pretty well forgotten since. Tried to pound this out in a series of poems aimed against Franco's fascists (*Air Raid,* a verse play for radio and *The Spanish Lie*); Hitler's fascists (*The Fall of the City,* first verse play in this country); the betrayers of the American Alternative (*Panic,* the verse play about 1933 and *Land of the Free,* a book of photographs illustrated by a poem). Also tried to put the American Alternative in its own light in *America Was Promises.* As for the wrangling about the writer's responsibility in all this—put my two cents worth into an essay called *The Irresponsibles* aimed at the writers and artists and scholars who thought you could sit out a war one side of which was fascism.

By the end of the decade became pretty evident history wasn't going to wait for the books to be written. Feeling as I did, only natural I should get into Roosevelt's administration. Roosevelt had the right enemies and the right memories and it didn't much matter about his friends, though he had far and away the best selection of them, if you come down to it, since the first Presidents. What chiefly mattered was that he really believed in the cause which, as things turn out, was really the American cause—the revolution of the individual. Had it in his blood and had it in his head. And had the personal individuality of force and will and self-confidence to make it real. Reason Washington was alive under Roosevelt as it wasn't before and hasn't been since is that the lines weren't just being read; they were being acted. Arguing about Roosevelt's greatness is like arguing about a mountain. All you have to do is look.

My participation was pretty remote though I knew him and sometimes worked with him. Librarian of Congress in 1939. OFF. OWI. Assistant Secretary of State in 44. Winter flights to England during the war on one mission or another—the wind on the air field in Iceland—the Hebrides in the snow—London just as the fog closed once: almost too late—an American bomber station east of Cambridge: the departures before dawn, the belated return and always one or two or seven not returning—a secret broadcasting station in an English forest where the tongue was German—the Thames touched by the reflected flares—Westham and the devastated acres—the sleepers in the subways—the odor of terror and fatigue.

The Library of Congress was an administrative job—reorganization of the whole agency—enlivened by unexpected friendships and the shadow of immortal things. Among the half dozen greatest institutions of our world and one of the least known. Perse, exiled from France, found some measure of peace there—enough to begin again to write. Mann became a Fellow of the Library. Tate, Katherine Anne Porter, Robert Penn Warren, Louise Bogan, Willard Thorpe, Theodore Spencer became Fellows in American Letters. The Library began to touch its time and not in America alone but many countries.

OFF—the Office of Facts and Figures—was the first government-wide information agency. President instructed me to set it up fall of 41. No facts, no figures and no authority to get any, all OFF had was the best and most gallant staff of writers in the war—Henry Pringle, E. B. White, Charles Poore, Arthur Schlesinger, Jr., Malcolm Cowley, Philip Hamburger, MacGeorge Bundy. Merged in summer of 42 to form OWI but not before it had turned out the best pamphlets, bar none, which came out of the war.

OWI was another administrative job. Assistant Director in charge of the "domestic end." All this time still had responsibility for the Library. Fall of 44, however, resigned to become Assistant Secretary of State. Principal job there was preparation for San Francisco and work at the Conference. After the President's death resigned from the Government but went to London and Paris in 1945-6 and 7 to work on drafting of UNESCO Constitution and setting up of organization. Finally got free in summer of 47. *Actfive* published in the next year brought me back to my own work.

California — A South-Easter[1]

RICHARD HENRY DANA

CALIFORNIA extends along nearly the whole of the western coast of Mexico, between the gulf of California in the south and the bay of Sir Francis Drake on the north, or between the 22d and 38th degrees of north latitude. It is subdivided into two provinces—Lower or Old California, lying between the gulf and the 32d degree of latitude, or near it; (the division line running, I believe, between the bay of Todos Santos and the port of San Diego;) and New or Upper California, the southernmost port of which San Diego, in lat. 32° 39′, and the northernmost, San Francisco, situated in the large bay discovered by Sir Francis Drake, in lat. 37° 58′, and called after him by the English, though the Mexicans call it Yerba Buena. Upper California has the seat of its government at Monterey, where is also the custom-house, the only one on the coast, and at which every vessel intending to trade on the coast must enter its cargo before it can commence its traffic. We were to trade upon this coast exclusively, and

[1] Chapter 9 of *Two Years Before the Mast,* the journal of the author kept during his two years at sea, 1834-1836.

therefore expected to go to Monterey at first; but the captain's orders from home were to put in at Santa Barbara, which is the central port of the coast, and wait there for the agent who lives there, and transacts all the business for the firm to which our vessel belonged.

The bay, or, as it was commonly called, the *canal of* Santa Barbara, is very large, being formed by the main land on one side, (between Point Conception on the north and Point St. Buena Ventura on the south,) which here bends in like a crescent, and three large islands opposite to it and at the distance of twenty miles. This is just sufficient to give it the name of a bay, while at the same time it is so large and so much exposed to the south-east and north-west winds, that it is little better than an open roadstead; and the whole swell of the Pacific ocean rolls in here before a south-easter, and breaks with so heavy a surf in the shallow waters, that it is highly dangerous to lie near in to the shore during the south-easter season, that is, between the months of November and April.

This wind (the south-easter) is the bane of the coast of California. Between the months of November and April, (including a part of each,) which is the rainy season in this latitude, you are never safe from it, and accordingly, in the ports which are open to it, vessels are obliged, during these months, to lie at anchor at a distance of three miles from the shore, with slipropes on their cables, ready to slip and go to sea at a moment's warning. The only ports which are safe from this wind are San Francisco and Monterey in the north, and San Diego in the south.

As it was January when we arrived, and the middle of the south-easter season, we accordingly came to anchor at the distance of three miles from the shore, in eleven fathoms water, and bent a slip-rope and buoys to our cables, cast off the yard-arm gaskets from the sails, and stopped them all with rope-yarns. After we had done this, the boat went ashore with the captain, and returned with orders to the mate to send a boat ashore for him at sundown. I did not go in the first boat, and was glad to find that there was another going before night; for after so long a voyage as ours had been, a few hours is long to pass in sight and out of reach of land. We spent the day on board in the usual avocations; but as this was the first time we had been without the captain, we felt a little more freedom, and looked about us to see what sort of a country we had got into, and were to spend a year or two of our lives in.

In the first place, it was a beautiful day, and so warm that we had on straw hats, duck trowsers, and all the summer gear; and as this was mid-winter, it spoke well for the climate; and we afterwards found that the thermometer never fell to the freezing point throughout the winter, and that there was very little difference between the seasons, except that during a long period of rainy and south-easterly weather, thick clothes were not uncomfortable.

The large bay lay about us, nearly smooth, as there was hardly a breath of wind stirring, though the boat's crew who went ashore told us that the long ground swell broke into a heavy surf on the beach. There was only one vessel in the port—a long, sharp brig of about 300 tons, with raking masts and very square yards, and English colors at her peak. We afterwards learned that she was built at Guayaquil, and named the "Ayacucho," after the place where the battle was fought that gave Peru her independence, and was now owned by a Scotchman named Wilson, who commanded her, and was engaged in the trade between Callao, the Sandwich Islands, and California. She was a fast sailer, as we frequently afterwards perceived, and had a crew of Sandwich Islanders on board. Beside this vessel there was no object to break the surface of the bay. Two points ran out as the horns of the crescent, one of which—the one to the westward—was low and sandy, and is that to which vessels are obliged to give a wide berth when running out for a south-easter; the other is high, bold, and well wooded, and, we were told, has a mission upon it, called St. Buenaventura, from which the point is named. In the middle of this crescent, directly opposite the anchoring ground, lie the mission and town of Santa Barbara, on a low, flat plain, but little above the level of the sea, covered with grass.

though entirely without trees, and surrounded on three sides by an amphitheatre of mountains, which slant off to the distance of fifteen or twenty miles. The mission stands a little back of the town, and is a large building, or rather collection of buildings, in the center of which is a high tower, with a belfry of five bells; and the whole, being plastered, makes quite a show at a distance, and is the mark by which vessels come to anchor. The town lies a little nearer to the beach—about half a mile from it—and is composed of one-story houses built of brown clay—some of them plastered—with red tiles on the roofs. I should judge that there were about a hundred of them; and in the midst of them stands the Presidio, or fort, built of the same materials, and apparently but little stronger. The town is certainly finely situated, with a bay in front, and an amphitheatre of hills behind. The only thing which diminishes its beauty is, that the hills have no large trees upon them, they having been all burnt by a great fire which swept them off about a dozen years before, and they had not yet grown up again. The fire was described to me by an inhabitant, as having been a very terrible and magnificent sight. The air of the whole valley was so heated that the people were obliged to leave the town and take up their quarters for several days upon the beach.

Just before sun-down the mate ordered a boat's crew ashore, and I went as one of the number. We passed under the stern of the English brig, and had a long pull ashore. I shall never forget the impression which our first landing on the beach of California made upon me. The sun had just gone down; it was getting dusky; the damp night wind was beginning to blow, and the heavy swell of the Pacific was setting in, and breaking in loud and high "combers" upon the beach. We lay on our oars in the swell, just outside of the surf, waiting for a good chance to run in, when a boat, which had put off from the Ayacucho just after us, came alongside of us, with a crew of dusky Sandwich Islanders, talking and hallooing in their outlandish tongue. They knew that we were novices in this kind of boating, and waited to see us go in. The second mate, however, who steered our boat, determined to have the advantage of their experience, and would not go in first. Finding, at length, how matters stood, they gave a shout, and taking advantage of a great comber which came swelling in, rearing its head, and lifting up the stern of our boat nearly perpendicular, and again dropping it in the trough, they gave three or four long and strong pulls, and went in on top of the great wave, throwing their oars overboard, and as far from the boat as they could throw them, and jumping out the instant that the boat touched the beach, and then seizing hold of her and running her up high and dry upon the sand. We saw, at once, how it was to be done, and also the necessity of keeping the boat "stern on" to the sea; for the instant the sea should strike upon her broad-side or quarter, she would be driven up broad-side on, and capsized. We pulled strongly in, and as soon as we felt that the sea had got hold of us and was carrying us in with the speed of a race-horse, we threw the oars as far from the boat as we could, and took hold of the gunwale, ready to spring out and seize her when she struck, the officer using his utmost strength to keep her stern on. We were shot up upon the beach like an arrow from a bow, and seizing the boat, ran her up high and dry, and soon picked up our oars, and stood by her, ready for the captain to come down.

Finding that the captain did not come immediately, we put our oars in the boat, and leaving one to watch it, walked about the beach to see what we could, of the place. The beach is nearly a mile in length between the two points, and of smooth sand. We had taken the only good landing-place, which is in the middle; it being more stony toward the ends. It is about twenty yards in width from high-water mark to a slight bank at which the soil begins, and so hard that it is a favorite place for running horses. It was growing dark, so that we could just distinguish the dim outlines of the two vessels in the offing; and the great seas were rolling in, in regular lines, growing larger and larger as they approached the shore, and hanging over the beach upon which they were to break, when their tops would curl

over and turn white with foam, and, beginning at one extreme of the line, break rapidly to the other, as a long cardhouse falls when the children knock down the cards at one end. The Sandwich Islanders, in the meantime, had turned their boat round, and ran her down into the water, and were loading her with hides and tallow. As this was the work in which we were soon to be engaged, we looked on with some curiosity. They ran the boat into the water so far that every large sea might float her, and two of them, with their trowsers rolled up, stood by the bows, one on each side, keeping her in her right position. This was hard work; for beside the force they had to use upon the boat, the large seas nearly took them off their legs. The others were running from the boat to the bank, upon which, out of the reach of the water, was a pile of dry bullocks' hides, doubled lengthwise in the middle, and nearly as stiff as boards. These they took upon their heads, one or two at a time, and carried down to the boat, where one of their number stowed them away. They were obliged to carry them on their heads, to keep them out of the water, and we observed that they had on thick woolen caps. "Look here, Bill, and see what you're coming to!" said one of our men to another who stood by the boat. "Well, D—," said the second mate to me, "this does not look much like Cambridge college, does it? This is what I call '*head work.*'" To tell the truth it did not look very encouraging.

After they had got through with the hides, they laid hold of the bags of tallow, (the bags are made of hide, and are about the size of a common meal bag,) and lifting each upon the shoulders of two men, one at each, end, walked off with them to the boat, and prepared to go aboard. Here, too, was something for us to learn. The man who steered, shipped his oar and stood up in the stern, and those that pulled the after oars sat upon their benches, with their oars shipped, ready to strike out as soon as she was afloat. The two men at the bows kept their places; and when, at length, a large sea came in and floated her, seized hold of the gunwale, and ran out with her till they were up to their armpits, and then tumbled over the gunwale into the bows, dripping with water. The men at the oars struck out, but it wouldn't do; the sea swept back and left them nearly high and dry. The two fellows jumped out again; and the next time they succeeded better, and, with the help of a deal of outlandish hallooing and bawling, got her well off. We watched them till they were out of the breakers, and saw them steering for their vessel, which was now hidden in the darkness.

The sand of the beach began to be cold to our bare feet; the frogs set up their croaking in the marshes, and one solitary owl, from the end of the distant point, gave out his melancholy note, mellowed by the distance, and we began to think that it was high time for "the old man," as the captain is generally called, to come down. In a few minutes we heard something coming towards us. It was an man on horseback. He came up on the full gallop, reined up near us, addressed a few words to us, and receiving no answer, wheeled round and galloped off again. He was nearly as dark as an Indian, with a large Spanish hat, blanket cloak or surreppa, and leather leggins, with a long knife stuck in them. "This is the seventh city that ever I was in, and no Christian one neither," said Bill Brown. "Stand by!" said Tom, "you haven't seen the worst of it yet." In the midst of this conversation the captain appeared; and we winded the boat round, shoved her down, and prepared to go off. The captain, who had been on the coast before and "knew the ropes," took the steering oar, and we went off in the same way as the other boat. I, being the youngest, had the pleasure of standing at the bow, and getting wet through. We went off well, though the seas were high. Some of them lifted us up, and sliding from under us, seemed to let us drop through the air like a flat plank upon the body of the water. In a few minutes we were in the low, regular swell, and pulled for a light, which, as we came up, we found had been run up to our trysail gaff.

Coming aboard, we hoisted up all the boats, and diving down into the forecastle, changed our wet clothes, and got our supper. After supper the sailors lighted their pipes,

(cigars, those of us who had them,) and we had to tell all we had seen ashore. Then followed conjectures about the people ashore, the length of the voyage, carrying hides, etc., etc., until eight bells, when all hands were called aft, and the "anchor watch" set. We were to stand two in a watch, and as the nights were pretty long, two hours were to make a watch. The second mate was to keep the deck until eight o'clock, and all hands were to be called at daybreak, and the word was passed to keep a bright look-out, and to call the mate if it should come on to blow from the south-east. We had also orders to strike the bells every half hour through the night, as at sea. My watchmate was John, the Swedish sailor, and we stood from twelve to two, he walking the larboard side, and I the starboard. At daylight all hands were called, and we went through the usual process of washing down, swabbing, etc., and got breakfast at eight o'clock. In the course of the forenoon, a boat went aboard of the Ayacucho and brought off a quarter of beef, which made us a fresh bite for dinner. This we were glad enough to have, and the mate told us that we should live upon fresh beef while we were on the coast, as it was cheaper here than the salt. While at dinner, the cook called, "Sail ho!" and coming on deck, we saw two sails coming round the point. One was a large ship under top-gallant sails, and the other a small hermaphrodite brig. They both backed their top sails and sent boats aboard of us. The ship's colors had puzzled us, and we found that she was from Genoa, with an assorted cargo, and was trading on the coast. She filled away again, and stood out; being bound up the coast to San Francisco. The crew of the brig's boat were Sandwich Islanders, but one of them, who spoke a little English, told us that she was the Loriotte, Captain Nye, from Oahu, and was engaged in this trade. She was a lump of a thing—what the sailors call a butter-box. This vessel, as well as the Ayacucho, and others which we afterwards saw engaged in the same trade, have English or Americans for officers, and two or three before the mast to do the work upon the rigging, and to rely upon for seamanship, while the rest of the crew are Sandwich Islanders, who are active, and very useful in boating.

The three captains went ashore after dinner, and came off again at night. When in port, everything is attended to by the chief mate; the captain, unless he is also supercargo, has little to do, and is usually ashore much of his time. This we thought would be pleasanter for us, as the mate was a good-natured man and not very strict. So it was for a time, but we were worse off in the end; for wherever the captain is a severe, energetic man, and the mate is wanting in both these qualities, there will always be trouble. And trouble we had already begun to anticipate. The captain had several times found fault with the mate, in presence of the crew; and hints had been dropped that all was not right between them. When this is the case, and the captain suspects that his chief officer is too easy and familiar with the crew, then he begins to interfere in all the duties, and to draw the reins taughter, and the crew have to suffer.

2

People and Places

Fortunately, people do not remain interested solely in their own lives. There are others in the world besides themselves. So there are character sketches, thumbnail portraits, appreciations, and biographies short or voluminous. The "full dress" life may be a great compendium omitting nothing, heavily footnoted and dull. Or a biography can be—and many have been—scholarly and still the engrossing story of a life. It is trite to say that writing of this kind can "read like fiction"—but it is complimentary and often true. But how true should this be? There has been much argument about how far the biographer should go in selecting material and interpreting his subject. Lytton Strachey, one of the most provocative biographers of our time, has been called, by an adherent of the other school, "the man who ruined the art of biography."

The long life-story and the brief informative paragraph, such as the entries in encyclopedias, generally have fact as an objective and chronology for a guide. But there are memorable brief treatments clearly shaped by the imagination and even the bias of their writers. Such "lives" seek to disclose the significance of a career; they contain within themselves the answer to why the author wished to write them—certainly not merely to give information. "Tin Lizzie" is but one of many such "biographies" in John Dos Passos' *U.S.A.*, a trilogy of panoramic novels. Here no details or happenings are invented, but the chief element is the interpretation of Henry Ford as revealed in the pattern of emphasis and selection. Again, the story of Opal Whiteley is shaped and tempered by mild patronage and a keen sense of the girl's all but fantastic career. The American scene bred Carter Harrison, fabulous one-time mayor of Chicago, and Charles Connick, perhaps our greatest artist in stained glass. It also bred two men to do interpretations of their lives.

In all these pieces there are abundant details, no doubt authentic if one wished to challenge them. But with all the mass of fact, we are being steadily persuaded. And we are willing to be, for the interpretation seems to grow honestly out of the facts, at least as we are shown them; and the mood of each seems genuine. Yet of each piece one may say that the character appears not as he really was but as the author saw him. Is this bad or good? Who can show people as they "really" are? It will not happen through the arts. *Reality* and *objectivity* are comparative terms.

As it is with people, so with the places that men write about. First there is the matter of actual acquaintance. Tacitus saw Germany in the days of the Caesars and wrote from firsthand observation. Thomas Heggen lived on the *U.S.S. Reluctant* and with its officers and men. Melville no doubt saw many inns like *The Spouter*, and vividly, plausibly fused fact with his fiction. Robert Coffin lived his early life close to the ice-cutting on the Kennebec

River, and he writes a composite scene that has the ring of regional truth. People write best of what they know.

But sometimes people spend their lives in one locality and yet derive only a few languid generalities about it. How different from the zest of Robert Coffin! When the details and the whole report show that a place and its culture have not been what Henry James once called "felt life," the result must be a failure.

The presence or absence of human beings has always helped give a place its character. Often it is the key to the right coherence and emphasis. But the author must bring something with him beyond curiosity and zest. Often a whole complex being responds to the situation discovered. So with the man Tacitus, who could not be merely a note-taking observer because he was so actively aware of the culture he had brought with him to this strange Germany. E. B. White certainly spent a day and night at Concord and Walden Pond, but he was sharply aware of his own time as well as Thoreau's. And he had read Thoreau's *Walden*. Half-humorous and half-regretful, the sense of contrast between the old and new runs through White's whole commentary. What he saw and emphasized depended on his mood and knowledge and even his philosophy, as with Tacitus and many another too. A different visitor to Walden not so long ago found many of the same phenomena that White encountered. But *his* response was a letter to a New England paper complaining of the unsanitary conditions of the pond and the state park around it. He obviously was not thinking of Thoreau, and probably had not read his *Walden*.

As with Tacitus and White and the letter-writer, so with anyone who writes of people and places—he is the sum of all that he has met and known and done, of his tastes and aversions, his prejudices and his hopes. The past colors and shapes the present for such a writer, and each personal equation is different. The poet Keats believed the artist should have no character but be a kind of chameleon. Today we mean much the same thing when we speak of "detachment." The social scientist says detachment is impossible, and certainly its virtue is debatable. Meanwhile we see that Mr. White had been alert and curious long before that trip to Concord, and unlike the letter writer was not too insistent on what *ought* to be. And he had read Thoreau!

Tin Lizzie[1]

JOHN DOS PASSOS

"MR. FORD *the automobileer,*" the feature-writer wrote in 1900.

"*Mr. Ford the automobileer began by giving his steed three or four sharp jerks with the lever at the righthand side of the seat; that is, he pulled the lever up and down sharply in order, as he said, to mix air with gasoline and drive the charge into the exploding cylinder. . . . Mr. Ford slipped a small electric switch handle and there followed a puff, puff, puff. . . . The puffing of the machine assumed a higher key. She was flying along about eight miles an hour. The ruts in the road were deep, but the machine*

[1] From *The Big Money* by John Dos Passos. Copyright 1936 by John Dos Passos, and reprinted by permission of Houghton Mifflin Company, publishers, and of the author.

certainly went with a dreamlike smoothness. There was none of the bumping common even to a streetcar. . . . By this time the boulevard had been reached, and the automobileer, letting a lever fall a little, let her out. Whiz! She picked up speed with infinite rapidity. As she ran on there was a clattering behind, the new noise of the automobile."

For twenty years or more,

ever since he'd left his father's farm when he was sixteen to get a job in a Detroit machineshop, Henry Ford had been nuts about machinery. First it was watches, then he designed a steamtractor, then he built a horseless carriage with an engine adapted from the Otto gasengine he'd read about in *The World of Science*, then a mechanical buggy with a onecylinder fourcycle motor, that would run forward but not back,

at last, in ninetyeight, he felt he was far enough along to risk throwing up his job with the Detroit Edison Company, where he'd worked his way up from night fireman to chief engineer, to put all his time into working on a new gasoline engine,

(in the late eighties he'd met Edison at a meeting of electriclight employees in Atlantic City. He'd gone up to Edison after Edison had delivered an address and asked him if he thought gasoline was practical as a motor fuel. Edison had said yes. If Edison said it, it was true. Edison was the great admiration of Henry Ford's life);

and in driving his mechanical buggy, sitting there at the lever jauntily dressed in a tightbuttoned jacket and a high collar and a derby hat, back and forth over the level illpaved streets of Detroit,

scaring the big brewery horses and the skinny trotting horses and the sleekrumped pacers with the motor's loud explosions,

looking for men scatterbrained enough to invest money in a factory for building automobiles.

He was the eldest son of an Irish immigrant who during the Civil War had married the daughter of a prosperous Pennsylvania Dutch farmer and settled down to farming near Dearborn in Wayne County, Michigan;

like plenty of other Americans, young Henry grew up hating the endless sogging through the mud about the chores, the hauling and pitching manure, the kerosene lamps to clean, the irk and sweat and solitude of the farm.

He was a slender, active youngster, a good skater, clever with his hands; what he liked was to tend the machinery and let the others do the heavy work. His mother had told him not to drink, smoke, gamble or go into debt, and he never did.

When he was in his early twenties his father tried to get him back from Detroit, where he was working as mechanic and repairman for the Drydock Engine Company that built engines for steamboats, by giving him forty acres of land.

Young Henry built himself an uptodate square white dwellinghouse with a false mansard roof and married and settled down on the farm,

but he let the hired men do the farming;

he bought himself a buzzsaw and rented a stationary engine and cut the timber off the woodlots.

He was a thrifty young man who never drank or smoked or gambled or coveted his neighbor's wife, but he couldn't stand living on the farm.

He moved to Detroit, and in the brick barn behind his house tinkered for years in his spare time with a mechanical buggy that would be light enough to run over the clayey wagonroads of Wayne County, Michigan.

By 1900 he had a practicable car to promote.

He was forty years old before the Ford Motor Company was started and production began to move.

Speed was the first thing the early automobile manufacturers went after. Races advertised the makes of cars.

Henry Ford himself hung up several records at the track at Grosse Pointe and on the ice on Lake St. Clair. In his 999 he did the mile in thirtynine and fourfifths seconds.

But it had always been his custom to hire others to do the heavy work. The speed he was busy with was speed in production, the

records records in efficient output. He hired Barney Oldfield, a stunt bicyclerider from Salt Lake City, to do the racing for him.

Henry Ford had ideas about other things than the designing of motors, carburetors, magnetos, jigs and fixtures, punches and dies; he had ideas about sales,

that the big money was in economical quantity production, quick turnover, cheap interchangeable easilyreplaced standardized parts;

it wasn't until 1909, after years of arguing with his partners, that Ford put out the first Model T.

Henry Ford was right.

That season he sold more than ten thousand tin lizzies, ten years later he was selling almost a million a year.

In these years the Taylor Plan was stirring up plantmanagers and manufacturers all over the country. Efficiency was the word. The same ingenuity that went into improving the performance of a machine could go into improving the performance of the workmen producing the machine.

In 1913 they established the assemblyline at Ford's. That season the profits were something like twentyfive million dollars, but they had trouble in keeping the men on the job, machinists didn't seem to like it at Ford's.

Henry Ford had ideas about other things than production.

He was the largest automobile manufacturer in the world; he paid high wages; maybe if the steady workers thought they were getting a cut (a very small cut) in the profits, it would give trained men an inducement to stick to their jobs.

wellpaid workers might save enough money to buy a tin lizzie; the first day Ford's announced that cleancut properlymarried American workers who wanted jobs had a chance to make five bucks a day (of course it turned out that there were strings to it; always there were strings to it)

such an enormous crowd waited outside the Highland Park plant

all through the zero January night

that there was a riot when the gates were opened; cops broke heads, jobhunters threw bricks; property, Henry Ford's own property, was destroyed. The company dicks had to turn on the firehose to beat back the crowd.

The American Plan; automotive prosperity seeping down from above; it turned out there were strings to it.

But that five dollars a day

paid to good, clean American workmen

who didn't drink or smoke cigarettes or read or think,

and who didn't commit adultery

and whose wives didn't take in boarders,

made America once more the Yukon of the sweated workers of the world;

made all the tin lizzies and the automotive age, and incidentally,

made Henry Ford the automobileer, the admirer of Edison, the birdlover,

the great American of his time.

But Henry Ford had ideas about other things besides assemblylines and the livinghabits of his employees. He was full of ideas. Instead of going to the city to make his fortune, here was a country boy who'd made his fortune by bringing the city out to the farm. The precepts he'd learned out of McGuffey's Reader, his mother's prejudices and preconceptions, he had preserved clean and unworn as freshprinted bills in the safe in a bank.

He wanted people to know about his ideas, so he bought the *Dearborn Independent* and started a campaign against cigarettesmoking.

When war broke out in Europe, he had ideas about that too. (Suspicion of armymen and soldiering were part of the midwest farm tradition, like thrift, stickativeness, temperance and sharp practice in money matters.) Any intelligent American mechanic could see that if the Europeans hadn't been a lot of ignorant underpaid foreigners who drank, smoked, were loose about women and wasteful in their methods of production, the war could never have happened.

When Rosika Schwimmer broke through the stockade of secretaries and servicemen

who surrounded Henry Ford and suggested to him that he could stop the war,

he said sure they'd hire a ship and go over and get the boys out of the trenches by Christmas.

He hired a steamboat, the *Oscar II,* and filled it up with pacifists and socialworkers,

to go over to explain to the princelings of Europe

that what they were doing was vicious and silly.

It wasn't his fault that Poor Richard's commonsense no longer rules the world and that most of the pacifists were nuts,

goofy with headlines.

When William Jennings Bryan went over to Hoboken to see him off, somebody handed William Jennings Bryan a squirrel in a cage; William Jennings Bryan made a speech with the squirrel under his arm. Henry Ford threw American Beauty roses to the crowd. The band played *I Didn't Raise My Boy to Be a Soldier.* Practical jokers let loose more squirrels. An eloping couple was married by a platoon of ministers in the saloon, and Mr. Zero, the flophouse humanitarian, who reached the dock too late to sail,

dove into the North River and swam after the boat.

The *Oscar II* was described as a floating Chautauqua; Henry Ford said it felt like a middlewestern village, but by the time they reached Christiansand in Norway, the reporters had kidded him so that he had gotten cold feet and gone to bed. The world was too crazy outside of Wayne County, Michigan. Mrs. Ford and the management sent an Episcopal dean after him who brought him home under wraps,

and the pacifists had to speechify without him.

Two years later Ford's was manufacturing munitions, Eagle boats; Henry Ford was planning oneman tanks, and oneman submarines like the one tried out in the Revolutionary War. He announced to the press that he'd turn over his war profits to the government,

but there's no record that he ever did.

One thing he brought back from his trip was the Protocols of the Elders of Zion.

He started a campaign to enlighten the world in the *Dearborn Independent;* the Jews were why the world wasn't like Wayne County, Michigan, in the old horse and buggy days;

the Jews had started the war, Bolshevism, Darwinism, Marxism, Nietzsche, short skirts and lipstick. They were behind Wall Street and the international bankers, and the white-slave traffic and the movies and the Supreme Court and ragtime and the illegal liquor business.

Henry Ford denounced the Jews and ran for senator and sued the *Chicago Tribune* for libel,

and was the laughingstock of the kept metropolitan press;

but when the metropolitan bankers tried to horn in on his business

he thoroughly outsmarted them.

In 1918 he had borrowed on notes to buy out his minority stockholders for the picayune sum of seventy-five million dollars.

In February, 1920, he needed cash to pay off some of these notes that were coming due. A banker is supposed to have called on him and offered him every facility if the bankers' representative could be made a member of the board of directors. Henry Ford handed the banker his hat,

and went about raising the money in his own way:

he shipped every car and part he had in his plant to his dealers and demanded immediate cash payment. Let the other fellow do the borrowing had always been a cardinal principle. He shut down production and canceled all orders from the supplyfirms. Many dealers were ruined, many supplyfirms failed, but when he reopened his plant,

he owned it absolutely,

the way a man owns an unmortgaged farm with the taxes paid up.

In 1922 there started the Ford boom for President (high wages, waterpower, industry scattered to the small towns) that was skillfully pricked behind the scenes

by another crackerbarrel philosopher,

Calvin Coolidge;
but in 1922 Henry Ford sold one million three hundred and thirtytwo thousand two hundred and nine tin lizzies; he was the richest man in the world.

Good roads had followed the narrow ruts made in the mud by the Model T. The great automotive boom was on. At Ford's production was improving all the time; less waste, more spotters, strawbosses, stool-pigeons (fifteen minutes for lunch, three minutes to go to the toilet, the Taylorized speedup everywhere, reach under, adjust washer, screw down bolt, shove in cotterpin, reach-under adjustwasher, screwdown bolt, reach-underadjustscrewdownreachunderadjust until every ounce of life was sucked off into production and at night the workmen went home grey shaking husks).

Ford owned every detail of the process from the ore in the hills until the car rolled off the end of the assemblyline under its own power, the plants were rationalized to the last tenthousandth of an inch as measured by the Johansen scale;
in 1926 the production cycle was reduced to eightyone hours from the ore in the mine to the finished salable car proceeding under its own power,
but the Model T was obsolete.

New Era prosperity and the American Plan
(there were strings to it, always there were strings to it)
had killed Tin Lizzie.
Ford's was just one of many automobile plants.
When the stockmarket bubble burst,
Mr. Ford the crackerbarrel philosopher said jubilantly,
"I told you so.
Serves you right for gambling and getting in debt.
The country is sound."
But when the country on cracked shoes, in frayed trousers, belts tightened over hollow bellies,
idle hands cracked and chapped with the cold of that coldest March day of 1932,
started marching from Detroit to Dearborn, asking for work and the American Plan, all they could think of at Ford's was machine-guns.

The country was sound, but they mowed the marchers down.
They shot four of them dead.

Henry Ford as an old man
is a passionate antiquarian,
(lives besieged on his father's farm embedded in an estate of thousands of millionaire acres, protected by an army of servicemen, secretaries, secret agents, dicks under orders of an English exprizefighter,
always afraid of the feet in broken shoes on the roads, afraid the gangs will kidnap his grandchildren,
that a crank will shoot him,
that Change and the idle hands out of work will break through the gates and the high fences;
protected by a private army against
the new America of starved children and hollow bellies and cracked shoes stamping on souplines,
that has swallowed up the old thrifty farmlands
of Wayne County, Michigan,
as if they had never been).
Henry Ford as an old man
is a passionate antiquarian.
He rebuilt his father's farmhouse and put it back exactly in the state he remembered it in as a boy. He built a village of museums for buggies, sleighs, coaches, old plows, waterwheels, obsolete models of motorcars. He scoured the country for fiddlers to play old-fashioned squaredances.

Even old taverns he bought and put back into their original shape, as well as Thomas Edison's early laboratories.

When he bought the Wayside Inn near Sudbury, Massachusetts, he had the new highway where the newmodel cars roared and slithered and hissed oilily past (*the new noise of the automobile*).
moved away from the door,
put back the old bad road,
so that everything might be
the way it used to be,
in the days of horses and buggies.

Miss Opal Whiteley[1]

ELBERT BEDE

ABOUT 20 YEARS AGO I was reporting a Junior Christian Endeavor convention in Cottage Grove and was astounded when informed that a 17-year-old girl from a nearby logging camp had been elected president. My newspaper instinct told me that here was to be found an unusual human interest story. I sought the girl. Her name was Opal Whiteley.

This was the olive-skinned, dark-haired, dark-eyed maid who, a few years later, as the author of *The Story of Opal: The Journal of an Understanding Heart*, published under the auspices of the *Atlantic Monthly*, staid beacon light of literature, was to precipitate the literary controversy of the century; was to present in that story a foster-parentage fantasy that drew into the controversy psychologists, scientists, astrologers, psychists, editors, ministers of the gospel, literary critics, and every person who had at any time known Opal; and that brought sorrow and embarrassment to many who believed themselves relatives of this fanciful and imaginative young woman. No other book, with an Oregon locale, no other Oregon author, has claimed so many hundreds of columns of gratuitous publicity.

The *Atlantic Monthly* had discovered something different, even though that magazine may have afterwards wished the job had been left to others.

A volume would hardly suffice to summarize the personality of the nature-tutored child who at the age of six, so her diary would have us believe, confided her most intimate heart secrets to Michael Angelo Sanzio Raphael (a fir tree), and whose associates, instead of people, were Lars Porsena of Clusium (a crow), Thomas Chatterton Jupiter Zeus (a most dear wood rat), Brave Horatius (a shepherd dog), Peter Paul Rubens (a pet pig) and other characters with equally classical appellations. My first impression of Opal was that of a vibrant, fluttery, exotic, whimsical person, informed strangely beyond her years, eager, deeply earnest and seriously religious. She later became to me an inexplicable enigma.

Opal told me her plans for the Junior Endeavor for the coming year, already well advanced while the convention was yet in session. She was going out among the children of the state to tell them of God. She was going to interest them in Endeavor work through stories of His fairy creatures that roam the fields and flutter in the air. She was going to give them messages whispered by the flowers and trees, the flowing streams, the rocks of the mountains, the fairies of the air, the shells of the seas.

"How did you get your plans laid so quickly?" I wanted to know.

"I've been preparing for this for years," she explained innocently, frankly.

In various of Opal's excursions into fame circumstances seem to have been made to order for her, but she was no mean performer in laying backgrounds for her fantasies. Sometimes it has seemed uncanny, supernatural almost, the way circumstances have suited themselves to her plans.

Other characteristics should be known for their bearing upon the literary efforts of this waif of the mountains and logging camps. Although usually she fluttered from one unfinished thing to something else, she was capable, under stress, of a prodigious amount of work. She could apply herself at nerve-racking effort 12 to 16 hours a day over a considerable period.

This little maid, though having a huge fund of information upon many subjects, seemed totally unfamiliar with the ways of the world, so that many things which would

[1] From *History of Oregon Literature* by Alfred H. Powers, 1935. Reprinted with the kind permission of Elbert Bede.

have seemed utterly impossible to others did not in the least daunt her.

Opal could walk as an unknown person into a gathering of notables and with a childish, naive charm interrupt whatever was going on to introduce herself to each of those present. This was not discourtesy nor lack of breeding—it was Opal.

These several traits had considerable bearing upon the preparation of the tattered and torn diary in the manner in which I believe it was prepared, upon the accidental request for it from *Atlantic Monthly* editor, and upon various things that happened during its publication.

Even Opal's name is peculiarly fitted to her character and personality. The stone is both transparent and opaque, and nothing better describes our Opal. The last definitely heard of her she had been accepted as a princess of India, through an alleged marriage of Henri d'Orléans, the angel father of the diary. The opal is believed by many to have magical qualities. How appropriate if Opal came out of India, land of magic and mystery, of glitter and glamor, a perfect setting for the fairy world in which this master of make-believe always lived.

Opal wrote *The Journal of an Understanding Heart*, but she never had an affair of the heart, probably because hers was an understanding one.

In her adolescent years Opal gathered geological specimens, and bugs and worms by the thousands, by the barrel. She garnered chrysalises by the bucketful and watched how God brought life to his fairies of the great outdoors. Somewhere, somehow, she gained a prodigious amount of knowledge about these things. Without having completed a high school course, this little maid of mystery presented herself at the University of Oregon, where entrance requirements were waived because of her knowledge of geology, astronomy and biology. She became an indifferent student.

Opal made friends quickly, but intimate association usually was short lived. However, she had an uncanny way of getting acquaintances to assist her financially.

After a year or two at college, during which she was the subject of many news stories, Opal decided to give her life to conducting nature classes for children and went to Los Angeles for that purpose. A woman she had met but once furnished the money for the trip.

The nature classes did not do so well. Opal therefore decided to become an author in a big way. Just as a starter, she decided upon a comprehensive volume, *The Fairyland Around Us*. It was to be profusely illustrated, to be bound in genuine leather and to sell for $10. She listed a number of volumes to follow.

Opal, though ill from an accident, undertook to finance the publication. All funds from her nature study classes, all that could be secured from admiring friends, went into the production of the book, but were not sufficient. Opal, so lacking in worldly wisdom, then solicited contributions from such persons as Andrew Carnegie and John D. Rockefeller and actually got money from some of them. Still funds were not sufficient for the purchase of color plates. Somewhere, however, Opal secured picture cards of the desired subjects and laboriously pasted these into her books, copies of which are in a number of Oregon libraries. A leaflet advertising the book carried expressions of wondering admiration from such persons as Queen Elizabeth of Belgium, Theodore Roosevelt, Nicholas Murray Butler, Gene Stratton Porter and others of equal prominence. No worldly wise author ever dreamed of launching a first book under such auspices.

Sales were not sufficient to satisfy the ambitions of Opal, so she decided to offer the *Atlantic Monthly* the privilege of completing publication. A kind woman provided funds for the trip to Boston.

So far as I know no money borrowed has ever been returned.

Ellery Sedgwick, editor of the *Atlantic Monthly*, was not interested in *The Fairyland Around Us*, but—here again the unusual circumstances that fitted into Opal's plans—he was struck by the personality of the girl from the Oregon wildwood. Such a girl must have kept a diary that might make interesting reading. Certainly there was a diary, and it

was all that Sedgwick had expected and more, much more. Opal, with no thought of selling it to the *Atlantic*, had a background all prepared and plans all laid to make the impossible seem probable.

With the publication of the diary came the first intimation to relatives and friends that Opal claimed foster parentage.

Opal was born, according to the Whiteleys, at Colton, Washington, 22 years before the publication of the diary. Opal herself said, at the time of its publication, that she was born in a far land where she had roamed the fields with an angel mother and an angel father, that while the child of the Whiteleys was being taken to Wendling, Lane County, Oregon, the Opal we know was put in place of the Opal born to the Whiteleys. The Whiteley Opal, it was claimed, fell into water while the exchange was being made and the mother left with the foster child without knowing that her own had been saved. During the publication of the diary Opal wrote that the first Opal had been saved from the water and that trace had been secured of her, but nothing developed.

If the Opal we know is not a daughter of the Whiteleys, it was by a most remarkable combination of circumstances that the foster child, substituted without advance arrangements, bore such a strong resemblance to members of the Whiteley family that even the father, who had come on ahead, did not suspect the substitution. It is even more remarkable that the substituted Opal asked for a dog Ginger (not the Brave Horatius of the diary), a little red chair and other things that the original Opal had left at Colton.

Opal has often been spoken of as of lowly origin, but there was nothing about the Whiteley parentage to be renounced. They cared well for their children, and the mother, saved by death from the embarrassment of the diary, is spoken of by those who knew her as having been a woman of education and refinement.

Family pictures prove beyond reasonable doubt that Opal is a Whiteley, but in mental characteristics she fits more the place her supposed child fantasy gives her. However, at least one member of the Whiteley family has an imagination as lively as Opal's and once explained away the foster parentage claim with a story as fanciful as any of Opal's.

The diary which Sedgwick wanted, sent post haste from Los Angeles to Boston, was in 50 or 60 cardboard boxes, all of it supposed to have been written in Opal's younger years, and supposed to have been torn into shreds by a younger sister who didn't approve of Opal's love for nature and her conversations with trees, bees, pigs, bugs and other things.

Opal's family moved many times and Opal lived in various places besides home. According to Opal's own story, she guarded the diary carefully, but I have in years of effort found but three persons who ever saw any of it and they only saw one box. Surely a girl guarding 50 or 60 cardboard boxes would have attracted some attention. At the home where she was received in Los Angeles no such collection of boxes arrived, but after she had been in Los Angeles two years there was such a collection. At this home, where Opal lived six months, she spent long nights printing on paper. Reference books in that home and in the Los Angeles library—by another chain of circumstances probably—were well thumbed where appeared things that were also word for word in the diary. Possibly Opal was merely comparing her childish work with these books which, incidentally, contained much about, Henri d'Orléans, adopted by Opal for parentage.

After Opal had been with the *Atlantic Monthly* for some time, various relatives in Oregon received mysterious letters and valuable presents from Boston, purportedly from persons in the employ of Opal's real relatives. A long story could be written about these, but briefly the letters stated that the persons writing them had always been near Opal since the time of her substitution, to watch her and keep from her her parentage. The presents were rewards from Opal's estate to the Whiteleys for the care they had given her. The letters were written by some one intimately acquainted with persons and events in Cottage Grove, Oregon. They told an involved story of Opal's parentage that

gave a perfect background for the diary running in the *Atlantic* and for the cleverly concealed acrostics in French adroitly brought into the diary and discovered by accident after the diary had gone into book form. These acrostics pointed directly to Henri d'Orléans as the father of Opal. One of them is as follows:

"I did sing it *le chant de fleurs* that Angel Father did teach me to sing of Hiacinthe, Èclaire, Nenufar, Rose, Iris, et Dauphinelle et Oléandre, et Romarin, Lis, Eglantier, Anemone, Narcisse et Souci."

The first letters of the names of the flowers spell Henri d'Orléans. Wasn't that something for a seven-year-old? I am firmly convinced that Opal had aid in Los Angeles in preparing these acrostics.

It is significant that the angel mother, so tenderly referred to by Opal, is not pointed out in the acrostics, most likely because no biography shows that d'Orléans ever married. The acrostics also give much intimate information found in the will of d'Orléans, a copy of which—here is that odd chain of circumstances again—was in the Boston library. Also in this library were books by d'Orléans, whole sections of which must have been taught Opal by her father, for they appeared in what Opal claimed was written by her at the age of six or seven.

Information in my voluminous files shows that Opal was not only piecing together and transcribing the tattered and torn heart throbs on childhood—in itself a sufficient task, she not only was spending much time in the Boston library; but she also had a secret establishment in which were prepared the letters purporting to come from the mysterious persons who were guarding her. It was she who sent the presents. I have said that Opal was at times a prodigious worker.

During publication of the diary there came to me many strange letters—some of them weird almost—that laid a background for the foster-parentage fantasy of the diary. One of these was from Opal herself and a second letter accompanying it explained that the first letter was written soon after Opal went to Los Angeles, and had not been mailed because it had been mislaid in a box containing part of the diary. That it had been written years before was proved by the three-cent stamp it bore, that denomination having been out of use for several years. This incident proves that Opal was for some purpose poring over the diary in Los Angeles. Was she embellishing it with the foster-parentage fantasy and the acrostics?

Another mysterious letter, bearing the tell-tale three-cent stamp, contained pictures that purported to be of Opal's real father, of her real grandfather and of her real uncle. I was unable to find pictures of the d'Orléans family with which to compare them, but an expert, not knowing the history of the pictures, said that the one of the grandfather and the one of Opal were undoubtedly of persons of the same family. I have no doubt Opal contrived the mailing of these, but if they had been what they purported to be she certainly wouldn't have parted with them to send on a strange journey to me. Anyone else, wishing to aid Opal, certainly would have sent them to her instead of to me.

With all these plans so well laid long before the jaunt of Opal to Massachusetts' center of culture, I have often wondered what plans she had made to give the diary to the public. And then how Ellery Sedgwick should accidentally ask for this diary.

Yet this diary of childish romance and of an impossible foster-parentage fantasy was not all hoax and plagiarism, for it contains intimate details of things known to have happened at the time Opal was a child—the births of children who have been identified, a girl burned to death, a suicide, visits of various persons, persons identified by the intimate descriptions of them, things that could have been remembered in detail only by being recorded at the time they happened. Whole sections are the beautiful, innocent, sincere unveiling of the heart of a precocious tot in composition childishly expressive; fact and fancy so cleverly interwoven as to be almost inseparable; improbable and probable imagery told with the same naïve charm, humor, tragedy, human interest; everything a story should contain for sustained interest. These were enough to have assured Opal a niche in the hall of fame, to have proclaimed

her a literary genius, to have brought her a welcome from the literati.

It is my belief that what was presented to Ellery Sedgwick—at least what he examined before he staked his own reputation and that of his magazine upon its genuiness—appeared to be the kind described in the preceding paragraph, the kind that would have been accepted under such auspices as the *Atlantic Monthly* for what it pretended to be.

As it is, many want to know how a child of six could have a nimble familiarity with French yet never use a word of that language in conversation or at any other time; they want to know why *The Fairyland Around Us* contained many of the odd references and classical names later found in the diary when pieced together; they want to know why Opal couldn't remember at any time in her life the name of her father when at six or seven she constructed involved acrostics that named her father and all his family; they want to know how she could remember trivial things that happened when she was three years of age, yet couldn't remember her own name; they want to know why a child of five, just come from a foreign land, spoke the language of other children of five whom she found here. They refused to believe that any mother could be so unnatural as to put her own daughter out of her life forever through a chance meeting with strangers and not stop to learn whether her own daughter was saved from water into which she had fallen. They want to know how a girl of six or seven became familiar with classical names given her pets, some of them based on the physical characteristics of the persons whose names were taken, peculiarities known to few scholars who had searched libraries of the world. For example, lambs were named for the personal characteristics of Diogenes.

I haven't the least doubt that a large part of Opal's diary is hoax and a large part plagiarism. I have presented facts that show the foster-parentage claim impossible, but—

Those who wish to believe in Opal will point out that Opal, who has never returned to the scenes so beautifully described as those of her childhood, embarked for Europe with a confidential document signed by our secretary of state and Sir Edward Grey of England, who become acquainted with Opal in this country through Ellery Sedgwick; they will point out that some way Opal was countenanced by the mother of d'Orléans, who probably financed Opal's trip to India; they will point out that there is strong evidence that Opal was accepted for at least a time as a relative of His Royal Highness, the Maharana of Adiapur, ruling Indian prince.

Opal would have been satisfied with nothing less. From an Oregon logging camp to a princess of India was the way our little home town girl made good.

They will point out that there was a chance for the alleged substitution—and combinations of circumstances always seemed to favor Opal; they will point out that d'Orléans lived and died at a time to fit Opal's story; they will point out that if d'Orléans did not marry he might have had a reason for sending a daughter to a foreign land, or heirs to an estate might have contrived something of the sort; they will point out that the odd heirlooms, given Opal by a grandmother who had never seen her, while none went to any other member of the family, have never been fully explained; they will point out that Opal was the only nature-loving member of the family, which fits the d'Orléans parentage.

Could Opal's story be true and did she cast doubt upon it by her pains to give it background—by embellishments that tested credulity?

Would Opal's story be more amazing as fact or as fiction?

If it be only romance, why has not Opal given us another Arabian Nights?

Singer in Light – Charles J. Connick[1]

ROLLO WALTER BROWN

IF CHARLES J. CONNICK had not been an Irishman, he might have become one more American expatriate looking to a sympathetic Europe to mother him. For his activity reaches back to the time when it was the style to hurry away to find sanctuary east of the Atlantic, and he works in an art that in truth has been little thought about in the United States. But next to a good stained-glass window he liked nothing so much as a good fight. So he planted himself solidly in his own country, here to create windows worth seeing, and to make his fellow Americans look at them and like them.

Nearly a half-century ago when he was a cub cartoonist on the Pittsburgh Press a Philadelphian who made transoms and windows of colored glass in Pittsburgh confessed to him that he was lonely and invited him to come up. When the glassman struck a match to light the gas, there suddenly appeared a world of vibrating color in the loose pieces of glass lying everywhere about. Connick still grows eloquent about his speechlessness that evening at the magic which he saw. But the magic disappeared when the gas steadied down to an even burning and he was looking at completed windows. Why was it not in these windows when it had been in the loose glass? He meant to find out.

He worked for this glassman. But he could not learn what he wanted to know. He heard that a firm in Boston made windows—lots of them—and he went there. Soon he discovered, though, that the head of the firm was not interested in magic. His great concern was to give customers what they wanted —and no more.

He bothered Connick with questions. "Why are you working any longer over that? It is already good enough to please them."

"But I don't like it," the quiet-looking light-haired Irishman was sure to answer.

"Just who the hell cares whether you like it or not? You are not the one who has to like it."

"Oh!"

Connick has a disconcerting way of saying "Oh!" that even then was well developed. The head of the firm, known for his ability to substitute florid speech for precision of thought, declared him to be "the most conceited damned ass that ever walked the face of God's green earth."

Connick packed up one day and went back to Pittsburgh. But in Pittsburgh there was not enough interest in glass to provide him with so much as a good fight. "I nearly died," is all he ever says about those years; "I had to get out." So one day—one day in 1907—he walked into Tiffany's New York office with a great portfolio under his arm and asked if the firm were not looking for stained-glass designs of unquestioned originality.

"No, nobody here looking for designs," the man whose office he had invaded replied.

"But," the young titleholder in conceit assured him, "it will cost you nothing to look at them." And before there was time for protest, he had colored designs for windows leaning against anything in the room that would support them.

The man at the desk saw himself completely surrounded. "My God! What did you say—Pittsburgh? Are they doing things like that in glass out there? You're hired."

But he was not to stay long. He knew too much. Some of his fellow workers gave him a dinner after they were quite sure he was going.

Since plenty of places seemed worse, he tried Boston again. A suburban church needed a window, and he submitted a design.

[1] Reprinted by permission from the *University Review* (October, 1941), Quarterly Journal of the University of Kansas City, and from the author.

The architect and the rector wanted European crafsmanship. Connick told them that he could give them something better than they were likely to get from Europe. The representative of the donor believed him. A two-year battle followed. It ended when the man who held the money had his way. Connick is jumpy about donors and their influence on artists, but he was sure this one was right.

He took his earnings from the commission and hurried away to Europe to see just what could be learned about glass over there. He went wherever windows were to be seen.

He stayed long at Chartres. For in Chartres he quickly found the magic of that evening when the old glassman struck the match to light the gas—the magic of vibrating color. And in Chartres the magic had been multiplied a few million times. Connick marveled; he watched; he lingered to observe the effects of every kind of weather; he tried to record something of what he saw; he tried to understand what the early magicians had been at. They had done their best work, he was sure, when they were experimenting at something with the artist's flair. That was what he meant to do—to experiment, to produce magics of his own.

II

When he was back in Boston and established in his own workshop he was soon making discoveries of less agreeable kinds. Without much effort he saw that the real money in the United States was going into good-looking union stations and into skyscrapers tall enough to rend the clouds, rather than into churches—where the glassman logically expects to find most of his work. As recently as the Century of Progress he was still full of disgust at the discrepancy between Americans' religious professions and their neglect of thought about their churches. He sat back belligerently in his desk chair to say what it was like out at the Fair Grounds: "It was as if they had brought everything together for the fair that they could think of, and then when they looked it over somebody had said, 'Hell, we forgot religion! We had better get busy and try to scare some up'." In the 1930's the attitude only enraged him. But two or three decades before when he was a glassman of young repute and many debts, it was a major discouragement.

So, too, was opalescent pictorial window then in vogue. He had never before appreciated how complete its conquest of the United States had been. Church windows had ceased to be windows—presumably to let in some light—and had become only so many gloomy spaces in church walls where Grandmother and Uncle John were represented in caramel portrait likenesses—Uncle John with just the right familiar droop to his heavy black mustache. Or great muddy-looking angels with harps and with excessive wing spread filled the windows in such flocks that they completely shut out the light of the cheerful sun. In glass as well as in architecture the last decades of the nineteenth century stood as a completed fact. Connick could not have been born at any time since the twelfth century and found more in the churches everywhere about him to impose suffering upon anyone sensitive to the play of light and color. Just over on Copley Square, within three or four blocks of his workshop, was Trinity Church filled with so many cloudy windows that the light must come from a dynamo, and only a little farther down town in the Arlington Street Church the clear windows of an earlier day had given place to the same kind of gloom. He had to declare himself with emphasis. He had to proclaim the unwelcome news that ugliness in windows was not a question of a lost art but of a lost taste.

Among the many battles he had to fight with people immersed in the tradition of heavy opalescent picture windows was a famous one with the dean of the School of Theology in Boston University, who required a window for a new chapel. "Now this is what I want," he said. In pastoral words he sketched a green hilltop, and sheep, and people, and a commanding figure of the Good Shepherd, and something like "Feed my sheep."

"But that's a picture."

"That's what I want—a picture."

"But I don't make pictures. I make stained glass windows."

"Don't you make what people want?"

"When you preach, do you preach only what people want?"

"Oh—I have convictions, if that's what you mean."

"So have I. I make what I think people ought to have."

The dean marched out. But in a few days he was back. "Now see here, let's get down to business. I want a window, and you make windows. There's no reason why you should be stubborn in the matter."

"Yes, there is. But you are too stubborn yourself to see it."

There was another abrupt exit. But there was also another early return. Soon the dean had become such a frequent figure in Harcourt Street that the studio force would call cheerily to each other: "Better tell the Big Boss to jump down the elevator shaft. Here comes his man again."

One day Connick sat back from his desk and said: "You are just wasting your time coming here. Go down to New York. Here, I'll give you the addresses of three or four firms that will be glad to make up what you want."

The dean took the addresses. But a few days later, while the office was still thinking of all the bills that could have been paid with the money from that commission, he reappeared.

"I have come to get you to make our window for us."

"But I've already told you that I don't make these damned picture windows. Why didn't you go to New York?"

"I did. That's just it."

He became very conciliatory. "Those fellows that I went to see down there are no good. They have no convictions. And I have come to ask you to make us the kind of window you think we ought to have."

But his greatest obstacle, perhaps, was in the Americans who traveled in western Europe and then came home and talked in tremulous voice about the lost art of stained glass. When he stood up and declared that it was not a lost art to him, they assumed that the best he could hope to do was to approximate the work that the medieval glassmen had done well. But hadn't he told them that he had no desire to be a copyist? The mediaeval glassmen had had a flair for trying out all sorts of new ways in design and symbol and color. He had the same flair, if anybody cared to know. Maybe there was something to be expressed in glass in the twentieth century that had never been expressed before—quite. That was what he meant to do some day if the chance came along.

The force of craftsmen that he brought together in preparation for such a day became almost as much a matter of comment as the windows that he and they together made. They were from England; they were from Germany; they were from Connick's own workshop, where they had perhaps answered an advertisement for "an errand boy with special talent in drawing." Visitors came. They began to learn something of the entire process of stained-glass windows: how the artist sketched the proposed window in colors; how another made a cartoon of it, section by section, in black and white, with lines to mark the boundaries of the different pieces of glass, how heavy paper was then cut into pieces to correspond to the pieces of glass in colors selected under the eye of the master himself; how the glass of all gradings of thicknesses and textures was cut; how it was all leaded and soldered into shape; how it was set up in a trial-gallery where it would have much the same light as in the building in which it was to be placed; how it was modified according to need; and how it was finally taken down, cemented and made waterproof before it was packed in sections and shipped away to where it was to be set up permanently. Visitors gained the impression that almost anybody from the girls in the front office to the gray old man who cemented the finished windows and pressed the leads down carefully would be competent to direct the work.

With such support, he had come in the late 1920's to be a busy man. One never knew

where to find him. He was on the road as his own representative; he was buried in the library; he was at his desk sketching a design while somebody talked to him; he was studying some noticeably brilliant window that had been set up in the gallery and saying just how anything with such wealth of color as that would have to be changed—if it required change; he was in the basement darkroom considering lantern slides by means of which he hoped to have all who would listen discover that the art of glass is not a lost art if only the artist has a chance; he was sitting before the upstairs library fireplace in his own house with some poet who understood glass because he understood poetry; he was dictating to his wife on his monumental but interesting book, *Adventures in Light and Color;* he was in pursuit of waterfalls and glaciers to sing about in gay watercolors; he was in the office again, sitting back in his chair with some stringy light hair down over one eye and his lips still tightened from battle, telling a friend about some committee chairman or strong-chinned donor who has just left, and in general what an artist in glass is up against; he was smiling over some letter that his secretary had brought in from some unwavering champion of his work; he was wishing that he could spend the main body of his time in doing work that he wanted to do, instead of using it up in fighting off people's cheap ideas, he was suddenly sitting erect in his chair, his face alight, as if he had never encountered a trouble in a life-time, telling of a great song in glass—or a symphony—that he hoped some day to make.

III

That was what he wanted to do—to sing, to express something of "the mighty singing which is America." In order to see how a singing became the dominant quality in his glass it is not necessary to go far from New York. It is in the Princeton University Chapel windows—in the great chancel window, in the four Epic Windows devoted to Dante, Milton, Malory, and Bunyan. More of it is in the East Window—not to mention the new West Rose Window—in St. Vincent Ferrer's in New York. "Oh, kids!" exclaimed one of four well-painted girls who sat mechanically saying their prayers in this church one Sunday afternoon when a bright sun crept from a clouded sky. "Look!" And they sat as if they were seeing some vision, and hearing voices from an unsuspected heaven. More of it still is in the Great Rose Window of St. John the Divine. One sees true yellow and warm reds and rich blues fused into a radiating messenger of the sun; not just a window in colors, but "a singing with bells and harps in the wind."

But he wanted to try an entire symphony in windows—or at least a symphonic poem. After waiting most of a lifetime, he had an opportunity without recent parallel in the modified French Gothic chapel designed by Charles Z. Klauder for the University of Pittsburgh. For there were twenty-three important windows in a building of compact unity, and four of these, the slender double lancets in the transepts, rose to such unexpected heights that they required of the glassman perfect imagination and perfect confidence.

Connick was sure he had what was required. The windows that resulted celebrate the questing spirit of free men—such lay saints as Bach and Schubert and Chaucer and William Harvey and Galileo and Isaac Newton and Louis Pasteur, and such American survivals as the Boone Family in Kentucky, and Abraham Lincoln, and Pere Marquette, and Francis Asbury, and Lewis and Clark, and Emily Dickinson, and Chief Cornplanter. He found it easy to treat figures who had placed high value on the spirit of discovery. In the swiftly changing sunset light of a clear day these windows do produce a symphony's effect. Youthfulness is in the world again, the universe is a living universe, the sun a glorifier of what man can do.

Not everyone across the street in Pittsburgh has found the way in to see what this glassman has done. And some of those who have ventured in have asked the wrong questions: "Were these windows Heinz's idea?"

"How many tons of glass are in a job like this?" But a vanguard of youth tells one what to expect. Boys and girls stop talking without being told as soon as they are inside, and whisper such questions as, "Did a man make it?" And certain adults not yet wholly unwilling to see a new thing come back day after day. They predict that a hundred years from now the stones at the entrance will be worn hollow—a hundred years from now.

And they may be right. "Say," Connick himself once remarked after a man had scoffed at glass in general as interesting only to a few aesthetes, "maybe the trouble with me is that I haven't been dead long enough." It might be interesting once to reverse the usual process of looking indignantly back to the time when somebody was not appreciated, and look forward to the time when somebody may be. Perhaps after the first or second hundred years, when intelligent people have come to regard light and color as important elements in their lives, candidates for the Ph. D.—if there are any left—will write theses about the most private details of Charles J. Connick's record, and prepare chronological tabulations of his work. They will list windows of his in Paris and New York and Boston and Pittsburgh and St. Paul and Minneapolis and Denver and San Francisco and Washington and all sorts of other places. It may even be possible to report that somebody accepted the fantastic Alice-in-Wonderland window that still exists only in design. And they will ask, "Did he start a new era in glass, or only happen to be there when the era came along?" They will be pleased in either event to record that he was a "cantankerous Irishman"—way back there in the dark ages of the twentieth century when Hitler strutted and raged—who had unharmful convictions, and clung to them until he was able to convert the light of the sun into new music. Something like that is what they may be saying you might have seen right "in the process of" if you had only been living—now.

Carter Harrison[1]

ERNEST POOLE

BUT CHICAGO all this time had not only worked but lived; and as it surged out on the prairie, with its frame and brick houses and flats, beer gardens, restaurants and saloons, theaters and burlesque shows, red-light houses, ring fights, gambling joints and race tracks, it had remained up into the eighties a wide-open frontier town. Old Cap Streeter had been right. The great masses of its people wanted it so and had fought all attempts to interfere with the freedom and tolerance they enjoyed. When as mayor teetotaler Joe Medill in 1872 rushed through the Sunday closing of all beer gardens and saloons, from the Irish and the Germans and plenty of native Americans, too, rose such a howl of protest that soon the hated law was repealed. In vain the "praying women" crusaders marched by hundreds through the streets and knelt on the sawdust of barroom floors. The unregenerate drinkers laughed; and feeling quite itself again, the wide-open lusty city continued on its disorderly way. And this aspect of it can best be seen in the story of a Kentucky planter aristocrat, Carter Harrison, mayor of Chicago for five terms between '79 and '93, who in one of his speeches declared:

"Chicago is my bride! I love it as a young man loves his chosen one!"

As a boy I used to see him on his famous big bay mare, in riding clothes with a broad-brimmed hat on his massive bearded head, riding through our city streets and stopping to chat with all sorts and kinds. My father

[1] Chapter X of *Giants Gone*, copyright by Ernest Poole, 1943. Reprinted by permission of Willis Kingsley Wing.

knew him well, and from him and the printed records and in long talks with Harrison's son, himself a noted Chicago mayor, I gathered the material for this story of his career and this picture of its background—the politics and dissipations, genial sins and colorful joys of Chicago's turbulent mass life.

Born of old southern stock near Lexington, Kentucky, in 1825—after the early death of his father he grew up with his mother in the pioneer plantation life. Though they owned many slaves and much land, most of it was in timber still, and at first they lived in a small log cabin in a field of sugar cane. Later on he was to make political capital out of that.

"I was born in a canebrake and rocked to sleep in a sugar trough," he said.

But his mother managed the estate so ably that its value soon increased and poverty was left behind. She taught him at home till he was fifteen. Then he rode each morning to school in Lexington six miles away, and later he took his thoroughbred with him to Yale, where young Harrison was known for his eloquence in debate. On his return, he studied law and helped his mother to run the plantation. This tribute to her gives some idea of the luscious style that he could indulge in:

"I close my eyes and go far back to the time when I lay in a woman's lap. I look up into dark brown eyes and upon a face full of female beauty. My baby tongue can speak no word, but I coo in gentle murmurs: My beautiful mother!"

He wrote that in his middle age, and it helped his popularity, for in their softer moments not only Carter Harrison but Chicago, too, in those days, did love to feel themselves feel like that. Yet in spite of such devotion back there in his early years, restless for the glamour of the colorful world outside, he went to gay plantation dances where he was famed for his gallantry, made a trip down river to New Orleans; and when his mother married again, he went abroad. All over England he traveled on foot or horseback, visiting the Earl of Denbigh and picking up several prize bulls for the plantation back at home. With two comrades from the Old South he toured Germany and France and was in Paris in wild days and nights of insurrection following the revolution of '48. On coming back he found plantation life too tame, so finished his law course, married a young southern belle and with her went west to look for a home. He did not like Chicago at first; it was much too crude and new; but on his second visit he rode about the booming town and decided that it was to be the greatest city in the land. So he settled there in '55.

He kept out of public life at first; for in those years of arguing political factions before the war, his sympathies were half with the South. He opened a law office, but it soon became an agency where he dealt in city land not only for others but for himself. Later he doubled his fortune that way. Meanwhile, he built one house and then another and in 1866 joined a group of Kentucky families building homes near the open prairie. He bought on what is Ashland Avenue now, between Jackson and Van Buren streets. It was only a dirt road in those days with deep ditches at the sides. The Harrison home had been built by a friend. In the building, when workmen on the roof quit shingling before a storm, the owner called on Harrison and other friends to help him; and while they nailed on the last shingles just before a deluge of rain, they passed around an opera glass and took turns in watching the sheriff hang a horse thief three blocks away! When Harrison later bought the house, he bought with it the entire block, made a little plantation of the place and lived there for the rest of his life.

"He was strict with us boys," said his eldest son, "and yet he was great pals with us, too; and we had a mighty happy life. Our father had a passion for gardens. He had stables and outhouses for horses, cows, goats and pigs, chickens, turkeys, peacocks and even eagles and other pets. He would work in the gardens till tired and then lie with a book to read in a swinging seat under the trees. He read Dickens, Thackeray and Scott, histories and biographies in English, French and German. He was a moderate drinker of

wines and bourbon; he liked good cigars. At meals he never over-ate except when it came to watermelons and clabber. 'I can eat clabber till my eyes bulge out,' he used to say; and in season he ate melons at all three meals and again before going to bed.

"Though he went to a good tailor, I doubt if he ever had a suit pressed. He wore a broad-rimmed black hat and high knee boots of fine soft leather. When he rode out he liked to make friends. 'There is no person alive from whom you can't learn something,' he said. He did not care for the theater but loved the circus and minstrel shows. Often he told us: 'I like to laugh. That is why I keep healthy and strong. I go where there are people who laugh just as often as I can.' To meetings and later to City Hall he always rode his Kentucky mare. He could do his best thinking when in the saddle and going at a canter, he said. At City Hall he kept the mare in the fire station close by."

In 1875 he was elected to Congress and he made many speeches there. He fought for Chicago's lake front and for a canal to connect the Illinois and Mississippi Rivers and so bring his beloved South closer to the great Northwest. When some of his eastern opponents claimed that the project was not national, Harrison scornfully declared:

"Sir, the Mississippi and its feeders have a water line of nearly twelve thousand miles. They water soil capable of raising nearly every fruit and grain known to the world. The Lakes have a shore line of five thousand miles. Every foot of that shore except on Lake Superior is as rich as the valleys of Judea, the home of God's chosen people. The rugged shores of Superior are solid with minerals as pure as the product of the furnace. Mr. Speaker, all of this vast inland seaboard can be brought into union by a canal only thirty-six miles long, and yet our statesmen ask—is it national?"

Years later the project was put through. Chicago liked such speeches, so they sent him to Congress a second time; and on his coming home they made him mayor in 1879. Four times they reelected him. They were drawn to him by his honesty and his warm humanity and the splurge and color he threw into the city life. The people loved him. Businessmen liked him. Oh, their wives might smile at times at his dashing appearance on horseback, as two of them did when they told me about his gallant manners. But their husbands said he was good for business, a grand showman for this city he loved, that he ran it in ways that brought in trade and that, instead of hounding businessmen by ruinous rulings, he gave them a chance and played them along, and at the same time reduced their taxes by cutting down city expenses and graft.

There was plenty! Led by the Gray Wolves, the aldermen in City Hall had plunged the city so deep in debt that, when Harrison took office, there was $2,000,000 in city scrip in circulation in place of money. He struck at that. Promptly he ordered heavy cuts in police and fire departments. When Fire Marshal Mat Benner refused to reduce his force, Harrison dismissed him and in his place put Dennis Sweeney, to be known in the next twenty years as the best marshal the city had seen. The new mayor appointed a keen-eyed city controller, too, and set him to watching all accounts. As a real-estate man, Harrison knew how to get low prices for materials and see that building contractors did not skimp their work. So he built new waterworks and schools and a fine new city hall. He built new sidewalks and paved the downtown streets with blocks of stone instead of wood and forced the telegraph companies to run their disfiguring wires underground. All these and other improvements he made; and yet by the end of his third term he'd retired all the city scrip, and at the end of his fourth he left $2,665,000 in the treasury.

There was plenty he could not do, for the gang was still strong at City Hall. Through his power of appointment to fifteen thousand city jobs, he forced gang aldermen into line or rewarded others who had backed him in his fight against some grab. But in spite of that he had to close his eyes to a lot of skulduggery. With the Gray Wolves he lived in a state of armed neutrality. All pleasant enough on the surface, but they knew they couldn't push him too far, and he knew that

to get anything done he must play along with the machine. To put through his improvements he had to be reelected, and for that he needed the people behind him. He got them. He was no puritan but a big-hearted mixer, they said, with no high-falutin puritan talk about clamping down the lid on saloons. In all his political life, not even Harrison's enemies accused him of graft; but his years abroad had given him continental ideas about leaving the moralities of private lives to the people who led them. When he spoke at meetings, he often took along an old stuffed American eagle, set it up on a platform table and addressed to it his remarks on the right of every citizen to his personal liberty; and such eloquent outbursts brought loud cheers from voters who meant to keep their frontier city all wide open still.

"You can't legislate morality," said Harrison, "so leave it alone. Those who think that the morals of a great crowded city can be made pure by law are as much dreamers as the mad anarchists who imagine that crime can be destroyed by killing law."

So the haunts of vice remained; and for the plain people whom Harrison loved, theaters and variety shows, race tracks, beer gardens and saloons were allowed to keep open seven days and nights a week. The glittering palatial bars at the Palmer House and the Sherman House were crowded nearly all night long. I was only a small boy then, but years later not only Chicago's bars but its brothels and gambling joints were pictured to me by an old Chicago reporter, who back in the eighties and nineties had been a leading light in the festive group of journalists and politicians known as the White Chapel Club.

"When my father ran the Sherman House," he said, "all along the fifty-foot bar were pyramids of shining glasses, from high tumblers for milk punch to little stemmed thimbles for liqueurs. Decanters and bottles of various shapes and brilliant colors were reflected in the mirrors behind. Mr. Dooley, my old friend Pete Dunne, often dropped in there for a drink, and all over town were other bars that Pete and I used to know well. His favorite was McGarry's place, where McGarry supplied him with a lot of Mr. Dooley's philosophy. The Tremont House was a great place for north siders to stop in at for snifters on their way home. Most of the actors gathered there. Charlie Cavoroc from New Orleans ran a lovely little bar. Schlogel's on Wells Street had splendid wines, and Charlie Clayton's was famed for its bourbon. The hobos gathered at Hinky Dink's, with its bar nearly a hundred feet long. In the Black Winter of '94, six thousand saloons gave free lunches to sixty thousand jobless a day."

There were other attractions in town. Men and boys who loved the ring saw bloody battles of many rounds between champions from all over the land. On spring and summer afternoons thousands went out to the race tracks, made colorful by the four-horse coaches and tallyhos of the wealthy sporting men and their bustled ladies in picture hats under small pink parasols, in silks and laces and loaded with jewels, and with hampers of wine beneath the seats.

Back in the city every night men and boys poured into the gambling dives, with yellow gaslights blazing outside, on Gambler's Alley in Cullom Place and on that stretch on Randolph Street between State and Clark which ever since the sixties had been known as Hair-trigger Block. The "Senate" and other places there, where keno was the favorite game, had long been so popular that crowds had often blocked the streets to get in, to play and to watch the "black-leg" stars, the picturesque gamblers who by the war had been driven from the big river boats. Others now had taken their places at games that ran around the clock. In Harrison's time the richly decorated joint of Harry Varnell, with its two score of faro dealers and croupiers for roulette, ran all day long and all night. So did those of Ed Wagner, Curt Gunn and Billy Fagin's House of David, with its rich curtains and paintings of nudes, up over an innocent-looking hall, where a street sign announced a gospel service. To Fagin's place and that of Curt Gunn had often come in his early days Bet-a-million John W. Gates, for whom later Gunn arranged quiet little games of whist where $100,000 changed hands be-

tween Saturday night and Monday dawn.

Mike McDonald's big "palace" on Clark Street was the best known of them all. To old Mike, whose notoriety dated from the Civil War, was attributed the famous line: "A sucker is born every minute"—a line well supported by the flocks of young city clerks and farmer boys who lost everything but their shirts. Over Mike's big barroom were floor after floor where faro, roulette and all the table games were crowded day and night.

In vain reform mayors like Joe Medill had tried to close such places. Genial judges in gamblers' pay gave replevins and more than once issued warrants for the arrests of puritan raiders for breaking in. To hosannas from the gamblers the would-be reformers were grabbed by cops and triumphantly marched off to jail. Other raids by the puritans were met by gunmen and husky thugs who hurled them back onto the street. Some of the games were so openly run that on summer nights the whir of the wheel and droning voice of the croupier could be distinctly heard outside. A story is told of one corpulent cop standing under the open windows of one such place. A virtuous citizen asked him:

"What do you mean by standing out here when men are gambling right on your beat?"

"Gambling?" came the shocked reply. "Well! I must look into this!" And he strolled off up the street. By 1890 there were more than two thousand gambling joints, and gun fights were common there.

Many of the gambler kings had glamorous dames whom they drove in victorias through the town and set up as madams in houses of joy. From the late fifties, when Long John Wentworth had raided and burned the red-light shanties on The Sands on the north side, vice had moved and scattered west and south, as we have seen, to such regions as Conley's Patch and the tough sailor joint of the Bengal Tigress, and to Under the Willow, on Wells and Monroe, with its scarlet window shades and the question in gold—Why Not?—on each one. Since those days the trade had spread to more elegant places on Wells Street and the Levee, on State and Clark streets and Wabash Avenue farther south. Lou Harper's big house on Monroe Street had been one of the first of these; and on South Clark Street was Lizzie Allan, a most respectable-looking dame, who in the eighties was said to have cleared $250,000, in brilliantly lighted vivid rooms sumptuously furnished, with frescoed amoretti on the bedroom walls.

Nellie Costello, Victoria Shaw, Frankie Wright, French Em and Irene Woods ran other glamour palaces. One of the most notorious was Carrie Watson's gaudy house. Once a girl in Lou Harper's place, she had been set up in business by Al Smith, the gambler king, and now had sixty girls of her own and a bowling alley where gentleman patrons were supplied with freshly iced bottles of champagne for pins. Later, through the nineties and on into this century, on Dearborn Street near Twenty-second the two Everleigh sisters from the Old South, trained to the trade at Lizzie Allan's, ran their sumptuous house for Chicago's rich and kept it decorous and discreet. In their notorious Everleigh Club, the lady inmates in Paris gowns politely gossiped of music and books and the latest scandals in town, in the six reception rooms, each one named after a flower and decorated to match and scented by a fountain giving off the flower's perfume!

"You can't legislate morality," said Mayor Harrison, and he left such places alone. Many years later his son as mayor attempted a cleanup of the town. On the Levee, with big squads of detectives assisted by hundreds of volunteers smashing their way into brothels to the boom of Salvation Army drums, the owners and inmates were herded out into Black Marias and rushed to jails. But promptly the chiefs of the underworld proceeded to get them out by paying fines or giving bail, and ordered them all to put on their war paint and gaudiest togs and in the most respectable districts bang on doors and ask for lodgings. That afternoon a horde of such ladies, old and young, in silks and satins, some of them sober but more of them tight, paraded Michigan Avenue and other decorous thoroughfares, staggering up to bang on the doors of the rich and ask to be

taken in, because they'd been robbed of their homes by police!

"You can't legislate morality." No such spectacular battles with vice took place in Harrison Senior's time. Though decent citizens broke out now and then in clamor for reform, Chicago still roared on its way. Its people liked to read in the news the melodramatic stories from race tracks and gambling joints, red-light palaces and saloons. Though all men did not want such places, there were plenty of them who did; and in the Irish, German, Swedish, Bohemian, Polish and Italian quarters, where two-thirds of the people lived, not only the men but their mothers and their sisters, daughters and wives wanted their beer gardens and cafés left open on Sundays, their one holiday.

And so they loved their tolerant mayor. On his rides to City Hall, he would go by roundabout routes, up and down streets and even through alleys, watching conditions, stopping to chat with the men and to ask the housewives if the city garbage carts were doing their job in the neighborhood. In that way he made countless friends, who would proudly tell their neighbors: "The mayor stopped and talked to me today." All this of course took a lot of his time, and to do it he had to start early, for he reached his office at nine and, except for a brief lunch, stayed working till five or six o'clock. He was in demand in the evenings, too, at public meetings•all over the city. But Harrison loved it, he loved the whole job. Though a hunter and fisherman in the past, he had long ago given it up and rarely went away, for he said that Chicago was good enough for anyone the whole year 'round.

So he knew the whole town and the people knew him, not only at political rallies but at their celebrations and parties of all sorts and kinds. He carried with him two sets of cigars, the best in a pocket over his heart; the other he called campaign cigars. At meetings he enjoyed being heckled and was ready with quick replies. To Germans, French and Italians he could speak in their mother tongues; and before going to address Poles, Bohemians or Swedes, he'd memorize a line or two from some noted poem in their language and at the climax of his speech throw that at the crowd and get a big hand. Another little trick of his was to claim he had in his veins some blood of each race of listeners—and that went fine until one night he addressed a convention of Pullman porters, and their Republican chairman said to their guest, a Democrat:

"Your honor, the mayor, we hear you claim to have Irish blood and German and Italian and Swedish and Norwegian blood, so we hope you'll claim Negro blood tonight."

For a man from the Blue Grass that was a fast one, but Harrison did not bat an eye.

"My fellow citizens," he began, "I am sorry I cannot claim Negro blood, but at least I did the best I could to make up for what Nature had deprived me of. In my early infancy I nursed at the breast of my good colored mammy; and remembering how I loved her, I feel I am one with you tonight!"

He spoke to labor unions; and though not himself a radical, his attitude was tolerant. His paper the *Times* was tolerant, too, and so was young Victor Lawson's great new evening paper, the *News*. And the hard-pressed unions of those days loved both men on that account. Beginning in 1873, when hordes of jobless men had paraded Chicago's streets under banners inscribed Bread or Blood, natives had joined with foreign born in the Workingmen's Party and in such chaotic strikes that in one of them it took nearly ten thousand police and armed citizens to put down the rioting mobs. By the eighties when Harrison was mayor, the big employers, determined to keep wages low and set like granite against interference by labor in their one man shows, were using hundreds of hated "Pinks" to break the new unions and force down their clamor for an eight-hour day. Standing firm against such repression as dangerous and futile, Harrison told the unions they had a right to organize, and in strikes he refused police protection except when there was violence. Give men decent wages and hours and they'll be sensible, he said. Among their leaders were a few anarchists who in their speeches liked to speak of dynamite as a symbol of the people's power;

and when between '84 and '86 armies of men were thrown out of work and in riots and strikes dozens were shot by the "Pinks" and police, anarchists shouted to the crowds, and a little anarchist circular urged the workers:

"Rise, oh, Hercules, in your might! If you are men, destroy the hideous monster that seeks to destroy you! To arms! We call you to arms!"

The employers were quick to demand that such leaders be put in jail. But Carter Harrison still stood firm.

"I know the working people," he said, "and the masses will never follow such leaders. Let the idiots bluster on, as I've seen them do over in London in Hyde Park. Both there and in this country, freedom of speech never did any harm." To stop it and imprison such men would give a dangerous boom to their cause. They were only a handful now. And when in May, 1886, they called a mass meeting in the Haymarket for the purpose of launching a general strike, his view was supported by the fact that, in spite of all the newspaper warnings about "this call to revolution," only two thousand workingmen gathered there. Keeping his police reserves at a precinct station close by, Harrison went to the Haymarket and mingled in the crowd. While listening to the speeches, he kept striking matches in the dark in order to relight his cigar; and when warned by a friend to stop or he would be noticed, he replied:

"I want them to notice me. I want them to know their mayor is here."

In the speeches no violence was urged; and when a drizzling rain set in, the crowd began to melt away. He went to the police station close by and told the inspector that the meeting was a washout and that the reserves might as well be sent back. Then he himself went home to bed. But the inspector left in charge, who in the past had more than once been called on the mat for rash work in time of strikes, on hearing from one of his stool pigeons that the last anarchist speaker had urged that the law "be throttled, killed and stabbed," marched his two hundred cops to the Haymarket and there called upon the crowd to disperse. A few seconds later, as though in reply, the first bomb ever thrown in this country exploded in the dense ranks of police, killing one and wounding seventy-three. The other police in a panic opened fire blindly in the dark, wounding some more of their fellow cops and shooting sixty workers down.

In the hysterical uproar which followed in the next few days, with the well-to-do and respectables scared to death by this act of the mob, all radical centers were raided by police, who made hundreds of arrests. Eight anarchist leaders were brought to trial, and four were hanged as inciters to crime. In the pressure employed by the wealthy on the judge who conducted the trial and on the city government, a group of Chicago's leading magnates led by Marshall Field called on the mayor to demand that he now repress free speech. And when Harrison replied that he did not believe the anarchists had any real part in the bomb throwing and that he was still against such suppression of the peoples' rights, Marshall Field said sternly:

"Mr. Harrison, we represent great interests in Chicago."

"Mr. Field," replied the mayor, "any poor man owning a single small cottage as his sole possession has the same interest in Chicago as its richest citizen."

Good political capital? Yes. But also sound democracy.

And so the people loved their mayor, the rich Kentucky aristocrat; and even big business, when not in a panic, liked him for all he had done for their town. But next year he dropped out of public life and in 1887 made a grand tour of the world, through Europe out to the Far East. He pictured his trip in a colorful book which he called *A Race with the Sun*. "I love to watch new people," he wrote. "I visit cities more to look at and into their peoples than into their buildings and their shows." And always he knew how to make friends. When riding in the mountains of northern India, he made a hit with the chief of a pass by drawing on a smooth boulder a rough chart and then making a tiny dot, and indicating by signs that the mountain chief was raja of all the region in the chart while he himself was raja only of the dot, Chicago.

Raja he certainly was at home in the last dramatic years of his life. For when in 1890 Congress was deciding where the Columbian Exposition should be, Harrison fought for the city he loved; and when it was chosen as the site, he was one of those who rallied all Chicago in support of the Fair. So once again the town made him mayor.

"C.H. is a grand showman," they said. "He'll give the whole show a color and dash and magnificence that will bring in business and make it a booming success."

So he did. All through the long rush of preparations he took the lead in staging immense mass meetings, a grand ball and glittering parades that made the Fair front-page news in newspapers all over the land; and upon the opening day in 1893 he rode in the procession of President Grover Cleveland and his cabinet, a duke and duchess and marquis from Spain, and a score of other notables. As the line of jingling carriages, on their way to the stately Court of Honor and the vast exhibit halls, passed through the boisterous Midway Plaisance, the fakirs, circus freaks and hootchy-kootchy dancers from the sideshows cheered, Africans yelled and tomtoms beat and lions were prodded to roar their applause. On they went to the greater show; and as Harrison waved his broad-brimmed hat to the half million people waiting there, it was one of the happiest days of his life.

Through the summer he was constantly there, speaking or presiding at meetings and going all about the grounds to see every exhibit and show. He fought down all efforts of puritans for Sunday closing of the Fair; and as he went about, he drew attention everywhere. "That's Carter Harrison," people said. His reputation had spread so far that people from all over the West, realtors, merchants, concessionaires, hotel keepers, showmen, gamblers, pickpockets and confidence men had come rushing to Chicago, each hungry for a share of the wealth to be gained with Carter Harrison running a wide-open Fair and a wide-open town. Chicago's noted writer Lloyd Lewis tells of a village storekeeper who said to his friend:

"If old Carter Harrison is to be mayor, I'll go to Chicago and the Fair, but I'm go'n' to wear nothin' but tights and carry a knife between my teeth and a pistol in each hand."

But though such visitors, no doubt, found plenty of such excitement in Chicago, they missed it at the Fair, for out in the "White City" Harrison kept a vigilant watch for any signs of disorder or graft. He had given strict orders to his police to clap the lid down tight on crime. Those orders were not quite obeyed, for years later I heard from an old ex-crook that the police inspector in charge sold to him and his pal the pickpocket monopoly. But even he held them strictly to only a paltry hundred dollars a day, a record of policing most remarkable when compared to that at other big fairs of the kind. And as crowds increased till this nation and Europe rang with praises of the show, Harrison's pride in his city grew and rose to a climax in the speech he made on American Cities Day in October near the close of the Fair. He spoke to a crowd of nearly a hundred thousand, but he reached them all, for his voice was grand for the open air.

"Look at it now!" he exclaimed. "These buildings looking like marble, this dream of poets of centuries, have sprung up in only two years from the marsh! . . . Genius is but audacity, and the audacity of the wild and woolly West and of Chicago has chosen a star, and has looked upward to it, and knows nothing that it will not attempt, and thus far has found nothing that it cannot achieve! . . . This World's Fair has been the greatest educator the world has known. It was the audacity of genius that imagined this thing It was the pluck of our people, congregated here from all this Union and all nationalities of the earth, speaking all languages, drawing their inspiration from three thousand miles of territory from east to west and from yonder green lake on the north to the Gulf on the south—our people, who have never yet found failure! . . . When the Great Fire swept over our city and laid it in ashes in twenty-four hours, then the world said: 'Chicago and her boasting are gone forever!' But Chicago said: 'We will rebuild the city better than ever!' And she has done it. The World's Fair is a mighty object lesson; but my

friends, come out of this White City into our Black City. It was nothing but a swamp when I was born into the world. What is it now? The second city in America! . . . I intend to live for more than half a century still, and at the end of that time London will be trembling lest Chicago shall surpass her and New York will say: 'Let us go to the metropolis of America!'"

After this last outburst of that warm western eloquence, that impassioned Americanism and boundless local pride which he had embodied all his life, he left the Fair and went back to his home. He found his family still away. In the empty house the doorbell rang; and when the weary triumphant old mayor went to the door and opened it, a crazy lad named Prendergast, with a persecution mania, jumped inside and shot him down!

"When I heard the news and rushed home," said his son, "I found crowds already around our house trying to lynch the murderer. The police had got him safely away, but the crowds didn't know, and they grew and grew till we had to call more police, so wild was the grief and clamor for vengeance by people of every kind who loved my father like their own. For the greater part of two days and nights Chicago's people passed slowly by the bier where he lay at City Hall. In the funeral procession next day, behind the hearse walked Father's old mare, with stirrups crossed on her empty saddle. We kept her out on the farm after that, and nobody ever rode her again."

No mayor will ever ride again through the streets of the city day and night, making friends with the people all over town. For Carter Harrison belonged to a warm grandiloquent personal city, in an age that will never be seen any more.

Customs of the Germans[1]

CORNELIUS TACITUS

THE GERMANS, it is well known, have no regular cities; nor do they allow a continuity of houses. They dwell in separate habitations, dispersed up and down as a grove, a meadow, or a fountain happens to invite. They have villages, but not with a series of connected buildings. Every tenement stands detached, with a vacant piece of ground round it, either to prevent accidents by fire, or for want of skill in the art of building. They do not know the use of mortar or of tiles. They build with rude materials, regardless of beauty, order, and proportion. Particular parts are covered over with a kind of earth so smooth and shining that the natural veins have some resemblance to the lights and shades of painting. Besides these habitations they have a number of subterranean caves, dug by their own labor and carefully covered over with dung: in winter their retreat from cold and the repository of their corn. In those recesses they not only find a shelter from the rigor of the season, but in times of foreign invasion their effects are safely concealed. The enemy lays waste the open country, but the hidden treasure escapes the general ravage; safe in its obscurity, or because the search would be attended with too much trouble.

The clothing in use is a loose mantle, made fast with a clasp, or, when they cannot be had, with a thorn. With only this on they loiter away whole days by the fire-side. The rich wear a more pretentious garment, not however displayed and flowing like the Parthians or the people of Sarmatia, but drawn so tight that the form of the limbs is palpably expressed. The skins of wild animals are also much in use. Near the frontier, on the borders of the Rhine, the inhabitants wear them, but are wholly indifferent as to the choice. The people who live in the more remote regions near the northern seas, and who have

[1] From *Germania* as translated by Arthur Murphy.

not acquired by commerce a taste for new-fashioned apparel, are more careful in their selection. They choose particular beasts, and having stripped off the furs clothe themselves with the spoil, decorated with parti-colored spots, or fragments taken from the skins of fish that swim the ocean as yet unexplored by the Romans. In point of dress there is no distinction between the sexes, except that the garment of the women is frequently made of linen, adorned with purple spots, but without sleeves, leaving the arms and part of the bosom uncovered.

Marriage is considered as a strict and sacred institution. In the national character there is nothing so truly commendable. To be contented with one wife is peculiar to the Germans. They differ in this respect from all other savage nations. There are indeed a few instances of polygamy; not however the effect of loose desire, but occasioned by the ambition of various families, who court the alliance of a chief distinguished by the nobility of his rank and character. The bride brings no portion, but receives a dowry from her husband. In the presence of her parents and relations he makes a tender of part of his wealth; if accepted, the match is approved. In the choice of the presents female vanity is not consulted. There are no frivolous trinkets to adorn the future bride. The whole fortune consists of oxen, a caparisoned horse, a shield, a spear, and a sword. She in return delivers a present of arms, and by this exchange of gifts the marriage is concluded. This is the nuptial ceremony; this the bond of union; these their hymeneal gods. Lest the wife should think that her sex exempts her from the rigor of the severest virtue and the toils of war, she is informed of her duty by the marriage ceremony; and thence she learns that she is received by her husband to be his partner in toil and danger, to dare with him in war, and suffer with him in peace. The oxen yoked, the horse accoutred, and the arms given on the occasion inculcate this lesson; and thus she is prepared to live, and thus to die. These are the terms of their union: she receives her armor as a sacred treasure, to be preserved inviolate, and transmitted with honor to her sons, a portion for their wives, and from them going down to her grandchildren.

In consequence of these manners the married state is a life of affection and female constancy. The virtue of the woman is guarded from seduction: no public spectacles to seduce her, no banquets to inflame her passions, no baits of pleasure to disarm her virtue. The art of intriguing by clandestine letters is unknown to both sexes. Populous as the country is, adultery is rarely heard of; when detected, the punishment is instant, and inflicted by the husband. He cuts off the hair of his guilty wife, and having assembled her relations expels her naked from his house, pursuing her with stripes through the village. To public loss of honor no favor is shown. She may possess beauty, youth, and riches; but a husband she can never obtain. Vice is not treated by the Germans as a subject of raillery, nor is the profligacy of corrupting and being corrupted called the fashion of the age. By the practice of some states,[2] female virtue is advanced to still higher perfection: with them none but virgins marry. When the bride has fixed her choice, her hopes of matrimony are closed for life. With one husband, as with one life, one mind, one body, every woman is satisfied. In him her happiness is centered, her desires find their limit, and the result is not only affection for the husband's person, but reverence for the married state. To set limits to population by rearing up only a certain number of children, and destroying the rest, is accounted a flagitious crime. Among the savages of Germany virtuous manners operate more than good laws in other countries.

In every family the children are reared in filth. They run about naked, and in time grow up to that strength and size of limb which we behold with wonder. The infant is nourished at the mother's breast, not turned over to nurses and to servants. No distinction is made between the future chieftain and the infant son of a common slave. On the same ground and mixed with the same cattle they pass their days, till the age of manhood draws the line of separation, and early valor shows

[2] I.e., German States.

the person of free birth. It is generally late before their young men come to manhood, nor are the virgins married too soon. Both parties wait to attain their full growth. In due time the match is made, and the children of the marriage have the constitution of their parents. The uncle by the mother's side regards his nephews with an affection not at all inferior to that of their father. With some the relation of the sister's children to their maternal uncle is held to be the strongest tie of consanguinity, so that in demanding hostages that line of kindred is preferred as the most endearing objects of the family and, consequently, the most tender pledges. The son is always heir to his father. Last wills and testaments are not in use. In case of failure of issue, the brothers of the deceased are next in succession, or else the paternal or maternal uncles. A numerous train of relations is the comfort and honor of old age. To live without raising heirs to yourself is no advantage in Germany.

To adopt the quarrels as well as the friendships of your parents and relations is held to be an indispensable duty. In their resentments, however, they are not implacable. Injuries are adjusted by a settled measure of compensation. Atonement is made for homicide by a certain number of cattle, and by that satisfaction the whole family is appeased; a happy regulation and conducive to the public interest, since it serves to curb that spirit of revenge which is the natural result of liberty in the excess. Hospitality and convivial pleasure are nowhere else so liberally enjoyed. To refuse admittance to a guest were an outrage against humanity. The master of the house welcomes every stranger, and regales him to the best of his ability. If his stock falls short, he becomes a visitor to his neighbor, and conducts his new acquaintance to a more plentiful table. They do not wait to be invited, nor is this of any consequence, since a cordial reception is always certain. Between an intimate and an entire stranger no distinction is made. The law of hospitality is the same. The departing guest receives as a present whatever he desires, and the host retaliates by asking with the same freedom. A German delights in the gifts which he receives, yet by bestowing he imputes nothing to you as a favor, and for what he receives he acknowledges no obligation.

In this manner the Germans pride themselves on their frankness and generosity. Their hours of rest are protracted to broad daylight. As soon as they rise, they bathe, generally, on account of the intense severity of the climate, in warm water. They then betake themselves of their meal, each on a separate seat and at his own table. Having finished their repast they proceed completely armed to the despatch of business, and frequently to a convivial meeting. To devote both day and night to deep drinking is a disgrace to no man. Disputes, as will be the case with people in liquor, frequently arise, and are seldom confined to opprobrious language. The quarrel generally ends in a scene of blood. Important subjects, such as the reconciliation of enemies, the forming of family alliances, the election of chiefs, and even peace and war, are generally canvassed in their carousing festivals. The convivial moment, according to their notion, is the true season for business, when the mind opens itself in plain simplicity, or grows warm with bold and noble ideas. Strangers to artifice and knowing no refinement, they tell their sentiments without disguise. The pleasure of the table expands their hearts and calls forth every secret. On the following day the subject of debate is again taken into consideration, and thus two different periods of time have their distinct uses: when warm, they debate; when cool, they decide.

Their beverage is a liquor drawn from barley or from wheat, and, like the juice of the grape, fermented to a spirit. The settlers on the banks of the Rhine provide themselves with wine. Their food is of the simplest kind: wild apples, the flesh of an animal recently killed, or coagulated milk. Without skill in cookery, or without seasoning to stimulate the palate, they eat to satisfy nature. But they do not drink merely to quench their thirst. Indulge their love of liquor to the excess which they require, and you need not employ the terror of your arms; their own vices will subdue them.

Their public spectacles boast of no variety. They have but one sort, and that they repeat at all their meetings. A band of young men make it their pastime to dance entirely naked amidst pointed swords and javelins. By constant exercise this kind of exhibition has become an art, and art has taught them to perform with grace and elegance. Their talents, however, are not let out for hire. Though some danger attends the practice, the pleasure of the spectator is their only recompense. In the character of a German there is nothing so remarkable as his passion for play. Without the excuse of liquor, strange as it may seem, in their cool and sober moments they have recourse to dice, as to a serious and regular business, with the most desperate spirit committing their whole substance to chance, and when they have lost their all, putting their liberty and even their persons on the last hazard of the die! The loser yields himself to slavery. Young, robust, and valiant, he submits to be chained, and even exposed to sale. Such is the effect of a ruinous and inveterate habit. They are victims to folly, and they call themselves men of honor. The winner is always in a hurry to barter away the slaves acquired by success at play; he is ashamed of his victory, and therefore puts away the remembrance of it as soon as possible.

The slaves in general are not arranged at their several employments in the household affairs, as is the practice at Rome. Each has his separate habitation, and his own establishment to manage. The master considers him as an agrarian dependent, who is obliged to furnish a certain quantity of grain, cattle, or wearing apparel. The slave obeys, and the state of servitude extends no further. All domestic affairs are managed by the master's wife and children. To punish a slave with stripes, to load him with chains or condemn him to hard labor is unusual. It is true that slaves are sometimes put to death, not under color of justice, or of any authority vested in the master, but in transport of passion, in a fit of rage, as is often the case in a sudden affray; but it is also true that this species of homicide passes with impunity. The freed men are not of much higher consideration than the actual slaves; they obtain no rank in the master's family, and, if we except the parts of Germany where monarchy is established, they never figure on the stage of public business. In despotic governments they rise above the men of ingenuous birth, and even eclipse the whole body of the nobles. In other states the subordination of the freedmen is a proof of public liberty.

The practice of placing money at interest and reaping the profits of usury is unknown in Germany; and that happy ignorance is a better preventive of the evil than a code of prohibitory laws. In cultivating the soil they do not settle on one spot, but shift from place to place. The state or community takes possession of a certain tract proportioned to its number of hands; allotments are afterwards made to individuals according to their rank and dignity. In so extensive a country, where there is no want of land, the partition is easily made. The ground tilled in one year lies fallow the next, and a sufficient quantity always remains, the labor of the people being by no means adequate to the extent or fertility of the soil. Nor have they the skill to make orchard plantations, to enclose the meadow grounds, or to lay out and water gardens. From the earth they demand nothing but grain. Hence their year is not, as with the Romans, divided into four seasons. They have distinct ideas of winter, spring, and summer, and their language has terms for each; but they neither know the blessings nor the name of autumn.

Their funerals have neither pomp nor vain ambition. When the bodies of illustrious men are to be burned, they choose a particular kind of wood for the purpose, and have no other attention. The funeral pile is neither strewed with garments nor enriched with fragrant spices. The arms of the deceased are committed to the flames, and sometimes his horse. A mound of turf is raised to his memory; and this, in their opinion, is a better sepulchre than those structures of labored grandeur which display the weakness of human vanity, and are at best a burden to the dead. Tears and lamentations are soon at an end, but their regret does not so easily wear away. To grieve for the departed is comely in the softer sex. The women weep for their friends; the men remember them.

The Spouter-Inn[1]

HERMAN MELVILLE

NOW HAVING a night, a day, and still another night, following before me in New Bedford, ere I could embark for my destined port, it became a matter of concernment where I was to eat and sleep meanwhile. It was a very dubious-looking, nay, a very dark and dismal night, bitingly cold and cheerless. I knew no one in the place. With anxious grapnels I had sounded my pockets, and only brought up a few pieces of silver. "So, wherever you go, Ishmael," said I to myself as I stood in the middle of a dreary street shouldering my bag, and comparing the gloom towards the north with the darkness towards the south—"wherever in your wisdom you may conclude to lodge for the night, my dear Ishmael, be sure to inquire the price, and don't be too particular."

With halting steps I paced the streets, and passed the sign of "The Crossed Harpoons" —but it looked too expensive and jolly there. Farther on, from the bright red windows of the "Sword-Fish Inn," there came such fervent rays, that it seemed to have melted the packed snow and ice from before the house, for everywhere else the congealed frost lay ten inches thick in a hard, asphaltic pavement,—rather weary for me, when I struck my foot against the flinty projections, because from hard, remorseless service the soles of my boots were in a most miserable plight. "Too expensive and jolly, again," thought I, pausing one moment to watch the broad glare in the street, and hear the sounds of the tinkling glasses within. "But go on, Ishmael," said I at last; "don't you hear? get away from before the door; your patched boots are stopping the way." So on I went. I now by instinct followed the streets that took me waterward, for there, doubtless, were the cheapest, if not the cheeriest inns.

Such dreary streets! blocks of blackness, not houses, on either hand, and here and there a candle, like a candle moving about in a tomb. At this hour of the night, of the last day of the week, that quarter of the town proved all but deserted. But presently I came to a smoky light proceeding from a low, wide building, the door of which stood invitingly open. It had a careless look, as if it were meant for the uses of the public; so, entering, the first thing I did was to stumble over an ashbox in the porch. "Ha!" thought I, "ha," as the flying particles almost choked me, "are these ashes from that destroyed city, Gomorrah? But 'The Crossed Harpoons,' and 'The Sword-Fish'?—this, then, must needs be the sign of 'The Trap.'" However, I picked myself up and hearing a loud voice within, pushed on and opened a second, interior door.

It seemed the great Black Parliament sitting in Tophet. A hundred black faces turned round in their rows to peer; and beyond, a black Angel of Doom was beating a book in a pulpit. It was a negro church; and the preacher's text was about the blackness of darkness, and the weeping and wailing and teeth-gnashing there. "Ha, Ishmael," muttered I, backing out, "wretched entertainment at the sign of 'The Trap'!"

Moving on, I at last came to a dim sort of outhanging light not far from the docks, and heard a forlorn creaking in the air; and looking up, saw a swinging sign over the door with a white painting upon it, faintly representing a tall straight jet of misty spray, and these words underneath—"The Spouter-Inn:—Peter Coffin."

"Coffin?—Spouter?—Rather ominous in that particular connection," thought I. "But it is a common name in Nantucket, they say, and I suppose this Peter here is an emigrant from there." As the light looked so dim, and the place, for the time, looked quiet enough, and the dilapidated little wooden house itself looked as if it might have been carted

[1] From *Moby Dick or The White Whale.*

here from the ruins of some burnt district, and as the swinging sign had a poverty-stricken sort of creak to it, I thought that here was the very spot for cheap lodgings, and the best of pea coffee.

It was a queer sort of place—a gable-ended old house, one side palsied as it were, and leaning over sadly. It stood on a sharp bleak corner, where that tempestuous wind Euroclydon kept up a worse howling than ever it did about St. Paul's tossed craft. Euroclydon, nevertheless, is a mighty pleasant zephyr to any one indoors, with his feet on the hob quietly toasting for bed. "In judging of that tempestuous wind called Euroclydon," says an old writer—of whose works I possess the only copy extant—"it maketh a marvellous difference, whether thou lookest out at it from a glass window where the frost is all on the outside, or whether thou observest it from that sashless window, where the frost is on both sides, and of which the wight Death is the only glazier." True enough, thought I, as this passage occurred to my mind—old black-letter, thou reasonest well. Yes, these eyes are windows, and this body of mine is the house. What a pity they didn't stop up the chinks and the crannies though, and thrust in a little lint here and there. But it's too late to make any improvements now. . . . What a fine frosty night; how Orion glitters; what northern lights! Let them talk of their oriental summer climes of everlasting conservatories; give me the privilege of making my own summer with my own coals.

. . . . .

Entering that gabled-ended Spouter-Inn, you found yourself in a wide, low, straggling entry with old-fashioned wainscots, reminding one of the bulwarks of some condemned old craft. On one side hung a very large oil-painting so thoroughly besmoked, and every way defaced, that in the unequal cross-lights by which you viewed it, it was only by diligent study and a series of systematic visits to it, and careful inquiry of the neighbours, that you could any way arrive at an understanding of its purpose. Such unaccountable masses of shades and shadows, that at first you almost thought some ambitious young artist in the time of the New England hags, had endeavoured to delineate chaos bewitched. But by dint of much and earnest contemplation, and oft repeated ponderings, and especially by throwing open the little window towards the back of the entry, you at last come to the conclusion that such an idea, however wild, might not be altogether unwarranted.

But what most puzzled and confounded you was a long, limber, portentous, black mass of something hovering in the centre of the picture over three blue, dim, perpendicular lines floating in a nameless yeast. A boggy, soggy, squitchy picture truly, enough to drive a nervous man distracted. Yet was there a sort of indefinite, half-attained, unimaginable sublimity about it that fairly froze you to it, till you involuntarily took an oath with yourself to find out what that marvellous painting meant. Ever and anon a bright, but, alas! deceptive idea would dart you through.—It's the Black Sea in a midnight gale.—It's the unnatural combat of the four primal elements.—It's a blasted heath.—It's a Hyperborean winter scene.—It's the breaking-up of the ice-bound stream of Time. But at least all these fancies yielded to that one portentous something in the picture's midst. *That* once found out, and all the rest were plain. But stop; does it not bear a faint resemblance to a gigantic fish? even the great leviathan himself?

In fact, the artist's design seemed this: a final theory of my own, partly based upon the aggregated opinions of many aged persons with whom I conversed upon the subject. The picture represents a Cape-Horner in a great hurricane; the half-foundered ship weltering there with its three dismantled masts alone visible; and an exasperated whale, purposing to spring clean over the craft, is in the enormous act of impaling himself upon the three mastheads.

The opposite wall of this entry was hung all over with a heathenish array of monstrous clubs and spears. Some were thickly set with glittering teeth resembling ivory saws; others were tufted with knots of human

hair; and one was sickle-shaped, with a vast handle sweeping round like the segment made in the new-mown grass by a long-armed mower. You shuddered as you gazed, and wondered what monstrous cannibal and savage could ever have gone a death-harvesting with such a hacking, horrifying implement. Mixed with these were rusty old whaling lances and harpoons all broken and deformed. Some were storied weapons. With this once long lance, now wildly elbowed, fifty years ago did Nathan Swain kill fifteen whales between a sunrise and a sunset. And that harpoon—so like a corkscrew now—was flung in Javan seas, and run away with by a whale, years afterwards slain off the Cape of Blanco. The original iron entered nigh the tail, and, like a restless needle sojourning in the body of a man, travelled full forty feet, and at last was found imbedded in the hump.

Crossing this dusky entry, and on through yon low-arched way—cut through what in old times must have been a great central chimney with fireplaces all round—you enter the public room. A still duskier place is this, with such low ponderous beams above, and such old wrinkled planks beneath, that you would almost fancy you trod some old craft's cockpits, especially of such a howling night, when this corner-anchored old ark rocked so furiously. On one side stood a long, low, shelf-like table covered with cracked glass-cases, filled with dusty rarities, gathered from this wide world's remotest nooks. Projecting from the farther angle of the room stands a dark-looking den—the bar—a rude attempt at a right whale's head. Be that how it may, there stands the vast arched bone of the whale's jaw, so wide, a coach might almost drive beneath it. Within are shabby shelves, ranged round with old decanters, bottles, flasks; and in those jaws of swift destruction, like another cursed Jonah (by which name indeed they call him) bustles a little withered old man, who, for their money, dearly sells the sailors deliriums and death.

Abominable are the tumblers into which he pours his poison. Though true cylinders without, within, the villainous green goggling glasses deceitfully tapered downwards to a cheating bottom. Parallel meridians rudely pecked into the glass, surround these footpads' goblets. Fill to *this* mark, and your charge is but a penny; to *this* a penny more; and so on to the full glass—the Cape Horn measure, which you may gulp down for a shilling.

Upon entering the place I found a number of young seamen gathered about a table, examining by a dim light divers specimens of *skrimshander*. I sought the landlord, and telling him I desired to be accommodated with a room, received for answer that his house was full—not a bed unoccupied. "But avast," he added, tapping his forehead, "you haint no objections to sharing a harpooneer's blanket, have ye? I s'pose you are goin' a-whalin', so you'd better get used to that sort of thing."

I told him that I never liked to sleep two in a bed; that if I should ever do so, it would depend upon who the harpooneer might be, and that if he (the landlord) really had no other place for me, and the harpooneer was not decidedly objectionable, why, rather than wander further about a strange town on so bitter a night, I would put up with the half of any decent man's blanket.

"I thought so. All right; take a seat. Supper?—you want supper? Supper'll be ready directly."

I sat down on an old wooden settle, carved all over like a bench on the Battery. At one end a ruminating tar was still further adorning it with his jack-knife, stooping over and diligently working away at the space between his legs. He was trying his hand at a ship under full sail, but he didn't make much headway, I thought.

At last some four or five of us were summoned to our meal in an adjoining room. It was cold as Iceland—no fire at all—the landlord said he couldn't afford it. Nothing but two dismal tallow candles, each in a winding-sheet. We were fain to button up our monkey-jackets, and hold to our lips cups of scalding tea with our half-frozen fingers. But the fare was of the most substantial kind—not only meat and potatoes, but dumplings; good heavens! dumplings for supper! One

young fellow in a green box coat, addressed himself to these dumplings in a most direful manner.

"My boy," said the landlord, "you'll have the nightmare to a dead sartainty."

"Landlord," I whispered, "that ain't the harpooneer, is it?"

"Oh, no," said he, looking a sort of diabolically funny, "the harpooneer is a dark-complexioned chap. He never eats dumplings, he don't—he eats nothing but steaks, and likes 'em rare."

"The devil he does," says I. "Where is that harpooneer? Is he here?"

"He'll be here afore long," was the answer.

I could not help it, but I began to feel suspicious of this "dark-complexioned" harpooneer. At any rate, I made up my mind that if it so turned out that we should sleep together, he must undress and get into bed before I did.

Supper over, the company went back to the bar-room, when, knowing not what else to do with myself, I resolved to spend the rest of the evening as a looker-on.

Presently a rioting noise was heard without. Starting up, the landlord cried, "That's the *Grampus's* crew. I seed her reported in the offing this morning; a three years' voyage, and a full ship. Hurrah, boys; now we'll have the latest news from the Feejees."

A tramping of sea boots was heard in the entry; the door was flung open, and in rolled a wild set of mariners enough. Enveloped in their shaggy watchcoats, and with their heads muffled in woollen comforters, all bedarned and ragged, and their beards stiff with icicles, they seemed an eruption of bears from Labrador. They had just landed from their boat, and this was the first house they entered. No wonder, then, that they made a straight wake for the whale's mouth—the bar—when the wrinkled little old Jonah, there officiating, soon poured them out brimmers all round. One complained of a bad cold in his head, upon which the old fellow mixed him a pitch-like potion of gin and molasses which he swore was a sovereign cure for all colds and catarrhs whatsoever, never mind of how long standing, or whether caught off the coast of Labrador, or on the weather side of an ice-island.

The liquor soon mounted into their heads, as it generally does even with the arrantest topers newly landed from sea, and they began capering about most obstreperously.

I observed, however, that one of them held somewhat aloof, and though he seemed desirous not to spoil the hilarity of his shipmates by his own sober face, yet upon the whole he refrained from making as much noise as the rest. This man interested me at once; and since the sea-gods had ordained that he should soon become my shipmate (though but a sleeping-partner one, so far as this narrative is concerned), I will here venture upon a little description of him. He stood full six feet in height, with noble shoulders, and a chest like a coffer-dam. I have seldom seen such brawn in a man. His face was deeply brown and burnt, making his white teeth dazzling by the contrast; while in the deep shadows of his eyes floated some reminiscences that did not seem to give him much joy. His voice at once announced that he was a Southerner, and from his fine stature, I thought he must be one of those tall mountaineers from the Alleghanian Ridge in Virginia. When the revelry of his companions had mounted to its height, this man slipped away unobserved, and I saw no more of him till he became my comrade on the sea. In a few minutes, however, he was missed by his shipmates, and being, it seems, for some reason a huge favourite with them, they raised a cry of "Bulkington! Bulkington! where's Bulkington?" and darted out of the house in pursuit of him.

Walden[1]

E. B. White

Miss Nims, take a letter to Henry David Thoreau. Dear Henry: I thought of you the other afternoon as I was approaching Concord doing fifty on Route 62. That is a high speed at which to hold a philosopher in one's mind, but in this century we are a nimble bunch.

On one of the lawns in the outskirts of the village a woman was cutting the grass with a motorized lawn mower. What made me think of you was that the machine had rather got away from her, although she was game enough, and in the brief glimpse I had of the scene it appeared to me that the lawn was mowing the lady. She kept a tight grip on the handles, which throbbed violently with every explosion of the one-cylinder motor, and as she sheered around bushes and lurched along at a reluctant trot behind her impetuous servant, she looked like a puppy who had grabbed something that was too much for him. Concord hasn't changed much, Henry; the farm implements and the animals still have the upper hand.

I may as well admit that I was journeying to Concord with the deliberate intention of visiting your woods; for although I have never knelt at the grave of a philosopher nor placed wreaths on moldy poets, and have often gone a mile out of my way to avoid some place of historical interest, I have always wanted to see Walden Pond. The account which you left of your sojourn there is, you will be amused to learn, a document of increasing pertinence; each year it seems to gain a little headway, as the world loses ground. We may all be transcendental yet, whether we like it or not. As our common complexities increase, any tale of individual simplicity (and yours is the best written and the cockiest) acquires a new fascination; as our goods accumulate, but not our well-being, your report of an existence without material adornment takes on a certain awkward credibilty.

My purpose in going to Walden Pond, like yours, was not to live cheaply or to live dearly there, but to transact some private business with the fewest obstacles. Approaching Concord, doing forty, doing forty-five, doing fifty, the steering wheel held snug in my palms, the highway held grimly in my vision, the crown of the road now serving me (on the righthand curves), now defeating me (on the lefthand curves), I began to rouse myself from the stupefaction which a day's motor journey induces. It was a delicious evening, Henry, when the whole body is one sense, and imbibes delight through every pore, if I may coin a phrase. Fields were richly brown where the harrow, drawn by the stripped Ford, had lately sunk its teeth; pastures were green; and overhead the sky had that same everlasting great look which you will find on Page 144 of the Oxford pocket edition. I could feel the road entering me, through tire, wheel, spring, and cushion; shall I not have intelligence with earth too? Am I not partly leaves and vegetable mold myself?—a man of infinite horsepower, yet partly leaves.

Stay with me on 62 and it will take you into Concord. As I say, it was a delicious evening. The snake had come forth to die in a bloody S on the highway, the wheel upon its head, its bowels flat now and exposed. The turtle had come up too to cross the road and die in the attempt, its hard shell smashed under the rubber blow, its intestinal yearning (for the other side of the road) forever squashed. There was a sign by the wayside which announced that the road had a "cotton surface." You wouldn't know what that is, but neither, for that matter, did I. There is a cryptic ingredient in many of our modern

[1] From *One Man's Meat* by E. B. White. Copyright, 1939, by E. B. White. Reprinted by permission of Harper & Brothers, publishers.

improvements—we are awed and pleased without knowing quite what we are enjoying. It is something to be traveling on a road with a cotton surface.

The civilization round Concord to-day is an odd distillation of city, village, farm, and manor. The houses, yards, fields look not quite suburban, not quite rural. Under the bronze beech and the blue spruce of the departed baron grazes the milch goat of the heirs. Under the porte-cochère stands the reconditioned station wagon; under the grape arbor sit the puppies for sale. (But why do men degenerate ever? What makes families run out?)

It was June and everywhere June was publishing her immemorial stanza; in the lilacs, in the syringa, in the freshly edged paths and the sweetness of moist beloved gardens, and the little wire wickets that preserve the tulips' front. Farmers were already moving the fruits of their toil into their yards, arranging the rhubarb, the asparagus, the strictly fresh eggs on the painted stands under the little shed roofs with the patent shingles. And though it was almost a hundred years since you had taken your ax and started cutting out your home on Walden Pond, I was interested to observe that the philosophical spirit was still alive in Massachusetts: in the center of a vacant lot some boys were assembling the framework of a rude shelter, their whole mind and skill concentrated in the rather inauspicious helter-skeleton of studs and rafters. They too were escaping from town, to live naturally, in a rich blend of savagery and philosophy.

That evening, after supper at the inn, I strolled out into the twilight to dream my shapeless transcendental dreams and see that the car was locked up for the night (first open the right front door, then reach over, straining, and pull up the handles of the left rear and the left front till you hear the click, then the handle of the right rear, then shut the right front but open it again, remembering that the key is still in the ignition switch, remove the key, shut the right front again with a bang, push the tiny keyhole cover to one side, insert key, turn, and withdraw). It is what we all do, Henry. It is called locking the car. It is said to confuse thieves and keep them from making off with the laprobe. Four doors to lock behind one robe. The driver himself never uses a laprobe, the free movement of his legs being vital to the operation of the vehicle; so that when he locks the car it is a pure and unselfish act. I have in my life gained very little essential heat from laprobes, yet I have ever been at pains to lock them up.

The evening was full of sounds, some of which would have stirred your memory. The robins still love the elms of New England villages at sundown. There is enough of the thrush in them to make song inevitable at the end of day, and enough of the tramp to make them hang round the dwellings of men. A robin, like many another American, dearly loves a white house with green blinds. Concord is still full of them.

Your fellow-townsmen were stirring abroad —not many afoot, most of them in their cars; and the sound which they made in Concord at evening was a rustling and a whispering. The sound lacks steadfastness and is wholly unlike that of a train. A train, as you know who lived so near the Fitchburg line, whistles once or twice sadly and is gone, trailing a memory in smoke, soothing to ear and mind. Automobiles, skirting a village green, are like flies that have gained the inner ear—they buzz, cease, pause, start, shift, stop, halt, brake, and the whole effect is a nervous polytone curiously disturbing.

As I wandered along, the toc toc of ping pong balls drifted from an attic window. In front of the Reuben Brown house a Buick was drawn up. At the wheel, motionless, his hat upon his head, a man sat, listening to Amos and Andy on the radio (it is a drama of many scenes and without an end). The deep voice of Andrew Brown, emerging from the car, although it originated more than two hundred miles away, was unstrained by distance. When you used to sit on the shore of your pond on Sunday morning, listening to the church bells of Acton and Concord, you were aware of the excellent filter of the intervening atmosphere. Science has attended

to that, and sound now maintains its intensity without regard for distance. Properly sponsored, it goes on forever.

A fire engine, out for a trial spin, roared past Emerson's house, hot with readiness for public duty. Over the barn roofs the martins dipped and chittered. A swarthy daughter of an asparagus grower, in culottes, shirt, and bandanna, pedalled past on her bicycle. It was indeed a delicious evening, and I returned to the inn (I believe it was your house once) to rock with the old ladies on the concrete veranda.

Next morning early I started afoot for Walden, out Main Street and down Thoreau, past the depot and the Minuteman Chevrolet Company. The morning was fresh, and in a bean field along the way I flushed an agriculturalist, quietly studying his beans. Thoreau Street soon joined Number 126, an artery of the State. We number our highways nowadays, our speed being so great we can remember little of their quality or character and are lucky to remember their number. (Men have an indistinct notion that if they keep up this activity long enough all will at length ride somewhere, in next to no time.) Your pond is on 126.

I knew I must be nearing your woodland retreat when the Golden Pheasant lunchroom came into view—Seal-test ice cream, toasted sandwiches, hot frankfurters, waffles, tonics, and lunches. Were I the proprietor, I should add rice, Indian meal, and molasses —just for old time's sake. The Pheasant, incidentally, is for sale: a chance for some nature lover who wishes to set himself up beside a pond in the Concord atmosphere and live deliberately, fronting only the essential facts of life on Number 126. Beyond the Pheasant was a place called Walden Breezes, an oasis whose porch pillars were made of old green shutters sawed into lengths. On the porch was a distorting mirror, to give the traveler a comical image of himself, who had miraculously learned to gaze in an ordinary glass without smiling. Behind the Breezes, in a sun-parched clearing, dwelt your philosophical descendants in their trailers, each trailer the size of your hut, but all grouped together for the sake of congeniality. Trailer people leave the city, as you did, to discover solitude and in any weather, at any hour of the day or night, to improve the nick of time; but they soon collect in villages and get bogged deeper in the mud than ever. The camp behind Walden Breezes was just rousing itself to the morning. The ground was packed hard under the heel, and the sun came through the clearing to bake the soil and enlarge the wry smell of cramped housekeeping. Cushman's bakery truck had stopped to deliver an early basket of rolls. A camp dog, seeing me in the road, barked petulantly. A man emerged from one of the trailers and set forth with a bucket to draw water from some forest tap.

Leaving the highway I turned off into the woods toward the pond, which was apparent through the foliage. The floor of the forest was strewn with dried old oak leaves and *Transcripts*. From beneath the flattened popcorn wrapper (*granum explosum*) peeped the frail violet. I followed a footpath and descended to the water's edge. The pond lay clear and blue in the morning light, as you have seen it so many times. In the shallows a man's waterlogged shirt undulated gently. A few flies came out to greet me and convoy me to your cove, past the No Bathing signs on which the fellows and girls had scrawled their names. I felt strangely excited suddenly to be snooping around your premises, tiptoeing along watchfully, as though not to tread by mistake upon the intervening century. Before I got to the cove I heard something which seemed to me quite wonderful: I heard your frog, a full, clear *troonk,* guiding me, still hoarse and solemn, bridging the years as the robins had bridged them in the sweetness of the village evening. But he soon quit, and I came on a couple of young boys throwing stones at him.

Your front yard is marked by a bronze tablet set in a stone. Four small granite posts, a few feet away, show where the house was. On top of the tablet was a pair of faded blue bathing trunks with a white stripe. Back of it is a pile of stones, a sort of

cairn, left by your visitors as a tribute I suppose. It is a rather ugly little heap of stones, Henry. In fact the hillside itself seems faded, browbeaten; a few tall skinny pines, bare of lower limbs, a smattering of young maples in suitable green, some birches and oaks, and a number of trees felled by the last big wind. It was from the bole of one of these fallen pines, torn up by the roots, that I extracted the stone which I added to the cairn—a sentimental act in which I was interrupted by a small terrier from a nearby picnic group, who confronted me and wanted to know about the stone.

I sat down for a while on one of the posts of your house to listen to the bluebottles and the dragonflies. The invaded glade sprawled shabby and mean at my feet, but the flies were tuned to the old vibration. There were the remains of a fire in your ruins, but I doubt that it was yours; also two beer bottles trodden into the soil and become part of earth. A young oak had taken root in your house, and two or three ferns, unrolling like the ticklers at a banquet. The only other furnishings were a DuBarry pattern sheet, a page torn from a picture magazine, and some crusts in wax paper.

Before I quit I walked clear round the pond and found the place where you used to sit on the northeast side to get the sun in the fall, and the beach where you got sand for scrubbing your floor. On the eastern side of the pond, where the highway borders it, the State has built dressing rooms for swimmers, a float with diving towers, drinking fountains of porcelain, and rowboats for hire. The pond is in fact a State Preserve, and carries a twenty-dollar fine for picking wild flowers, a decree signed in all solemnity by your fellow-citizens Walter C. Wardwell, Erson B. Barlow, and Nathaniel I. Bowditch. There was a smell of creosote where they had been building a wide wooden stairway to the road and the parking area. Swimmers and boaters were arriving; bodies plunged vigorously into the water and emerged wet and beautiful in the bright air. As I left, a boatload of town boys were splashing about in mid-pond, kidding and fooling, the young fellows singing at the tops of their lungs in a wild chorus:

Amer-ica, Amer-i-ca, God shed his grace on thee,
And crown thy good with brotherhood
From sea to shi-ning sea!

I walked back to town along the railroad, following your custom. The rails were expanding noisily in the hot sun, and on the slope of the roadbed the wild grape and the blackberry sent up their creepers to the track.

The expense of my brief sojourn in Concord was:

Canvas shoes	$1.95	
Baseball bat	.25	gifts to take back
Left-handed fielder's glove	1.25	to a boy
Hotel and meals	4.25	
In all	$7.70	

As you see, this amount was almost what you spent for food for eight months. I cannot defend the shoes or the expenditure for shelter and food: they reveal a meanness and grossness in my nature which you would find contemptible. The baseball equipment, however, is the kind of impediment with which you were never on even terms. You must remember that the house where you practiced the sort of economy which I respect was haunted only by mice and squirrels. You never had to cope with a shortstop.

Mister Roberts: Introduction[1]

THOMAS HEGGEN

Now, in the waning days of the second World War, this ship lies at anchor in the glassy bay of one of the black islands of the Pacific. It is a Navy cargo ship. You know it as a cargo ship by the five yawning hatches, by the house amidships, by the booms that bristle from the masts like mechanical arms. You know it as a Navy ship by the color (dark, dull blue), by the white numbers painted on the bow, and unfailingly by the thin ribbon of the commission pennant flying from the mainmast. In the Navy Register, this ship is listed as the *Reluctant*. Its crew never refer to it by name; to them it is always "this bucket."

In an approximate way it is possible to fix this ship in time. The local civil time is 0614 and the day is one in the spring of 1945. Sunrise was three minutes ago and the officer-of-the-deck is not quite alert, for the red truck lights atop the masts are still burning. It is a breathless time, quiet and fresh and lovely. The water inside the bay is planed to perfect smoothness, and in the emergent light it is bronze-colored, and not yet blue. The sky, which will be an intense blue, is also dulled a little by the film of night. The inflamed sun floats an inch or so above the horizon, and the wine-red light it spreads does not hurt the eyes at all. Over on the island there begin to be signs of life. An arm of blue smoke climbs straight and clean from the palm groves. Down on the dock people are moving about. A jeep goes by on the beach road and leaves a puff of dust behind. But on this ship there seems to be no one stirring. Just off the bow, a school of flying fish breaks the water suddenly. In the quiet the effect is as startling as an explosion.

In Germany right now it would be seven o'clock at night. It would be quite dark, and perhaps there is a cold rain falling. In this darkness and in this rain the Allied armies are slogging on toward Berlin. Some stand as close as one hundred and fifty miles. Aachen and Cologne have fallen, inside of days Hanover will fall. Far around the girdle of the world, at Okinawa Gunto it is now three in the morning. Flares would be dripping their slow, wet light as the United States Tenth Army finishes its job. These are contemporary moments of that in which our ship lies stagnant in the bay.

Surely, then, since this is One World, the tranquil ship is only an appearance, this somnolence an illusion. Surely an artillery shell fired at Hanover ripples the air here. Surely a bomb dropped on Okinawa trembles these bulkheads. This is an American Man o'War, manned by American Fighting Men: who would know better than they that this is One World? Who indeed? Of course, then, this indolence is only seeming, this lethargy a façade: in actuality this ship must be throbbing with grim purposefulness, intense activity, and a high awareness of its destiny. Of course.

Let us go aboard this Man o'War.

Step carefully there over little Red McLaughlin, sleeping on the hatch cover. Red is remarkable for being able to sleep anywhere: probably he was on his way down to the compartment when he dropped in his tracks, sound asleep. There do not, in truth, seem to be many people up yet—but then it is still a few minutes to reveille. Reveille is at six-thirty. In the Chief's quarters there is one man up: it is Johnson, the chief master-at-arms. He is the one who makes reveille. Johnson is drinking coffee and he seems preoccupied: perhaps, as you suggest, his mind is thousands of miles away, following the battle-line in Germany. But no—to tell the truth—it is not. Johnson is thinking of a can of beer, and he is angry. Last night he hid

[1] From *Mister Roberts*, Boston: Houghton Mifflin Company, 1946.

the can carefully beneath a pile of dirty scivvies in his locker: now it is gone. Johnson is reasonably certain that Yarby, the chief yeoman, took it; but he cannot prove this. He is turning over in his mind ways of getting back at Yarby. Let us move on.

Down in the armory a group of six men sits tensely around a wooden box. You say they are discussing fortifications?—you distinctly heard the word "sandbag" spoken? Yes, you did: but it is feared that you heard it out of context. What Olson, the first-class gunner's mate, said was: "Now watch the son-of-a-bitch sandbag me!" Used like that, it is a common colloquialism of poker: this is an all-night poker game.

We find our way now to the crew's compartment. You are surprised to see so many men sleeping, and so soundly? Perhaps it would be revelatory to peer into their dreams. No doubt, as you say, we will find them haunted by battles fought and battles imminent. This man who snores so noisily is Stefanowski, machinist's mate second class. His dream? . . . well . . . there is a girl . . . she is inadequately clothed . . . she is smiling at Stefanowski . . . let us not intrude.

You are doubtless right: certainly an officer will be more sensitive. In this stateroom, with his hand dangling over the side of the bunk, is Ensign Pulver. He is one of the engineering officers. And you *are* right; his dream *is* conditioned by the war. In his dream he is all alone in a lifeboat. He is lying there on a leather couch and there are cases of Schlitz beer stacked all about him. On the horizon he sees the ship go down at last; it goes down slowly, stern first. A swimming figure reaches the boat and clutches the gunwales. Without rising from his couch, Ensign Pulver takes the ball-bat at his side and smashes the man's hands. Every time the man gets his hands on the gunwales, Pulver pounds them with the bat. Finally the man sinks in a froth of bubbles. Who is this man—a Jap? No, it is the Captain. Ensign Pulver smiles happily and opens a can of beer.

What manner of ship is this? What does it do? What is its combat record? Well, those are fair questions, if difficult ones. The *Reluctant,* as was said, is a naval auxiliary. It operates in the back areas of the Pacific. In its holds it carries food and trucks and dungarees and toothpaste and toilet paper. For the most part it stays on its regular run, from Tedium to Apathy and back; about five days each way. It makes an occasional trip to Monotony, and once it made a run all the way to Ennui, a distance of two thousand nautical miles from Tedium. It performs its dreary and unthanked job, and performs it, if not inspiredly, then at least adequately.

It has shot down no enemy planes, nor has it fired upon any, nor has it seen any. It has sunk with its guns no enemy subs, but there *was* this once that it fired. This periscope, the lookout sighted it way off on the port beam, and the Captain, who was scared almost out of his mind, gave the order: "Commence firing!" The five-inch and the two port three-inch guns fired for perhaps ten minutes, and the showing was really rather embarrassing. The closest shell was three hundred yards off, and all the time the unimpressed periscope stayed right there. At one thousand yards it was identified as the protruding branch of a floating tree. The branch had a big bend in it and didn't even look much like a periscope.

So now you know: that is the kind of ship the *Reluctant* is. Admittedly it is not an heroic ship. Whether, though, you can also denounce its men as unheroic is another matter. Before that is summarily done, a few obvious facts about heroism should perhaps be pleaded; the first of them being that there are *kinds* of it. On this ship, for instance, you might want to consider Lieutenant Roberts as a hero. Lieutenant Roberts is a young man of sensitivity, perceptiveness, and idealism: attributes which are worthless and even inimical to such a community as this. He wants to be in the war; he is powerfully drawn to the war and to the general desolation of the time, but he is held off, frustrated, defeated by the rather magnificently nonconductive character of his station. He is the high-strung instrument assuming the low-strung rôle. He has geared himself to the tempo of the ship and made the adjustment with—the words are not believed misplaced

—gallantry, courage, and fortitude. Perhaps he is a kind of hero.

And then in simple justice to the undecorated men of the *Reluctant* it should also be pointed out that heroism—physical heroism—is very much a matter of opportunity. On the physical level heroism is not so much an act, implying volition, as it is a reflex. Apply the rubber hammer to the patella tendon and, commonly, you produce the knee jerk. Apply the situation permitting bravery to one hundred young males with actively functioning adrenal glands and, reasonably, you would produce seventy-five instances of clear-cut heroism. Would, that is, but for one thing: that after the fifty-first the word would dissolve into meaninglessness. Like the knee jerk, physical courage is perhaps latent and even implicit in the individual, needing only the application of situation, of opportunity, to reveal it. A case in point: Ensign Pulver.

Ensign Pulver is a healthy, highly normal young man who sleeps a great deal, is amiable, well-liked, and generally regarded by his shipmates as being rather worthless. At the instigation of forces well beyond his control, he joined the Naval Reserve and by the same forces was assigned to this ship, where he spends his time sleeping, discoursing, and plotting ingenious offensives against the Captain which he never executes. Alter the accidents, apply the situation, locate Pulver in the ball turret of a B-29 over Japan, and what do you have? You have Pulver, the Congressional Medal man, who single-handedly and successively shot down twenty-three attacking Zekes, fought the fire raging in his own ship, with his bare hands held together the severed wing struts and with his bare feet successfully landed the grievously wounded plane on its home field.

These, then—if the point is taken—are unheroic men only because they are non-combatant: whether unwillingly or merely unavoidably is not important. They fight no battles: *ergo* in a certain literal and narrow sense they are non-combatant. But in the larger vision these men are very definitely embattled, and rather curiously so. The enemy is not the unseen Jap, not the German, nor the abstract villainy of fascism: it is that credible and tangible villain, the Captain. The warfare is declared and continual, and the lines have long been drawn. On one side is the Captain, alone: opposing him are the other one hundred and seventy-eight members, officers and men, of the ship's company. It is quite an even match.

The Captain of a naval vessel is a curious affair. Personally he may be short, scrawny, unprepossessing; but a Captain is not a person and cannot be viewed as such. He is an embodiment. He is given stature, substance, and sometimes a new dimension by the massive, cumulative authority of the Navy Department which looms behind him like a shadow. With some Captains this shadow is a great, terrifying cloud; with others, it is scarcely apparent at all: but with none can it go unnoticed. Now to this the necessary exception: Captain Morton. With Captain Morton it could and does up to a point go unnoticed. The crew knows instinctively that the Captain is vulnerable, that he is unaware of the full dimensions of his authority; and, thus stripped of his substance, they find him detestable and not at all terrifying. He is not hated, for in hate there is something of fear and something of respect, neither of which is present here. And you could not say loathed, for loathing is passive and this is an active feeling. Best say detested; vigorously disliked. As the chosen enemy he is the object of an incessant guerrilla warfare, which is, for the Navy, a most irregular business. Flat declarations like "Captain Morton is an old fart" appear in chalk from time to time on gun mounts; cigarette butts, an obsession of the Captain's, are mysteriously inserted into his cabin; his telephone rings at odd hours of the night; once when he was standing on the quarterdeck a helmet dropped from the flying bridge missed him by perhaps a yard—the margin of a warning. Childishness? Pettiness? Perhaps: but remember that these are the only weapons the men have. Remember that they are really hopelessly outmatched. Remember that the shadow, acknowledged or not, is there all the time.

Captain Morton is a tall bulging middle-

aged man with a weak chin and a ragged-mustache. He is bow-legged and broad-beamed (for which the crew would substitute "lardassed"), and he walks with the absurd roll of an animated Popeye. If you ask, any crew member will give you the bill of particulars against the Captain, but he will be surprised that you find it necessary to ask. He will tell you that the man is stupid, incompetent, petty, vicious, treacherous. The signalmen or yeomen will insist that he is unable to understand the simplest message or letter. Anyone in the deck divisions will tell you that he is far more concerned with keeping the decks cleared of cigarette butts than with discharging cargo, his nominal mission. All of the crew will tell you of the petty persecution he directs against them: the preposterous insistence (for an auxiliary operating in the rear areas) that men topside wear hats and shirts at all times; the shouting and grumbling and name-calling; the stubborn refusal to permit recreation parties ashore; the absurd and constantly increasing prohibitions against leaning on the rail, sleeping on deck, gum-chewing, heavy-soled shoes, that and this and that. And you will be told with damning finality that the man is vulgar, foul-mouthed. In an indelicate community this charge may appear surprising, but of all it is clearly the most strongly laid.

These are the ostensible reasons for the feeling against the Captain; and possibly, possibly not, they are the real ones. It is for a student of causative psychology to determine whether the Captain created his own situation, or whether it was born, sired by boredom and dammed by apathy, of the need for such an obsessional pastime. The only thing abundantly certain is that it is there.

Now on this slumberous ship, this battleground, this bucket, there is sudden movement. Chief Johnson leans back in his chair, yawns, stretches, and gets up. He looks at his watch—0629—time to make reveille. He picks up his whistle, yawns again, and shuffles forward to the crew's compartment. Now there will be action on this torpid ship. Now the day will spring to life; now men will swarm the decks and the sounds of purposeful activity fill the air. Now at least, at reveille, this Man o'War will look the part.

Chief Johnson blows his whistle fiercely in the compartment. He starts forward and works aft among the bunks croaking in a raw, sing-song voice: "Reveille. . . . Hit the deck! . . . Rise and shine! . . . Get out of them goddam sacks! . . . What the hell you trying to do, sleep your life away? . . . Reveille. . . . Hit the deck! . . ." He is like a raucous minstrel, the way he chants and wanders through the compartment. Here and there an eye cocks open and looks tolerantly upon the Chief; now and then a forgiving voices mumbles sleepily, "Okay Chief okay. . . ." but not a body moves, not a muscle stirs.

Chief Johnson reaches the after door. He turns around for a moment and surveys the sagging bunks. He has done his job: he has observed the rules. Some of these men, he knows, will get up in half an hour to eat breakfast. Most of the rest, the ones who don't eat breakfast, will probably get up at eight. Chief Johnson walks sleepily aft and turns in his own bunk to sleep until eight. Eight o'clock is a reasonable hour for a man's arising; and this is, above all else, a reasonable ship.

Kennebec Crystals[1]

ROBERT P. TRISTRAM COFFIN

THE SHOPKEEPERS of Hallowell and Gardiner and Augusta had watched the January weather like hawks. They thumbed their ledgers and shook their graying temples at the lengthening columns of debit. The doctors had their eye on the sky as they felt of their lank wallets. Twenty miles deep each side of the river, farmers in small story-and-a-half farmhouses eyed their grocery-store thermometers at the side door, and bit more sparingly into their B.L. plugs. They chewed longer on their cuds too. In the kitchen, the wife was scraping the lower staves of the flour barrel. The big bugs in the wide white mansions along the river looked out of their east or west windows at crack of day to see the state of the water. Teachers in school grew short with their pupils who confused Washington's crossing of the Delaware with Clark's fording the fields around Vincennes. The mild weather continued. The river rolled on, blue in its ripples. Shopkeepers got short with their wives.

Then a sharp blue wind came up out of the northwest, the mercury in the thermometers tumbled. The pines roared on into the dark, the stars snapped in the sky like sapphires. Good weather for future soldiers, Napoleon once remarked. Napoleon be hanged! So thought the farmers along the Kennebec, who were up in history as much as they were down in their pork barrels. There were enough small pairs of pants running around their farms already. What they needed was nights to breed that life-giving ice which would keep the small thighs in the trousers going. Good freezing nights for starting the crop of the water.

The cold spell was a real one. Farmers had to beat their arms each side of their buffalo coats. Next sundown the wind fell. It got still as a pocket. You could hear the stars sputter over the valley. The shopkeepers sat sipping their evening's lime juice and gloated over their newspapers. "The Hudson Valley: continued mild weather, southerly winds, higher temperatures and showers for next week." It was a different story up here in Maine. The kitchen windowpanes had white ferns at their corners. A knife handle would have to be used on the water bucket in the morning. Down Hudson, up Kennebec! In the morning, there were no more waves running on the river. The water looked like a long, dark looking glass dropped between the hills. In a hundred sheds the grindstones were humming.

Then next day the January thaw came. Teachers went all to pieces as early as Wednesday in the week. Doctors used the whip on their horses as they clattered over the steaming ruts. Shopkeepers did not throw in the extra pilot bread but tied up the bags and bit off the twine. The big bugs behind the Ionian porticoes put aside the *Annals* of Tacitus and took down the *Magnalia Christi Americana* of Cotton Mather and Jonathan Edwards's *Sinners in the Hands of an Angry God.* Small boys lost their tempers and kicked the jackstraws their bachelor uncles had whittled out in the shape of oars and eelspears all over the floor. Farmers sat down to Indian pudding without any salt hake to season it off.

Young Timothy Toothaker decided not to ask Susannah Orr a certain question until mayflower time or later. And he stopped spooling new rungs for her future bed.

The thaw lasted eight days. Somebody saw a robin. He didn't get any vote of thanks from his neighbors. A body could see his dead grandmother in such fog as there was. The graybeards by the barrel stove in Ephraim Doughty's grocery store at Bowdoin Center shivered in their shoes. Ephraim

[1] From *Kennebec: Cradle of Americans* by Robert P. Tristram Coffin. Copyright, 1937, by Rinehart & Company, Inc. and reprinted with their permission.

had said earlier in the evening, as he looked out at the weather glumly, "Open winter, fat graveyards." Active Frost cheated at checkers and got caught. Wash Alexander drank up all his wife's Peruna.

The only consolation in Kennebec County was the newspaper. It said it was raining all up and down the Hudson, from Saratoga to Staten Island.

February came in murky. But the trotting horses on the Kennebec barns swung round at last and headed north: the thermometer went below zero and stayed there. Everybody began to breathe again, and the grindstones started singing.

The Kennebec was gray glass again, next dawn and next and next. It grew blacker as the days went by. In the third night the drums began, a single stroke, now and then, low bass and far away, rolling and reverberating along the hills. Next morning there were white cracks on the dark drumhead to show where the drumsticks had struck. All at once, at four o'clock, the whole stretch of river below the Augusta falls blossomed out with children in bright scarves, just out of school. A thousand young farmers and townsmen ground bark, cut figure eights, and yelled themselves hoarse at Ring-Leavo. Fat boys of six on their first skates stared wide-eyed at the green water weeds hanging still and going down into fearful darkness under their toes. At night bonfires ran down the river from bend to bend. Flame answered flame from Skowhegan to Swan Island. Everybody but those in slippers and those in the cradles was out on the ice. And next afternoon the horses had taken to the new ice highway that connected all the Kennebec towns. Men flew along behind them, mountains of robes in narrow sleighs. Their big mustaches smoked, and their breaths clung to them like mufflers straining out behind. Women swept past, little crepe bonnets cocked over the left eye and eyes like jets and blue diamonds. The ice was marked off into lanes, the racing sleighs came out. Horses came up the river, neck and neck, the flowers of the breaths festooned each side of them like garlands hung from high head to high head. Whips cracked, and shouts sent out long echoes each way. The chipped ice shone like splinters flying from a rainbow. Young men had young arms around waists of only eighteen inches, and young people started off on the road to matrimony on the thinnest of bright steel shoes.

But back up on the farms the men were grinding their picks. Women were laying out armfuls of gray socks with white heels and toes, piling up the flannel shirts, packing up bacon and ham and sausage meat and loaves. Boys were oiling harness and polishing the glass sidelights of headstalls. Chains were clinking, and sleds were being piled with blankets and bedding and victuals and extra whiffletrees, cant dogs, picks, and feed for the horses.

Down along the river the doors stood open in the big icehouses, with sides lined with sawdust, that for months had been shut in silence except for the sharp, thin music of wasps. Men were clearing out old roughage and rubbing the sections of track free of rust. Machinery was being oiled. Gouges and scrapers were being looked over and assembled by the river's side.

The preachers and everybody else in Gardiner and Richmond, Hallowell and Dresden, went to bed that night praying for the snow to hold up and the red blood in the glass to stay down in the ball where it belonged. The river of Henry Hudson was still liquid as it went down under the Catskills and down by the walls of the Palisades. God was in his heaven!

In the clear dawn next day, along a hundred roads that led down to the Kennebec, farmers were trudging, mustaches hanging down to the woolen mufflers like the tusks on the walrus. Brown mustaches, golden ones, black ones, gray ones, and white. But every one in front of a man. And behind them streamed their wealth, on its own feet. Tall, sinewy sons, out of school for good and on the doorstep of manhood and marriage, horses with hides like scrubbed horse chestnuts, big of hoof and billowy of muscle, fattened on corn, sharp shod, with long calks of steel that bit into the frozen ground. Here you could reckon up a man's prosperity in

solid, tangible things, as in the days of Jacob and Laban. Goods with the breath of life in them. Like Job's. The richest man was one who had nine or ten strong men to follow the swing of his creasing trousers in ringing, ironed shoes. Or three or four spans of horses with the morning star in their foreheads and the music of steel under their feet. So the wealth of the Kennebec came down to the harvest of Maine's best winter crop in the eighties.

Tramps, even, were coming. And all the black sheep of a hundred faraway pastures, beyond Maine, were swinging off the sides of freight cars in the chill gray of the morning. Drifters from far beyond New England.

The men crowded into the river lodging houses of Hallowell and Gardiner, Pittston and Dresden. They unloaded and stowed their dunnage in their temporary homes for the next few weeks. They armed themselves with picks and gougers and saws. Each man had his favorite tool tucked under his quilted arm. They descended on the cold harvest floor with horses and sons in a great host.

Then the field of the harvest was marked off for the game of wealth to be played there. Men walked with gougers tracing the line their narrow plows made straight as a die across the river. After them came the horse-drawn gougers cutting a deeper double furrow. Another army of men took up the game at right angles to the others, crisscrossing the wide fields. And then the sawyers came, slow with their loads of shoulder muscle and woolen shirts. They set in their saws and began the cutting of the gigantic checkers from the checkerboards on the hard Kennebec. The men stood to their work with both hands on the handles each side of their long tools, going down, coming back, fifty men keeping time as they ate into the stuff that meant their life, bed, and board, and fodder for their cattle. It was a sight to see the gates-ajar mustaches swinging like pendulums, gold and dark, and the breath in them changing to icicles as they worked. Every so often the picks spoke, and the sawed lines lengthened ahead of the sawyers. Noon saw a dozen checkerboards marked out on the river. One notable fact about the tools of the ice industry on the Kennebec in this: they were the only tools that were good enough to remain unchanged from the beginning of the industry to the end of it.

Then the workers went to the shores and ate their cold ham and bread and broke the crystals at the top of their jugs and drank the sluggish milk. They built fires to toast their thick soles and sat on the leeward side chewing their quids of tobacco in the heat and haze of the smoke that made the tears run from their eyes. Fathers and sons broke into cakes and frosty doughnuts the wives and mothers had made. Apple pie with splinters of ice.

The afternoon saw the first great checkers of ice lifted from the checkerboards. With heaving of cant dogs and picks, the square crystals came up into the splendid sunshine, sparkling like emeralds shading to azure in their deep hearts, with sections of whole rainbows where the edges were flawed. Layer on layer of brightness, layers of solid winter to go into the hot heart of summer in faraway cities and scorching lands. Long canals opened up into dark water, and men poled the cakes down to the ends where other men caught them with cant dogs as they came, hoisted them up on the ice, slued them to the runways. Chains clanked, the hooks bit into them, and up they flashed along the high lines of steel and plunged into the ice-houses.

Inside, men caught the thundering cakes and switched them, this one to the right, this to the left, to their places. The walls of cakes rose gradually, aisles of air spaces left between the walls of solid crystal. The workers here were in their shirt sleeves. They were the youngest of the men, sons more often than fathers. Their work made them glow inside like cookstoves. The sweat ran down their faces. They stood by the cataracts of ice and flung the bright streams each way, stepping as in a dance to keep clear of a blow that would shatter their bones. The work was like the thunder of summer in their ears, thunder all day long. And the house filled up with the cakes. Square cakes piled as even as the sides of a barn, true and

deep blue in the steaming dusk. The men walked between walls of Maine's cold wealth.

And the steel-bright days went by. No thaws or rain came to erase the grooves in the checkerboards. The icehouses were filled to their eaves and the last tier roofed in the aisles between the cakes. Roughage was heaped over all. The doors were closed and sealed.

That year the Hudson did not freeze over till March. The betting of the Maine farmers had been three to one against its doing so. They won their bets. The rival river, the only rival the clear blue Kennebec had among the rivers of earth, had lean-kine stalls along its banks that year of our Lord. The Lord had been good. The Kennebec ice farmers heaped great towers of the harvest outside their houses and covered them with spruce boughs and sawdust, for extra measure. The Knickerbocker Ice Company lost nothing. For they owned most of the icehouses along both the Hudson and the Kennebec. All ice was ice to them. The Kennebec crop was better than the Hudson, in fact, for the water in the Maine river was clearer and purer. Kennebec ice stood at the head of all ice. It was the Hudson ice cutters who lost. But if Peter was robbed, Paul was paid. The Kennebec farmers went back to their hens and heifers with wallets stuffing out their trousers and their sons' trousers, after $4-a-week lodging and eating bills had been paid. The grocers canceled whole tomes of ledgers. The schoolteachers kept their patience right up to "Horatius at the Bridge" in the Friday afternoon's speaking. New barrels of pork and flour came home to the high farms on the whistling runners of the horse sleds. And barrels of halibuts' heads and brokenbread. Active Frost stopped moving his checkers when his foeman turned to take a shot at the spittoon. And Timothy Toothaker asked the question when he brought his Susannah the first bunch of mayflowers. They were married and setting up housekeeping on new pine floors and in the spooled maple bed before the catkins were gone from the popples.

The geese were coming back early, up along Merrymeeting, that same spring, before the middle of April. And in late April that best day of all the spring on the Kennebec came, when the first boat arrived, the Boston steamer, with the star on her smokestack and her whistle tied down all the way from Swan Island to the Cobbosseecontee, waking the dead and the hills with her news of spring at last. There was not a church bell in the five towns that wasn't ringing. Women in bombazine waved handkerchiefs. School was let out for the day, and the hills were alive with children.

May saw the ice ships arrive and tie up at the docks. The icehouses opened their doors. The Kennebec crystals came down the runs, slithered across the decks of the four-masters and into the holds. When a number of the old hulls were loaded, which had once breasted the waves on the underside of the world, white under thunderclouds of sail, a tugboat steamed down-river on a neap tide, dragging the old veterans of the Atlantic back to the Atlantic again, below Popham.

And down in New York and Philadelphia prosperous citizens were getting down their ice-cream freezers. Children in Richmond and children under the shadow of the Blue Ridge were running starry-eyed behind high carts with letters frosted and dripping with icicles. The letters on those carts spelled *Kennebec Ice.* And deep in Alabama and Mississippi pickaninnies ran with pieces of Maine's finest river in their black palms and heaven in their eyes. Farther south, the crystals of Maine touched the fruit of the Caribbees. Far down off the Horn and up the other side, ships with bones bred in Maine forests carried the Maine treasure to the Pacific. Trains plowed through the dusty cornlands of Nebraska and on to the Rockies, carrying Maine ice. And a whole nation knew the taste of the clear Kennebec. Half the world, too, England and France, and Holland.

But all that was in the twilight days of wooden ships, when Maine women still kept their neat houses moving around the world.

That was when the wizards had not wakened new secrets out of electricity and steel. That was in the eighties and nineties.

Now the Kennebec icehouses are rotting and falling back into the earth. Their interiors are taken over by the wasps and the mice. The old piers are sinking into the water. No ship comes up in tow of a tug through the first leaves of May. School keeps week after week, and there are no bells ringing out to greet the steamer that leads up the spring. The gougers and saws are rusted half away.

For the Kennebec crystals, last harvest of Maine's finest river, have joined the white pine and the spruce, the sturgeon and shad and salmon. The end is elegy. The day of natural ice is done. New men, outside New England, bring their sons in their strength to the work of refrigerating homes and factories. And the small farmhouses, back from the river, that once housed great numbers of young men and boys, are full of empty rooms where the swallows bring up their young, or they have only a few children who work at their tasks and never need turn their heads toward the river, where the strength of their fathers lay and their fathers' lives.

The other day my good Kennebec friend whose great house looked up the river and down, over a twelve-foot hedge of spruce, took me out and showed me the tools of the ice harvesters. They were dark with rust and covered with cobwebs. They had joined the flint arrows and the bows that once bent to bring life to the men along the ancient Kennebec. When we were coming back we passed a strange depression in the woods, grown up with lusty spruces. It was the refrigerator men of my friend's house used a hundred fifty years ago. It was the ruins of the earth cellar where they had stored their vegetables in summer and winter, to keep them from heat and cold. It was the Kennebec refrigerator his ancestors and mine learned how to make from the Indians when they drove them away into the everlasting dark from the bright blue river. That refrigerator was a ruin, and the Kennebec was as young and lusty as ever as it hurried toward the sea. Someday our own sons' far great-grandchildren may find among the timbers of my friend's house the rusted shards of the electric refrigerator that serves the house today. And the Kennebec will be going down to the sea, as young and as fresh and blue as ever.

3

Language and Thinking

Translation from one language to another is never easy. For William Caxton in the fifteenth century it was doubly hard: the English of his time had not become conventional enough in its choice of certain words for certain meanings —so how could a translator be sure? To illustrate his problem, we have the anecdote about eggs, though it is really not about eggs so much as about difficulties in communication. Two different words for the same object, and the only way the two people who use those words can understand each other is through a third person who happens to "know" both words. So one of the three gets the egg he wants to eat. He has made what James Harvey Robinson would call a practical judgment, has decided that he wants

to eat an egg, asks for it, is told there aren't any. But behold—a little more language from the third person, and it is disclosed that there were eggs there all the time! This is a practical demonstration of the fundamental nature of language, its advantages, and its disadvantages. Had the objects we call *eggs* been present, there would have been no need for language. But since they were not, language was employed in an attempt to identify by reference. Even so, each word was but meaningless noise to one of two people until the third person came in with the explanation. Then it was possible for all three minds to *think* of an "egg" whenever anyone should mention either word. Eventually, perhaps, all three would decide to keep one word and drop the other as unnecessary. William Caxton certainly hoped so. As a matter of fact, that is what happened. Plenty of eggs now, but no eyren!

This story also illustrates the connection between language and thinking. The thinking of all three people comes before their attempts to communicate. Person number three does a good deal of thinking before he speaks at all; and since it is not made patent to us in words but only suggested by what he actually *does* say, we have to make inferences by putting ourselves imaginatively in his place. Sometimes, in other situations, we do the same thing by saying "Oh, you mean . . ." and offering words we think are more descriptive of the other person's thoughts than his own words have been. He may agree or disagree according to what he has *in mind*. It is evident that much as "fingers came before forks" so thinking comes before language. Disagreement about this idea occurs frequently, presumably because any person with a good working vocabulary translates his own thoughts so readily into language that he may believe one cannot think without language. "If you really know what you want to say, you will have the words for it." That does give the lie to "I know what I have in mind but cannot find the right words to express it." It also gives the lie to any philosophy of revision so far as words and phrases are concerned. Actually it does seem better to believe that thinking and language are distinct and do not appear simultaneously even within our own minds.

It is when language comes without thought that the greatest trouble arises. "Do you realize what you are saying?" we often ask people. Sometimes they do; often they do not. There are two important needs: a clear understanding of one's ideas, and an active notion of what the words will "mean" to someone else. Consider the Caxton once again. The woman replied that she had no *egges*. Unless the word had been previously in her vocabulary to denote something else, how did she know she had none? She did not think she did; all she *knew* was that she had no reference in her mind to any object or idea when she heard that alien word. She appears similar to the student who asked, "Is it not a fact that people ought to . . .?" There is this difference —*fact* meant to that student something quite different from what it means to Harold Larrabee in the essay "What Are Facts?"—something quite different from what the word means to most clear thinkers. We cannot think well, we rightly say, without facts; we shall also be in great difficulties, *both with others and with ourselves*, if we do not distinguish between *facts* and moral *opinions*, no matter what names we employ.

The names we employ are most helpful when considered historically, conventionally, as Professors Greenough and Kittredge remind us. The jargon of scientists has been invented for just such a reason—ideally, to fix the meaning of each word as clearly as the square root of four, so that it will always

mean the same thing to the initiate. Chemical formulas are the very best illustration of fixed meanings. If language in general is still comparatively loose and shifting in its references, it will not be meaningless jargon entirely if one person—speaker or writer—knows firmly what it means to him.

More so than others, this century has been a slack time both in thinking and in language. There have been two results: (1) a tremendously increased interest in language and thinking, an organized study of language such as we have not known before; (2) too much success with that kind of propaganda which is the deliberate and calculated exploitation of emotions by shrewd manipulation of words. More than direct untruth, vagueness and emotional association are the propagandist's weapons. They are still weak before a clear knowledge of the nature of language and an alert interest in clear thinking.

What seems needed most of all is clear thinking about language itself, perhaps with the aid of modern semantics, the organized study of meaning, among whose leaders Mr. Hayakawa is prominent. We need then to distinguish among various kinds of "thinking," as James Harvey Robinson helps us to do. We shall then begin to realize that Bacon's "Idols of the Mind" is an enduring description of human psychology in language astonishingly clear to us in the twentieth century, and that even today we can easily worship the same idols. Having improved our scepticism and furthered self-examination by reading the words of Robert Thouless, we shall more readily appreciate the worth of Mr. Larrabee's "What are Facts?" We shall yield less easily to the adroitness of the propagandist, become better logicians and even better everyday thinkers and talkers. All these improvements will make happy the majority of those who write what they hold to be the "truth" about language and who analyze true and false thinking. For they are modern missionaries who know, as Bacon did, that the advancement of learning (Bacon's phrase) involves more than the building of laboratories and grants for study. That so much about language and thinking is written in the twentieth century indicates that people still believe in the advancement of learning through good logic and subsequent clear communication.

Eggys or Eyren?[1]

William Caxton

That comyn englysshe that is spoken in one shyre varyeth from a nother. In so moche that in my dayes happened that certayn merchanntes were in a shippe in tamyse, for to have sayled over the see into zelande; and, for lacke of wynde, thei taryed atte forland, and wente to lande for to refreshe them. And one of theym named sheffelde, a mercer, cam into an hows and axed for mete; and specyally he axyd after eggys; And the good wyf answerde, that she coude speke no frenshe. And the marchaunt was angry, for he also coude speke no frenshe, but wold have hadde egges and she understode hym not. And thenne at laste a nother sayd that he wold have eyren; then the good wyf sayd that she understod hym wel. Loo! what sholde a man in thyse dayes now wryte, egges or eyren? certaynly it is harde to playse every man by cause of dyversite and chaunge of langage.

[1] From Caxton's preface to *Eneydos*, his translation of a French prose romance printed in 1490.

Idols of the Mind[1]

SIR FRANCIS BACON

XXXIX

THERE ARE four classes of Idols which beset men's minds. To these for distinction's sake I have assigned names,—calling the first class Idols of the Tribe; the second, Idols of the Cave; the third, Idols of the Market-place; the fourth, Idols of the Theatre.

XL

The formation of ideas and axioms by true induction is no doubt the proper remedy to be applied for the keeping off and clearing away of idols. To point them out, however, is of great use; for the doctrine of Idols is to the Interpretation of Nature what the doctrine of the refutation of Sophisms is to common Logic.

XLI

The Idols of the Tribe have their foundation in human nature itself, and in the tribe or race of men. For it is a false assertion that the sense of man is the measure of things. On the contrary, all perceptions as well of the sense as of the mind are according to the measure of the individual and not according to the measure of the universe. And the human understanding is like a false mirror, which, receiving rays irregularly, distorts and discolours the nature of things by mingling its own nature with it.

XLII

The Idols of the Cave are the idols of the individual man. For every one (besides the errors common to human nature in general) has a cave or den of his own, which refracts and discolours the light of nature; owing either to his own proper and peculiar nature; or to his education and conversation with others; or to the reading of books, and the authority of those whom he esteems and admires; or to the differences of impressions, accordingly as they take place in a mind preoccupied and predisposed or in a mind indifferent and settled; or the like. So that the spirit of man (according as it is meted out to different individuals) is in fact a thing variable and full of perturbation, and governed as it were by chance. Whence it was well observed by Heraclitus that men look for sciences in their own lesser worlds, and not in the greater or common world.

XLIII

There are also Idols formed by the intercourse and association of men with each other, which I call Idols of the Market-place, on account of the commerce and consort of men there. For it is by discourse that men associate; and words are imposed according to the apprehension of the vulgar. And therefore the ill and unfit choice of words wonderfully obstructs the understanding. Nor do the definitions or explanations wherewith in some things learned men are wont to guard and defend themselves, by any means set the matter right. But words plainly force and overrule the understanding, and throw all into confusion, and lead men away into numberless empty controversies and idle fancies.

XLIV

Lastly, there are Idols which have immigrated into men's minds from the various dogmas of philosophies, and also from wrong laws of demonstration. These I call Idols of the Theatre; because in my judgment all the received systems are but so many stage-plays, representing worlds of their own creation after an unreal and scenic fashion. Nor is it only of the systems now in vogue, or only of the ancient sects and philosophies, that I speak; for many more plays of the same kind may yet be composed and in like artificial manner set forth; seeing that errors

[1] From *Novum Organum*, in *The Philosophical Works of Francis Bacon*, edited by Robert Leslie Ellis and James Spedding, London, 1861, vol. IV.

the most widely different have nevertheless causes for the most part alike. Neither again do I mean this only of entire systems, but also of many principles and axioms in science, which by tradition, credulity, and negligence have come to be received.

But of these several kinds of Idols I must speak more largely and exactly, that the understanding may be duly cautioned.

XLV

The human understanding is of its own nature prone to suppose the existence of more order and regularity in the world than it finds. And though there be many things in nature which are singular and unmatched, yet it devises for them parallels and conjugates and relatives which do not exist. Hence the fiction that all celestial bodies move in perfect circles; spirals and dragons being (except in name) utterly rejected. Hence too the element of Fire with its orb is brought in, to make up the square with the other three which the sense perceives. Hence also the ratio of density of the so-called elements is arbitrarily fixed at ten to one. And so on of other dreams. And these fancies affect not dogmas only, but simple notions also.

XLVI

The human understanding when it has once adopted an opinion (either as being the received opinion or as being agreeable to itself) draws all things else to support and agree with it. And though there be a greater number and weight of instances to be found on the other side, yet these it either neglects and despises, or else by some distinction sets aside and rejects; in order that by this great and pernicious predetermination the authority of its former conclusions may remain inviolate. And therefore it was a good answer that was made by one who when they showed him hanging in a temple a picture of those who had paid their vows as having escaped shipwreck, and would have him say whether he did not now acknowledge the power of the gods,—"Aye," asked he again, "but where are they painted that were drowned after their vows?" And such is the way of all superstition, whether in astrology, dreams, omens, divine judgments, or the like; wherein men, having a delight in such vanities, mark the events where they are fulfilled, but where they fail, though this happen much oftener, neglect and pass them by. But with far more subtlety does this mischief insinuate itself into philosophy and the sciences; in which the first conclusion colours and brings into conformity with itself all that come after, though far sounder and better. Besides, independently of that delight and vanity which I have described, it is the peculiar and perpetual error of the human intellect to be more moved and excited by affirmatives than by negatives; whereas it ought properly to hold itself indifferently disposed towards both alike. Indeed in the establishment of any true axiom, the negative instance is the more forcible of the two.

XLVII

The human understanding is moved by those things most which strike and enter the mind simultaneously and suddenly, and so fill the imagination; and then it feigns and supposes all other things to be somehow, though it cannot see how, similar to those few things by which it is surrounded. But for that going to and fro to remote and heterogeneous instances, by which axioms are tried as in the fire, the intellect is altogether slow and unfit, unless it be forced thereto by severe laws and overruling authority.

XLVIII

The human understanding is unquiet; it cannot stop or rest, and still presses onward, but in vain. Therefore it is that we cannot conceive of any end or limit to the world; but always as of necessity it occurs to us that there is something beyond. Neither again can it be conceived how eternity has flowed down to the present day; for that distinction which is commonly received of infinity in time past and in time to come can by no means hold; for it would thence follow that one infinity is greater than another, and that infinity is wasting away and tending to become finite. The like subtlety arises touching the infinite divisibility of lines, from the same inability of thought to stop. But this

inability interferes more mischievously in the discovery of causes: for although the most general principles in nature ought to be held merely positive, as they are discovered, and cannot with truth be referred to a cause, nevertheless the human understanding being unable to rest still seeks something prior in the order of nature. And then it is that in struggling towards that which is further off it falls back upon that which is more nigh at hand; namely, on final causes: which have relation clearly to the nature of man rather than to the nature of the universe; and from this source have strangely defiled philosophy. But he is no less an unskilled and shallow philosopher who seeks causes of that which is most general, than he who in things subordinate and subaltern omits to do so.

XLIX

The human understanding is no dry light, but receives an infusion from the will and affections; whence proceed sciences which may be called "sciences as one would." For what a man had rather were true he more readily believes. Therefore he rejects difficult things from impatience of research; sober things, because they narrow hope; the deeper things of nature, from superstition; the light of experience, from arrogance and pride, lest his mind should seem to be occupied with things mean and transitory; things not commonly believed, out of deference to the opinion of the vulgar. Numberless in short are the ways, and sometimes imperceptible, in which the affections colour and infect the understanding.

L

But by far the greatest hindrance and aberration of the human understanding proceeds from the dullness, incompetency, and deceptions of the senses; in that things which strike the sense outweigh things which do not immediately strike it, though they be more important. Hence it is that speculation commonly ceases where sight ceases; insomuch that of things invisible there is little or no observation. Hence all the working of the spirits inclosed in tangible bodies lies hid and unobserved of men. So also all the more subtle changes of form in the parts of coarser substances (which they commonly call alteration, though it is in truth local motion through exceedingly small spaces) is in like manner unobserved. And yet unless these two things just mentioned be searched out and brought to light, nothing great can be achieved in nature, as far as the production of works is concerned. So again the essential nature of our common air, and of all bodies less dense than air (which are very many), is almost unknown. For the sense by itself is a thing infirm and erring; neither can instruments for enlarging or sharpening the senses do much; but all the truer kind of interpretation of nature is effected by instances and experiments fit and apposite; wherein the sense decides touching the experiment only, and the experiment touching the point in nature and the thing itself.

LI

The human understanding is of its own nature prone to abstractions and gives a substance and reality to things which are fleeting. But to resolve nature into abstractions is less to our purpose than to dissect her into parts; as did the school of Democritus, which went further into nature than the rest. Matter rather than forms should be the object of our attention, its configurations and changes of configuration, and simple action, and law of action or motion; for forms are figments of the human mind, unless you will call those laws of action forms.

LII

Such then are the idols which I call *Idols of the Tribe;* and which take their rise either from the homogeneity of the substance of the human spirit, or from its preoccupation, or from its narrowness, or from its restless motion, or from an infusion of the affections, or from the incompetency of the senses, or from the mode of impression.

LIII

The *Idols of the Cave* take their rise in the peculiar constitution, mental or bodily, of each individual; and also in education, habit, and accident. Of this kind there is a great number and variety; but I will instance

those the pointing out of which contains the most important caution, and which have most effect in disturbing the clearness of the understanding.

LIV

Men become attached to certain particular sciences and speculations, either because they fancy themselves the authors and inventors thereof, or because they have bestowed the greatest pains upon them and become most habituated to them. But men of this kind, if they betake themselves to philosophy and contemplation of a general character, distort and colour them in obedience to their former fancies; a thing especially to be noticed in Aristotle, who made his natural philosophy a mere bond-servant to his logic, thereby rendering it contentious and well-nigh useless. The race of chemists again out of a few experiments of the furnace have built up a fantastic philosophy, framed with reference to a few things; and Gilbert also, after he had employed himself most laboriously in the study and observation of the loadstone, proceeded at once to construct an entire system in accordance with his favourite subject.

LV

There is one principal and as it were radical distinction between different minds, in respect of philosophy and the sciences; which is this: that some minds are stronger and apter to mark the differences of things, others to mark their resemblances. The steady and acute mind can fix its contemplations and dwell and fasten on the subtlest distinctions: the lofty and discursive mind recognizes and puts together the finest and most general resemblances. Both kinds however easily err in excess, by catching the one at gradations the other at shadows.

LVI

There are found some minds given to an extreme admiration of antiquity, others to an extreme love and appetite for novelty; but few so duly tempered that they can hold the mean, neither carping at what has been well laid down by the ancients, nor despising what is well introduced by the moderns. This, however, turns to the great injury of the sciences and philosophy; since these affectations of antiquity and novelty are the humours of partisans rather than judgments; and truth is to be sought for not in the felicity of any age, which is an unstable thing, but in the light of nature and experience, which is eternal. These factions therefore must be abjured, and care must be taken that the intellect be not hurried by them into assent.

LVII

Contemplations of nature and of bodies in their simple form break up and distract the understanding, while contemplations of nature and bodies in their composition and configuration overpower and dissolve the understanding; a distinction well seen in the school of Leucippus and Democritus as compared with the other philosophies. For that school is so busied with the particles that it hardly attends to the structure; while the others are so lost in admiration of the structure that they do not penetrate to the simplicity of nature. These kinds of contemplation should therefore be alternated and taken by turns; that so the understanding may be rendered at once penetrating and comprehensive, and the inconveniences above mentioned, with the idols which proceed from them, may be avoided.

LVIII

Let such then be our provision and contemplative prudence for keeping off and dislodging the *Idols of the Cave,* which grow for the most part either out of the predominance of a favourite subject, or out of an excessive tendency to compare or to distinguish, or out of partiality for particular ages, or out of the largeness or minuteness of the objects contemplated. And generally let every student of nature take this as a rule,—that whatever his mind seizes and dwells upon with peculiar satisfaction is to be held in suspicion, and that so much the more care is to be taken in dealing with such questions to keep the understanding even and clear.

LIX

But the *Idols of the Market-place* are the most troublesome of all: idols which have

crept into the understanding through the alliances of words and names. For men believe that their reason governs words; but it is also true that words react on the understanding; and this it is that has rendered philosophy and the sciences sophistical and inactive. Now words, being commonly framed and applied according to the capacity of the vulgar, follow those lines of division which are most obvious to the vulgar understanding. And whenever an understanding of greater acuteness or a more diligent observation would alter those lines to suit the true divisions of nature, words stand in the way and resist the change. Whence it comes to pass that the high and formal discussions of learned men end oftentimes in disputes about words and names; with which (according to the use and wisdom of the mathematicians, it would be more prudent to begin, and so by means of definitions reduce them to order. Yet even definitions cannot cure this evil in dealing with natural and material things; since the definitions themselves consist of words, and those words beget others: so that it is necessary to recur to individual instances, and those in due series and order; as I shall say presently when I come to the method and scheme for the formation of notions and axioms.

LX

The idols imposed by words on the understanding are of two kinds. They are either names of things which do not exist (for as there are things left unnamed through lack of observation, so likewise are there names which result from fantastic suppositions and to which nothing in reality corresponds), or they are names of things which exist, but yet confused and ill-defined, and hastily and irregularly derived from realities. Of the former kind are Fortune, the Prime Mover, Planetary Orbits, Element of Fire, and like fictions which owe their origin to false and idle theories. And this class of idols is more easily expelled, because to get rid of them it is only necessary that all theories should be steadily rejected and dismissed as obsolete.

But the other class, which springs out of a faulty and unskilful abstraction, is intricate and deeply rooted. Let us take for example such a word as *humid;* and see how far the several things which the word is used to signify agree with each other; and we shall find the word *humid* to be nothing else than a mark loosely and confusedly applied to denote a variety of actions which will not bear to be reduced to any constant meaning. For it both signifies that which easily spreads itself round any other body; and that which in itself is indeterminate and cannot solidize; and that which readily yields in every direction; and that which easily divides and scatters itself; and that which easily unites and collects itself; and that which readily flows and is put in motion; and that which readily clings to another body and wets it; and that which is easily reduced to a liquid, or being solid easily melts. Accordingly when you come to apply the word,--if you take it in one sense, flame is humid; if in another, air is not humid; if in another, fine dust is humid; if in another, glass is humid. So that it is easy to see that the notion is taken by abstraction only from water and common and ordinary liquids, without any due verification.

There are however in words certain degrees of distortion and error. One of the least faulty kinds is that of names of substances, especially of lowest species and well-deduced (for the notion of *chalk* and of *mud* is good, of *earth* bad); a more faulty kind is that of actions, as *to generate, to corrupt, to alter;* the most faulty is of qualities (except such as are the immediate objects of the sense), as *heavy, light, rare, dense,* and the like. Yet in all these cases some notions are of necessity a little better than others, in proportion to the greater variety of subjects that fall within the range of the human sense.

LXI

But the *Idols of the Theatre* are not innate, nor do they steal into the understanding secretly, but are plainly impressed and received into the mind from the play-books of philosophical systems and the perverted rules of demonstration. To attempt refutations in this case would be merely inconsistent with what I have already said: for since we agree neither upon principles nor upon demonstrations there is no place for

argument. And this is so far well, inasmuch as it leaves the honour of the ancients untouched. For they are no wise disparaged—the question between them and me being only as to the way. For as the saying is, the lame man who keeps the right road outstrips the runner who takes a wrong one. Nay it is obvious that when a man runs the wrong way, the more active and swift he is the further he will go astray.

But the course I propose for the discovery of sciences is such as leaves but little to the acuteness and strength of wits, but places all wits and understandings nearly on a level. For as in the drawing of a straight line or a perfect circle, much depends on the steadiness and practice of the hand, if it be done by aim of hand only, but if with the aid of rule and compass, little or nothing; so is it exactly with my plan. But though particular confutations would be of no avail, yet touching the sects and general divisions of such systems I must say something; something also touching the external signs which show that they are unsound; and finally something touching the causes of such great infelicity and of such lasting and general agreement in error; that so the access to truth may be made less difficult, and the human understanding may the more willingly submit to its purgation and dismiss its idols.

The Conventional Character of Language[1]

J. B. GREENOUGH AND G. L. KITTREDGE

THE CHANGES which the meanings of words undergo in the development of a language seem, at first sight, purely fortuitous in some instances. In fact, however, the appearance of chance is due merely to our ignorance of the causes that have operated in each case. Such causes may be simple and easily understood, or so complex as never to be discoverable in their entirety. But so long as thought proceeds in obedience to definite laws, language, which is the expression of thought by means of conventional signs, must also obey rules which, if we could discover them, would account for every variation.

We often speak of the "proper or essential meaning" of a word. The term is convenient, and one could not well dispense with it in etymological study. Yet it may easily become misleading, if certain cautionary limitations are not borne in mind. In the absolute sense of the term a word has no "essential" meaning. Words are conventional signs. They mean what they are intended to mean by the speaker and understood to mean by the hearer. There is no other sense in which language can be properly said to signify anything. Thus when a boy in the street declares that he "hain't seen no dog," it is not true that his "two negatives make one affirmative," for he intends simply an emphatic negation, and we inevitably understand him in that way, however nice we may be about our own *not's*. In other words, two negatives may make an affirmative in logic, but they seldom do in English speech. The rule in Anglo-Saxon and Middle English was like that in Greek: "Use as many negatives as you can." Thus in King Alfred's description of the effects of the harping of Orpheus: "No hart shunned-not no lion, nor no hare no hound, nor no beast knew-not no hatred nor no fear from another, for the pleasure they took in the sound."

Many current social phrases show in a moment how conventional are the meanings of words. Thus, "Beg your pardon!" with a questioning inflection of the voice, has come to mean simply "What?"—an inquiry when one has failed to catch another's remark. The only difference between "Beg pardon"

[1] From Greenough and Kittredge: *Words and Their Ways in English Speech*. Copyright, 1901, by The Macmillan Company and used with their permission.

and "What?" is a difference in courtesy,—the former involving an apology for inattention. "Dear Sir" at the beginning of a letter, and "Your humble servant" (or "yours" anyway) at the end, may mean very much, but commonly mean very little; they are no more than a notification to your correspondent that a letter is beginning and ending (like *salutem* and *vale* in Latin). "Please" or "if you please," annexed to a command, carries no suggestion that the person who receives the order is to obey it or not, as he chooses. "An early remittance will greatly oblige" does not necessarily indicate that your tailor feels himself under an obligation when you pay your old bill. "Your favor of the 30th" is a common commercial phrase for any letter, though we all know that letters are hardly favors to busy men. "Be so good as to go home!" "Kindly let me see no more of you!" "Not at home!" "So glad to see you!" "Give my love to—," "Sorry to be out when you called!"—are all phrases which mean just as much and just as little as they are understood to mean by the speaker and the person spoken to.

Perhaps the final test of the fact that language is a convention,—that words have no natural and essential meaning which belongs to them more than any other,—is seen in irony. Here we use a word in a sense which is the direct opposite of that which it usually bears,—and we are understood without difficulty. Thus, "He is a very courageous person" may mean, if it is so intended and so taken, "He is an arrant coward!" Nor is it absolutely necessary that the remark should be uttered in any special tone of voice in order to convey this ironical meaning. The intention of the speaker and the understanding of the hearer are all that is required. There is a whole class of expressions (more or less colloquial) which have become idiomatic in an ironical sense: as, "A precious rascal!" "That's a pretty thing to say!" "Fine work, this!" "Here's a pretty how-d'ye-do!" "A nice mess!" "You're too kind!" "How *very* good of you!" "Here's richness!" "This is pleasant!" "Much good may it do him!" "I wish you joy of it!" So *merci!* and *danke!* may mean "no, thank you!" and the Romans used *benigne* (like the Greek Καλῶς) in a similar sense.

The truth of these considerations may be tested in another way. Many words have so changed their meanings in the course of time that their present sense has no necessary logical connection with that which they formerly bore.

Thus the Latin *rivalis* is an adjective that meant "pertaining to a brook" (L. *rivus;* cf. *river, rivulet*); but a *rival* is a "competitor." There is no necessary connection of thought between the two senses. Philologists know the history of this curious change, and see that it is easy and natural. *Rivales* in Latin came to mean "neighbors who got water from the same stream,"—and it is thus used in the Roman Digest, which discusses the contests that often rose between such persons respecting their riparian rights. But this connection between the senses is a mere matter of history. It does not affect us today. We do not think of brooks when we talk of rivals in politics, or business, or love.

Chamberlain once meant a servant who attended to the chambers of a house or inn. The *Chamberlain* of London is the city treasurer.

Phaeton was a Greek participle that meant "shining," and was appropriately applied to the son of Phœbus. Phaeton once drove a chariot with disastrous results, and his name now designates a kind of vehicle. But we do not call such vehicles *phaetons* because they *shine.*

Explodo meant, in Latin, "to drive off an actor by clapping the hands," then "to hoot off" by any noisy sign of disapproval. Thus Cicero speaks of a player as being "exploded not merely by hissing, but by abusive words." The modern intransitive use of *explode* is very modern indeed, but it suggests neither actors nor catcalls. The bridge between the senses is the idea of "driving out" in such phrases as "the ball was exploded from the gun." So powerful, however, are the modern associations of the word that even the bookish phrase "an exploded fallacy," which preserves the old sense, is commonly understood

as an error that has been "blown up" or "blown to pieces" by the arguments of an adversary.

Ingenium originally meant "that which is born in a man" (cf. *generate, genus*). Now, in the form *engine* (taken into English through the French), it means a machine for the application of "power,"—a locomotive, for instance. The intermediate steps are well known ("mother-wit," "contrivance," "device"); but it would be manifestly absurd to interpret our English word by appealing to *in* and the root GEN, "to be born."

These are merely a few examples out of thousands, but they suffice to enforce what has been said of the conventional nature of words.

To be sure, the course by which these same words have strayed so far from their former selves may usually be traced; and the clew which has guided their wanderings may then become evident. But this does not alter the case; for the present signification of each of them *is* its meaning, and something very different *was* its meaning a hundred or a thousand years ago, and between the two is a great gap, which the memory and the linguistic consciousness of the modern speaker does not span, and could not if it would. It is as if the word had been annihilated and created anew. The modern user knows nothing of the former meaning.

Words, then, have no character in themselves. They are merely conventional signs, and consequently they can be good or bad, dignified or vulgar, only in accordance with the ideas which they conventionally denote or suggest in the mind of the speaker and his hearers. Yet under this head of *suggestions* comes in an important consideration, which accounts for a great deal that would otherwise be inexplicable. Most words, from their use, acquire special connotations or associations, which almost seem to give them a character of their own.

Thus the word *fist* means simply "the hand with the fingers doubled up against the palm." In the idiomatic comparison "as big as your fist," it is purely descriptive, and has no particular character, good or bad. The use of the fist in fighting, however, has given a peculiar connotation to the term. We may say "He hit his opponent with his clenched fist," for here again *fist* is purely descriptive and occurs in an appropriate environment. Similarly, we may say "The boy cried dismally, wiping his eyes with his dingy fist," for here there is a certain grotesqueness in the scene which justifies the use of undignified language. But we can no longer say, as was formerly possible, "The lady held a lily in her delicate fist." In other words, the associations of *fist* are either pugnacious, vulgar, or jocose.

These suggestive associations are partly general and partly individual. If certain phrases are habitually associated in our minds with low or disagreeable persons or things, they will inevitably be relegated to the category of unseemly terms; and, on the other hand, phrases that are associated with dignified and reputable persons or circumstances, will aquire a kind of respectability independent of the exact meaning which they convey.

The associations in question may be purely personal. Everybody remembers certain words which he dislikes intensely, though they are in common use, convey no bad or disagreeable meaning, and are quite euphonious. We may even remember our reason for such dislikes. Perhaps the word is associated with an unpleasant experience; more likely, however, our antipathy is due to its habitual use by some one whom we do not fancy. Or we may have been bored by hearing the word over-used, so that every new repetition gives us a feeling of satiety.

We have already averted to this doctrine of association in discussing slang. One of the chief objections to the excessive use of this pariah dialect is not that there is anything objectionable about the words themselves, but that their associations are low, or at least undignified, and perhaps disgusting. If they secure a position in the vocabulary, their origin is likely to be forgotten, and they cease to be offensive.

The associations of words are always shifting even when the meaning remains unchanged. Hence we continually meet with expressions in our older poets which have

lost their dignity, and appear to us out of harmony with the context, though they were quite irreproachable when the author used them. Examples are *brag, candy, pate, slubber, mope, fry, portly, smug, pother, liver, wink, blab, feed,* and many others. The effect referred to may be felt in such a passage as the following:—

> I have dispatch'd in post
> To sacred Delphos, to Apollo's temple,
> Cleomenes and Dion, whom you know
> Of *stuff'd* sufficiency.
>
> Shakspere, The Winter's Tale, act ii, sc. 1, 11. 182-5.

It is largely these indefinable connotations of words that make it so difficult to speak a foreign tongue. We may be well trained in grammar and command a large vocabulary, and yet use words which, though they express our meaning accurately enough, suggest ridiculous or inopportune associations to a native. "Baboo English" is proverbial. The awkward and equivocal remarks into which one frequently blunders in speaking one's own language, "the things one would rather have left unsaid," depend on a momentary forgetfulness of some more or less obscure connotation which the words that we are using may bear.

Clearly, then, we are dealing with a very real phenomenon in the operations of language. When a word has been long used in a particular sense, there cluster about it a great variety of traditional associations,—religious, historical, literary, or sentimental, which, though not a part of its meaning, properly so called, are still a considerable factor in its significant power. A rose by any other name would smell as sweet, no doubt; yet no other name would so vividly suggest to us its fragrance. The noun *lily* is no whiter, nor is it more graceful, than, for example, *nilly*. Yet if it were possible to substitute *nilly* for *lily*, it would be long before the new term would call up in our minds either the whiteness or the grace of the lily as the accustomed word presents them,—not by virtue of any inherent quality, but merely because of its traditional and poetic associations.

The power of such connotations becomes very great when the word is an old one, which has been much used, and is in some manner, therefore, bound up with the most intense experiences of great numbers of men.

Words like *father, mother, home,* or the name of one's country, may have a tremendous effect in a great crisis. A mob may be roused to fury by the utterance of a single word; yet in all such cases it is of course not the word at all that produces the effect, but its associations. Cæsar's mutinous army was reduced to tearful submission by the one word *Quirites!* "fellow-citizens," which reminded them that they were no longer *commilitones,* the "fellow-soldiers" of their beloved leader.

Indeed, language is sometimes translated into conduct. A figure of speech may even suggest a course of action. To "*bridle* one's tongue" is an old and very natural metaphor. Is it too much to believe that it suggested the particular form of gag used in the seventeenth and eighteenth centuries to confine the tongue of a convicted shrew? At all events, the figure of speech is centuries older than the actual "scold's bridle." A mistaken etymology may react in a similiar manner. A *forlorn hope* is a body of soldiers who undertake some service of extraordinary peril. The phrase is an adaptation of the Dutch *verloren hoop,* "lost band" (in Fr., *enfants perdus*). *Hoop* is cognate with our *heap,* which formerly signified a multitude of persons as well as of things. Who can doubt that the happy confusion of tongues which illuminated with a ray of *hope* the desperate valor of the old phrase, has had its effect on the fortune of war?

As we have already remarked, we seem to ourselves to speak by nature, for we cannot remember learning to talk. This fact, taken in connection with the powerful influence which words often produce upon our minds through the association of ideas, enables us readily to understand how it is often thought that words have some natural power or meaning independently of usage or convention. This idea is widespread, and manifests itself alike in the savage and in the philosopher.

Thus we find amongst men of all degrees

of civilization a deep-seated belief in the magic potency of words. This belief underlies all kinds of charms and incantations. It is not the magician who forces the demon to appear or produces the convulsion of nature, but the words themselves which the magician speaks. His power consists only in knowing the words. There are stories of ignorant persons, and even children, who have accidentally read a passage, to them unintelligible, from a book of magic, with precisely the same effect which the spell would have had if recited by the enchanter. Similarly, it is often thought that the name of a person, an animal, or an object, has a mysterious connection with its bearer. A werewolf may be restored to his human form by calling him by name. If a berserk champion was addressed by his right name in the midst of a battle, he instantly lost his demonic strength. In invoking a god, or other supernatural being, it was customary to use many different names. Often, in later times, the object of this variety was thought to be the winning of the deity's favor by employing that title which he might prefer. Originally, however, the purpose was to make sure of uttering the one true and essential name of the divinity,—that name which would control him instantly and force him to grant your request. It is well known that the real name of the city of Rome was supposed to be kept secret, lest, if it became known to the enemy, they might use it in incantations which would deprive the city of its protecting gods. So, among some savages, it is a deadly insult to call a man by his right name,—an idea which has left its traces in the apologetic Latin formula "quem honoris causa nomino," and in the parliamentary phrase "the gentleman from Ohio."

All these superstitions, primitive as they seem to us, have had considerable effect on men's opinions about language, and, consequently, on language itself. They have even found philosophic expression in the Stoic doctrine of etymology, which has exerted a profound influence on the modern thought, and still sways us in our judgment of words.

When, in the fourth or fifth century before Christ, the Greek philosophers began to connect the study of words with that of things, one of the questions which confronted them, was, whether words and their meanings came "by nature" (φύσει), or artificially and "by convention" (θέσει). The Stoics, in accordance with their general theory of the universe, decided in favor of a "natural" origin, and held that if the "true" (ἔτυμος, *étumos*), or original meaning of a word could only be discovered, we should at once gain an insight into the divinely constituted nature of the thing which the word denotes. The search for this "true meaning" (ἔτυμον, *étumon*) was therefore called *etymology*, or "the science of true meanings."

The doctrine of the Stoics has long been exploded, and the term *etymology* has entirely changed its sense. Yet the old notion dies hard. In the popular mind there still lingers a haunting suspicion that it is true, and accordingly one often hears, from the pulpit or the platform, and even from the professor's chair, serious arguments based on the supposed original or essential meaning of this or that word. The fallacy of such reasoning may be illustrated by an anecdote. The writer recently asked a friend, in jest, whether a particular service came within the functions of an *amanuensis* "Oh! yes," was the reply, "she does it *with her hands!*" Now, it is true that *amanuensis* comes from *manus*, "the hand"; yet the jocose remark just quoted was none the less an absurdity, as indeed, it was meant to be. The Romans, who were accustomed to dictating their compositions, designated the slaves who wrote for them as *servi a manu*, i.e. "writing-servants," for *manus* was often used for "handwriting" (like our *hand*). Later they made, somewhat irregularly, a noun, *amanuensis* (like *Atheniensis*), and this we have borrowed in the same sense, and in that sense only. Hence the absurdity of drawing from the general meaning of *manus*, "hand," any inferences as to the proper duties of an amanuensis.

Yet similar "etymological" arguments are extremely common in serious discourse. One can hardly take up a periodical without reading that *education* is derived from L. *e-duco*, "draw out," and that *therefore* all education must be a "drawing out" of the child's facul-

ties. Nothing could be more erroneous. In the first place, *education* is not derived from *e-duco;* and if it were, it is absurd to suppose that the first Roman who used the noun *educatio* had any such sublimated and refined idea of education. The whole argument depends on the antiquated doctrine of the Stoic etymon.

Now, the fact is, that the Romans compounded the verb *duco,* "to lead," with *ex,* meaning "out" or "up." This compound *educo* they used for all kinds of "leading" (in distinction from *agere,* "to drive"), and particularly for "bringing up" from the egg to the chicken, or from infancy to mature years; always, however, with personal objects, that is, always with reference to the creature that was "brought up." As *educo* also came to be employed in many other senses, a special verb, *éduco,* was made for this special meaning, and later, this *educo,* with its derivative noun, *educatio,* was applied especially to the "training" of children. We may believe that the proper method of education is to draw out the latent faculties of the pupil, but we can find no suggestion of that method in the etymology of the word itself.

It is equally misleading to seek for light as to the nature of the religious principle in men from the etymology of the word *religion.* Yet we are often told that the very name of this principle reveals its true quality as the *bond* that unites the human and the divine. There is, to be sure, a bare possibility of deriving *religio* (irregularly) from *religo,* "to bind"; but even if that were its origin, the sense in which the first heathen users of the word conceived the figure could not throw any light on the central principles of spiritual life. It is far more likely, however, that the word is an abstract from *relego.* This is Cicero's own derivation, and the use of the cognate words undoubtedly confirms it. The verb *relego,* "to pick up," and so "to notice," "take cognizance of" is compounded of *lego,* "to pick," and *red-,* "again" (the prefix being used somewhat in the sense of *re-* in *regard,* as we also have it in *respicio, respecto*). It undoubtedly meant "to notice carefully," "to observe closely" (cf. *diligens*), especially of noticing omens, portents, and other divine intimations. Hence we have *religiosus,* "inclined to" this action, often in a bad sense, "excessively so inclined," and hence "superstitious": compare the dictum quoted by Aulus Gellius (iv, 9, 1),—"religentem esse oportet, religiosum nefas," "One ought to be scrupulous,—it is wrong to be superstitious." At a time when man's connection with the gods was entirely through omens and the like, it would be natural that a "painful regard" (for divine intimations) should be "superstition" or "religion," either of which ideas *religio* expresses. The word *neglegere* is used of the opposite idea (though not, like *relegere,* without an object). It is only by taking into account the customs and beliefs that prevailed when a word was made, that we can have any just conception of its origin.

Such false linguistic doctrine as this of *education* and *religion* must not be confused with a proper study of "root-meanings." The history of every word begins with its root, if the root can be ascertained, as is not always the case. Yet we must not expect the root to contain, as in the germ, all the significance that successive civilizations have attached to the words that have grown out of it. We should never forget that words are conventional symbols, and that any word—whatever its origin—bears, at any moment, that meaning which the speakers of the language have tacitly agreed to assign to it. And this meaning may, or may not, have a direct logical connection with the original sense of the root.

This principle does not do away with the distinctions of right and wrong in speaking a language. The purpose of speech is to express one's thoughts so that they may be understood by others. Hence, the consensus of usage determines the meaning which a word bears, and this consensus is governed at all times by the *Sprachgefühl,* so that a language always remains true to itself, as we have had occasion to remark before. Within the limits of this feeling, however, hardly any influence is too slight to produce a variation in sense.

How We Know What We Know[1]

S. I. HAYAKAWA

The crucial point to be considered in a study of language behavior is the relationship between language and reality, between words and not-words. Except as we understand this relationship, we run the grave risk of straining the delicate connection between words and facts, of permitting our words to go wild, and so of creating for ourselves fabrications of fantasy and delusion.

WENDELL JOHNSON

BESSIE, THE COW

The universe is in a perpetual state of flux. The stars are in constant motion, growing, cooling, exploding. The earth itself is not unchanging; mountains are being worn away, rivers are altering their channels, valleys are deepening. All life is also a process of change, through birth growth, decay, and death. Even what we used to call "inert matter"—chairs and tables and stones—is not inert, as we now know, for, at the submicroscopic level, it is a whirl of electrons. If a table looks today very much as it did yesterday or as it did a hundred years ago, it is not because it has not changed, but because the changes have been too minute for our coarse perceptions. To modern science there is no "solid matter." If matter looks "solid" to us, it does so only because its motion is too rapid or too minute to be felt. It is "solid" only in the sense that a rapidly rotating color chart is "white" or a rapidly spinning top is "standing still." Our senses are extremely limited, so that we constantly have to use instruments such as microscopes, telecopes, speedometers, stethoscopes, and seismographs to detect and record occurrences which our senses are not able to record directly. The way in which we happen to see and feel things is the result of the peculiarities of our nervous systems. There are "sights" we cannot see, and, as even children know today with their high-frequency dog whistles, "sounds" that we cannot hear. It is absurd, therefore, to imagine that we ever perceive anything "as it really is."

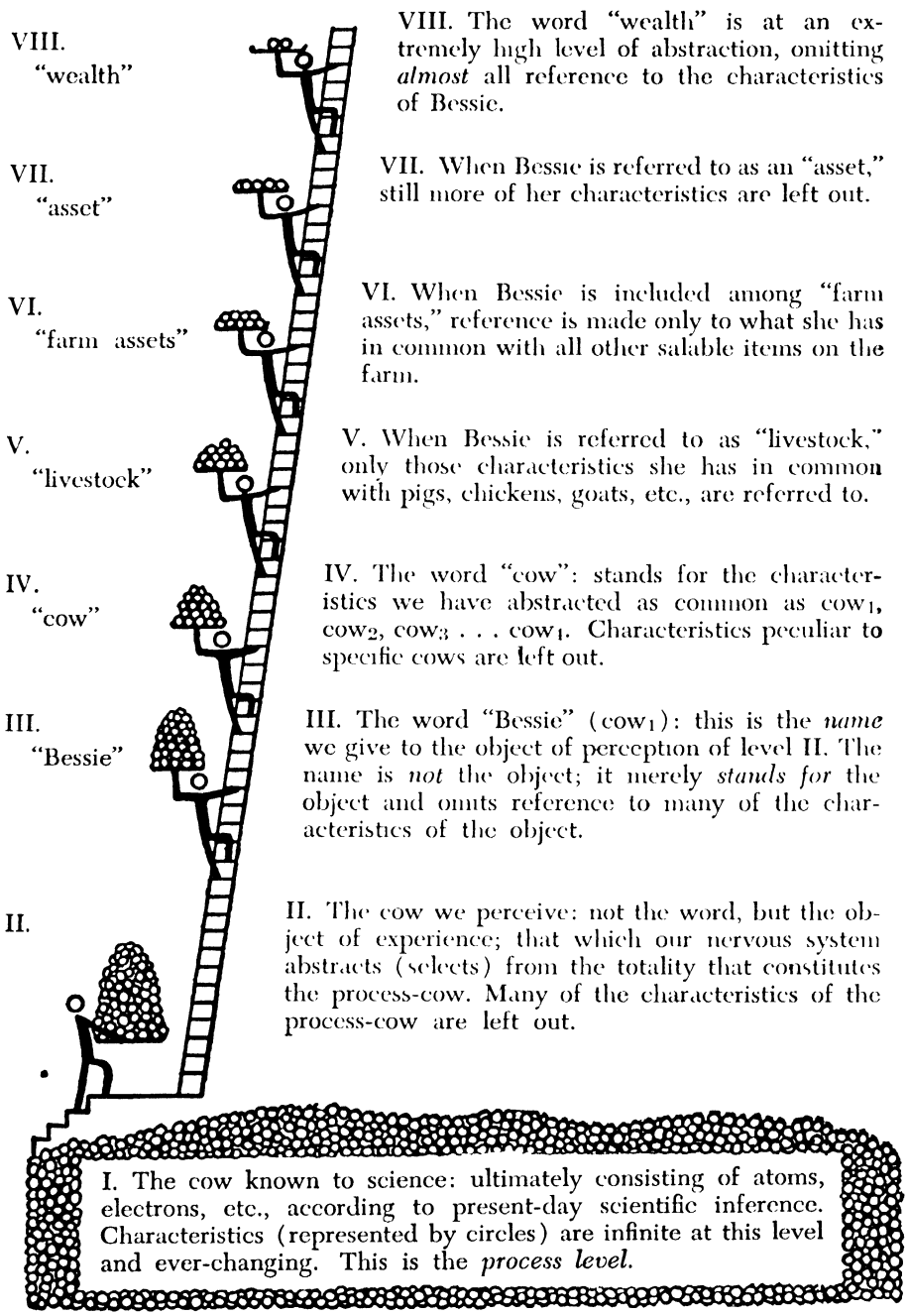
Inadequate as our senses are, with the help of instruments they tell us a great deal. The discovery of microörganisms with the use of the microscope has given us a measure of control over bacteria; we cannot see, hear, or feel radio waves, but we can create and transform them to useful purpose. Most of our conquest of the external world, in engineering, in chemistry, and in medicine, is due to our use of mechanical contrivances of one kind or another to increase the capacity of our nervous systems. In modern life, our unaided senses are not half enough to get us about in the world. We cannot even obey speed laws or compute our gas and electric bills without mechanical aids to perception.

To return, then, to the relations between words and what they stand for, let us say that there is before us "Bessie," a cow. Bessie is a living organism, constantly changing, constantly ingesting food and air, transforming it, getting rid of it again. Her blood is circulating, her nerves are sending messages. Viewed microscopically, she is a mass of variegated corpuscles, cells, and bacterial organisms; viewed from the point of view of modern physics, she is a perpetual dance of electrons. What she is in her entirety, we can never know; even if we could at any precise moment say what she was, at the next moment she would have changed enough so that our description would no longer be accurate. It is impossible to say completely what Bessie or anything else really *is*. Bessie is no static "object," but a dynamic process.

The Bessie that we experience, however, is something else again. We experience only a small fraction of the total Bessie: the lights

[1] From *Language in Thought and Action* by S. I. Hayakawa, copyright, 1941, 1949, by Harcourt, Brace and Company, Inc., and used with their permission.

Start reading from the bottom *UP*



and shadows of her exterior, her motions, her general configuration, the noises she makes, and the sensations she presents to our sense of touch. *And because of our previous experience, we observe resemblances in her to certain other animals to which, in the past, we have applied the word "cow."*

The Process of Abstracting

The "object" of our experience, then, is not the "thing in itself," but *an interaction between our nervous systems (with all their imperfections) and something outside them.* Bessie is unique—there is nothing else in the universe exactly like her in all respects. But our nervous systems, automatically *abstracting* or selecting from the process-Bessie those features of hers in which she resembles other animals of like size, functions, and habits, *classify* her as "cow."

When we say, then, that "Bessie is a cow," we are only noting the process-Bessie's resemblances to other "cows" and *ignoring differences.* What is more, we are leaping a huge chasm: from the dynamic process-Bessie, a whirl of electro-chemico-neural eventfulness, to a relatively static "idea," "concept," or *word*, "cow." The reader is referred to the diagram entitled "The Abstraction Ladder."[2]

As the diagram illustrates, the "object" we see is an abstraction of the lowest level, but it is still an abstraction, since it leaves out characteristics of the process that is the real Bessie. The *word* "Bessie" (cow_1) is the lowest *verbal* level of abstraction, leaving out further characteristics—the differences between Bessie yesterday and Bessie today, between Bessie today and Bessie tomorrow—and selecting only the similarities. The word "cow" selects only the similarities between Bessie (cow_1), Daisy (cow_2), Rosie (cow_3), and so on, and therefore leaves out still more about Bessie. The word "livestock" selects or abstracts only the features that Bessie has in common with pigs, chickens, goats, and sheep. The term "farm asset" abstracts only the features Bessie has in common with barns, fences, livestock, furniture, generating plants, and tractors, and is therefore on a very high level of abstraction.

The reason we must concern ourselves with the process of abstracting is that the study of language is all too often regarded as being a matter of examining such things as pronunciation, spelling, vocabulary, grammar, and sentence structure. The methods by which composition and oratory are taught in old-fashioned school systems seem to be largely responsible for this widespread notion that the way to study words is to concentrate one's attention exclusively on words.

But as we know from everyday experience, learning language is not simply a matter of learning words; it is a matter of correctly relating our words to the things and happenings for which they stand. We learn the language of baseball by playing or watching the game *and studying what goes on.* It is not enough for a child to learn to *say* "cookie" or "dog"; he must be able to use these words in their proper relationship to nonverbal cookies and nonverbal dogs before we can grant that he is learning the language. As Wendell Johnson has said, "The study of language begins properly with a study of what language is about."

Once we begin to concern ourselves with what language is about, we are at once thrown into a consideration of how the human nervous system works. When we call Beau (the Boston terrier), Pedro (the Chihuahua), Snuffles (the English bulldog), and Shane (the Irish wolfhound)—creatures that differ greatly in size, shape, appearance, and behavior—by the same name, "dog," our nervous system has obviously gone to work *abstracting* what is common to them all, ignoring for the time being the differences among them.

Why We Must Abstract

This process of abstracting, of leaving characteristics out, is an indispensable convenience. To illustrate by still another example, suppose that we live in an isolated village of four families, each owning a house. A's house is referred to as *maga;* B's house is *biyo;* C's is *kata,* and D's is *pelel.* This is quite satisfactory for ordinary purposes of communication in the village, unless a discussion arises about building a new house—a spare one, let us say. We cannot refer to the projected house by any one of the four words we have for the existing houses, since each of these has too specific a meaning. We must find a *general* term, at a higher level of abstraction, that means "something that has certain characteristics in common with *maga, biyo, kata,* and *pelel,* and yet is not A's, B's, C's, or D's." Since this is much too complicated to say each time, an *abbreviation* must be invented. Let us say we choose the noise, *house.* Out of such needs do our words come—they are a form of shorthand. The invention of a new abstraction is a great step forward, since it *makes discussion possible*—as,

[2] The "abstraction ladder" is based on "The Structural Differential," a diagram originated by A. Korzybski to explain the process of abstracting. For a fuller explanation both of the diagram and the process it illustrates, see his *Science and Sanity: An Introduction to Non-Aristotelian Systems and General Semantics* (1933), especially Chapter XXV.

in this case, not only the discussion of a fifth house, but of all future houses we may build or see in our travels or dream about.

A producer of educational films once remarked to the writer that it is impossible to make a shot of "work." You can shoot Joe hoeing potatoes, Frank greasing a car, Bill spraying paint on a barn, but never just "work." "Work," too, is a shorthand term, standing, at a higher level of abstraction, for a characteristic that a multitude of activities, from dishwashing to navigation to running an advertising agency to governing a nation, have in common. . . .

On Definitions

Definitions, contrary to popular opinion, tell us nothing about things. They only describe people's linguistic habits; that is, they tell us what noises people make under what conditions. Definitions should be understood as *statements about language.*

House. This is a word, at the next higher level of abstraction, that can be substituted for the more cumbersome expression, "Something that has characteristics in common with Bill's bungalow, Jordan's cottage, Mrs. Smith's tourist home, Dr. Jones's mansion . . ."

Red. A feature that rubies, roses, ripe tomatoes, robins' breasts, uncooked beef, and lipsticks have in common is abstracted, and this word expresses that abstraction.

Kangaroo. Where the biologist would say "herbivorous mammal, a marsupial of the family Macropodidae," ordinary people say "kangaroo."

Now it will be observed that while the definitions of "house" and "red" given here point *down* the abstraction ladder (see the charts) to *lower* levels of abstraction, the definition of "kangaroo" remains at the same level. That is to say, in the case of "house," we could if necessary go and *look* at Bill's bungalow, Jordan's cottage, Mrs. Smith's tourist home, and Dr. Jones's mansion, and figure out for ourselves what features they seem to have in common; in this way, we might begin to understand under what conditions to use the word "house." But all we know about "kangaroo" from the above is that where some people say one thing, other people say another. That is, when we stay at the *same* level of abstraction in giving a definition, we do not give any information, unless, of course, the listener or reader is already sufficiently familiar with the defining words so that he can work himself down the abstraction ladder. Dictionaries, in order to save space, have to assume in many cases such familiarity with the language on the part of the reader. But where the assumption is unwarranted, definitions at the same level of abstraction are worse than useless. Looking up "indifference" in some cheap pocket dictionaries, we find it defined as "apathy"; we look up "apathy" and find it defined as "indifference."

Even more useless, however, are the definitions that go *up* the abstraction ladder to higher levels of abstraction—the kind most of us tend to make automatically. Try the following experiment on an unsuspecting friend:

"What is meant by the word *red*?"
"It's a color."
"What's a *color*?"
"Why, it's a quality things have."
"What's a *quality*?"
"Say, what are you trying to do, anyway?"

You have pushed him into the clouds. He is lost.

If, on the other hand, we habitually go *down* the abstraction ladder to *lower* levels of abstraction when we are asked the meaning of a word, we are less likely to get lost in verbal mazes; we will tend to "have our feet on the ground" and know what we are talking about. This habit displays itself in an answer such as this:

"What is meant by the word *red*?"
"Well, the next time you see a bunch of cars stopped at an intersection, look at the traffic light facing them. Also, you might go to the fire department and see how their trucks are painted."

"Let's Define Our Terms"

An extremely widespread instance of an unrealistic (and ultimately superstitious) attitude toward definitions is found in the

common academic prescription, "Let's define our terms so that we shall all know what we are talking about." As we have already seen, the fact that a golfer, for example, cannot define golfing terms is no indication that he cannot understand and use them. *Conversely, the fact that a man can define a large number of words is no guarantee that he knows what objects or operations they stand for in concrete situations.* People often believe, having defined a word, that some kind of understanding has been established, ignoring the fact that *the words in the definition often conceal even more serious confusions and ambiguities than the word defined.* If we happen to discover this fact and try to remedy matters by defining the defining words, and then, finding ourselves still confused, go on to define the words in the definitions of the defining words, and so on, we quickly find ourselves in a hopeless snarl. The only way to avoid this snarl is *to keep definitions to a minimum and to point to extensional levels wherever necessary—and in writing and speaking, this means giving specific examples of what we are talking about.*

Ultimately, no adequate definition of "apple pie" can be given in words—one has to examine and taste an actual apple pie. The same goes for more abstract words. If we have never felt love, if we have never felt strongly about a moral principle nor felt the satisfactions of seeing a moral principle observed, we may verbally define "love" or "justice" until doomsday, but we shall still not know what they mean.

Chasing Oneself in Verbal Circles

In other words, the kind of "thinking" we must be extremely wary of is that which *never* leaves the higher verbal levels of abstraction, the kind that never points *down* the abstraction ladder to lower levels of abstraction and from there to the extensional world:

"What do you mean by *democracy?*"
"Democracy means the preservation of human rights."
"What do you mean by *rights?*"
"By rights I mean those privileges God grants to all of us—I mean man's inherent privileges."
"Such as?"
"Liberty, for example."
"What do you mean by *liberty?*"
"Religious and political freedom."
"And what does that mean?"
"Religious and political freedom is what we have when we do things the *democratic* way."

Of course it is possible to talk meaningfully about democracy, as Jefferson and Lincoln have done, as Charles and Mary Beard do in *The Rise of American Civilization,* as Frederick Jackson Turner does in *The Frontier in American History,* as Lincoln Steffens does in his *Autobiography,* as David Lilienthal does in *TVA: Democracy on the March*—to name only the first examples that come to mind—but such a sample as the above is not the way to do it. The trouble with speakers who never leave the higher levels of abstraction is not only that they fail to notice when they are saying something and when they are not; they also produce a similar lack of discrimination in their audiences. Never coming down to earth, they frequently chase themselves around in verbal circles, unaware that they are making meaningless noises.

This is by no means to say, however, that we must never make extensionally meaningless noises. When we use directive language, when we talk about the future, when we utter ritual language or engage in social conversation, we often make utterances that have no extensional verifiability. It must not be overlooked that our highest ratiocinative and imaginative powers are derived from the fact that symbols *are* independent of things symbolized, so that we are free not only to go quickly from low to extremely high levels of abstraction (from "canned peas" to "groceries" to "commodities" to "national wealth") and to manipulate symbols even when the things they stand for cannot be so manipulated ("If all the freight cars in the country were hooked up to each other in one long line . . ."), but we are also free to manufacture symbols at will even if they stand only for abstractions made from other abstrac-

tions and not for anything in the extensional world. Mathematicians, for example, often play with symbols that have no extensional content, just to find out what can be done with them; this is called "pure mathematics." And pure mathematics is far from being a useless pastime, because mathematical systems that are elaborated with no extensional applications in mind often prove later to be applicable in useful and unforeseen ways. Mathematicians, however, when they are dealing with extensionally meaningless symbols, usually know what they are doing. We likewise *must* know what we are doing.

Nevertheless, all of us (including mathematicians), when we speak the language of everyday life, often make meaningless noises without knowing that we are doing so. We have already seen what confusions this can lead to. The fundamental purpose of the abstraction ladder, as shown both in this chapter and the next, is to make us aware of the process of abstracting.

The Distrust of Abstractions

We may, using our abstraction ladder, allocate statements as well as words to differing levels of abstraction. "Mrs. Plotz makes good potato pancakes" may be regarded as a statement at a fairly low level of abstraction, although, to be sure, it leaves out many characteristics, such as (1) what one means• by "goodness" in potato pancakes, and (2) the infrequent occasions when her pancakes fail to turn out well. "Mrs. Plotz is a good cook," is a statement at a higher level of abstraction, covering Mrs. Plotz's skill not only with potato pancakes, but also with roasts, pickles, noodles, strudels, and so on, nevertheless omitting *specific* mention of what she can accomplish. "Chicago women are good cooks," is a statement at a still higher level of abstraction; it is one that can be made (if at all) on the basis of the observation of the cooking of a statistically significant number of Chicago women. "The culinary art has reached a high state in America," would be a still more highly abstract statement, and if made at all, would have to be based not only on the observation of the Mrs. Plotzes of Chicago, New York, San Francisco, Denver, Albuquerque, and Chattanooga, but also on the observation of the quality of meals served in hotels and restaurants, the quality of training given in departments of home economics in high schools and colleges, the excellence of the writings on culinary art in American books and magazines, and many other relevant facts.

It is to be regretted, although it is understandable, that there exists a tendency in our times to speak contemptuously of "mere abstractions." The ability to climb to higher and higher levels of abstraction is a distinctively human trait, without which none of our philosophical or scientific insights would be possible. In order to have a science of chemistry, one *has* to be able to think of "H_2O," leaving out of consideration for the time being the wetness of water, the hardness of ice, the pearliness of dew, and the other extensional characteristics of H_2O at the objective level. In order to have a study called "ethics," one has to be able to think of what ethical behavior has in common under different conditions and in different civilizations; one has to abstract that which is common to the behavior of the ethical carpenter, the ethical politician, the ethical businessman, the ethical soldier, and that which is common to the laws of conduct of the Buddhist, the Judaist, the Confucian, and the Christian. Thinking that is most abstract can also be that which is most generally useful. The famous injunction of Jesus. "And as ye would that men should do to you, do ye also to them likewise," is, from this point of view, a brilliant generalization of more particular directives—a generalization at so high a level of abstraction that it appears to be applicable to all men in all cultures.

But high level abstractions acquire a bad reputation because they are so often used, consciously or unconsciously, to confuse and befuddle people. A grab among competing powers for oil resources may be spoken of as "protecting the integrity of small nations." (Remember the "Greater East Asia Co-prosperity Sphere"?) An unwillingness to pay

social security taxes may be spoken of as "maintaining the system of free enterprise." Depriving the Negro of his vote in violation of the Constitution of the United States may be spoken of as "preserving states' rights." The consequence of this free, and often irresponsible, use of high level abstractions in public controversy and special pleading is that a significant portion of the population has grown cynical about *all* abstractions.

But, as the abstraction ladder has shown, *all we know is abstractions.* What you know about the chair you are sitting in is an abstraction from the totality of that chair. When you eat white bread, you cannot tell by the taste whether or not it has been "enriched by vitamin B" as it says on the wrapper; you simply have to trust that the process (from which the words "vitamin B" are abstracted) is actually there. What you know about your wife—even if she has been your wife for thirty years—is again an abstraction. Distrusting all abstractions simply does not make sense.

The test of abstractions then is not whether they are "high" or "low level" abstractions, but *whether they are referrable to lower levels.* If one makes a statement about "culinary arts in America," one should be able to refer the statement down the abstraction ladder to particulars of American restaurants, American domestic science, American techniques of food preservation, and so on down to Mrs. Plotz in her kitchen. If one makes a statement about "civil rights in Wisconsin," one should know something about national, state, and local statutes, about the behavior of policemen, magistrates, judges, academic authorities, hotel managers, and the general public in Wisconsin, whose acts and whose decisions affect that minimum of decent treatment in the courts, in politics, and in society that we call "civil rights." *A preacher, a professor, a journalist, or politician whose high level abstractions can systematically and surely be referred to lower level abstractions is not only talking, he is saying something.* As *Time* would say, no windbag, he.

"Dead-Level Abstracting"

Professor Wendell Johnson of the State University of Iowa, in his *People in Quandaries,* discusses a linguistic phenomenon which he calls "dead-level abstracting." Some people, it appears, remain more or less permanently stuck at certain levels of the abstraction ladder, some on the lower levels, some on the very high levels. There are those, for example, who go in for "persistent low-level abstracting":

> Probably all of us know certain people who seem able to talk on and on without ever drawing any very general conclusions. For example, there is the back-fence chatter that is made up of he said, and then I said and then she said and I said and then he said, far into the afternoon, ending with, "Well, that's *just* what I told him!" Letters describing vacation trips frequently illustrate this sort of language, detailing places seen, times of arrival and departure, the foods eaten and the prices paid, whether the beds were hard or soft, etc.

A similar inability to get to higher levels of abstraction characterizes certain types of mental patients who suffer, as Johnson says, "a general blocking of the abstracting process." They go on indefinitely, reciting insignificant facts, never able to pull them together to frame a generalization to give a meaning to the facts.

Other speakers remain stuck at higher levels of abstraction, with little or no contact with lower levels. Such language remains permanently in the clouds. As Johnson says:

> It is characterized especially by vagueness, ambiguity, even utter meaninglessness. Simply by saving various circulars, brochures, free copies of "new thought" magazines, etc. . . . it is possible to accumulate in a short time quite a sizable file of illustrative material. Much more, of course, is to be found on library shelves, on newsstands, and in radio programs. Everyday conversation, classroom lectures, political speeches, commencement addresses, and various kinds of group forums and round-table discussions provide a further abundant source of *words cut loose from their moorings.* [Italics supplied.]

(The writer heard recently of a course in

esthetics given at a large middlewestern university in which an entire semester was devoted to Art and Beauty and the principles underlying them, and during which the professor, even when asked by students, persistently declined to name specific paintings, symphonies, sculptures, or objects of beauty to which his principles might apply. "We are interested," he would say, "in principles, not in particulars.")

There are psychiatric implications to dead-level abstracting on higher levels, too, since it is inevitable that, when maps proliferate wildly without any reference to a territory, the result can only be delusion. But whether at higher or lower levels, dead-level abstracting is, as Johnson says, always dull:

> The low-level speaker frustrates you because he leaves you with no directions as to what to do with the basketful of information he has given you. The high-level speaker frustrates you because he simply doesn't tell you what he is talking about. . . . Being thus frustrated, and being further blocked because the rules of courtesy (or of attendance at class lectures) require that one remain quietly seated until the speaker has finished, there is little for one to do but daydream, doodle, or simply fall asleep.

It is obvious, then, that interesting speech and interesting writing, as well as clear thinking and consequent psychological adjustment, require the constant interplay of higher and lower level abstractions, and the constant interplay of the verbal levels with the non-verbal ("object") levels. In science, this interplay goes on constantly, hypotheses being checked against observations, predictions against extensional results. (Scientific *writing*, however, as exemplified in technical journals, offers some appalling examples of *almost* dead-level abstracting—which is the reason so much of it is hard to read. Nevertheless, the interplay between verbal and non-verbal, experimental levels does continue, or else it would not be science.) The work of good novelists and poets also represents this constant interplay between higher and lower levels of abstraction. A "significant" novelist or poet is one whose message has a high level of *general* usefulness in providing insight into life; but he gives his generalizations an impact and a power to convince through his ability to observe and describe actual social situations and states of mind. A memorable literary character, such as Sinclair Lewis's George F. Babbitt, has *descriptive* validity (at a low level of abstraction) as the picture of an individual, as well as a *general* validity as a picture of a "typical" American businessman. . . .

The interesting writer, the informative speaker, the accurate thinker, and the well-adjusted individual, operate on all levels of the abstraction ladder, moving quickly and gracefully and in orderly fashion from higher to lower, from lower to higher—with minds as lithe and deft and beautiful as monkeys in a tree.

Four Kinds of Thinking[1]

JAMES HARVEY ROBINSON

WE DO NOT think enough about thinking, and much of our confusion is the result of current illusions in regard to it. Let us forget for the moment any impressions we may have derived from the philosophers, and see what seems to happen in ourselves. The first thing that we notice is that our thought moves with such incredible rapidity that it is almost impossible to arrest any specimen of it long enough to have a look at it. When we are offered a penny for our thoughts we always find that we have recently had so many things in mind that we can easily make a selection which will not compromise us too nakedly. On inspection we shall find that even if we are

[1] From *The Mind in the Making*. Copyright, 1921, by Harper & Brothers, publishers. Copyright, 1949, Bankers Trust Company, executors of the author.

not downright ashamed of a great part of our spontaneous thinking it is far too intimate, personal, ignoble or trivial to permit us to reveal more than a small part of it. I believe this must be true of everyone. We do not, of course, know what goes on in other people's heads. They tell us very little and we tell them very little. The spigot of speech, rarely fully opened, could never emit more than driblets of the ever renewed hogshead of thought—*noch grösser wie's Heidelberger Fass.* We find it hard to believe that other people's thoughts are as silly as our own, but they probably are.

We all appear to ourselves to be thinking all the time during our waking hours, and most of us are aware that we go on thinking while we are asleep, even more foolishly than when awake. When uninterrupted by some practical issue we are engaged in what is now known as a *reverie.* This is our spontaneous and favorite kind of thinking. We allow our ideas to take their own course and this course is determined by our hopes and fears, our spontaneous desires, their fulfillment or frustration; by our likes and dislikes, our loves and hates and resentments. There is nothing else anything like so interesting to ourselves as ourselves. All thought that is not more or less laboriously controlled and directed will inevitably circle about the beloved Ego. It is amusing and pathetic to observe this tendency in ourselves and in others. We learn politely and generously to overlook this truth, but if we dare to think of it, it blazes forth like the noontide sun.

The reverie or "free association of ideas" has of late become the subject of scientific research. While investigators are not yet agreed on the results, or at least on the proper interpretation to be given to them, there can be no doubt that our reveries form the chief index to our fundamental character. They are a reflection of our nature as modified by often hidden and forgotten experiences. We need not go into the matter further here, for it is only necessary to observe that the reverie is at all times a potent and in many cases an omnipotent rival to every other kind of thinking. It doubtless influences all our speculations in its persistent tendency to self-magnification and self-justification, which are its chief preoccupations, but it is the last thing to make directly or indirectly for honest increase of knowledge. Philosophers usually talk as if such thinking did not exist or were in some way negligible. This is what makes their speculations so unreal and often worthless.

The reverie, as any of us can see for himself, is frequently broken and interrupted by the necessity of a second kind of thinking. We have to make practical decisions. Shall we write a letter or no? Shall we take the subway or a bus? Shall we have dinner at seven or half past? Shall we buy U. S. Rubber or a Liberty Bond? Decisions are easily distinguishable from the free flow of the reverie. Sometimes they demand a good deal of careful pondering and the recollection of pertinent facts; often, however, they are made impulsively. They are a more difficult and laborious thing than the reverie, and we resent having to "make up our mind" when we are tired, or absorbed in a congenial reverie. Weighing a decision, it should be noted, does not necessarily add anything to our knowledge, although we may, of course, seek further information before making it.

A third kind of thinking is stimulated when anyone questions our beliefs and opinions. We sometimes find ourselves changing our minds without any resistance or heavy emotion, but if we are told that we are wrong we resent the imputation and harden our hearts. We are incredibly heedless in the formation of our beliefs, but find ourselves filled with an illicit passion for them when anyone proposes to rob us of their companionship. It is obviously not the ideas themselves that are dear to us, but our self-esteem, which is threatened. We are by nature stubbornly pledged to defend our own from attack, whether it be our person, our family, our property, or our opinion. A United States Senator once remarked to a friend of mine that God Almighty could not make him change his mind on our Latin-American Policy. We may surrender, but rarely confess ourselves vanquished. In the intellectual

world at least peace is without victory.

Few of us take the pains to study the origin of our cherished convictions; indeed, we have a natural repugnance to so doing. We like to continue to believe what we have been accustomed to accept as true, and the resentment aroused when doubt is cast upon any of our assumptions leads us to seek every manner of excuse for clinging to them. *The result is that most of our so-called reasoning consists in finding arguments for going on believing as we already do.*

I remember years ago attending a public dinner to which the Governor of the state was bidden. The chairman explained that His Excellency could not be present for certain "good" reasons; what the "real" reasons were the presiding officer said he would leave us to conjecture. This distinction between "good" and "real" reasons is one of the most clarifying and essential in the whole realm of thought. We can readily give what seem to us "good" reasons for being a Catholic or a Mason, a Republican or a Democrat, an adherent or opponent of the League of Nations. But the "real" reasons are usually on quite a different plane. Of course the importance of this distinction is popularly, if somewhat obscurely, recognized. The Baptist missionary is ready enough to see that the Buddhist is not such because his doctrines would bear careful inspection, but because he happened to be born in a Buddhist family in Tokio. But it would be treason to his faith to acknowledge that his own partiality for certain doctrines is due to the fact that his mother was a member of the First Baptist church of Oak Ridge. A savage can give all sorts of reasons for his belief that it is dangerous to step on a man's shadow, and a newspaper editor can advance plenty of arguments against the Bolsheviki. But neither of them may realize why he happens to be defending his particular opinion.

The "real" reasons for our beliefs are concealed from ourselves as well as from others. As we grow up we simply adopt the ideas presented to us in regard to such matters as religion, family relations, property, business, our country, and the state. We unconsciously absorb them from our environment. They are persistently whispered in our ear by the group in which we happen to live. Moreover, as Mr. Trotter has pointed out, these judgments, being the product of suggestion and not of reasoning, have the quality of perfect obviousness, so that to question them

> . . . is to the believer to carry skepticism to an insane degree, and will be met by contempt, disapproval, or condemnation, according to the nature of the belief in question. When, therefore, we find ourselves entertaining an opinion about the basis of which there is a quality of feeling which tells us that to inquire into it would be absurd, obviously unnecessary, unprofitable, undesirable, bad form, or wicked, we may know that that opinion is a nonrational one, and probably, therefore, founded upon inadequate evidence.

Opinions, on the other hand, which are the result of experience or of honest reasoning do not have this quality of "primary certitude." I remember when as a youth I heard a group of business men discussing the question of the immortality of the soul, I was outraged by the sentiment of doubt expressed by one of the party. As I look back now I see that I had at the time no interest in the matter, and certainly no least argument to urge in favor of the belief in which I had been reared. But neither my personal indifference to the issue, nor the fact that I had previously given it no attention, served to prevent an angry resentment when I heard *my* ideas questioned.

This spontaneous and loyal support of our preconceptions—this process of finding "good" reasons to justify our routine beliefs—is known to modern psychologists as "rationalizing"—clearly only a new name for a very ancient thing. Our "good" reasons ordinarily have no value in promoting honest enlightenment, because, no matter how solemnly they may be marshaled, they are at bottom the result of personal preference or prejudice, and not of an honest desire to seek or accept new knowledge.

In our reveries we are frequently engaged in self-justification, for we cannot bear to think ourselves wrong, and yet have constant illustrations of our weaknesses and mistakes.

So we spend much time finding fault with circumstances and the conduct of others, and shifting on to them with great ingenuity the onus of our own failures and disappointments. *Rationalizing is the self-exculpation which occurs when we feel ourselves, or our group, accused of misapprehension or error.*

The little word *my* is the most important one in all human affairs, and properly to reckon with it is the beginning of wisdom. It has the same force whether it is *my* dinner, *my* dog, and *my* house, or *my* faith, *my* country, and *my* God. We not only resent the imputation that our watch is wrong, or our car shabby, but that our conception of the canals of Mars, of the pronunciation of "Epictetus," of the medicinal value of salicine, or the date of Sargon I, are subject to revision.

Philosophers, scholars, and men of science exhibit a common sensitiveness in all decisions in which their *amour propre* is involved. Thousands of argumentative works have been written to vent a grudge. However stately their reasoning, it may be nothing but rationalizing, stimulated by the most commonplace of all motives. A history of philosophy and theology could be written in terms of grouches, wounded pride, and aversions, and it would be far more instructive than the usual treatments of these themes. Sometimes, under Providence, the lowly impulse of resentment leads to great achievements. Milton wrote his treatise on divorce as a result of his troubles with his seventeen-year-old wife, and when he was accused of being the leading spirit in a new sect, the Divorcers, he wrote his noble *Areopagitica* to prove his right to say what he thought fit, and incidentally to establish the advantage of a free press in the promotion of Truth.

All mankind, high and low, thinks in all the ways which have been described. The reverie goes on all the time not only in the mind of the mill hand and the Broadway flapper, but equally in weighty judges and godly bishops. It has gone on in all the philosophers, scientists, poets, and theologians that have ever lived. Aristotle's most abstruse speculations were doubtless tempered by highly irrelevant reflections. He is reported to have had very thin legs and small eyes, for which he doubtless had to find excuses, and he was wont to indulge in very conspicuous dress and rings and was accustomed to arrange his hair carefully. Diogenes the Cynic exhibited the impudence of a touchy soul. His tub was his distinction. Tennyson in beginning his *Maud* could not forget his chagrin over losing his patrimony years before as the result of an unhappy investment in the Patent Decorative Carving Company. These facts are not recalled here as a gratuitous disparagement of the truly great, but to insure a full realization of the tremendous competition which all really exacting thought has to face, even in the minds of the most highly endowed mortals.

And now the astonishing and perturbing suspicion emerges that perhaps almost all that has passed for social science, political economy, politics, and ethics in the past may be brushed aside by future generations as mainly rationalizing. John Dewey has already reached this conclusion in regard to philosophy. Veblen and other writers have revealed the various unperceived presuppositions of the traditional political economy, and now comes an Italian sociologist, Vilfredo Pareto, who, in his huge treatise on general sociology, devotes hundreds of pages to substantiating a similar thesis affecting all the social sciences. This conclusion may be ranked by students of a hundred years hence as one of the several great discoveries of our age. It is by no means fully worked out, and it is so opposed to nature that it will be very slowly accepted by the great mass of those who consider themselves thoughtful. As a historical student I am personally fully reconciled to this newer view. Indeed, it seems to me inevitable that just as the various sciences of nature were, before the opening of the seventeenth century, largely masses of rationalizations to suit the religious sentiments of the period, so the social sciences have continued even to our own day to be rationalizations of uncritically accepted beliefs and customs.

It will become apparent as we proceed that the fact that an idea is ancient and that it has been widely received is no argument in its favor, but should immediately suggest the necessity of carefully testing it as a probable instance of rationalization.

This brings us to another kind of thought which can fairly easily be distinguished from the three kinds described above. It has not the usual qualities of the reverie, for it does not hover about our personal complacencies and humiliations. It is not made up of the homely decisions forced upon us by everyday needs, when we review our little stock of existing information, consult our conventional preferences and obligations, and make a choice of action. It is not the defense of our own cherished beliefs and prejudices just because they are our own—mere plausible excuses for remaining of the same mind. On the contrary, it is that peculiar species of thought which leads us to *change* our mind.

It is this kind of thought that has raised man from his pristine, subsavage ignorance and squalor to the degree of knowledge and comfort which he now possesses. On his capacity to continue and greatly extend this kind of thinking depends his change of groping his way out of the plight in which the most highly civilized peoples of the world now find themselves. In the past this type of thinking has been called Reason. But so many misapprehensions have grown up around the word that some of us have become very suspicious of it. I suggest, therefore, that we substitute a recent name and speak of "creative thought" rather than of Reason. *For this kind of meditation begets knowledge, and knowledge is really creative inasmuch as it makes things look different from what they seemed before and may indeed work for their reconstruction.*

In certain moods some of us realize that we are observing things or making reflections with a seeming disregard of our personal preoccupations. We are not preening or defending ourselves; we are not faced by the necessity of any practical decision, nor are we apologizing for believing this or that. We are just wondering and looking and mayhap seeing what we never perceived before.

Curiosity is as clear and definite as any of our urges. We wonder what is in a sealed telegram or in a letter in which some one else is absorbed, or what is being said in the telephone booth or in low conversation. This inquisitiveness is vastly stimulated by jealousy, suspicion, or any hint that we ourselves are directly or indirectly involved. But there appears to be a fair amount of personal interest in other people's affairs even when they do not concern us except as a mystery to be unraveled or a tale to be told. The reports of a divorce suit will have "news value" for many weeks. They constitute a story like a novel or play or moving picture. This is not an example of pure curiosity, however, since we readily identify ourselves with others, and their joys and despairs then become our own.

We also take note of, or "observe," as Sherlock Holmes says, things which have nothing to do with our personal interests and make no personal appeal either direct or by way of sympathy. This is what Veblen so well calls "idle curiosity." And it is usually idle enough. Some of us when we face the line of people opposite us in a subway train impulsively consider them in detail and engage in rapid inferences and form theories in regard to them. On entering a room there are those who will perceive at a glance the degree of preciousness of the rugs, the character of the pictures, and the personality revealed by the books. But there are many, it would seem, who are so absorbed in their personal reverie or in some definite purpose that they have no bright-eyed energy for idle curiosity. The tendency to miscellaneous observation we come by honestly enough, for we note it in many of our animal relatives.

Veblen, however, uses the term "idle curiosity" somewhat ironically, as is his wont. It is idle only to those who fail to realize that it may be a very rare and indispensable thing from which almost all distinguished human achievement proceeds, since it may lead to systematic examination and seeking for things hitherto undiscovered. For research is but diligent search which enjoys the high flavor of primitive hunting. Occasionally and

fitfully idle curiosity thus leads to creative thought, which alters and broadens our own views and aspirations and may in turn, under highly favorable circumstances, affect the views and lives of others, even for generations to follow. An example or two will make this unique human process clear.

Galileo was a thoughtful youth and doubtless carried on a rich and varied reverie. He had artistic ability and might have turned out to be a musician or painter. When he had dwelt among the monks at Vallombrosa he had been tempted to lead the life of a religious. As a boy he busied himself with toy machines and he inherited a fondness for mathematics. All these facts are of record. We may safely assume also that, along with many other subjects of contemplation, the Pisan maidens found a vivid place in his thoughts.

One day when seventeen years old he wandered into the cathedral of his native town. In the midst of his reverie he looked up at the lamps hanging by long chains from the high ceiling of the church. Then something very difficult to explain occurred. He found himself no longer thinking of the building, worshipers, or the services; of his artistic or religious interests; of his reluctance to become a physician as his father wished. He forgot the question of a career and even the *graziosissime donne.* As he watched the swinging lamps he was suddenly wondering if mayhap their oscillations, whether long or short, did not occupy the same time. Then he tested this hypothesis by counting his pulse, for that was the only timepiece he had with him.

This observation, however remarkable in itself was not enough to produce a really creative thought. Others may have noticed the same thing and yet nothing came of it. Most of our observations have no assignable results. Galileo, may have seen that the warts on a peasant's face formed a perfect isosceles triangle, or he may have noticed with boyish glee that just as the officiating priest was uttering the solemn words, *ecce agnus Dei,* a fly lit on the end of his nose. To be really creative, ideas have to be worked up and then "put over," so that they become a part of man's social heritage. The highly accurate pendulum clock was one of the later results of Galileo's discovery. He himself was led to reconsider and successfully to refute the old notions of falling bodies. It remained for Newton to prove that the moon was falling, and presumably all the heavenly bodies. This quite upset all the consecrated views of the heavens as managed by angelic engineers. The universality of the laws of gravitation stimulated the attempt to seek other and equally important natural laws and cast grave doubts on the miracles in which mankind had hitherto believed. In short, those who dared to include in their thoughts the discoveries of Galileo and his successors found themselves in a new earth surrounded by new heavens.

On the 28th of October, 1831, three hundred and fifty years after Galileo had noticed the isochronous vibrations of the lamps, creative thought and its currency had so far increased that Faraday was wondering what would happen if he mounted a disk of copper between the poles of a horseshoe magnet. As the disk revolved an electric current was produced. This would doubtless have seemed the idlest kind of an experiment to the stanch business men of the time, who, it happened, were just then denouncing the child-labor bills in their anxiety to avail themselves to the full of the results of earlier idle curiosity. But should the dynamos and motors which have come into being as the outcome of Faraday's experiment be stopped this evening, the business man of to-day, agitated over labor troubles, might, as he trudged home past lines of "dead" cars, through dark streets to an unlighted house, engage in a little creative thought of his own and perceive that he and his laborers would have no modern factories and mines to quarrel about had it not been for the strange practical effects of the idle curiosity of scientists, inventors, and engineers.

The examples of creative intelligence given above belong to the realm of modern scientific achievement, which furnishes the most striking instances of the effects of scrupulous, objective thinking. But there are, of course, other great realms in which the recording

and embodiment of acute observation and insight have wrought themselves into the higher life of man. The great poets and dramatists and our modern story-tellers have found themselves engaged in productive reveries, noting and artistically presenting their discoveries for the delight and instruction of those who have the ability to appreciate them.

The process by which a fresh and original poem or drama comes into being is doubtless analogous to that which originates and elaborates so-called scientific discoveries; but there is clearly a temperamental difference. The genesis and advance of painting, sculpture, and music offer still other problems. We really as yet know shockingly little about these matters, and indeed very few people have the least curiosity about them. Nevertheless, creative intelligence in its various forms and activities is what makes man. Were it not for its slow, painful, and constantly discouraged operations through the ages man would be no more than a species of primate living on seeds, fruits, roots, and uncooked flesh, and wandering naked through the woods and over the plains like a chimpanzee.

The origin and progress and future promotion of civilization are ill understood and misconceived. These should be made the chief theme of education, but much hard work is necessary before we can reconstruct our ideas of man and his capacities and free ourselves from innumerable persistent misapprehensions. There have been obstructionists in all times, not merely the lethargic masses, but the moralists, the rationalizing theologians, and most of the philosophers, all busily if unconsciously engaged in ratifying existing ignorance and mistakes and discouraging creative thought. Naturally, those who reassure us seem worthy of honor and respect. Equally naturally those who puzzle us with disturbing criticisms and invite us to change our ways are objects of suspicion and readily discredited. Our personal discontent does not ordinarily extend to any critical questioning of the general situation in which we find ourselves. In every age the prevailing conditions of civilization have appeared quite natural and inevitable to those who grew up in them. The cow asks no questions as to how it happens to have a dry stall and a supply of hay. The kitten laps its warm milk from a china saucer, without knowing anything about porcelain; the dog nestles in the corner of a divan with no sense of obligation to the inventors of upholstery and the manufacturers of down pillows. So we humans accept our breakfasts, our trains and telephones and orchestras and movies, our national Constitution, our moral code and standards of manners, with the simplicity and innocence of a pet rabbit. We have absolutely inexhaustible capacities for appropriating what others do for us with no thought of a "thank you." We do not feel called upon to make any least contribution to the merry game ourselves. Indeed, we are usually quite unaware that a game is being played at all.

What are Facts?[1]

HAROLD A. LARRABEE

THE FIRST STAGE of the combined method of induction and deduction has two main aspects, either of which may be considered first: observation—"get the facts," or hypothesis—"but what facts?" The two phases cannot be separated; and we shall begin by emphasizing observation rather than hypothesis. To consult experience is plainly to get the facts. But what are facts? The answer seems easy: facts are . . . just facts. The word "fact," however, has come to have a good many meanings, all the way from the broad sense of a factually supported theory

[1] From *Reliable Knowledge.* Houghton Mifflin Company, Boston, 1945. Reprinted by the permission of the author.

("Evolution is a fact") to the narrow notion of a single event ("It is a fact that this pebble is in motion"). To avoid unnecessary controversies, it will be best to start with the ordinary meaning of fact.

What we usually think of as a fact is something known to us directly in experience. It is what is appealed to as the ground for some human assertion or judgment. It is the stuff of evidence; it is the foundation or primary datum upon which a claim to knowledge rests. When we use such expressions as: "To get down to the facts . . . ," "Now the fact of the matter is . . . ," we call attention to some lower or more fundamental stratum upon which our assertions rest. To talk about "true facts," as people often do, is redundant: facts just *are*. They cannot be false. To demand the facts is to signify our intention to find out what it is that we are obliged to take account of—that is, to move away from the sphere of the merely possible: guesses, conjectures, and fancies, toward actuality—"the world as it really is."

Now if we are to make this appeal for confirmation of our knowledge with any success whatever, it is apparent that there must be present in human experience, no matter how chaotic or variable it may be in other respects, *some* elements or factors that are relatively stable and orderly. These may be physical or mental or a combination of both. Rocks are facts, but so are the obsessions of insane people. Recent experiments have shown that a bull can be kept within a field by a fence consisting of a single electrically charged wire, provided he has been conditioned by one or more shocks from it. Such a fence is no less a fact, although it consists of the physical wire, its charge, *and* the mental state of the conditioned bull (inferred from his behavior), than an ordinary steel fence which is so strong that no bull whatever could escape from it. Whatever in experience is compelling, coercive, inescapable—whatever cannot be conjured into and out of our world at will—deserves the name of fact.

"Facts," as Smollett and many other writers have remarked, "are stubborn things"; or, as the poet Burns put it, "they downa be disputed." The brute facts, as they are sometimes called, are what, in a thorough inquiry at any given time, or especially over a period of time, we cannot seem to get rid of; they are more or less blunt indications of states of affairs to which we are ultimately obliged to adjust ourselves in order to get along in the world. They can, of course, be temporarily obscured or glossed over with fictions, romances, and all manner of pretenses by the tender-minded, or even in some instances completely ignored. Men have deliberately refrained from inquiry; they have been deceived by illusions; and they have deceived themselves times without number ever since there have been human beings on earth. There are some matters concerning which it does seem as if the old saying "*Mundus vult decipi*" ("The world wishes to be deceived") were still true. Witness the comment of President Barnard of Columbia, himself a scientist, in 1873: "Much as I love truth in the abstract I love my sense of immortality still more, and if the final outcome of all the boasted discoveries of modern science is to disclose to men that they are more evanescent than the shadow of the swallow's wing upon the lake . . . give me then, I pray, no more science. I will live on in my simple ignorance, as my fathers did before me; and when I shall at length be sent to my final reprose, let me . . . lie down to pleasant, even though they may be deceitful dreams."[2]

But the will to believe what is pleasing, whether or not it is contrary to fact, must always battle with the counter-will to find out what is so; and there is abundant evidence that, in the long run, even apparently "vital lies" display poor staying powers. The facts, as we say, have a way of catching up with their most determined ignorers. Men, in other words, are forced to inquire objectively into some matters if they wish to survive and to satisfy their dearest desires. It may, of course, literally take centuries to dispel a universal acceptance of the existence of witches, sea-serpents, and vampires as

[2] Quoted by Sidney Ratner, "Evolution and the Rise of the Scientific Spirit in America," *Philosophy of Science*, vol. III (1936), p. 115.

facts of physical Nature instead of as illusions, or facts of abnormal psychology. Certainly we should expect that many of our present opinions concerning matters of fact will look just as silly to the wiser men of a few centuries hence.

What we shall be looking for, then, in all our attempts to "get the facts" by observation in any field of inquiry, are the ultimately compelling elements or factors in the ever-flowing stream of human experience, which may form relatively stable bases for human knowledge-claims. Experience acquaints us with the world as our whole organism reacts to it; but understanding in its primary stage of observation of facts interprets our experience by finding form in it or giving form to it. The relatively constant elements in our experience may be due to the outside structure and functioning of the physical world or to the inside structure and functioning of human minds, or to an interaction of all those factors. It is not a matter of discovering absolute anchorages for knowledge which shall be eternally immovable, but rather of trimming down gradually the unmanageable areas of change or flux.

Facts are living, growing, changing affairs with cores of sufficient relative permanence to enable us to count on them in inquiry and to utilize them in confirming or rejecting our hypotheses. That means, as Dewey points out, that our search for reliable knowledge through what is broadly known as scientific method will usually begin and end with the process of analyzing out of the flux of experience its relatively coercive aspects for us as knowers, whatever and wherever, in the line of our interests, they may happen to be. We should not expect all facts to be of the same type, or all equally accessible, or all equally easy to establish as "factual" by a single standardized method. Some facts lend themselves to scrutiny by instruments; some can be stated in exact quantities and precise measurements; some are capable of being expressed in words and sentences; while others, no less coercive and inescapable, are almot impossible to put into language of any sort. Some facts are also more plastic than others, at least in the sense that we are sometimes able to escape their coercion by changing our interest or dropping our inquiry. Pragmatists in philosophy emphasize this capacity of ours to determine, to some extent, what some of the facts we experience shall be *for us;* while Realists are inclined to stress the structural elements to which our knowing must inevitably conform.

Private and Public Facts

If facts are the coercive aspects of experience which we are able to "carve out" by analysis—that is, by relative isolation in a changing background or context, how shall we undertake the task of observing them? What method shall we use in dealing with the different kinds of experience for different purposes, always remembering that it is seldom the isolated fact in which we are ultimately interested, but rather its rôle in confirming or rejecting our tentative generalization or hypothesis?

Introspection

In our preliminary survey of man the knower as seen from the inside, we discovered the immense potential wealth and variety of the contents of any human consciousness when viewed as a "private world," without reference to anything outside itself. Minds that are both sane and insane entertain, as we know, all manner of fleeting sensations, dreams, memories, feelings, speculations, intuitions, and so on. The method by which the facts of one's private mental life are observed is called introspection. Fortunately its possibilities have been thoroughly explored by pioneer psychologists, so that its limitations are now generally recognized. Indeed, almost anyone can grasp the reasons for the essential awkwardness of subjective observation. For if I attempt to watch my own fugitive mental processes with a view to analyzing them, I find that I must, as it were, stand aside sufficiently to avoid obstructing and distorting them by "self-consciousness." To do this I must let them run their natural course, and then pause and view them retrospectively, i.e. in memory. Since any mental state lingers on vividly in memory

for only a few seconds at most, it is next to impossible for me to make any accurate observations of inner processes that extend over longer periods. Introspection, therefore, while it can deal with simple sensations such as after-images and the like, and can reveal in our minds the presence of a great many kinds of complex mental operations, is unable to cope with the latter with any precision.

It is possible, however, for a person to set up his own private tests of what he regards as coercive in his own introspected experience, and to insist against all challenges by others that such-and-such is a fact *as far as he is concerned.* Mystical revelations may be held to be authoritative by the individual to whom they come, in spite of all the arguments of the scoffers. Carried to an extreme, this may cut the person off from his fellows as insane; but milder cases of alleged private knowledge are extremely important in the fields of art, religion, and even in politics. In my private world, I may assert that I am having a sensation of yellow, or a feeling of warmth, or a vision of eternal bliss, or a direct assurance that I am being called upon to save my country. Are these subjective or objective? Are they facts indicative of states of affairs in physical Nature, or simply facts about my states of mind?

Now it is hard to see how anyone else can know better than I do what I am in fact experiencing. Yet the capacity to experience does not necessarily carry with it the capacity to express or to analyze one's experiences. We know that men are notorious self-deceivers, to say nothing of those who deliberately misrepresent the private feelings of which they are well aware, e.g., the malingerer who, to escape military service, assures the examining physician that he is suffering from sharp but invisible aches and pains. Even the most honest patients are seldom able to tell their doctors exactly how they feel; while to diagnose the ailment of a man who is suffering from delusions is extremely difficult. Legal cases involving attempts to prove in court that a certain amount of pain or indignity was suffered, especially pain of the sort called "mental anguish," present great psychological and logical obstacles. The "secrets of the heart" make notoriously slippery evidence; and a callous jury may place a value of only six cents upon the "established fact" of a breach of promise to marry.

Thus it would seem that the private facts which pass an individual's own tests and are accepted by him as reliable knowledge are beyond the power of public examination either to credit or to discredit, except by some inference from conditions that are open to public observation. When another person's finger is cut by a knife, we suppose that his pain is like one that we have experienced in a similar situation, although we cannot verify our inference directly. Yet, we do not, for that reason, abandon our bungling attempts to guess the contents of other minds on the basis of our own experiences. We have a large vocabulary for describing these correlations between inner states and outer actions: "You look as if you were tired, angry, elated, despondent . . ." But the "as if" is important, since you may be feigning fatigue or anger or elation. All our correlating (of your mental state with my remembered mental state via my observation of your outward behavior) is subject to a great many kinds of error.

What makes this matter of private knowledge of such crucial importance is the fact that within its scope lie some portions, at least, of all of our most profound experiences of value, and the seat of all of our ultimate bases of appraisal. The things by which and for which men live and die have final residues which are private because they lie beyond the possibility of expression in words or deeds. Lovers make momentous decisions on the basis of wordless intuitive estimates of each other that neither of them can coherently express. Many a religious mystic and romantic poet claims to "know what he knows" by intuition or direct assurance from within. If he is called upon to validate his personal feeling of certainty, he is likely to reply that the experience upon which it is based is wholly "ineffable"—that is, incommunicable, and therefore unimpeachable by anyone else. The fanatical nationalisms of Europe talk in terms of similar ultimately ir-

to make coincidence observations as one of the tests of the normal observer.

Public Facts as Our Most Reliable Knowledge

We seem at last to have reached the goal of the most reliable knowledge that is accessible to man for purposes of action, mastery, and control of his world. It is achieved whenever any individual succeeds in winning virtually unanimous social acceptance of something in his experience as a scientific fact—that is, as an item that can be tested publicly by means of approximate coincidence observations carried out by normal observers according to conventions which have proved serviceable in similar instances. It consists, when analyzed, of something sensed, concerning which there is a substantial agreement among independent inquirers who have not been coerced by violence or threats or indeed by anything except the "hard data" of the experience itself. It ends the particular inquiry that aimed at discovering what was inescapably there; it clinches that argument, and provides the basis for a knowledge-claim.

But it should be clear that this does not mean in any given instance that we have arrived at knowledge which is absolute or beyond doubt. We cannot even say figuratively that we have reached bedrock, and can now build up structures that will rest upon absolutely reliable knowledge. All normal observers may bring in approximately the same sense-reports about a given fact, and yet there is always the possibility that we are the victims of a gigantic "conspiracy to deceive." At the same time, we are justified in saying that, in our world, there is no human knowledge that is *more* reliable for purposes of action than that which approximate coincidence observations by many witnesses yield. To doubt *all* instances of that kind of knowledge is to refuse to credit not only the evidence of our own senses, but that of all other human observers whom we regard as normal—that is, as sharing roughly our own interests, demands, and sense-equipment. For this basic knowledge of socially tested public facts, like a bareback circus rider precariously poised on two galloping horses, rests upon elements of relative permanence in two changing realms: (1) in living human knowers, and (2) in the evolving environments with which they find that they must deal.

What happens when all such observers are able approximately to agree upon a fact is that a number of these stable elements appear and correspond. On the side of the observers, their interests, demands, past experiences, and sense-organs are sufficiently similar, while on the side of what is observed, the material is sufficiently lasting, to enable them all to direct their attention upon and to single out of its context a specific item of experience concerning which all of them are willing without extraneous influence to make about the same statements with regard to its relation to the rest of experience. If either set of factors, subjective or objective, fluctuates too rapidly, we shall have no commonly accepted facts in that field. When we are able to agree on a fact, however, our agreement usually extends beyond our perception of it to its status with respect to other facts. Even the simple acceptance of the whiteness of a piece of chalk as a perceived fact normally includes an agreement that, in all sorts of perspectives and amounts of light, the object will behave with a certain consistency upon which we can rely. In knowing facts for purposes of action, then, we are not content to register them in isolation. We are not interested merely in discriminating sounds and shapes and colors for their own sakes, as in intuitive aesthetic contemplation. What we want to grasp is their meaning or import through their structures and relations to other facts and meanings—the ways in which they can or cannot reliably be expected to fit into all the sorts of future situations and contexts in which we are or may become interested.

Habits of Thought[1]

ROBERT H. THOULESS

THE EASE and the pleasure with which our minds slip into habitual lines of thought is one of the characters of human thinking used by orators who wish to exploit our power of crooked thinking. Those of us who speak in public know how easy it is to find some phrase which just coincides with the thought habits of our audience. We know when we have got such a phrase by the applause which follows. A skillful orator begins his speech by many such phrases. He refers to "the glorious institutions of our great country" (applause), to "the sound common sense of the American people" (more applause), and to their "unconquerable spirit" (still more applause). By this time he has produced in his audience an attitude of willingness to accept what he says. He can now go on to say things which earlier their thought habits would have led them to reject. He can say, for example, that we have nothing left of Liberty except the Statue, or that the glory of our nation is being dimmed by our lawlessness or bureaucracy. And the audience go on accepting what he says. The resistance which would certainly have been shown against these statements if he started with them has been broken down by this simple device of beginning with easily accepted statements.

The same device may be used by a quack psychological healer. He tells his audience that the mind has greater power over the body, which is true. He goes on to illustrate this power by stories which may also be true. He may tell, for example, of people who seemed to be dumb or paralyzed who become suddenly well under the influence of some emotional crisis. He may even illustrate this power by some simple experiments. When his audience are in a receptive state of mind he goes on to tell them the falsehoods which are the real object of the whole discourse. He tells them that he has a method by which all their illnesses, physical or mental, may be cured, which will be communicated in small classes. If the trick has succeeded and members of his audience have gone on believing the speaker because the first things he said seemed to them to be obviously true, they will be $25 poorer and probably no better in health.

So if we hear a succession of statements, A, B, C, and D, which our minds accept readily and with enthusiasm, we must still be on guard against accepting a fifth statement E. A, B, C, and D may only have been ground bait intended to produce the habit of swallowing everything the speaker says. E may conceal the hook.

Our caution, however, should extend even further than this. The ease and readiness with which we accept A, B, C, and D is no guarantee that even they are true. The laws of habit formation hold in the mind as they do in the body. Thoughts we have thought often pass through our minds with increasing ease until they appear obvious. Emotions that have been called up in connection with particular thoughts are aroused more easily by those thoughts until the connection between emotion and thought appears to us to be a necessary one. So an appreciation of psychology should lead us to reject the old statement of the philosophers that what we cannot doubt must be true. What we cannot doubt may simply be based on a very deeply rooted thought habit and may well be false.

Our ancestors, for example, found themselves unable to doubt that the earth stood still while the sun moved round it every day. We ourselves have found it equally difficult

[1] From *How to Think Straight*, copyright, 1932, 1939, by Simon and Schuster, Inc. Reprinted by permission of Simon and Schuster.

to doubt that there is an exact meaning in the statement that two events in different places occurred at the same time. Yet both of these convictions were wrong, and were simply based on deeply grounded habits of thought. One of these sets of thought habits was broken by Copernicus when he showed that the facts were better explained by supposing that instead of the sun moving round the earth, the earth rotated on its axis. The other set was broken by Einstein when he revolutionized physics by bringing forward his special theory of relativity.

We all have a newspaper acquaintance with Einstein's theory of relativity, so I can safely take from it another example of the power of thought habits to hinder the mind from reaching new truth. In his general theory of relativity, Einstein made a statement offensive to our "common sense" (that is, to our habits of thought) by saying that space in the neighborhood of matter was non-Euclidean. This means that in such space the angles of a triangle would not add up to two right angles.

Now, the proposition that the three angles of every triangle together make up two right angles is a proposition in Euclid, but Euclid himself recognized that the proposition was a peculiar one. It was essential to nearly everything he proved afterward, but itself rested on another proposition which could not be proved. So he treated this as an axiom, although it was not self-evident. Other geometers since Euclid's time have tried to prove this proposition, but no sound proof has been found, and it was finally decided that a sound proof was impossible. So other mathematicians worked out what they called "non-Euclidean geometries," based on the assumption that the sum of the angles of triangles was less or was more than two right angles. If we make either of these assumptions, we can base a whole geometry on it. Such a geometry may not be true of the space we know, but it will be self-consistent. It will be true of a possible space if not of the space in which we live.

Now it might be asked (and frequently was asked): "What is the good of that kind of speculation? If we know that the angles of triangles do add up to two right angles what is the good of assuming they don't?" The answer was: "The question is not whether they *do* add up to two right angles but whether they *must*. If they must, then the conclusions of Euclid would hold for all possible universes, but if it only happens that they do, and our conviction that they must has no better foundation than our habits of thought, then it is quite worth while to find out what are the consequences of the opposite assumption." The important practical result of these speculations was that they made possible the acceptance of Einstein's theory (which was true and which had verifiable practical consequences). If people had remained convinced that every triangle must obey Euclid's law they could not have reached the general theory of relativity. Insight into new truth was made possible by the destruction of an old thought habit.

Few of the thought habits we may be asked to question will ever appear so obvious to us as the conviction that Euclidean geometry must be true. The apparent obviousness of a conviction is no guarantee of its truth. Once we are convinced of that, we should be prepared boldly to experiment in questioning the apparent truths based on our habits of thought.

The physical theory of relativity is a very useful example of the danger of thought habits closing our minds to new truth, for it is in the fact of relativity in its wider sense that this danger is greatest. We all of us tend to judge problems from one particular standpoint, the one determined by our own conditions of life. We are inhabitants of our own particular country, with a particular religious and moral tradition, and we are inclined to forget how many of our judgments are simply relative to this single standpoint and are not absolute.

It is only when we begin to study comparative religions and comparative codes of morals that we begin to see to what extent our own opinions about right and wrong and about other matters are not scientific truths (for these are true for all persons under all conditions), but are judgments whose truth is entirely relative to the particular

point of view from which they were made. By accustoming our minds to comparative studies and by forming the habit of trying to look at problems in a manner which discounts our own point of view, we can to some extent escape from this relativity. Such statements, for example, as that "the heathen are wicked folk without law or religion," that "Americans are dollar chasers," or that "Europeans are degenerate," will be seen to be statements made entirely from a limited point of view and with no objective validity at all.

Particularly in international affairs, we must remember this relativity of our point of view. Most of us would be able to judge a dispute between Rumania and Jugoslavia more objectively and scientifically than we would judge a dispute between the United States and Japan—always provided we had access to the facts. But until we can see and feel the other side's case as well as our own, our judgments cannot possibly even approach scientific validity. Most people seem not to realize this, and after the last war the Allied Powers felt they were capable not merely of acting as prosecuting attorneys against their late enemies, but as their judges. Now a judge has to make objective, universally true judgments, and this could plainly only be done by someone as detached from that dispute as Americans should be from one between Rumania and Jugoslavia.

An instructive experiment is to take a statement expressing our own point of view on a subject on which we have well-developed thought habits; then, making no other alteration, to change the particular matters with which it deals to others which are similar but about which we have different thought habits. Now we can consider the statement with its new subject matter and see whether our attitude toward it remains the same. So we judge how far our attitude toward the original statement possessed objective or scientific validity, and how far it was acceptable to us merely because it fitted in with our thought habits.

During a war, for example, we read with strong approval of its author's honesty and courage the writings of an enemy national living in a neutral country expressing opinions unfavorable to his own country. Perhaps our judgment is right, but, in order to be sure that we are not being unduly influenced by our own thought habits, let us consider what would be (or what, in fact, has been) our attitude toward members of our own country expressing in similar conditions opinions unfavorable to ourselves. Or we applaud our own Government's firm action in holding responsible for the death of a murdered American official an alien Government through whose neglect of precautions for his safety the murder took place. Let us consider what our attitude would be toward similar demands made by another country in similar circumstances (let us say, by the old Austrian empire against Serbia when an Austrian archduke is killed by a Serbian bomb). There is no limit to the field for such intellectual experimentation—Communist executions of Trotzkyites, Nazi executions of Communists, Franco's executions of Republicans, British executions of Indian Nationalists, the execution of Sacco and Vanzetti by the Commonwealth of Massachusetts.

The result of the experiment will not, of course, always be to lead us to revise our opinions. Very often, however, it will. Always it should help us to rid our judgments of that element in them which is due to our thought habits and which is relative only to our own limited point of view, and to replace such imperfect opinions by judgments, which more nearly approach the ideal of impartiality.

We may try this with the following passage from a speech which I found by chance at the back of a press cutting. It is a stirring passage, so it is a suitable subject for an experiment to determine how much of its stir (if any) is independent of the thought and emotional habits it arouses:

> *Unless we play our part as an Imperial race there is nothing but disaster in front of the human race. (Applause.) With the effervescence that is going on in the world today, the only force to my mind which can maintain the ideal of ordered freedom*

is the 70,000,000 of the true American nation and the 70,000,000 there or thereabouts, of the white race of the British Empire. These 140,000,000 people, speaking the English tongue, reading the English Bible and the English Shakespeare, with the ideas which were embodied originally in Magna Charta—these people with a common background of civilization have to share the responsibility for maintaining civilization among the 1800 or 1900 million people on the globe.

Now we are undoubtedly moved by this speech, but before we take our feelings at their face value we must remember that it is rather easy for us (as for other people) to form habits of thinking of ourselves as the chosen civilizers of all the rest of the world, and to form habits of responding with exalted emotions to speeches expressing this destiny. So to test the real worth of this passage we will try it again in a setting in which we have formed different habits.

At a review in 1914 of the German army at Potsdam, the Kaiser said:

Unless we play our part as an Imperial race there is nothing but disaster in front of the human race. With the effervescence that is going on in the world today, the only force to my mind which can maintain the ideal of ordered freedom is the 65,000,000, there or thereabouts, of the German Empire, and the 11,000,000 German-speaking members of the Austrian Empire. These 76,000,000 people, speaking the German tongue, reading the German Bible and the German Goethe—these people with a common background of Kultur *have to share the responsibility for maintaining civilization among the 1800 or 1900 million people on the globe.*

That, you will notice, is the same passage as before, put in a different setting. The setting has been changed to one in which we have different thought habits. Our reaction too is different. Instead of a dignified statement of imperial responsibility, it sounds like an expression of national megalomania. How would the original passage have sounded to an impartial visitor from Mars?

Even the things about which we feel most certain (and perhaps rightly feel certain) have been questioned, and it may not be a bad thing for us to hear these questionings so that our deepest beliefs may be based on reasoned and critical conviction and not merely on thought habits. Christian believers may read the attacks of Nietzsche, and good constitutionalists may read the writings of Marx, Kropotkin, and Lenin. They will experience the uncomfortable sensation of an attempt to shake long-founded and deeply based thought habits. Perhaps those who are old are right to protect themselves from such an uncomfortable process, but those who are young and have the necessary flexibility of mind could profit by it. Their opinions may not be reversed, but they will no longer be merely based on thought habits which have never been questioned. They will be something stronger and better, the reasonable convictions of free minds. Those whose attitude toward what they regard as "subversive" literature is simply that it must be suppressed (by force if necessary) show little faith in the truth of the beliefs they are trying to protect.

We have in ordinary speech a word for expressing the feelings that are aroused in us when something presented to us breaks across cherished mental habits. We say we are "shocked"; and we resent being shocked. We believe in a censorship of plays, books, films, and wireless talks which will save us from any danger of being shocked. People who seem deliberately to write in order to shock us, writers such as Ibsen, Bernard Shaw, and Upton Sinclair, we are careful not to read. But why should we be so tender to our mental habits? Such writers do us a great service (the service done to the science of physics by the writers on non-Euclidean geometry) of forcing us to question our old beliefs so that we may freely and intelligently choose what is sound in them and reject the rest, and thus have our minds prepared for seeing new and unfamiliar truths. Most people do not need protection from being shocked. They need to

be shocked a great deal more than they are.

There are a large number of problems it is impossible effectively to put before most people because they have so many thought habits in connection with them that they resent any questioning of them. "What changes (if any) ought we to make in the institution of marriage, or in the institution of private property?" "Ought we to control the size of our families?" "What ought to be our attitude toward those individuals who love members of their own and not of the opposite sex?" or "Is the New Deal a failure?" These are all questions which merely to raise in public is to set in action thought habits connected with such strong emotions that reasonable discussion and reasonable decision are quite impossible. Yet there should be no question reasonable people dare not ask, no thought too shocking to think if we are to regulate our affairs wisely.

Nor does the evil of keeping our minds closed to some possible lines of thought end with the social misfortune that there are some questions we can never decide wisely because we cannot think about them reasonably. We are learning more and more to recognize that people lead dwarfed and impoverished mental lives because there are parts of their own characters they dare not face, particularly the forces which belong to the life of love. We have comfortable little habits of thought which conceal from us the terrific forces of our instinctive natures, and these are treated by us as something alien and to be fought against when they ought to be recognized as our own and brought under our wise control. We smack our children when they ask us questions which we regard as improper or put them off with lies about storks and gooseberry bushes in order to preserve their innocence. Then we wonder why they are psychoneurotic and morbidly afraid at the stage of becoming grown up. We have ourselves destroyed their innocence by implanting habits of fear and evasion on a subject about which thought should be as free and unafraid as about any other. The reading of the works of Professor Freud has shocked many people out of such dangerous fears into a condition of mental liberation and mental health.

We must not suppose, of course, that we have escaped the danger of being imprisoned by our thought habits merely by giving up our old habits of thought which are much the same as everybody else's and starting new ones of our own. The unorthodox and unconventional are in just as much danger of finding their minds closed to new truth by the persistence of their old habits of thought as are the orthodox and the conventional. They too have just the same need of being occasionally shaken out of their thought habits so that they may retain flexibility of mind. We have taken Bernard Shaw as an example of a writer who questions orthodox and conventional thought habits. Similarly we might take G. K. Chesterton as a writer whose function it is to question the thought habits of those who are unorthodox and unconventional.

The worst danger of all which threatens those who have rejected commonly accepted habits of thought is that they should form the habit of disbelieving things merely because other people believe them. This is what we mean by "crankiness." A "crank" is not a person free from thought habits, but one who has formed a thought habit which is at least as likely to hide the truth from him as is the opposite habit of accepting what is commonly believed.

It should be one of the aims of education to produce a quality that we may describe as "flexibility of mind," an ability to try out new ways of thinking and to make unfamiliar assumptions. This means that we must be able at will to put on one side our old thought habits. The mathematicians had thought habits based on the fact that the angles of all the triangles they had ever met had added up to two right angles, but they were able to ask themselves: "Suppose they hadn't, what would follow?" So we must keep for ourselves the power of intellectual experimentation. We see everywhere men carrying out work for wages or salary. We must ask ourselves: "Is this a necessary law, or can we imagine a form of society in which

the monetary motive would not be the dominant one and yet in which the world's work would be done?" We are accustomed to a particular form of the marriage relationship. We must ask: "Is this the only possible one? Would other kinds of relationship be better or worse in securing the ends for which marriage exists?"

Clearly it is neither desirable nor possible to get rid of all thought habits. Such an aim would be absurd. The formation of thought habits is as inevitable as the formation of bodily habits and just as useful. But we must be ready continually to revise them. Thought habits once serviceable may prevent us from attaining to new truths. We differ from the lower animals in the possession of a rich and complicated brain. This is an instrument to give flexibility and adaptability to our behavior. If we allow ourselves merely to become creatures of habit, we become automatic and mechanical like the lower animals. We are allowing our brain to degenerate into mere mechanisms when they were meant for plasticity and change. It is like using a razor for digging the ground.

Astronomers tell us that the human race has many million years more to spend on this globe if it does not destroy itself by wars. It is only by unceasing flexibility of mind that we can continue to adapt ourselves to our ever-changing environment. Inflexibility of mind will lead to the extermination of the human race.

"Government" vs "Business"[1]

STUART CHASE

GOVERNMENT is destroying the confidence of Business. . . .

If Government would leave Business alone, the depression would soon be over. . . .

Business is sabotaging recovery. . . .

If Business were not so blind, it would realize that Government is chiefly engaged in bolstering up Capitalism. . . .

Government and Business must co-operate if this nation is to march forward. . . .

To show that these paraphrases are not unfair, here are two run-of-the-mine samples clipped from the New York *Times* of April 28th, 1938:

Alfred P. Sloan: "The exploitation of industry by regimentation means the death knell of individual enterprise."

Henry Ford: "If finance would get out of government, and government would get out of business, everything would go again."

Mr. Sloan identifies "industry" with "business," and "regimentation" with "government." Mr. Ford complicates the situation by introducing something called "finance" which is in government's hair and should get out. Most commentators do not make this nice distinction; they lump "finance" with "business," i.e., bankers are assumed to be businessmen.

Similar statements can be found by the square yard in any newspaper, in almost any magazine, radio address, column by General (Iron Pants) Johnson, speech at the annual banquet of the American Widget Manufacturers, baccalaureate sermon . . . Government and Business glowering at each other over the barbed wire and shell holes of no man's land. Such pronouncements are gravely received by millions of Americans who are certified by life insurance examiners as sane. It is widely held that something of moment is being said, and that the cause of human understanding and knowledge is advanced.

Wherever you drive in the country, you are likely to see a billboard advertising a business magazine. The sign shows a gigantic baby about to burst into tears, with the caption: "What hurts Business hurts me."

[1] From *Common Sense*. Reprinted by kind permission of the author.

You are not to conclude that Business is a crying baby, but that Business provides milk and shoes for children, especially for your child. But what is Business and what are the things that hurt it? The sign does not say, nor do the columnists and orators. They could not tell you. It would be a tough job of analysis for anyone to tell you. This article will indicate some ways of going about that job.

II

Initially we must recognize that there are two prevalent motives in the minds of those who use the terms "government" and "business." Some of the talkers wish to create a prejudice for or against a definite measure (say a tax bill), for or against a definite person or group of persons (say Mr. Roosevelt or Mr. Willkie and his friends). They are using loose talk consciously and deliberately to confuse the issue, and will of course continue to do so. They are not interested in saying what they mean, and would be greatly alarmed if attempts were made to clarify their verbiage.

Other talkers, and I think they are in the majority, really want more knowledge about political and industrial affairs. They want to know clearly what is going on so that suitable inferences may be drawn and suitable action taken. They are like persons in a theater when a fire breaks out—where are the exits, what shall we do?—except that political and industrial fires, while just as dangerous, do not burn so fast. To them, semantics offers certain fire-fighting tools—to continue the analogy. Semantics does not merely encourage the habit of rejecting windy abstractions, it also provides a series of tests by which you can be sure that you are thinking straight when you tackle a mental problem with the serious intention of solving it.

These tests include:

1. The determination of the *referent,* or the concrete event in time and space, behind the abstract terms. When you say "monopoly is terrible," I want to know what corporations or other enterprises you are referring to.

2. The determination of the level of abstraction. How far away from the concrete event does the term lie? "Dog" is an abstract term close to the referent Rover. "The animal kingdom," or "sentient life," is far from the referent.

3. The pinning down of terms by time, place and kind. When you say "democracy is the only desirable form of government," I want to know: What kind of democracy? Where was it functioning? When was it functioning?

4. The use of the *operational test* to make terms clear in many cases. Scientists promote knowledge not by arguing, but by performing operations. Their concepts are usually based not on words, but on things they do silently with their hands and eyes in the laboratory. You say, "I can prove by logic that Achilles can never overtake the tortoise." You produce the logic and it is verbally faultless. But the scientist is not satisfied. He wants an operation, an experiment, performed. When it is performed, of course even an 80-year-old Achilles can beat the stuffing out of the speediest tortoise.

There are other tests in the semantic discipline, but this gives us a start.

People talk as though they saw an iron-booted entity "government" jumping on a frail, defenseless "business," or, *per contra,* a gross, recalcitrant "business" hurling a shower of monkey wrenches at a hard-working conscientious "government." In the world that we actually see with our eyes, or touch with our hands, there is no entity "government" and no "business." A man with a camera could not take a picture of either. He can take a picture of Dr. Bennett of the Soil Conservation Service, or a picture of Mr. Alfred P. Sloan. He can take a picture of Grand Coulee Dam—indeed I have a copy—where thousands of men working for a "business" contractor are building the biggest "government" structure in history, bossed by "government" engineers. He can take a picture of a fleet of "business" trucks running on US 1, a "government" road, or a picture of a little "business" man made happy by an RFC "government" loan.

A brief grounding in semantics makes it clear that most of the talk, emotion, fury,

this pounding of tables, these apoplexies in club armchairs, these editorials, upheavals of columnists, banquet orators, soap-box fireworks, are without meaning. The uproar is not about events in space and time, but about events in Cloudcuckooland. No fiery combatant knows what "government" or "business" means to his equally fiery opponent. He could not make an intelligent appraisal of what these terms mean to himself—not, if you please, because he does not stop to think, but because the words themselves are so abstract that they defy comprehensive appraisal by even the most careful appraiser. That is the kind of loose, general words they happen to be.

It follows that specific action taken by any combatant must be loose, random and confused. It will be on a par with action taken by Congo villagers when they beat drums to exorcise demons in the forest. The demons seem real to the villagers. "Government" and "business" seem real to most Americans.

Before citizen A and citizen B can intelligently communicate to one another about "government," it is necessary that they both go down the verbal ladder to events in the real world which both can see, and agree upon. At this lower level, citizen A can point to his income tax blank, and say to citizen B: "By 'government' I mean this. Take it, look at it, add it up. Isn't it the damndest thing?" But citizen B may say: "I pay no income tax. I'm on the Federal Arts Project. It saved my life. Look at these sketches for my new high-school mural. By 'government,' I mean *this*!" Income tax blanks and high-school murals, and millions of other tangible objects, acts, events, constitute the reality behind the term "government." Ditto for "business." How are you going to get A and B to agree in this situation? You cannot get them to agree. So they shout. But observe: if they stop shouting about "government," it may be possible for B to agree with A that his income tax is a complicated monstrosity; and for A to agree with B that his high-school mural sketch is admirable.

If two or more persons are going to understand one another and make sense in an abstract discussion, they must find a common object or event to which their words refer. Otherwise their discussions will be meaningless because (1) they have different referents for their words, and so are talking about different events, or (2) they have no referents at all. For such a term as "the sublime" there are no referents at all. Without a common referent A and B can make noises at one another, but they cannot communicate. It is as though one talked in Chinese and the other in Eskimo. Each can let the other know that he is very much stirred up, but not what he is stirred up about.

The student of semantics cannot get excited about all the acts of "government" because he does not know, and never can know, what all the acts are. Ditto for "business." He can get excited about Mr. Roosevelt, or Mr. Hopkins, about the acts of certain government officials, or about the behavior of Jim Hill or of Richard Whitney. But is the behavior of Richard Whitney to be taken as the mode for the behavior of "business"? I ask any corporation official if this is justifiable. Yet that same official may be growling to Mrs. Official over the *Times* and coffee cups tomorrow morning: "Look at that fellow Earle in Pennsylvania. That's government for you. That's why we can't make any progress in this country."

III

Words are not things. You cannot sleep on the word "bed," or eat the word "roast beef." The thing comes before the word and is recognized by the senses on the nonverbal level. A dog knows what "roast beef" is right enough, but he makes no conversation about it. Man alone of the animals invents labels for things in his environment and makes conversations about them. If A and B discuss a side of beef on the table in front of them, they both see the referent; they can touch it, taste it, smell it. Here communication difficulty is at a minimum. Similarly, scientists talk clearly to one another—sometimes aided by a special language called mathematics—because they constantly check their talk with physical experiments. They perform operations and find common referents. They must, if they are to continue

to be scientists. When they turn their backs on the laboratory and begin to argue, they resemble philosophers. Most philosophers, incidentally, do not like semantics. It is beneath their attention. It certainly is—far down the verbal ladder.

"Well," cries one enthusiastic convert to semantics, "let's get rid of abstract terms and stick to Rover—the actual dog out on the lawn there." We cannot get rid of abstractions; we require them constantly. This article I am writing is full of them. No. Relief is available not by striking abstractions from the language, *but by using them accurately;* by realizing which level of the verbal ladder we are on; by going down the ladder at frequent intervals to find the real events at the bottom. We should use abstractions cautiously and the last thing we should do is to get excited about them. To become emotional about a high order abstraction is pretty good evidence that we have mistaken a word for a thing, personified the label, and so delivered ourselves over, bag and baggage, to word magic.

Rover is never as goofy as this. He does not get excited about "private property" as a sacred principle. He gets excited when somebody steals his bone. It is sane to get excited about stolen bones, or stolen bonds. It is not sane to get excited about verbal machinery. The structure of language as it has developed down the ages, whether English, French or Hottentot, makes us tend to believe in things which are not there. Adjustment to the environment is a difficult business, as any dog or robin or bee knows. Men have made that adjustment far more difficult by peopling the environment with ghosts and demons derived from bad language.

Consider savages in New Guinea. In addition to floods, storms, insects, wild beasts, pestilences, the distraught native must contend with evil spirits in trees, caves, clouds and soul boxes. This doubles the job. We are just beginning to realize from the semantic studies of Ogden, Richards, Korzybski and others, that similar conditions obtain among civilized peoples today. We must deal not only with droughts, dust storms, floods, erosion, mortgages, men out of work, syphilis, slums, busted banks, wars, but with demons lurking behind such terms as "red," "Wall Street," "fascism," "democracy," "plutocracy," "collective security," "isolation," "the profit system," "dictatorship," "government," "business," "regimentation," "the bosses," and hundreds more. Foggy language about "dictatorship" killed the reorganization bill in Congress recently. (Part of it was, of course, intended deliberately to be foggy.) Foggy language about "spending" and "balanced budgets" may cut the national income to 50 billions or less, and give us more years like 1932. We work so much harder than we would need to work if we could understand what we are talking about.

Opium is a beneficial drug in certain limited fields of medical practice. Indiscriminately used, it is a curse. Similarly, the abstract terms "government" and "business" are useful in limited contexts, and breeders of confusion in others. If one says, "Governments all over the world in 1938 are spending more for armaments," the statement is clear, and can be checked by inspection of government budgets, nation by nation. But if one says, "The sole purpose of government is tyranny and oppression," clear use gives way to a ghost hunt.

IV

Where are the referents behind the word "government"? Great God, where are they not? Possibly five million individuals in America today are acting as representatives of the community in one capacity or another. There are thousands of laws on statute books, three hundred million acres of land, hundreds of great ships, schoolhouses, courthouses, dams, highways, mines. These individuals, buildings, printed laws, pieces of land, are referents for "government," in one context or another. Here is a typical abstraction ladder:

1. My neighbor, Roger Holmes, dog catcher for the town
2. Dog catchers as a class
3. Local police officers
4. Town governments
5. County governments

6. State governments
7. Federal governments
8. The concept of government

That is a long way from Roger Holmes. Furthermore, I have heard Roger, a good Republican, violently attack the encroachment of "government" on "personal liberty." Is he attacking himself? Does he know what he is attacking? Or is he just making a loud noise about a pair of spooks?

It is highly probable that Mr. Holmes is not objecting so much to "government" as he is to Mr. Roosevelt. Why doesn't he say so? To identify Mr. Roosevelt with "government" is to leave out some five million other individuals as referents for the term. No one of them is so important as Mr. Roosevelt today, but they do a tremendous number of important jobs, whoever happens to be President. Persons on government payrolls furnish us with pure water supplies, fire protection, schools for our children, concrete highways. They protect us from contagious diseases. Does this undermine our personal liberty? Do these acts make "government" an interloper and a menace? If we fired every government official who is performing some economic activity today, we should soon be in a fine jam. Consider the state of the roads alone, without traffic controls of any kind. Our hospitals would be filled to the roof—except that many of them, being government institutions, would have shut up shop. Quarrel with Mr. Roosevelt if you wish, for that is your traditional privilege as a sovereign voter, but do not talk nonsense about throwing out "government" because you would like to throw out Mr. Roosevelt.

Congress, says Mr. A, is all right, for it licked the President in the reorganization bill. Part of Congress would be more accurate, for the bill was defeated by eight votes. But Congressmen are important referents for that "government" which so tyrannizes over Mr. A's liberties. Does he mean that government is bad but that a bare majority of Congress is good? Does Mr. A recall, however, the shouts of approval with which he welcomed the news that Congress had adjourned, thus "allowing business to go back to work"?

Mr. A's opinion of the Supreme Court is high. At least, he bitterly resented a proposal to change its membership. Yet the Justices of that Court are also important referents for "government." Are these gentlemen interfering with his business, tearing up his liberties, prostrating him with taxes, taking orders from Moscow?

One could go on like this for pages. Once the semantic analysis is grasped, any high order abstraction can be chased down the ladder where tangible referents often make a mockery of passionate opinions as to the abstraction itself. It is plain goofy to become passionate about things which are not there, or about things which represent only a very small fraction of the total situation under discussion.

V

Turning now to "business" we find a similar situation, except that "business" is of a higher order and even vaguer than "government." You can at least line up and count government employees. How do you line up business men? The unconscious stereotype back of the label is probably the independent merchant of the early nineteenth century. There are some still left in America, but large corporations are liquidating them rapidly. Most Americans in "business" work for corporations and have not much independent action left. Important decisions are made higher up. Are professional men in business? Are farmers business men? Is an investor a business man? Is a filling-station owner a business man, or a laboring man? When I shut my ears to labels and project my imagination over the America I have seen with my eyes, I find it impossible to visualize a definite army of private business men. I can pick out some real entrepreneurs, but in the picture are millions of corporation employees, engineers, chain-store managers, architects, college presidents, all sorts of people. Furthermore, these various groups are frequently in violent conflict. One group wants free trade and another protection. One group wants to control retail stores by corporate devices while the neighborhood store man runs to "government" for laws prohibiting chains. Railroads fight shippers. Coal

men fight oil men. Managers of large corporations oust legal owners from all but a semblance of control over their "private property." Some groups want a free market; more powerful groups want prices fixed by executive fiat, and fix them. Mr. Ford thinks the trouble with "business" is "finance."

Here are two abstraction ladders, reading down:

Business	Business
The oil business	The oil business
Oil production	Oil production
Hot oil production	Standard Oil producing companies
Hot oil wells in Texas	Mr. Y, of a standard company in Texas, violently in favor of proration
Mr. X, a hot oil runner in Texas, violently opposed to proration	

In these cases, referents for "business" at the bottom of the ladder are found in two gentlemen with policies belligerently and diametrically opposed.

Certain astute politicians in the United States Chamber of Commerce and the National Manufacturers' Association wangle resolutions through their respective organizations. I suppose these men are as close to the "voice of business" as one can get. But obviously they represent only a limited group.

Where does "business" end and "government" begin? At the margin, we find a hopeless confusion of referents. Ford builds cars and government builds roads. No roads, no Fords. Is transportation a government or a business activity or a mixture of both? How about enterprises "affected with a public interest" like the utilities, where rates and investment policies are controlled in name at least by regulatory commissions? How about the 600 million dollars the government has lent to the railroads to bail out the widows and orphans holding railroad bonds? Suppose these loans had not been made. What would have been the effect on the investment market and on "confidence"? How about government loans for housing projects? You cannot tear these operating realities apart—except in your head.

Meanwhile, one can say categorically that most persons buying and selling goods and services have benefited to some degree by government spending programs of the last five years. Such persons may hold the program morally wrong and economically odious, but they have not neglected to take the dollars as they rolled along from reliefer to retailer to wholesaler to manufacturer to banker.

VI

Some stockbrokers, manufacturers, merchants, investors, have lost money because of some laws passed and enforced since 1933. Undoubtedly true. Some have made money and avoided loss because of laws passed. Also true. For example, had it not been for certain fiscal laws passed in March and April of 1933, most bankers would have lost their banks. Nobody knows what the net effects of laws and the acts of government officials have been on the balance sheets and operating accounts of all corporations, partnerships and proprietorships. Nobody can know. The matter is too complex for appraisal. Many business activities in 1938 are not as profitable as they were in 1928. Ha! The New Deal is guilty! But they are considerably more profitable than they were in 1932. Ha! Mr. Hoover is guilty—and a government dominated by Republicans is worse for business than a government dominated by Democrats.

So the conclusions spin round and round until the mind reels. This kind of thing gets nowhere because it is about nothing. Generalizations about "government" destroying the confidence of "business," kicking the stuffing out of "business," are just windy salutes in the spring air. People on private payrolls are worried. But people on public payrolls are worried too. The whole damned population is worried, and has been since 1929. Rather than digging into the causes of that universal worry, people call each other names.

I happen to be an employee on part time of a small corporation in New York City. The undistributed profits tax hit this concern pretty hard in 1937. I feel that this tax is sometimes unfair to small companies. I am prepared to ask Congress to exempt certain classes of small corporations. But I do not propose to accompany the protest with loud

yells about the "government" destroying confidence. You have to take these things as they come. In 1934, when the Treasury began to borrow and spend, my business began to pick up. I happen to be a shrewd enough business man to grasp the connection. When the Treasury halted spending last year, my business took a nose dive. (Name of my company on request.)

Here you see I am dealing with real referents—a business I know thoroughly and a certain act of Congress whose effects on that business I know. I made out the tax form. I can talk intelligently, I hope, about this business and this law. But as a student of semantics the last thing I propose to do is to identify my business with all "business," or to identify this law with all "government." Such a technique may be good enough for naked savages; it is not good enough for civilized men.

What business enterprise has been hurt? What is the connection between a given law and a given hurt? How was it hurt? When was it hurt? What laws have helped this business? What is the net loss or gain? Such questions and answers make sense. Referents are found. Communication is aided. Laws can be intelligently discussed and perhaps rendered more just.

In this semantic exercise, I have tried to set forth a method. I have not examined the policies of Mr. Roosevelt or the policies of those who oppose him. This is an analytical essay directed against the whirlwind of bad language which fills the press and the air waves today. It is not supposed that this attack will have much tangible effect. But I venture the opinion that until enough of us, in this or some future generation, begin to separate mental machinery from things under our noses, we shall continue to tilt at verbal windmills, while the objective of making the environment a tolerable and peaceful place in which to live remains only a pious hope.

Emotional Meanings[1]

ROBERT H. THOULESS

WHEN WE USE a word in speech and writing, its most obvious purpose is to point to some thing or relation or property. This is the word's "meaning." We see a small four-footed animal on the road and call it a "dog," indicating that it is a member of the class of four-footed animals we call dogs. The word "dog" as we have used it there has a plain, straightforward, "objective" meaning. We have in no way gone beyond the requirements of exact scientific description.

Let us suppose also that one grandparent of the dog was a collie, another was an Irish terrier, another a fox terrier, and the fourth a bulldog. We can express these facts equally scientifically and objectively by saying that he is a dog of mixed breed. Still we have in no way gone beyond the requirements of exact scientific description.

Suppose, however, that we had called that same animal a "mongrel." The matter is more complicated. We have used a word which objectively means the same as "dog of mixed breed," but which also arouses in our hearers an emotional attitude of disapproval toward that particular dog. A word, therefore, can not only indicate an object, but can also suggest an emotional attitude toward it. Such suggestion of an emotional attitude does go beyond exact and scientific discussion because our approvals and disapprovals are individual—they belong to ourselves and not to the objects we approve or disapprove of. An animal which to the mind of its master is a faithful and noble dog of mixed ancestry may be a "mongrel" to his neighbor whose chickens are chased by it.

Similarly, a Negro may be indicated objectively as a "colored man" or he may be

[1] From *How to Think Straight*, copyright, 1932, 1939, by Simon and Schuster, Inc. Reprinted by permission of Simon and Schuster.

indicated with strong emotional disapproval and contempt as a "nigger." The use of the latter word debases any discussion in which it is used below the level of impartial and objective argument.

Once we are on the lookout for this difference between "objective" and "emotional" meanings, we shall notice that words which carry more or less strong suggestions of emotional attitudes are very common and are ordinarily used in the discussion of such controversial questions as those of politics, morals, and religion. This is one reason why such controversies cannot yet be settled.

There is a well-known saying that the word "firm" can be declined as follows: I am *firm,* thou are *obstinate,* he is *pigheaded.* That is a simple illustration of what is meant. "Firm," "obstinate," and "pigheaded" all have the same objective meaning—that is, following one's own course of action and refusing to be influenced by other people's opinions. They have, however, different emotional meanings: "firm" has an emotional meaning of strong approval, "obstinate" of mild disapproval, "pigheaded" of strong disapproval.

In much the same way when, during the World War, thoughts were dominated by emotions, the newspapers contrasted the *spirit* of our heroic boys with *ruthlessness* of the *Huns,* and the *heroism* of our troops with the enemy's *savagery.* Now, with the more objective attitude that has been brought by the lapse of time, we can look back and see that *spirit* and *ruthlessness* are objectively the same thing, only the one word has an emotional meaning of approval, the other of disapproval. We can see, too, that a soldier going forward under shellfire to probable death is doing the same thing whether he is a German or one of our own countrymen, and that to distinguish between them by applying the word *savagery* to the action of the one and *heroism* to that of the other is to distort reality by using words to make an emotional distinction between two actions which are objectively identical.

Such thinking in wartime may do much harm by leading humane people to condone cruelty. When the ordinarily liberal-minded Swinburne wrote a poem during the Boer War on the death of a British officer who had been blamed for the bad condition of the camps in which the Boer women and children were interned, he said:

Nor heed we more than he what liars dare say
Of mercy's holiest duties left undone
Towards whelps *and* dams *of* murderous *foes, whom none*
Save we had spared or feared to starve and slay.

Whelps and *dams* clearly mean in objective fact *children* and *wives* with the added meaning of the emotional attitude adopted toward the females and young of wild beasts, while *murderous* means no more in objective fact than that our foes killed us when they could (as we also killed them), with the added emotional meaning of an attitude toward them which is our attitude to those who are guilty of murder.

The use of emotionally toned words is not, of course, always to be condemned. They are always harmful when we are trying to think clearly on a disputable point of fact. In poetry, on the other hand, they have a perfectly proper place, because in poetry (as in some kinds of prose) the arousing of suitable emotions is an important part of the purpose for which the words are used. In *The Eve of St. Agnes,* Keats has written:

Full on this casement shone the wintry moon,
And threw warm gules on Madeline's fair breast.

These are beautiful lines. Let us notice how much of their beauty follows from the proper choice of emotionally colored words and how completely it is lost if these words are replaced by neutral ones. The words with strikingly emotional meanings are *casement, gules, Madeline, fair,* and *breast. Casement* means simply a kind of window with emotional and romantic associations. *Gules* is the heraldic name for red, with the suggestion of romance which accompanies all heraldry. *Madeline* is simply a girl's name, but one calling out favorable emotions absent from a relatively plain and straightforward name. *Fair* simply means, in objective fact, that her skin was white or uncolored—a necessary condition for the colors of the window to show—but also *fair* implies warm emotional preference for an uncolored skin rather than

one which is yellow, purple, black, or any of the other colors which skin might be. *Breast* has also similar emotional meanings, and the aim of scientific description might have been equally well attained if it had been replaced by such a neutral word as *chest.*

Let us now try the experiment of keeping these two lines in a metrical form, but replacing all the emotionally colored words by neutral ones, while making as few other changes as possible. We may write:

Full on this window shone the wintry moon,
Making red marks on Jane's uncolored chest.

No one will doubt that all of its poetic value has been knocked out of the passage by these changes. Yet the lines still mean the same in external fact; they still have the same objective meaning. It is only the emotional meaning which has been destroyed.

Now if Keats had been writing a scientific description for a textbook on physics instead of a poem, it would have been necessary for him to have used some such coldly objective terms as the ones into which we have just translated his lines. Such emotionally charged phrases as *warm gules* and *fair breast* would only have obscured the facts to which the scientist exactly and unbeautifully refers when he speaks of "the selective transmission of homogeneous light by pigmented glass."

The purpose of the present book is to deal with the kind of problem in which cold and scientific thinking is required. Most of the practical problems of life are of this order. The fact that I shall abuse the use of emotional thinking in connection with such problems as tariffs, social ownership, revolution, and war does not mean that there is no place for emotional thinking. Poetry, romantic prose, and emotional oratory are all of inestimable value, but their place is not where responsible decisions must be made. The common (almost universal) use of emotional words in political thinking is as much out of place as would be a chemical or statistical formula in the middle of a poem. Real democracy will come only when the solution of national and international problems is carried out by scientific methods of thought, purged of all irrelevant emotion. Into the action which follows decision we can put all the emotion which we have refused to allow in our thinking. Let us think calmly and scientifically about war, and then actively oppose it with all the passion of which we are capable.

The growth of the exact thinking of modern science has been very largely the result of its getting rid of all terms suggesting emotional attitudes and using only those which unemotionally indicate objective facts. It was not always so. The old alchemists called gold and silver "noble" metals, and thought that this emotionally colored word indicated something belonging to the metals themselves from which their properties could be deduced. Other metals were called "base." Although these terms have survived as convenient labels for the modern chemist they carry none of their old emotional significance.

In popular biological discussions, on the other hand, such words are still used with their full emotional meaning, as when the "nobility" of man is contrasted with his alleged "base" origin. In this respect, popular biological discussion differs from that of the textbook and the laboratory, in which are used terms almost as devoid of emotional meaning as those of physics or chemistry.

Psychology is still younger in the ranks of the sciences, and the clearing away from it of emotional words has not gone very far. "Passion," "emotion," "sex" are all terms of our science which carry strong emotional meanings, so that it is difficult to discuss a controversial matter in psychology without using words which rouse strong emotions and confuse all issues. A beginning is being made. "Intelligence" was a subject on which it was difficult to think clearly because it carried so much emotional meaning. Now Professor Spearman has replaced it by what he calls "g" (or the "general factor"), which is a conception derived from the statistical analysis of a large collection of figures, and yet which is in its essence all that was really scientific in the old conception of intelligence. Some day a psychological genius will give us X or Z to replace the old emotional

conception of sex, and we shall be able to discuss psychoanalysis as objectively as a mathematical physicist can discuss the quantum theory.

When we turn to politics and international questions, we are still further from straight scientific thinking. Such words as "Bolshevik," "Fascist," "reactionary," "revolutionary," "constitutional," "national honor," etc., are all words used in national and international political thinking which carry more of emotional than of any other meaning. So long as such words are the ordinary terms of rival politicians, how can we hope to think straight in national and international affairs? If a chemist doing an experiment depended on such thought processes as a nation uses in selecting its rulers or in deciding on peace or war with other nations, he would blow up his laboratory. This, however, would be a trivial disaster in comparison with what may result from emotional thinking in politics. Better have a hundred chemical laboratories blown up than the whole of civilization!

We must look forward to and try to help on the day when the thinking about political and international affairs will be as unemotional and as scientific as that about the properties of numbers or the atomic weights of elements. The spirit of impartial investigation of facts unswayed by irrelevant emotions has given us great advances in the sciences. Its triumphs will be even greater when it is applied to the most important affairs of life. We look forward to the day when we shall be able to discuss and settle such questions as Tariffs, Public *vs.* Private Ownership, and Disarmament Treaties as successfully as physicists have discussed and settled Einstein's theory of relativity.

Let us try to study a few more examples of the use of words with emotional meanings taken from various sources. Accounts of wars are rich sources of such material, so we are not surprised to find in a book on the French Commune the statement that large numbers of the regular troops were *assassinated* during the street fighting by the Communards, while a much larger number of the latter were *summarily executed* by the regulars. In order to reduce this to a statement of objective fact it is clear that the one word "killed" should be used in place both of *assassinated* and *summarily executed.* We have already noticed how such a choice of words with the same objective but opposite emotional meaning can be used to make us feel sympathetic to one and hostile to the other of two sides in warfare. During the Spanish Civil War, the supporters of the Government referred to themselves as the "Loyalists" and called Franco a "Rebel" or an "Insurgent." The supporters of Franco, on the other hand, called themselves "Nationalists" and referred to their opponents as "Reds." During the conflicts between Red and White forces in Russia and in China, our newspapers told us of the *atrocities* of the Bolsheviks and the *wise severity* of the White commanders. Examination of the details (often possible only long afterwards) shows that the objective facts of an *atrocity* and of *wise severity* are much the same, and that they are not the kind of objective facts which will call out an emotion of approval in a humane person.

A similar choice of words will be noticed in political discussion. A fluent and forcible speech delivered by one of our own party is *eloquent,* a similar speech by one of the opposite party is *fanatical;* again two words with the same objective meaning but with the opposite emotional meanings of approval and strong disapproval. The practical proposals of the opposition, moreover, are *panaceas*—a highly emotional word calling out the strongly disapproving emotions which we feel for those quack patent medicines which make extravagant claims. Those who show enthusiasm in support of proposals with which a speaker disagrees are *crackpots;* while those showing similar enthusiasm on his own side are called *sound.* If a politician wishes to attack some new proposal he has a battery of these and other words with emotional meanings at his disposal. He speaks of "this suggested *panacea* supported only by *fanatical crackpots*"; and the proposal is at once discredited in the minds of the majority of people, who like to think of themselves as moderate, distrustful of panaceas, and un-

influenced by windy eloquence. Also, we may notice that it has been discredited without the expenditure of any real thought, for of real objective argument there is none—only the manipulation of words calling out emotion.

It is not, however, only in warfare and politics that such words are used in order to influence opinion more easily than can be done by words embodying real thought. Art criticism is also a good source for this kind of material. Ruskin said of Whistler's Nocturnes: "I have heard and seen much of *Cockney impudence* before now, but never expected to hear a *coxcomb* ask two hundred guineas for *flinging a pot of paint in the public's face.*" As in earlier passages, I have italicized the words or phrases with strongly emotional meanings. Stripped of these and reduced to a statement of objective fact, the passage would have to be paraphrased in some such way as follows: "I have heard and seen much of the behavior of Londoners before now, but never expected to hear a painter ask two hundred guineas for painting a picture which seemed to me to have no meaning." Plainly not much is left of Ruskin's criticism after this operation has been performed on it.

As a last example, we may take a part of an attack made by a newspaper on a novel. This runs: "Its *vicious plea* for the acknowledgment and *condonation of sexual perversity,* and the grounds on which it is based, loosen the very *sheet anchor of conduct.*" This passage calls out such strong emotions of abhorrence that most readers will be content to condemn the novel without further inquiry. Yet the effect is gained entirely by the choice of words with emotional meanings. It happens to deal with a subject on which emotions are strong, so a dispassionate examination is all the more necessary. We note that a *plea* is simply an argument, plus a suggestion of repugnance for the kind of argument used; that *condonation* is tolerance plus an emotional suggestion that such toleration is indefensible; that *sexual* means something in the life of love of which we disapprove, and that a *perversity* is an unusualness plus an emotional suggestion of abhorrence. The loosening of a *sheet anchor* is a metaphor implying change and suggesting to a landsman the emotion of fear, while *conduct* is simply behavior of which we approve.

So reduced to its bare bones of statement of objective fact (ignoring for a moment the special difficulties raised by the word *vicious*), the passage becomes: "Its argument for the acknowledgment and tolerance of unusualness in the life of love, and the grounds on which it is based, change the principles of behavior." This clearly is an important statement if it is true, but is not enough in itself to condemn the book, because undoubtedly our principles of behavior do need changing from time to time. We can only decide intelligently whether or not they need changing in the particular case under discussion, when we have made a dispassionate statement of what the proposed changes are and why they are defended. As in all other cases, discussion of the question with emotionally charged words obscures the problem and makes a sensible decision difficult or impossible.

The word *vicious* has some special difficulties of its own. It arouses emotions of disapproval, but there is no word with the same objective meaning which would not. If we call the book bad, corrupt, or evil, the same emotions would be aroused. So we cannot perform the simple operation of replacing *vicious* by an emotionally neutral word with the same objective meaning. Can we then leave it out altogether, on the ground that it has no objective meaning, but that it is used merely to arouse emotion?

Here we are up against a problem about which there has been much dispute. Some people consider that all such words as "good," "bad," "beautiful," "ugly," only indicate one's own emotional reactions toward actions or things and in no sense properties of the actions or things themselves. But when we see a man steal a penny from a child and we call his action "bad," we are in fact saying something meaningful about the action itself and not merely about our own feelings. As to what that something is we may leave the philosophers to dispute; it may only be that the man's action has subtracted from the

total amount of human happiness. So to say a book is *vicious* is not the same kind of thing as contrasting the *slaughter* of regular troops by Communards with the *execution* of the Communards by regular soldiers. The statement that the book is *vicious* has a meaning which is not merely emotional, although, of course, the statement may not be true.

On the other hand, it is clearly not quite the same kind of meaning as a simple statement of outside fact such as "This is a book." Whether the book is good or bad is a real question, but it is a question peculiarly difficult to decide. Our own statement one way or the other is likely to be nothing but a reflection of our own personal prejudices and to have, therefore, no sort of scientific exactness. At the same time, such words certainly arouse strong emotions and should, therefore, be used sparingly in honest argument. The use of words implying moral judgments in the course of argument is very generally an attempt to distort the hearers' view of the truth by arousing emotions.

If we are trying to decide a simple question of fact, such words should be left out, because it is easier to settle one question at a time. If a man is accused of poisoning his wife, the prosecuting attorney should not say, "This *scoundrel* who hounded his wife to her grave." The question to be decided is whether the man did poison his wife. If he did, he is a "scoundrel" undoubtedly, but calling him a scoundrel does not help to decide the question of fact. On the contrary, it makes a correct decision more difficult by rousing emotions of hatred for the accused in the minds of the jury. Another obvious objection to the use of the word "scoundrel" before the man is convicted, which puts it in the ranks of "crooked thinking," is that it "begs the question" or assumes what is to be proved. The man is only a scoundrel if he is guilty, and yet the word has been used in the course of an argument to prove that he is guilty.

These two objections can be urged against the word "vicious" in the condemnation of a book quoted above. It calls up strong emotions making a just decision of the nature of the book difficult, and it assumes exactly what the article professes to prove—that the book is a bad one.

The aim of this chapter has been to distinguish one kind of crooked thinking, in the hope that those who recognize how their opinions can be twisted away from the truth by the use of words with emotional meanings may be able to recognize this source of error and to guard themselves against it. Those of its readers who have found anything new to them in the ideas of this chapter should not, I suggest, be content simply to read the chapter, but should try to do some practical work on its subject matter. If you were studying botany, you would not be content merely to read books on botany. If you were, that would not carry you far in botanical knowledge. Instead you would gather plants from the hedges and weeds from your garden, dissecting them, examining them with a microscope or magnifying glass, and drawing them in your notebook. Psychology too should be studied by practical methods. Emotional thinking (like most of the other kinds of crooked thinking we shall be studying) is as common as a weed. It is to be found in the leading articles of newspapers, in the words of people carrying on discussions on political, religious, or moral questions, and in the speeches made by public men when these deal with controversial matters. In order to understand it, we should collect specimens by putting them down on paper and then we should dissect them. Current political and social controversy in the United States abounds in such words and phrases as "crackpots," "economic royalists," "the abundant life," "bureaucracy" --or, on the street level—"scabs," "finks," "nigger-lovers." The *New York Herald Tribune* habitually referred to the child labor bill for New York State as the "youth control bill"; the Hearst press dubbed the New Deal the "Raw Deal"; Communists use the words "Trotzkyite" and "Fascist" to cover a multitude of sinners; Secretary Ickes managed to get some powerful emotional undertones from Ferdinand Lundberg's phrase, "America's Sixty Families."

With these ideas and phrases in mind, it is

not difficult to set forth on a practical search for truth. I suggest that readers should copy out controversial phrases from newspapers, books, or speeches which contain emotionally colored words. Then they should underline all the emotional words, afterwards rewriting the passages with the emotional words replaced by neutral ones. Examine the passage then in its new form in which it merely states objective facts without indicating the writer's emotional attitude toward them, and see whether it is still good evidence for the proposition it is trying to prove. If it is, the passage is a piece of straight thinking in which emotionally colored words have been introduced merely as an ornament. If not, it is crooked thinking, because the conclusion depends not on the objective meaning of the passage but on the emotions roused by the words.

When we condemn such a use of emotional words in writings and speeches, we must remember that this is a symptom of a more deep-seated evil—their prevalence in our own private, unexpressed thinking. Many of our highly colored political speakers whose speeches stir us as we are stirred by romantic poetry show themselves unable to think calmly and objectively on any subject. They have so accustomed themselves to think in emotionally toned words that they can no longer think in any other way. They should have been poets or professional orators, but certainly not statesmen.

It really does not matter much if we sometimes use emotional words. We all do when we are trying to produce conviction. What does matter is that we should not lose the power to think without them. So a more important exercise than any we can perform on written material is one we can perform on our own minds. When we catch ourselves thinking in emotional phraseology, let us form a habit of translating our thoughts into emotionally neutral words. So we can guard ourselves from ever being so enslaved by emotional words and phrases that they prevent us from thinking objectively when we need to do so—that is, whenever we have to come to a decision on any debatable matter.

4

Making Matters Clear

Explaining metaphysics to the nation;
I wish he would explain his explanation.

With this impudent jingle Byron lampooned the prose of Coleridge. If Byron was right, Coleridge was guilty of the cardinal sin of writing—vagueness, the failure to make his explanation clear. But Coleridge, like every writer, must be tested by each new reader word by word, through involutions of thought and grammar and over the barriers of the parenthetical quite to the end. The test of clarity is a severe one, but it is basic. For there can be little good in the "explanation" that does not explain. Whether the matter is new to us or one we "know" already, there is both intellectual and esthetic value—lasting satisfaction—in writing that makes something clearer to us than it was before. We then take pleasure in right language, easy transition, wise

progress point by point; and most of all in that unerring choice of what is said and what is not, to build this understanding for us. Even familiar things fall into a better pattern in our minds. And we will follow that good pattern almost instinctively when we explain these things to others. Or we may simply ask that others read what we have read—like Carl Becker's definition of democracy.

In these days, when the word *democracy* is used so loosely, merely to mention Becker's definition should gain him many readers. For few will think it waste of energy or time to be set right on matters not clear though important, even imperative, to understand. Yet many an explanation, just as good, must wait long for its curious and motivated reader and may wait in vain.

One function of the journalist, the writer of articles, is to make clear the explanations of the learned when scholars cannot do the job themselves, at least within our range. "Can Science be Explained?" asks Rudolph Flesch, and says yes, in two ways, one for the learned only and the other, on a "lower" level, for the rest of us. Thus Byron might have wished not Coleridge, but someone else, to paraphrase those explanations.

But one may also ask whether Byron or anyone else is interested, then or now, in metaphysics. Who shall be the curious patrons of our explanations? And why? Does it matter to most readers whether some things are made clear or not? Left to themselves, how many care about the Indian rope trick, democracy, humor, the size of animals, or weather? Not many, probably; and probably their numbers run down in the order of the topics given. The writer who would reach a larger audience than the special keeps these questions well in mind. He strives for human interest. He calculates the age and probable experience of his readers. He considers any special motivation that may quicken by a mere glance at a title, in so far as that gives a hint of subject. He begins and ends his piece so as to translate this solicitude into style. At the extreme, he may burlesque the very act of explanation, like Benchley with his rope trick. Benchley's opening and his digression into story are the planned economy of wit and impatience serving as a team in what is really a form of literary criticism. Fun and a good corrective it may be, but certainly no explanation of the rope trick. Who cares? says Benchley. And isn't explanation dull!

Yet, audience or no, people will persist in wanting to explain the things they understand. They seem impelled to do so, as was the Ancient Mariner to tell his story. And often if they can but make us *start* to read, our notion that this or that is dull will be at once dispelled and we will respond with admiration. Who has not sometime had that experience? "A man of genius creates his own taste," said Wordsworth. And surely explanations that win us without special or *a priori* interest are entitled to be called literature.

Whether the wooing and winning are a matter of genius or not, from the beginning of such reading we are released from our ordinary selves. An author well informed and rich in understanding replaces our anxiety about our *own* interest with his absorption in what he has to say. Like the great teacher, he is ever mindful of his listeners, but beyond the point of worrying whether any but the intrinsic appeal is needed. For the moment nothing is more important to him than this awareness, this illumination that must be achieved, because the subject should not fail to capture human interest for its own sake. So the good writer will let others ask whether his enthusiasm is overbalanced,

his explanation "useful," his respect for himself and his subject undue. Artist and scientist are one, giving discovery its commensurate eloquence. Rudolph Flesch might have answered a mere "yes and no" to his question "Can Science be Explained?" But that was not enough, *for him*. To Craven and Johnson, the logic of American history was engrossing even in summary—though often such summaries are deadly dull for the author and so for the reader too. There was no "demand" that Melville even briefly distinguish the two kinds of whales. But he wanted, even passionately, for everyone to "see" their differences and the ramifications of that contrast. "On Being the Right Size" is but one of many illuminating essays for which Haldane will long be remembered. So with the two Milnes in the whole book from which "Tenants of the Soil" was taken. These are about the most undutiful explanations one could imagine. Yet in each of them the writer's imagination burns so brightly with his subject that ours must take fire too.

Perhaps the best example of this controlled excitement, of the more than merely clear, is George Stewart's imaginative treatment of air and weather, with man in the midst. Human interest is never forgotten, nor is the science of weather. But there is much more—a muchness we cannot give an abstract label, as we cannot label any work of art. Would that all explanations could transcend the merely dutiful and be as spontaneous as this. Benchley was right, of course, to mock the dull, the stereotyped. But when certain "matters" are important to the well-balanced and informed and they are urged to speak and write—and when "clearness" is but the foundation of the whole good result—the literature of knowledge and the literature of power are not so separate as DeQuincey once insisted.

The Rope Trick Explained[1]

ROBERT BENCHLEY

IN EXPLAINING this trick, I need hardly say that it is known as "the Indian rope trick." That is the only trick that everyone explains, as well as the only trick that no one has ever seen. (Now don't write in and say that you have a friend who has seen it. I know your friend and he drinks.)

For readers under the age of three (of whom, judging from several letters at hand, I have several) I will explain that "the Indian rope trick" consists in throwing a rope into the air, where it remains, apparently unfastened to anything, while a boy climbs up to the top. Don't ask me what he does then.

This trick is very easy to explain. The point is that the boy gets up into the air somehow and *drops the rope down to the ground*, making it look as if the reverse were true. This is only one way to do it, however. There are millions of ways.

* * * * *

While in India, a friend of mine, a Mr. MacGregor, assisted me in confusing the natives, in more ways than one. We dressed up in Indian costume, for one thing. This confused even us, but we took it good-naturedly.

Then I announced to a group of natives, who were standing open-mouthed (ready to bite us, possibly) that Mr. MacGregor and I would perform the famous Indian Rope

[1] From *My Ten Years in a Quandary and How They Grew* by Robert C. Benchley. Copyright, 1936, by Robert C. Benchley. Reprinted by permission of Harper and Brothers.

Trick under their very noses. This was like stealing thunder from a child.

Stationing myself at the foot of a rope which extended upward into the air with no apparent support at the other end, I suggested to Mr. MacGregor that he climb it.

"Who—me?" he asked, hitching his tunic around his torso.

This took up some time, during which part of our audience left. The remainder were frankly incredulous, as was Mr. MacGregor. I, however, stuck to my guns.

"Up you go, MacGregor!" I said. "You used to be in the Navy!"

* * * * *

So, like a true yeoman, Mr. MacGregor laid hands on the rope, and, in a trice, was at its top. It wasn't a very good trice, especially when viewed from below, but it served to bring a gasp of astonishment from the little group, many of whom walked away.

"Come on in—the water's fine!" called Mr. MacGregor, waving from his pinnacle (one waves from one's pinnacle sideways in India).

"Is everything fast?" I called up at him.

"Everything fast and burning brightly, sir!" answered Mr. MacGregor, like a good sailor.

"Then—*let 'er go!*" I commanded, sounding *Taps* on a little horn I had just found in my hand.

And, *mirabile dictu,* Mr. MacGregor disappeared into thin air and *drew the rope up after him!* Even I had to look twice. It was a stupendous victory for the occult.

* * * * *

"Are there any questions?" I asked the mob.

"What is Clark Gable like?" someone said.

"He's a very nice fellow," I answered. "Modest and unassuming. I see quite a lot of him when I am in Hollywood."

There was a scramble for my autograph at this, and the party moved on, insisting that I go with them for a drink and tell them more about their favorite movie stars. There is a native drink in India called "*straite-ri*" which is very cooling.

* * * * *

It wasn't until I got back to our New York office that I saw Mr. MacGregor again, and I forgot to ask him how he ever got down.

Democracy[1]

CARL L. BECKER

DEMOCRACY, like liberty or science or progress, is a word with which we are all so familiar that we rarely take the trouble to ask what we mean by it. It is a term, as the devotees of semantics say, which has no "referent"—there is no precise of palpable thing or object which we all think of when the word is pronounced. On the contrary, it is a word which connotes different things to different people, a kind of conceptual Gladstone bag which, with a little manipulation, can be made to accommodate almost any collection of social facts we may wish to carry about in it. In it we can as easily pack a dictatorship as any other form of government. We have only to stretch the concept to include any form of government supported by a majority of the people, for whatever reasons and by whatever means of expressing assent, and before we know it the empire of Napoleon, the Soviet regime of Stalin, and the fascist systems of Mussolini and Hitler are all safely in the bag. But if this is what we mean by democracy, then virtually all forms of government are democratic, since virtually all governments, except in times of revolution, rest upon the explicit or implicit consent of the people. In order to discuss democracy intelligently it will be necessary, therefore, to define it, to attach to the word a sufficiently precise

[1] From *Modern Democracy,* by Carl L. Becker. Reprinted by permission of Yale University Press, publishers.

meaning to avoid the confusion which is not infrequently the chief result of such discussions.

All human institutions, we are told, have their ideal forms laid away in heaven, and we do not need to be told that the actual institutions conform but indifferently to these ideal counterparts. It would be possible then to define democracy either in terms of the ideal or in terms of the real form—to define it as government of the people, by the people, for the people; or to define it as government of the people, by the politicians, for whatever pressure groups can get their interests taken care of. But as a historian I am naturally disposed to be satisfied with the meaning which, in the history of politics, men have commonly attributed to the word —a meaning, needless to say, which derives partly from the experience and partly from the aspirations of mankind. So regarded, the term democracy refers primarily to a form of government by the many as opposed to government by the one—government by the people as opposed to government by a tyrant, a dictator, or an absolute monarch. This is the most general meaning of the word as men have commonly understood it.

In this antithesis there are, however, certain implications, always tacitly understood, which give a more precise meaning to the term. Peisistratus, for example, was supported by a majority of the people, but his government was never regarded as a democracy for all that. Caesar's power derived from a popular mandate, conveyed through established republican forms, but that did not make his government any the less a dictatorship. Napoleon called his government a democratic empire, but no one, least of all Napoleon himself, doubted that he had destroyed the last vestiges of the democratic republic. Since the Greeks first used the term, the essential test of democratic government has always been this: the source of political authority must be and remain in the people and not in the ruler. A democratic government has always meant one in which the citizens, or a sufficient number of them to represent more or less effectively the common will, freely act from time to time, and according to established forms, to appoint or recall the magistrates and to enact or revoke the laws by which the community is governed. This I take to be the meaning which history has impressed upon the term democracy as a form of government.

Humor[1]

John Erskine

Humor is the art of adapting oneself to another temperament. Every temperament, men used to think, is conditioned by the quality of the moisture or "humor" in the individual's body. If you were melancholy, it was because you had a melancholy "humor." Ben Jonson wrote about *Every Man in His Humor.* To humor a person was to accommodate yourself to his characteristic tendencies. To have a sense of humor was to have such imaginative flexibility that you could adapt yourself to anybody.

Long ago we abandoned the physiological explanation, and instead built up around the word an atmosphere of rich meanings, having to do not with the origin of our temperament but with the ends to which we devote our gifts. Humor is now a thing to cultivate and achieve. Some of us have more of an aptitude for it than others, but in a truly civilized world no one is excused from having some of it—perhaps no one who lacked it entirely could survive. We fancy that the cave-man, some primitive brute who argued with a stone ax and disposed of ideas in an adversary by dashing out his brains,

[1] From *The Century Magazine.* Reprinted by the kind permission of the author.

might get on well without a sense of humor, provided that his own skull remained uncracked; if once, however, you admit the right of all your fellows to survive, even though they disagree with you, you must learn how to bend their peculiarities without surrendering your own pet queernesses. It's a great art.

As we now understand it, humor has a surface quality and an inner depth. It is related to cheerfulness, courage, fun, even to merriment. It is also allied to sympathy, to a fellow-feeling for the unfortunate and the unhappy, to the animal pathos of life. This inward aspect of humor most of us admit is the nobler and the more important. Laughter is no bad thing, not even if it is a shallow reaction of the nerves to silly and insignificant occasions; but a true sense of humor keeps the mind too occupied and the heart too alert to laugh. For the same reason it is at its best when divorced from wit. The kindest wit still has an edge on it, and to be sharp it becomes a little hard. Hardness and humor are contradictions.

To say it another way, humor is the most inclusive form of comedy. It keeps in mind our own peculiarities while it observes the tendency in others to be mechanical, or as we say, to be a little "set." However we explain the cause of temperament, we know that the daily habit of life trains us, perhaps against our will, in ruts and grooves; we develop tendencies of which we are not aware; in the eyes of our friends we become at last distinguished by stereotyped thoughts, emotions, conduct. Though these marks of our soul may be in themselves admirable, yet it is not entirely admirable that they should be automatic repetitions; it is not desirable that our ways of accepting experience should be less varied and flexible than the experience we accept. The aim of education, in one important aspect, is to acquire the art of distinguishing, of catching the minute differences which set apart each thing or thought, each person, each situation, from every other. The finest mind will not distinguish perfectly; the mind without humor, alas, will hardly distinguish at all. It is easier to take life in the rough, to group experience in large categories, to make choices from the crude contrast of good and bad, white and black. But to live so simply is, for civilized man, not to live at all. To be content in a few mental grooves, we must first have lost sight of the manifold shadings and combinations of life, and we must have forgotten that actions, thoughts, and emotions are always to some extent conditioned by time and place.

Mr. Micawber, looking for something to turn up, is a comic figure. That is, his value to us is the insight we get into what has become mechanical in him. His virtues were cheerfulness, loyalty and optimism, all admirable, but he has ceased to distinguish among the occasions when those virtues were adequate. He was optimistic in minor adversities, and equally optimistic when he faced disaster. We suspect that he didn't recognize disaster when he saw it. Our sympathy goes to his family, to whom discomfort arrived in varied degrees, however he tried to cheer them up with his automatic formulas.

Richard Feverel's father, in Meredith's novel, is a comic figure on a finer plane. Having suffered disaster in his private life, he determines that his boy shall be spared so bitter an experience, and he applies his splendid mind to the development of a system of education which will take account of human nature and will direct the impulses of youth to high purposes, instead of compressing them dangerously in frail conventions. Yet he overlooks some of the possibilities of life, accidents of time and place, and though his system works successfully, it doesn't work as he intended. His mind has become so set in his personal theories, that he fails to recognize success, as Mr. Micawber failed to recognize failure.

Suppose a man avoided the stereotyped attitude toward life by taking no attitude at all. Suppose you try to keep yourself free of all conventions, all systems; this stupid classification of black and white, utterly bad and utterly good, can be escaped, suppose you say, by denying that there is a difference between black and white. This was Falstaff's philosophy. At first glance there seems little

resemblance between his broad, loose acceptance of whatever fate sends, and Mr. Micawber's formulas, or Sir Austin Feverel's system. Yet to deny all distinction in experience is to adopt the most rigid of formulas. Falstaff is so mechanical in his ethics or in his lack of them that we hesitate to say he was a bad man. He made himself into an automaton so simple that his friends could anticipate his conduct in any situation, yet he remained unaware that his method was obvious. What he overlooked was the fact that there are gradations, even in logic, that however you avoid stereotyped patterns, there are laws in the universe and therefore, however flexible, a design. Sometimes the design is a temporary convention, and the laws not very profound, but at other moments we confront universal truths and obligations. It is easy to say that Falstaff interests us apart from the drama in which he appears—he is a character independent of plot. But Shakespere gave him a private drama. He shows us the fat knight in a succession of predicaments, caught lying, caught stealing, engaged in graft, frightened on the battle-field; in each case Falstaff extricates himself with a fresh ingenuity—no question that his wits are more flexible than Mr. Micawber's or Sir Austin Feverel's—but in each case we observe his blindness to the special point at issue. The climax of his philosophy occurs in his marvelous discussion of honor. Is it not good sense? Yet no one, not even the most ardent pacifist, ever felt that in that scene he was an admirable man. He was blind to the distinction between running away from death and running away from a cause, between escaping from a house on fire and escaping from a house in which others were burning to death.

If we merely appreciate the peculiarity of Mr. Micawber's temperament, or of Falstaff's, we may be said to have the sense of comedy. This cosmic sense, we are often told, is rare, yet it is not hard to smile at another man's frailty, after it has been called emphatically to our attention. What is rare is the sense of humor which makes us alert to the mechanical bent in all natures, even in our own. For this wisdom we need the aid of all our intelligence and of all our heart. If we recognize the fact that every man is liable to fall into a mechanical and blind routine, we must include ourselves in the picture, and find even Falstaff a reflection of ourselves in certain moods, a prophecy of what we might easily become if we were not on our guard. The human race, beset with this temptation to a mechanical dullness—which, however we fight against it, marks each of us with his special tricks and formulas—bears within its heart also a desire to know all the shades of truth, to be adjusted to the varieties of experience, to be unchained, to be altogether alive. In all of us the love of life is at war with the convenience of habits and formulas. It isn't our fault—we are made so. Of ourselves, this is easy to say. Are we intelligent enough to see that it is equally true of Micawber and Falstaff.

If Falstaff had the same desire as we have, to be a free spirit, at home in the gradations of admirable experience, then his life is a failure, and when we smile at him, it is not because he is funny but because he is tragic. A sense of humor must assume that the other man loves life as much as we; it must assume that life is worth loving and that to miss it because the machine tendency in us is too strong is the saddest of defeats. Perhaps we should never succeed in loving defeated men if we hadn't the brains to recognize ourselves in their troubles. Perhaps to recognize our kinship, even in the most depraved, is enough to make the depraved seem likable. Perhaps this is why we like Falstaff.

But if he is so tragic, why do we smile at him? We don't smile at King Lear. Well, the recognition of a new truth gives always the sense of pleasure. A demonstration in geometry, unexpected and convincing, may make us smile. We are forced to laugh when our adversary in debate scores a point on us. He isn't necessarily funny, but he has opened our eyes. The value of a sense of humor to ourselves is that in the faults of others we are suddenly aware of tendencies in ourselves, and can therefore correct them. When our nerves are taut, when we have worked ourselves up into a prejudice of idea

or emotion, when we have become, that is, mechanical and inflexible, the sudden vision of the same frailty in Micawber or Sir Austin Feverel helps us to relax. We are reminded of our common plight; we remember that perhaps the man against whom we cherish a temporary grudge is like ourselves the victim of his temperament. That is why the cultivation of humor is essential if we would survive in an advanced and complex society in which there will always be much to wear out the nerves and try the patience.

We smile too at the temperament which seems to show itself in inanimate things. They too have their personal cussedness, their exasperating inflexibilities. To fight them is neither more nor less stupid than to contend with the fixed habits of our friends. We can only understand and adjust ourselves. Oddly enough, for most of us a sense of humor comes more easily when we are dealing with machines than when we are facing the mechanical element in men. We have no great difficulty in learning the whims of our typewriter or of our automobile. We know we have to humor the engine, since no two engines are exactly alike. We are even reluctant to let another drive it, who may not understand its ways. To deal so imaginatively and sympathetically with human beings would be the height of wisdom, but the human engine at its simplest is complicated, and wisdom comes hard.

If we smile at Falstaff, is there any difference between comedy and tragedy? Not much. We usually call those stories comic in which the disaster is not too grim for us to detect a universal law of temperament, applicable to ourselves. If we understand the profound implications of humor, it makes little difference whether we call *Hamlet* a tragedy or a comedy. Some of us feel that *Much Ado* is as tragic as it is comic. *King Lear* and *Othello*, and all the stories which are too terrible to serve as mirrors of ourselves, ought to have another name. Iago and Goneril are devils, outside of the moral world as most of us can conceive of it. Admiration for Shakespeare prevents us from admitting freely that such characters are unintelligible, interesting only as monsters and nightmares. But the bulk of serious experience, no matter how sad, is susceptible of illumination by a sense of humor, by a realization that in spite of human ignorance and stupidity, life is lovable, and that the faults which handicap others are mere variations of tendencies in ourselves.

With all the laughter in the world, there are very few funny books. *Humphrey Clinker* is one, in English literature, and *Pickwick Papers* is another. In these stories we laugh at a succession of ridiculous incidents which illustrate nothing in particular, either about human nature or about the universe. Mr. Pickwick gets into the wrong room at the inn, and after he has gone to bed, the occupant, an old maid, enters and prepares to retire. The ridiculousness of the situation has nothing to do with the characters of the persons involved. If the characters did count in the episode, we should have to call on our sense of humor, and the fun would be translated into the more serious form of comedy. Humphrey Clinker engages as postilion to the coachful of travelers, but when he mounts his horse his tattered breeches come apart. Fun, in this elementary form, is nothing but the recognition of absurdity. It calls for no effort of the intelligence, and it stimulates us to no sympathy. We sometimes say it is the occasion of harmless laughter.

On the other hand, there are many witty books. To turn a phrase so that the word or the cadence puts a fresh point on an old idea, is not difficult for an intelligent person who is willing to study the best models and keep in practice. The attempt at wit may easily prove vulgar, if the writer or speaker makes his point too broad, and assumes too little alertness in his audience. The pleasure of successful wit is obvious, but by itself it does not necessarily imply great sympathy with life, nor a complete understanding of a neighbor's problems. Wit is sometimes the gift or the acquisition of a narrow heart and mind, and the employment of it by such a nature makes us fear that the clever point has been scored at some expense to truth.

Whether or not a book has wit, it can't be great without humor. If we say that the Bible is humorous, we are giving it the ut-

most praise. Not funny, and seldom witty, but almost always humorous. Think of the strongly marked temperament in Jacob or in Joseph. When we say they are very human, we are recognizing in the one a certain aptitude for trickery, which is in our temperament also, though perhaps less strongly marked—and we are fair enough to observe that Jacob had some better traits besides, which are less developed in us. In the other we recognize a most unpleasant habit of taking himself seriously, and of telling his family of his merits. We have caught ourselves at the same mischief, and we know that the family is always the worst audience to tell such news to. Or recall the little man who insisted on running to King David with the news of Absalom's death, but who didn't get the news straight and forgot it on the way. Or even David himself, on his deathbed, relapsing into a particularly tragic mood of vengeance, and giving Solomon a hint as to the treatment an old enemy ought to get. Such stories would be cynical if they were not humorous; to cite them as though they did not belong in a sacred book is to be blind ourselves to humor, to that tragic behavior of our natures in those moments when we are weak or off our guard. How else could we interpret St. Peter's cowardice and repentance? Most delightful of all the Old Testament stories, perhaps, is that of Naomi and Ruth. We think more of it rather than less because Naomi, in stating her claim on her kindred to provide Ruth with a husband, passed over the near and poor relative, and set her heart on the wealthy Boaz. If we recognize her motives, it is because we have met them in ourselves.

It is usually thought that the sense of humor is a gift, not an art. Perhaps wit, like any other form of expression, is to some extent a gift, but it would be sad if we had to believe that the understanding of life is natural to some of us and withheld from others. Humor can be learned and taught. The method at its simplest would be constant admonition not to go blind in the routine of life. He that has eyes to see, let him see—and we all start with eyes to see. But education could go further. We could train ourselves to think of life not as an experience exclusive and personal to us, not as a conglomeration of lives all entirely different, but as a common condition and fate, in which each of us develops a few peculiarities, fewer and less important than we suppose. Once we have reached that idea, we can go on to the truth that the whole race, from age to age, changes little, no matter how fast the outer surface of civilization alters. Falstaff, Naomi, David, and Peter, Thersites and Hector, are still recognizable as mirrors of us, in spite of electricity and motorcars and the philosophy of Freud. Well then, we have only to keep our love of life, and study the temperament of our fellows as we would the ruling passion of our pet automobile, and remembering how relatively unimportant those peculiarities are, humor them. To do this successfully, we must also study our own besetting queerness, and temper that to our suffering friends.

But we can't follow this old-fashioned and simple schooling unless we train ourselves first of all to think of human life in general terms. Since we do so to-day less often than our fathers did, we have a less rich sense of humor. The children used to study penmanship in copybooks, in which proverbs and mottoes, the cream of general experience, were constantly before their eyes. The old readers contained fables and more proverbs, the accumulated wisdom of the race about life in general. If young people now have meager ideas about human nature, and exaggerated notions of the uniqueness of their own personalities, it is because we have unintentionally fastened their attention on the temporary and exceptional aspects of their world. It's hard to have a sense of humor if you are brought up to be a special pleader. The writers to-day who make special pleas for one good cause or another, do so perforce without humor, because before they can envisage any human fate as special, they must discard temporarily that full view of life which sees the common heart and the common fate in us all.

Two Kinds of Whales[1]

HERMAN MELVILLE

HERE, NOW, are two great whales, laying their heads together; let us join them, and lay together our own. Of the grand order of folio leviathans, the Sperm Whale and the Right Whale are by far the most noteworthy. They are the only whales regularly hunted by man. To the Nantucketer, they present the two extremes of all the known varieties of the whale. As the external difference between them is mainly observable in their heads; and as a head of each is this moment hanging from the *Pequod's* side; and as we may freely go from one to the other, by merely stepping across the deck:—where, I should like to know, will you obtain a better chance to study practical cetology than here?

In the first place, you are struck by the general contrast between these heads. Both are massive enough in all conscience; but there is a certain mathematical symmetry in the Sperm Whale's which the Right Whale's sadly lacks. There is more character in the Sperm Whale's head. As you behold it, you involuntarily yield the immense superiority to him, in point of pervading dignity. In the present instance, too, this dignity is heightened by the pepper and salt colour of his head at the summit, giving token of advanced age and large experience. In short, he is what the fishermen technically call a "grey-headed whale."

Let us now note what is least dissimilar in these heads—namely, the two most important organs, the eye and the ear. Far back on the side of the head, and low down, near the angle of either whale's jaw, if you narrowly search, you will at last see a lashless eye, which you would fancy to be a young colt's eye; so out of all proportion is it to the magnitude of the head.

Now, from this peculiar sideway position of the whale's eyes, it is plain that he can never see an object which is exactly ahead, no more than he can one exactly astern. In a word, the position of the whale's eyes corresponds to that of a man's ears; and you may fancy, for yourself, how it would fare with you, did you sideways survey objects through your ears. You would find that you could only command some thirty degrees of vision in advance of the straight side-line of sight; and about thirty more behind it. If your bitterest foe were walking straight towards you, with dagger uplifted in broad day, you would not be able to see him, any more than if he were stealing upon you from behind. In a word, you would have two backs, so to speak; but, at the same time also, two fronts (side-fronts): for what is it that makes the front of a man—what, indeed, but his eyes?

Moreover, while in most other animals that I can now think of, the eyes are so planted as imperceptibly to blend their visual power, so as to produce one picture and not two to the brain; the peculiar position of the whale's eyes, effectually divided as they are by many cubic feet of solid head, which towers between them like a great mountain separating two lakes in valleys; this, of course, must wholly separate the impressions which each independent organ imparts. The whale, therefore, must see one distinct picture on this side, and another distinct picture on that side; while all between must be profound darkness and nothingness to him. Man may, in effect, be said to look out on the world from a sentry-box with two joined sashes for his window. But with the whale, these two sashes are separately inserted, making two distinct windows, but sadly impairing the view. This peculiarity of the whale's eyes is a thing always to be borne in mind in the fishery; and to be remembered by the reader in some subsequent scenes.

[1] From *Moby Dick, or The White Whale.*

A curious and most puzzling question might be started concerning this visual matter as touching the Leviathan. But I must be content with a hint. So long as a man's eyes are open in the light, the act of seeing is involuntary; that is, he cannot then help mechanically seeing whatever objects are before him. Nevertheless, any one's experience will teach him, that though he can take in an indiscriminating sweep of things at one glance, it is quite impossible for him, attentively, and completely, to examine any two things—however large or however small —at one and the same instant of time; never mind if they lie side by side and touch each other. But if you now come to separate these two objects, and surround each by a circle of profound darkness; then, in order to see one of them, in such a manner as to bring your mind to bear on it, the other will be utterly excluded from your contemporary consciousness. How is it, then, with the whale? True, both his eyes, in themselves, must simultaneously act; but is his brain so much more comprehensive, combining, and subtle than man's, that he can at the same moment of time attentively examine two distinct prospects, one on one side of him, and the other in an exactly opposite direction? If he can, then is it as marvellous a thing in him, as if a man were able simultaneously to go through the demonstrations of two distinct problems in Euclid. Nor, strictly investigated, is there any incongruity in this comparison.

It may be, but an idle whim, but it has always seemed to me, that the extraordinary vacillations of movement displayed by some whales when beset by three or four boats; the timidity and liability to queer frights, so common to such whales; I think that all this indirectly proceeds from the helpless perplexity of volition, in which their divided and diametrically opposite powers of vision must involve them.

But the ear of the whale is full as curious as the eye. If you are an entire stranger to their race, you might hunt over these two heads for hours, and never discover that organ. The ear has no external leaf whatever; and into the hole itself you can hardly insert a quill, so wondrously minute is it. It is lodged a little behind the eye. With respect to their ears, this important difference is to be observed between the sperm whale and the right. While the ear of the former has an external opening, that of the latter is entirely and evenly covered over with a membrane, so as to be quite imperceptible from without.

Is it not curious, that so vast a being as the whale should see the world through so small an eye, and hear the thunder through an ear which is smaller than a hare's? But if his eyes were broad as the lens of Herschel's great telescope; and his ears capacious as the porches of cathedrals; would that make him any longer of sight, or sharper of hearing? Not at all.—Why then do you try to "enlarge" your mind? Subtilise it.

Let us now with whatever levers and steam-engines we have at hand, cant over the sperm whale's head, that it may lie bottom up; then, ascending by a ladder to the summit, have a peep down the mouth; and were it not that the body is now completely separated from it, with a lantern we might descend into the great Kentucky Mammoth Cave of his stomach. But let us hold on here by this tooth, and look about us where we are. What a really beautiful and chaste-looking mouth! from floor to ceiling, lined, or rather papered with a glistening white membrane, glossy as bridal satins.

But come out now, and look at this portentous lower jaw, which seems like the long narrow lid of an immense snuff-box, with the hinge at one end, instead of one side. If you pry it up, so as to get it overhead, and expose its rows of teeth, it seems a terrific portcullis; and such, alas! it proves to many a poor wight in the fishery, upon whom these spikes fall with impaling force. But far more terrible is it to behold, when fathoms down in the sea, you see some sulky whale, floating there suspended, with his prodigious jaw, some fifteen feet long, hanging straight down at right angles with his body, for all the world like a ship's jib boom. This whale is not dead; he is only dispirited; out of sorts, perhaps; hypochondriac; and so supine, that the hinges of his jaw have relaxed, leaving him there in that ungainly sort

of plight, a reproach to all his tribe, who must, no doubt, imprecate lock jaws upon him.

In most cases this lower jaw—being easily unhinged by a practised artist—is disengaged and hoisted on deck for the purpose of extracting the ivory teeth, and furnishing a supply of that hard white whalebone with which the fishermen fashion all sorts of curious articles, including canes, umbrella-stocks, and handles to riding-whips.

With a long, weary hoist the jaw is dragged on board, as if it were an anchor; and when the proper time comes—some few days after the other work—Queequeg, Daggoo, and Tashtego, being all accomplished dentists, are set to drawing teeth. With a keen cutting-spade, Queequeg lances the gums; then the jaw is lashed down to ring bolts, and a tackle being rigged from aloft, they drag out these teeth, as Michigan oxen drag stumps of old oaks out of wild wood lands. There are generally forty-two teeth in all; in old whales, much worn down, but undecayed; not filled after our artificial fashion. The jaw is afterwards sawn into slabs, and piled away like joists for building houses.

. . . . . .

Crossing the deck, let us now have a good long look at the Right Whale's Head.

As in general shape the noble Sperm Whale's head may be compared to a Roman war-chariot (especially in front where it is so broadly rounded); so, at a broad view, the Right Whale's head bears a rather inelegant resemblance to a gigantic galliot-toed shoe. Two hundred years ago an old Dutch voyager likened its shape to that of a shoemaker's last. And in this same last or shoe, that old woman of the nursery tale, with the swarming brood, might very comfortably be lodged, she and all her progeny.

But as you come nearer to this great head it begins to assume different aspects, according to your point of view. If you stand on its summit and look at these two *f*-shaped spout-holes, you would take the whole head for an enormous bass-viol, and these spiracles, the apertures in its sounding-board. Then, again, if you fix your eye upon this strange, crested, comb-like incrustation on the top of the mass—this green, barnacled thing, which the Greenlanders call the "crown," and the Southern fishers the "bonnet" of the Right Whale; fixing your eyes solely on this, you would take the head for the trunk of some huge oak, with a bird's nest in its crotch. At any rate, when you watch those live crabs that nestle here on this bonnet, such an idea will be almost sure to occur to you; unless, indeed, your fancy has been fixed by the technical term "crown" also bestowed upon it; in which case you will take great interest in thinking how this mighty monster is actually a diademed king of the sea, whose green crown has been put together for him in this marvellous manner. But if this whale be a king, he is a very sulky-looking fellow to grace a diadem. Look at that hanging lower lip! what a huge sulk and pout is there! a sulk and pout, by carpenter's measurement, about twenty feet long and five feet deep; a sulk and pout that will yield you some 500 gallons of oil and more.

A great pity, now, that this unfortunate whale should be hare-lipped. The fissure is about a foot across. Probably the mother during an important interval was sailing down the Peruvian coast, when earthquakes caused the beach to gape. Over this lip, as over a slippery threshold, we now slide into the mouth. Upon my word, were I at Mackinaw, I should take this to be the inside of an Indian wigwam. Good Lord! is this the road that Jonah went? The roof is about twelve feet high, and runs to a pretty sharp angle, as if there were a regular ridge-pole there; while these ribbed, arched, hairy sides, present us with those wondrous, half-vertical, scimitar-shaped slats of whalebone, say three hundred on a side, which depending from the upper part of the head or crown bone, form those Venetian blinds which have elsewhere been cursorily mentioned. The edges of these bones are fringed with hairy fibres, through which the Right Whale strains the water, and in whose intricacies he retains the small fish, when open-mouthed he goes through the seats of *brit* in feeding-time. In the central blinds of bone, as they stand in their natural order, there are certain curious

marks, curves, hollows, and ridges, whereby some whalemen calculate the creature's age, as the age of an oak by its circular rings. Though the certainty of this criterion is far from demonstrable, yet it has the savour of analogical probability. At any rate, if we yield to it, we must grant a far greater age to the Right Whale than at first glance will seem reasonable.

In old times, there seem to have prevailed the most curious fancies concerning these blinds. One voyager in Purchas calls them the wondrous "whiskers" inside of the whale's mouth;[2] another, "hogs' bristles"; a third old gentleman in Hackluyt uses the following elegant language: "There are about two hundred and fifty fins growing on each side of his upper *chop*, which reach over his tongue on each side of his mouth."

As everyone knows, these same "hogs' bristles," "fins," "whiskers," "blinds," or whatever you please, furnish to the ladies their busks and other stiffening contrivances. But in this particular, the demand has long been on the decline. It was in Queen Anne's time that the bone was in its glory, the farthingale being then all the fashion. And as those ancient dames moved about gaily, though in the jaws of the whale, as you may say; even so, in a shower, with the like thoughtlessness, do we nowadays fly under the same jaws for protection; the umbrella being a tent spread over the same bone.

But now forget all about the blinds and whiskers for a moment, and, standing in the Right Whale's mouth, look around you afresh. Seeing all these colonnades of bone so methodically ranged about, would you now think you were inside of the great Haarlem organ, and gazing upon its thousand pipes? For a carpet to the organ we have a rug of the softest Turkey—the tongue, which is glued, as it were, to the floor of the mouth. It is very fat and tender, and apt to tear in pieces in hoisting it on deck. This particular tongue now before us; at a passing glance I should say it was a six-barreler; that is, it will yield you about that amount of oil.

Ere this, you must have plainly seen the truth of what I started with—that the Sperm Whale and the Right Whale have almost entirely different heads. To sum up, then: in the Right Whale's there is no great well of sperm; no ivory teeth at all; no long, slender mandible of a lower jaw, like the Sperm Whale's. Nor in the Sperm Whale are there any of those blinds of bone; no huge lower lip; and scarcely anything of a tongue. Again, the Right Whale has two external spout-holes, the Sperm Whale only one.

Look your last, now, on these venerable hooded heads, while they yet lie together; for one will soon sink, unrecorded, in the sea; the other will not be very long in following.

Can you catch the expression of the Sperm Whale's there? It is the same he died with, only some of the longer wrinkles in the forehead seem now faded away. I think his broad brow to be full of a prairie-like placidity, born of a speculative indifference as to death. But mark the other head's expression. See that amazing lower lip, pressed by accident against the vessel's side, so as firmly to embrace the jaw. Does not this whole head seem to speak of an enormous practical resolution in facing death? This Right Whale I take to have been a Stoic; the Sperm Whale, a Platonian, who might have taken up Spinoza in his latter years.

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[2] This reminds us that the Right Whale really has a sort of whisker, or rather a moustache, consisting of a few scattered white hairs on the upper part of the outer end of the lower jaw. Sometimes these tufts impart a rather brigandish expression to his otherwise solemn countenance.

The United States of America[1]

AVERY O. CRAVEN AND WALTER JOHNSON

THE HISTORY of the American people may be divided roughly into three periods. The first is the colonial period, in which different European groups, with differing cultural patterns, were adjusting themselves to one another and to the American environment and, thereby, evolving a new people and a new nation. The second is the national period, in which the young United States of America turned its back on Europe, marched steadily westward across the American continent, and transformed it, region by region, from a simple wilderness into a land of farms and towns and complex social-industrial institutions. Connections with the outside world were reduced to a minimum, and Americans, engaged in American tasks, sharpened and modified their own national characteristics, both personal and institutional, and emerged before the world as a powerful nation with positive interests and values uniquely its own. The third period is the one in which we find ourselves, at the present time, an integral part of the larger world. We are back where we started. The days of isolation are over. Just before the dawn of the twentieth century the United States found itself, half reluctantly, again facing outward. American goods and American capital had already invaded other lands; interests and values had forced a war with Spain and bequeathed us a colonial empire; and then the blunt fact of world interdependence pushed us into two great European wars. The cycle was thus completed, but the attitudes and assumptions inherited from the two earlier periods of American life, and their need of readjustment, have left much of mental confusion and much of uncertainty. We often appear to be a people whose bodies are in one age and whose minds are in an earlier one. The great task of adjustment still plagues the American people.

Many nationalities and much of good fortune have entered into the making of the United States. The first settlers on the North American continent came out of Western Europe and brought with them the habits, the tastes, and the prejudices that they had acquired in that intensely active part of the world. It was a region where strong national governments, relying on taxes and gold and silver, not on personal services, had replaced feudalism; where commerce and trade, especially with the Orient, had greatly increased the importance of towns and townsmen; where great trading companies had been organized to exploit the riches of far-flung corners of the world; and where national churches, under the Protestant revolt, had defied the See of Rome and stressed anew the direct responsibility of the individual to his God.

The discovery of America came about as a result of the efforts of nations bordering on the Atlantic to escape the middlemen who controlled trade through the Mediterranean. In seeking the East they found the West. Some of the early American colonies were planted by the trading companies; others were founded by religious refugees who sought to escape the conformity required in most European nations; still others were made up of peoples set free by the great changes in rural Europe, and lured to the New World by hopes of better things than could be found amid the unsettled conditions at home. England furnished the greatest number of settlers, but Germany, Sweden, Holland, France, and Spain furnished enough to make the American colonies the children of Europe, not of Great Britain alone. Each of these groups made valuable contributions to American life.

[1] From *The United States: Experiment in Democracy*, by Avery O. Craven and Walter Johnson. Reprinted by permission of Ginn and Company, publishers.

From the English came the language which was to be the dominant one in use in the United States and with it the opportunity to share in the rich accumulations of English literature. Even the folk songs of Ireland and Wales and Scotland were a part of that heritage. The common law and most of the political forms and practices adopted in the colonies were of English origin. Much of the Protestant Reformation, but not all of it, came to America by way of England. The conception of classes in society, including the country-gentleman ideal, so important in the South, came from the same source. In fact, it would be difficult to find any part of life on the American continent that was not, to some degree, influenced by England.

The Dutch influenced only one colony, New York, but they left a decided impress on that colony. Their stanch Protestantism, their peculiar types of architecture, the great landed estates that they scattered along the Hudson, and the quaint, picturesque folklore that they created in both town and country added something rich to the American pattern.

Even greater was the contribution of the German people. They brought with them much of manual skill and a knowledge of farming, together with a taste for it, which the English sadly lacked. Their fields did not decline in fertility, and their great barns, soon known as "Pennsylvania Dutch barns," were symbolic of the interest and care that went into their efforts. They too were Protestants, and their Pietism, which came to them from Luther, flowered in various sects whose love of music, whose devotion to high social standards, and whose patient skill as craftsmen enriched the fiber being woven into American life.

The French Huguenots in New York and in South Carolina were comparatively few in number and were soon absorbed by the English stock. They did, however, reveal a peculiar aptitude for commerce and added something intellectual and artistic to the communities where they lived.

Farther away, and at first unconnected with these groups, were the French in Louisiana and the Spanish in the Southwest. Both were Catholic in religion, and both were strong enough in numbers to give the dominant color to life in the regions which they occupied. Each group had its type of houses and public buildings, which not only were different in appearance from those of the rest of the country, but exerted a strong and permanent influence on later American architecture. The Roman law, modified by French and Spanish influences, permanently shaped the legal code of Louisiana. The French love of music and the drama continued to characterize life in New Orleans and the neighboring region. In like manner, the Spanish missions and ranches colored life in California long after that state had become a part of the United States. Spanish influence in architecture was important; and, in later days, the cattle industry on the Plains carried the mark of its Spanish origin.

The contribution of the Negro to the Western world, to which he came first as a servant and then as a slave, is hard to measure. His labor helped to push the wilderness back and to open the way for the production of the great staples so necessary for trade. In places where his numbers were great, he altered and shaped both the economic and the social life. The plantation system and the caste system both rested in part on his shoulders. His strong sense of rhythm, his store of folk tales and superstitions, and the more subtle force of personality in the close contacts of rural living, all contributed something to the making of a new people in a new land.

All these early groups were augmented, both in colonial and in early national days, by new arrivals of the same stocks. Then, in the years after 1830, they were again increased, and new floods from wider areas also poured in. The Irish and the Germans headed the flow—the former settling in New England and along the canals and railroads which they helped to build into the West, and the latter finding places as tradesmen and farmers in Ohio, Texas, Missouri, and Wisconsin. Both groups, long subject to harsh treatment at home, gloried in the freedom and the security that they enjoyed in the United States. The Civil War found them stanchly

on the Union side. The Irish, already notable for their ready wit and romantic qualities, soon revealed a practical aptitude for politics, which matched their marked attachment to fellow countrymen and to their Catholic faith. The first Germans were joined, after 1848, by a group of intellectuals who, despairing of liberalism in the fatherland, hoped to realize their dreams in America. They showed less political acumen than the Irish, but not less of the desire to get ahead or to retain something of the joy of living.

After the Civil War great numbers of Scandinavians joined the few who had already come to make their homes largely in the newer states of the Old Northwest. Settlements now spread to Minnesota, northern Iowa, and out to the Dakota Territory. These were a hardy people, who settled in neighborhoods close together and revealed almost as much of thrift and eagerness for education as had the early Puritans themselves. The Jews, meanwhile, crowded into the cities to add something strangely different to the existing order—something older in tradition, but something intensely eager for success in the new urban-capitalistic society that was emerging. With them came from southern and southeastern Europe other new groups,—Italians, Poles, Greeks, and Czechs,—each with its own national traits and values, but nearly all alike in allegiance to the Catholic Church. The new flood was greater than the old; its birth rate was higher; its peoples tended to remain in the urban centers either as industrial laborers or as market gardeners on the outskirts of the cities. Members of these new groups, of the same nationality or race, often remained close together, retaining their national speech and, to some degree, their Old World customs. The problem of assimilation increased, but the public-school system and closer contact with the now established national ways of living worked wonders on second generations and brought unity of aspiration and feelings if not always of minor social practices. Thus, in spite of increased burdens, the "melting pot" continued its work of fusing divergent peoples into a new American race.

European peoples and ways, however, were only one factor in the making of the United States. Of equal importance was the influence of the continent itself, of the life it required of those who would make it their home. It was a continent great in size and rich in resources. Stretching nearly three thousand miles from the Atlantic to the Pacific, and more than fifteen hundred miles from the Great Lakes to the Gulf of Mexico, it lay between the parallels 26° and 55° north latitude in a climate where crops familiar to Europeans would yield bountiful harvests, where white men would be more healthy than in the tropics or in the extreme north, and where the change in seasons would be marked enough to stimulate a maximum of mental and physical activity. To the known European crops the continent added corn and potatoes and tobacco. It offered generous areas of fertile soils, well watered and easily accessible. Its rivers and lakes formed natural highways that interlocked in such manner as to provide, with only short portages, routes from ocean to ocean. In its mountains were convenient gaps through which trails might grow into wagon roads and these in turn give way to railroads and paved highways. Within its borders could be found rich deposits of all the important minerals save tin and potash. The iron and coal deposits were especially rich; copper and oil, so important in later days, were equally abundant. Great timber resources and almost limitless water power rounded out the picture of a land unmatched by any other of equal size on the face of the earth. For years the United States was to be known as a land of fabulous resources; in 1924 one writer estimated that it produced 38 per cent of the world's coal, 70 per cent of its petroleum, 38 per cent of its electric power, 54 per cent of its copper, 33 per cent of its iron ore, 53 per cent of its timber, and from 25 per cent to 75 per cent of its corn and cereals. With such great natural resources, and with some eight hundred million acres capable of being turned into improved farm lands, the potentialities for comfort and luxury were to be measured only by the abilities of those who undertook their realization.

But this great land, when the European first entered it, was only an untamed wilderness thinly occupied by tribes of Indians. It had to be possessed and transformed. Step by step, from east to west, the wilderness had to be pushed back, and farms and towns and all the complex agencies of civilization had to be set up in its place. First, the coast nearest Europe had to be won, then the regions farther inland. Trappers and traders and intrepid missionaries would lead the way and prepare the region for the first crude "cabineers," who would begin the cultivation of the soil. Sometimes lumbermen or miners or cattlemen took the lead when their special kind of natural wealth attracted. Sometimes the forward movement was too rapid; then the advance guard would be driven in by Indian massacres, by drought or pestilence. But always the frontier would again move forward, and behind it life would grow more complex and more like the pattern for living which men had brought with them from the Old World.

For nearly three centuries Americans and their institutions knew this great experience of forward movement into the wilderness, a return in some degree, at least, to more primitive ways than they had already known, and the uneven advance toward that complexity which, deservedly or not, was called "civilization." By this experience they were altered in person and in characteristics. They became Americans. Just what that meant is not easy to say, but there were definite marks left on men and on institutions that distinguished them from the original settlers and practices that had first come out of Europe. Men became natives. They fitted the continent and its needs. Outsiders recognized the differences.

In the colonial period intimate connections with the Old World and the fact that colonial life was modeled after European patterns held back change to a degree. Most of the colonists thought of themselves as Europeans and strove to look and act like their fellows in the homeland. Residents of the towns and those in the older areas of the colonies, and persons of wealth and officeholders,—in fact, most who could afford to do so,—read English books and magazines, decked themselves and their homes in English-made goods, and took a real interest, direct or indirect, in what was going on abroad. If permitted to prosper and enjoy a reasonable degree of freedom, they were content to remain as part of the growing British Empire. Those who moved farther out, however, and who were forced, of necessity, to supply their own needs, lost both the English contacts and the English patterns. For some time before the Revolution many felt the separateness of their world and were thoroughly conscious of the fact that, if they were to be content and were to realize the possibilities offered in the new land, they must live their own lives in their own way. Troubles with the mother country, therefore, divided the colonists into Tories and Patriots. The bitter struggle over the Declaration of Independence only stressed the conflict between the persistence of things old and the force of change to things new. The ultimate acceptance of independence confirmed the fact that long years and long miles apart had created two peoples. Sadly many Tories left the colonies; others reluctantly accepted the inevitable.

But the greater influence of frontier living and the steady advance into the wilderness came in the years after the second war with England, in 1812. Emigrants poured westward in ever greater numbers. New Wests, one after the other in different geographic basins, sprang into being. Soon they had upset the old balance in American life and taken charge. Western men were elected to the Presidency; domestic issues occupied Congress; American traits and American assumptions deepened and became fixed. For eighty years and more the process went on until the end of the frontier was reached and new forces came to dominate. But even then the American was largely what he was because of these days under this great experience. His characteristics and outlook, for years to come, had been shaped.

Foreign writers and native observers generally agreed on the larger characteristics of this "new man," this American. They stressed

the fact that he was an individualist—a man who had learned to stand on his own feet, care for himself, do all kinds of things fairly well; who kept the patent office busy with his inventions; who liked his freedom and resented even government's interference. Yet, with all his stanch individualism, he was a man who knew how to co-operate, to help to raise the neighbor's house or barn, husk his corn, or bring into being a vigilance committee or a more substantial government.

He was, moreover, a confirmed believer in progress. He was used to change, and his experiences in transforming the wilderness into farms, in seeing his towns grow into cities and his nation become powerful among the nations, gave him faith in the future. Anything could be done. Dreams were forever becoming realities. He saw things not as they were, but as he and his fellows could make them to be. Henry Adams tells how the early American was wont to boast of his wealth, his "solid mountains of salt and iron, of lead, copper, silver, and gold"; of his cities "broadcast to the Pacific," and his cornfields "rustling and moving in the summer breeze." But the visitor saw only "tremendous wastes," where "sickly men and women" were "dying of homesickness" or were being scalped by savages; mountains beyond reach or swamps "choked with their own rotten ruins." No wonder he called the American "a liar and swindler" and his story "a fraud.' But what he did not realize was that the American was not talking about things as they were, but about things as they were to be. He was indulging in dreams that could and would come true. That became a national habit. The future, not the past, held America's Garden of Eden.

Yet with all his belief in progress and all his tolerance of change, the American was, at heart, a conservative and a conformist. Life on the frontier was rather simple, and the problems to be faced were rather restricted and definite. The men who successfully solved them were, therefore, much alike in ability and point of view. They were of the same general pattern, regardless of time and place. Their way of doing things also fell into a pattern and soon constituted the accepted way in which things should be done. Standards were thus set, and the notion was created that these were the means by which progress was achieved. Conformity to pattern of necessity became a virtue, and eccentricity a fault. Amid primitive conditions the price of survival was often the rigid adherence by all men to well-understood lines of conduct. Where men had to depend on one another and to know how each would react to a given situation, uniformity and conformity alone afforded security. The nonconformist was a weak link in the social chain.

And, in like manner, ways that had helped to give "progress" beyond anything known elsewhere were deemed superior to any "foreign" importations. A community that had struggled upward from simple crudeness to complex comforts and extravagance had, by that very fact, demonstrated its superiority. Most Americans lived in "the best town" in the world. Their form of government and business system were also "best." To hold fast to that which was "good" was as much an American trait as was the urge to change.

Out of the experience of crossing and transforming the continent came also a tendency to stress material things and accomplishments. The tasks that the American faced were largely those of clearing land, accumulating materials, extracting natural resources, and building things. His accomplishments represented victories over nature. He worked with his hands, bent his back, endured physical hardships. He measured his progress by the clearing he made in the forest, the acres he broke to the plow, the size of the buildings, the towns, and the factories that he erected. The measure of his success was the wealth he accumulated. He worked hard and glorified toil. He hated the lazy man. There were too many things that had to be done in a new country. The Massachusetts Bay Company instructed its governor to permit "noe idle drone . . . to live amongst us," and Virginia ordered slothful persons to be bound over to forced labor. Compulsory labor, in the form of Negro slavery, was long accepted as a "good."

Such a situation produced a quantitative

valuation of almost everything. When an American talked about what a man was worth, he was speaking of his material accumulations. When he said that a girl had married well, he probably was referring to her husband's bank account. The words *big* and *great* became synonyms. Values were to be measured by statistics. The height of a building, the enrollment of a university, the acres of a farm—these were the things on which judgments were to be based. Men should be "practical." Theories and speculations served no purpose. "Doing something useful" did not include much that had to do only with beauty for its own sake.

Yet here, again, was contradiction. Behind the American's pride in national accomplishment lay the more profound fact of an incurable idealism. The men who transformed a wilderness had to be men of faith. The finished product was the substance of things hoped for. Big buildings, big universities, big farms, represented achievement —victory over difficulties. The skyscraper stood where, only a few years before, there was a one-story structure with a false front. The rich man probably began as a poor boy and was proof of the opportunity offered in this new land. Both seemed to justify American optimism. Both, in their way, seemed to prove, to the generations which saw their story repeated over and over again, that something better for mankind was always possible if the right effort was made.

A strong dislike of special privilege, something interpreted as a belief in equality, also marked the American. He believed in every man's having a chance. After that, men could draw as far apart as their abilities permitted. Freedom to become unequal was an essential part of his democracy. Yet the game had to be played fairly; and when the rules sometimes permitted favors to the few, there was a "higher law." This was only saying that the purpose of law, after all, was to secure a just social order based on equality.

Then there was the American brand of humor, characterized by "exaggeration and extravagance"; there was a new place for women, and new attitudes toward their rights; there was ever a restless moving about—a nervous tension that kept the nation on wheels much of the time, put rockers on chairs, and kept people chewing at something from morning until night. These and other qualities marked the American, with his back to Europe and his face to the West. With boundless energy he created kingdoms of wheat and cotton, and cities where the Industrial Revolution reached new levels of efficiency; fought a Civil War in order to adjust conflicting interests and values to the needs of changing conditions; created a new age of big business, with larger problems of social justice and the question of what government could do about it. And then, as domestic problems grew more complex, he found himself again, unwilling and bewildered, an active participant in the affairs of the larger world.

The years following the Civil War were years of drastic change, in which industrial and financial capitalism definitely established their dominance in American life. Agriculture was slowly pushed into a secondary place, and the policies favorable to industry and capital were enacted into law. Natural resources were developed and exploited as never before, and the patterns of living were greatly altered by urban developments and mass production. It was a period of transition marked by conflict and strife. Agriculture and industry, capital and labor, East and West, North and South, were often in bitter conflict with each other. The relationships and assumptions which had come down from the great era of physical expansion did not always fit the facts of the new day. Neverthless they continued to play a part in shaping the course of developments, and they made the problems of adjustment more difficult. Soon the very power of business interests threatened the whole democratic order and forced an effort to find a balance between *laissez faire* and government control and regulation. The clash of rival groups and interests also bore heavy at times on the public welfare and brought demands for reform that ranged all the way from the passage of new legislation to a

complete reordering of the whole social-economic system. Urban growth brought greater emphasis on cultural achievements, such as music and the arts. The specialist began to take the place of the old Jack-of-all-trades, and a greater tolerance for the "expert" appeared. Group association for work and play and mutual development testified to a weakening of the old individualism of frontier days. More leisure was possible, and, though "the gospel of work" still persisted, men nevertheless began to talk of the good uses to which "spare time" could be put. The old American values were weakening.

Equally important was the gradual resumption of American participation in larger world affairs. External interests crowded in to turn the American face outward once again. The Monroe Doctrine was widened in its application; American capital and business interests looked outside for both raw materials and markets. We made Cuba's unhappy conditions our business, and, through a war with Spain, gained new territorial interests, which involved us in the affairs of areas as widely separated as the Caribbean and the Philippines in the far Pacific. That gave American isolationism a terrific jolt and brought sharp conflict over "imperialism" into American politics. But it was only a beginning. Soon American representatives were sitting at council tables where European problems were dealt with, and a world war, begun in 1914, soon drew us into the thick of it for the simple reason that our interests were as vitally affected as those of the other great nations of the earth. But our minds were not prepared to accept entirely the facts. The struggle over entrance into the war was a bitter one, and the conflict between the natural impulse to make the world safe for democracy and the equally good tradition of confining our interests to this hemisphere was never quite won or lost. Isolationism triumphed with peace, and the realization of how out of character we were as a participant in European strife was not the least of the reasons for our rejection of the League of Nations.

The conflict between necessary participation in world affairs and the bent to isolationism went on to the very outbreak of the Second World War. It was as confusing as was the struggle between "free enterprise" in our domestic economic life and government participation in business. It still finds many Americans torn between the necessity of accepting world responsibility for democracy and peace and the old urge to stay at home and "mind our own business." The American is still in the making.

The making of the American, however, is only one part of the story. The rest of it has to do with the great experiment in democratic government and the effort to create a more democratic social-economic order. Out of Europe, in early years, came much that favored the few and justified the exploitation of the many. There were "superiors" and "inferiors"; there were cliques that formed around the governors and enjoyed special privileges. There was an established church in some colonies; the franchise usually belonged to those with property; representation in the assemblies was seldom equitable.

But the harsh pressure of wilderness living brought aristocrats down and common men up, and the struggle for home rule in Revolutionary days forced concessions as the price of wider co-operation. Gradually the franchise was broadened and representation balanced. Church and State were separated, and freedom was granted to all sects. Freedom of speech, trial by an impartial jury, security of person and property, and the right to keep and bear arms were added, in the Bill of Rights, to the new national Constitution.

Nature, meanwhile, offered her riches impartially, and the pressure of sheer numbers gradually forced more liberal policies in their distribution. Free land became the symbol of democracy. And, though the speculator still held advantages, the demands of the actual settler forced the granting of pre-emption rights and the ultimate passage of homestead legislation. The right to begin over again on some new frontier was thereby guaranteed to all Americans.

The door of opportunity was thus kept

open, and the chance to fight for more democratic advances was always possible. Inequalities and injustice still remained, but the frontier and the continent's riches were on the side of greater equality and greater justice. The American tradition favored the common man more and more. With increasing force, the nation's outstanding leaders spoke for democracy. In early national days Thomas Jefferson insisted on the sacredness of individual personality, and fought to free his countrymen from the burdens of too much governing and the tyranny of traditional practices. A generation later Andrew Jackson took up the fight against the threatening power of business and finance, and established the claim of the commonest of men to the nation's highest offices. Abraham Lincoln, for the next generation, struck down human slavery and forced the nation to understand the significance to all mankind of the great experiment in government of the people, by the people, for the people. Then, in turn, came the Populists, the Progressives, and the New Dealers to stress anew the claims of democracy on the American people. They kept alive the tradition of protest and the ideal that government exists only to promote the general welfare. They carried on the tradition that forced the nation to accept responsibility for making the world safe for democracy under Woodrow Wilson, and equally safe for the Four Freedoms under Franklin D. Roosevelt.

Never have the American people been allowed to forget that the United States is an experiment in democracy. Even, at times, they have been reminded, as August Belmont reminded them in 1850, that "the day is not far distant when self-preservation will dictate to the United States the necessity of throwing her moral and physical force into the scales of European republicanism."

Can Science Be Explained?[1]

RUDOLPH FLESCH

WHEN PEOPLE talk about something that's difficult to read, they are apt to say it's "too technical." The ordinary person, when he gets bogged down in a book or article, wouldn't think of saying, "The author of this can't write"; he will say, "A layman like me will never understand this" and let it go at that. In other words, most people think that some subjects are easy and some difficult and it hardly matters what language is used in explaining them.

I don't agree with those people. The principles of simple language are just as important, or maybe more so, in explaining, say, biochemistry, than they are for a news broadcast. The only difference is this: When you use simple language for anything that is *not* scientific or technical, you can explain it to anybody; but when you simplify science, you will find that only part of it will be understandable to the layman, and another part, however simply stated, will be clear only to people who have some training in that branch of science. There is no scientific discovery or theory that cannot be popularized —up to a point; the important thing is to know just what can be explained to the ordinary person and what can't.

Let me show you an example of what I mean: Some time ago Commander Howard S. Aiken of Harvard University developed a so-called mathematical robot, that is, an automatic calculator that can solve tremendous, otherwise insoluble mathematical problems. Now how can anybody explain this incredible machine to a layman? At first sight, you would think it's impossible; but that isn't so. In fact, the machine is being operated by laymen; they get a code book prepared by

[1] From *The Art of Plain Talk* by Rudolph Flesch. Copyright 1946 by Rudolph Flesch. Reprinted by permission of Harper and Brothers.

a mathematician and all they have to do is to follow the code and punch holes in a tape. So the *operations* of the machine can be explained very simply; the book probably says something like "First punch hole A6; then punch hole C31" and so on.

But you can also go one step further and explain to a layman what Commander Aiken was about when he was building that machine: you can tell what the problem was, for what purpose the machine was going to be used, what theory he had in mind and how he put it into practice, and finally what tests he used to be sure the monster-gadget worked. All this can be told in simple, ordinary language, and if it's properly dramatized and made interesting, it will go a long way toward explaining the *meaning* of this scientific development: not exactly what was done, but why and how it was done. It will give the layman an explanation he can understand, and usually that will be all he wants.

There is, of course, a third kind of explanation, a mathematical explanation of the machine for mathematicians. This, too, can be put in simple language, that is, short sentences, simple words and so on, and that will save mathematicians time and effort in reading their professional journals. But—let's face it—the layman will never understand the formulas and graphs. To understand exactly what Commander Aiken has done, you have to have so-and-so many years of higher mathematics, and that's that.

Or let's take another example that happens to be handy. How can the scientific yardstick formula of this book be explained? The answer is exactly the same. Again, there are three levels of explanation, two for laymen, one for scientists only. First, there is the *operation* of the formula: that can be explained by the simple set of directions which you will find in the back of the book. Second, there is the *meaning* of the formula: to explain that properly, I would have to go into the history of language simplifying, the relationship between language and understanding, the readability formulas that were developed by other researchers, the differences between those formulas and this one, and so on. Then I could dramatize the whole story and that would probably give most people all the explanation they want. However, there is still the third level, that of the *scientific* explanation; and here I would have to get into statistical regression formulas and multiple correlation and whatnot, and nobody who hasn't had a course in statistics would know what I am talking about.

Now let's see how the principles of language simplifying apply to these three types of scientific explanation. First, let's take a look at the language of operation sheets, directions, shop manuals, popular mechanics, the literature that tells how to do a technical job. Here is an example I picked at random from a book on papermaking:

> In the event of there being more than one screen serving the machine (as is usually the case) it is necessary to watch carefully the operation of the screens with reference to the stock supplied them, and each valve should be opened or closed in proportion to the capacity of the screen it is feeding. If there is any difference in the capacities of the screens, it is probably due to the cams or toeblocks being worn, or some other thing affecting the oscillation of the diaphragm.

Now obviously this is not very readable But what are the obstacles the reader has to face? Certainly *not* the technical terms; in fact, any reader interested in papermaking machines is apt to know what a cam or toeblock is, and if not, will have no trouble finding out. But that technical knowledge won't make it any easier for him to work his way through "in the event of there being" or "with reference to the stock supplied them" or "in proportion to the capacity." The simple fact is that people who know something about certain technical operations are usually those least equipped for writing about them or explaining what they know to somebody else.

Not so long ago a *New York Times* story described the excellent instruction manuals put out by Bell Telephone Laboratories for the Army and Navy. Let me quote one sentence: "The company has discovered that it is easier to hire a qualified editor and teach him what he needs to know about the techni-

cal terms involved than it would be to take a qualified engineer and teach him what he would need to know about the art of editing . . ."

If those papermakers had followed the same principle, our passage would probably read somewhat like this:

> Usually the machine is served by more than one screen. If so, watch carefully how much stock goes through each. To keep the flow even, just open or close the valves. (If you want to make the screens work evenly, look first for worn cams or toe-blocks. Most often that's what makes the difference.)

In other words, all writing of the operation-sheet type should address the reader directly, and should tell him step by step what to do. It's as simple as that. Anybody who writes how-to-do prose should start off by reading a good cookbook; here, for instance, is a model paragraph from Fannie Farmer:

> Apple Pie
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> Line pie plate with pastry. Pare, core, and cut apples in eighths, put row around plate ½ inch from edge, and work towards center until plate is covered; then pile on remainder. Mix sugar, nutmeg, salt, lemon juice, and grated rind, and sprinkle over apples. Dot over with butter. Wet edges of undercrust, cover with upper crust, and press edges together. Prick several places with fork. Bake.

Anybody can understand that, and anybody can understand any kind of technical directions that are written in the same style.

When we come to the second level of scientific explanation we find, oddly enough, that there is also one single standard formula. The reason is simple: Since the meaning of any modern scientific fact can only be explained by the method of its discovery, and since the scientific method is the same in all branches of science, and such explanation will be the story of a scientist, or several scientists, going through the classic four stages of modern scientific method: observation, hypothesis, deduction, and experimental verification. So this type of popularization will show how a scientist got curious about certain facts, thought up a theory to explain them, devised experiments to prove the theory, and finally tested it and found that it worked. If two scientists working on the same problem can be shown, so much the better: this will make the reader appreciate not only the scientific method, but also the fact that modern science is never a one-man affair.

Popular science written by this standard formula is probably the most educational type of writing there is: it's the only way of making laymen appreciate scientific method. But let's not get into this; let me rather show you a classic example. This is from a *Reader's Digest* article on penicillin by J. D. Ratcliff:

> The story of penicillin begins in 1929, when Dr. Alexander Fleming . . . was examining a glass culture plate milky with millions of bacteria. His sharp eye detected something. There was a fleck of green mold on the plate, and around this fleck was a halo of clear fluid *Something was destroying the bacteria!* A mold that had dropped in from the air was causing their sudden death on an unprecedented scale . . .
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Within 17 hours all the unprotected mice were dead . . . Hundreds of other mice trials followed, with similarly favorable results.

At last Florey was ready to carry his work from mice to men . . .

And so on. This is science for laymen at its best, and it's written in typical *Reader's Digest* manner, so that an average person can understand it. But I hope you realize that it is a piece of what might be called science appreciation, not of scientific explanation. It does not even have the chemical formula for penicillin in it. In short, from a scientist's point of view, it offers no explanation at all.

To explain science fully, as I said before, you will have to use a third level of explanation, and this is where the layman will never be able to keep up with you. Suppose, for instance, you are asked for an explanation of what retene is, and the Encyclopaedia Britannica gives you the following clue:

> Retene, an aromatic hydrocarbon occurring in wood tars and obtained by distilling resinous woods. It crystallises in colourless plates melting at 98.5° C and boiling at 394° C. Chromic acid oxidises the hydrocarbon to retene quinone (an *ortho*diketone) and permanganate oxidises the quinon to 3-hydroxy-*iso*propyldiphenyl—1:1′:2′-tricarboxylic acid. These reactions show that retene is thyl*iso*-propylphenanthrene, $C_{18}H_{18}$, with the adjacent structural formula.

Plainly, there is no way of really telling a layman what retene is. To understand it, with or without simple language, you have to be a chemist and that's that.

There is only one bit of advice I can offer in this business of giving laymen an exact scientific explanation: don't try. It is far better to be as frank as Bertrand Russell in his popular explanation of the relativity theory, who says at one point:

> . . . this part can be expressed by the method of "tensors." The importance of this method can hardly be exaggerated; it is, however, quite impossible to explain it in non-mathematical terms.

Or, if you are unfortunate enough to be assigned to such an impossible job, you might add some sort of apology, the way Gove Hambridge did in the 1941 *Yearbook of Agriculture:*

> . . . The editor would like to point out that to visualize even the more elementary aspects of atmospheric circulation over the earth is not easy, since you have to imagine that you are a mile or two up in the air, on your stomach with your head toward the North Pole, a clock nearby lying on its back so you can readily tell which is clockwise and which counter-clockwise rotation—also a mirror so you can see how everything would be reversed if you were in the Southern instead of the Northern Hemisphere, and you have to remember constantly that a south wind is a northward-moving wind, an east wind a westward-moving wind, and vice versa.

Tenants of the Soil[1]

LORUS J. MILNE AND MARGERY J. MILNE

WHEN A CYCLONE rips through a small town, tearing roofs from some houses and flattening others altogether, the Red Cross hurries to the scene and co-operates with state agencies in helping homeless victims. In the animal world an equally disastrous situation occurs when someone carelessly pries up a flat stone that has lain in a field for a year,

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packed in soil and peat moss, to be shipped by the carton to farmers all over the country.

Everyone is familiar with earthworms and their smooth moist skins. Local usage varies greatly as to the name by which they are known: mud worm, night walker, eas'worm, angledog, dew worm, night lion, rain worm, night prowler, or just plain fishworm. Yet this is but one of the animals that spends the day under stones. Salamanders and slugs have smooth moist skins, too. They frequent galleries under rocks for the same reasons. But unlike the earthworms and ants, when the roof is removed these creatures have no maze of tunnels into which they can retire for safety. The salamander wriggles like a short-legged tadpole to take cover under leaves or in the nearby grass. The slug contracts into a bean-shaped mass and exudes a creamy slime to render it unpalatable and less liable to damage by desiccation. If touched, a large slug can even squirt the yellow juice in fine jets that drench objects several inches away. As minutes pass the salamander grows restless and creeps deeper into the protective forest of grass shoots. The slug dries off a little and unfolds a pair of eye-tipped stalks. Slowly it glides into the nearest shadow, its route marked by a glistening wake. If both survive the dangers of the day, they become far more active in the moist dark of evening, and find new shelters for the morrow long before the sun is due to rise again.

Other animals exposed when rocks are lifted have crept into crevices there in search of food. Daylight and fresh air disturb them in their foraging. Centipedes wind around obstacles in seeking new shelter, their thirty-odd legs moving so rapidly that it is easy to see why they are credited with an even hundred. Beetles scurry off or wedge their heads below projecting fragments opaque enough to hide from their eyes the light of day. They may remain thus, exposed to view except for their heads, in apparent belief that because they can see nothing, no enemy can find them either. This is the ostrich fable in miniature, and has the benefit of truth, whereas the bird has long since been vindicated of such stupidity.

One of the beetles below rocks in open pastures near meandering streams, is *Brachynus,* the "bombardier." It is a trim little animal, with orange legs and fore body, and dusky blue wing covers that seem squarely cut off behind. When pursued or disturbed by such a disaster as loss of the roof over its head, this beetle ejects a defensive fluid from a special gland at the hinder end of the body. The material issues with an audible "pop" suggesting to early naturalists the explosion of a cannon, bombarding an enemy. Part of the discharge is a spray that must corrode the eyes of any pursuer since a few shots of it on a human fingertip harden the skin and stain it a dark brown. The beetle simulates gunfire in still another way. Each puff of vapor carries with it a gray powder that looks like smoke. By night this dust is faintly luminescent, like the muzzle flash of a rifle. Every "pop" of the beetle—and they can repeat the performance several times in quick succession—ejects the charge half an inch or more astern. The powder settles and loses its glow; the vapor drifts away. In some tropical species of larger size, each explosion throws out a thimbleful of the gray dust, and the accompanying mist has been identified as nitrous acid.

A young biologist who made a study of ground beetles had several favorite sources for specimens. In his mother's garden some two dozen bricks were laid close together flat on top of the soil. Each week for many summers he raised the blocks in turn and caught certain kinds with great regularity. The commonest of these beetles was a large black insect with a narrow rim of iridescent purple on its hard wing covers. It was an introduced form, originating in Europe, and the wing covers hid an empty space—the creature lacked flying wings altogether. Yet year after year these beetles spread from surrounding gardens to hide under the mosaic of bricks. In no other way was the abundance of these big insects evident, but their benefit to the community must have been considerable since their food is almost exclusively caterpillars. Another productive hunting place for beetles was around an old tumbledown mill on the muddy banks of a

nearby stream. Flat stones there sheltered a different type of beetle, with slender golden legs, long feelers and a soft, blackish brown body. It could fly, but each spring numbers congregated under those particular rocks. Nowhere else were they found.

One summer, the naturalist returned; he had been away eighteen years. But under a brick in the parental flower bed he observed one of the flightless caterpillar hunters. It scampered off just as had those seen many years before. The old mill had become a tea-room with a national reputation, but a visit there would have been incomplete without lifting a rock. And standing there on long delicate yellow legs were two of the same kind of soft ground beetles, upset over the loss of their roof in exactly the same way as their relatives had been in the past. In spite of the numbers of these insects that had been collected for study at the earlier date, finding them again in the same sites was like seeing old friends. The brick and the stone may well have been shelters lifted years before, but the animals under them were short-lived descendants carrying on an unwritten tradition in a place that suited their living needs. Without important changes in soil drainage or exposure, the population below rocks in any given locality is astonishingly stable.

Many of the creatures exposed by rolling a log or lifting a stone are hiding there just for the day that separates two active nights. Millipedes—"thousand-leggers" of various kinds—are vegetarians that rely on their armor and nocturnal habits to protect them from harm. Some are flat-backed; others have cylindrical bodies that curl up like watch springs when touched. Pale grayish sow-bugs, half an inch long, seem colored to blend better with stones in the dark. They are scavenging crustaceans, the only members of this huge class to solve the problem of living on land through all stages of development. Their jointed shells resemble the plates of an armadillo, and some of them roll into an almost perfect sphere when disturbed, hence their other name of "pill-bugs." Earwigs too creep under rocks, into earthworm burrows and through decayed wood, to wait until night comes and they can resume their roving in search of meat. Flat stones in sandy sea beaches often harbor these interesting animals. They are entirely harmless although they can nip mildly with jaw-like pincers on their abdominal ends. They investigate clothing left on the shore at night by beach parties, and can be recognized in the dark with ease. If the creature is small and runs away, but bites with the retreating end, it is almost surely an earwig. All our common kinds in the Northeast are transatlantic introductions. The largest measure over an inch in length and are wingless even when adult. Mother earwigs guard their eggs under stones, sitting on them like brooding hens until the youngsters hatch.

Some of the living animals below rotting wood and fallen logs use the decaying plant material for food. Termites and a special kind of cockroach often scurry to shelter when their homes are wrecked, their galleries torn apart. But in each case, only the large member of a remarkable partnership is visible without a microscope. Neither termites nor wood cockroaches by themselves can use the food they chew and swallow. They have no means for changing cellulose into sugars that can be absorbed. Instead they delegate digestion to a swarm of "guests" in their intestines. There thousands of protozoans swim through the moistened wood pulp, with long whip-lashes on their single-celled bodies. These tiny "simple" animals inside the insects engulf the plant fibers and split the large molecules into smaller ones. From the protozoans the insects recover the food in useful form. But the protozoans benefit too from this co-operative venture. Alone they could not live in even rotting wood. They have no jaws with which to break up the coarse fragments into pieces they can surround. In the digestive tract of their wood-eating partners, they thrive and make possible the success of the insect hosts.

Scientists have investigated this special sort of symbiosis by placing termites and wood cockroaches in heated dishes that did no harm to the insects but that were too hot for survival of their intestinal protozoans. The

experimental animals were returned to ordinary temperatures in a few hours. They continued to eat, but they became distended with undigested food and died of starvation without their living intestinal fauna. The most important gift a parent termite or wood cockroach can provide its young is a cropful of regurgitated food rich in protozoans, to populate the nymph's digestive system with living helpmates. Without them it can starve to death in the midst of an insect banquet.

A little rain fulfills a great need for tenants of the soil, but a continuous downpour means the undoing of many. The water fills the air spaces in the ground so that oxygen no longer diffuses freely into the depths. Some animals suffocate in their chambers. Others evade the water by burrowing deeper. A few drown where they lie, depending on unhatched eggs with waterproof shells to carry on their kind. Earthworms, swollen and discolored from absorbing too much water, leave their flooded burrows and take their chances on the surface. Robins gorge themselves on the hapless creatures as they seek drier spots in which to start afresh. Sunlight breaking through the storm clouds kills them and dries their soft bodies to stiff, shriveled relics that only the ants enjoy. Or beetle larvae attack a wet worm, biting it, backing off, only to rush in again and snap at another spot. Soon the insects have incapacitated their prey and are able to feast at leisure. But in the soil the water remains awhile to provide a medium for multitudes of parasites that swim in search of new hosts. Too much moisture can be almost as serious a misfortune as too little. Yet an excess usually lasts a far shorter time and the soil soon teems again with life.

Rain sometimes causes widespread redistributions of tenants of the soil. Slugs that were separated by considerable distances where they hid under rotting logs and decaying leaves, become active and seek out higher ground. A flat stone that ordinarily rests lightly on the ground and is too dry below to give an animal anything but momentary shelter, may become a haven during a rainy spell for dozens of slugs. These occasional clusterings are not without amorous advantages, and the creatures go forth after the deluge to scatter eggs far and wide.

Much of the moisture needed by soil animals comes to them, as to the plants, by capillarity from ground water far below the surface. For many of these creatures it is not necessary that they find drops of the liquid. Drinking may even be harmful since it introduces parasites and dilutes the digestive juices that should be concentrated to act efficiently on food. It is sufficient for great numbers of animals that they be surrounded by humid air. They are able to absorb water vapor from it and store the distilled moisture in their bodies where it is needed. Beebe mentioned a spectacular demonstration of this that he noticed on a visit to an island in the West Indies: "The strangest sight was hundreds of large, brown millipedes clinging to the stems of bushes, and small trees, apparently finding more moisture in the steady tradewinds than in the soil, which even under large stones, was parched and dry." Much more recently other scientists have tested various insects, by weighing them, confining them in jars of air with known humidity, and reweighing them after some hours or days. These creatures slowly lost water to the air if it was dry, but they were able to gain weight, though starving, by absorbing moisture from more humid surroundings.

An entomologist named Berlese found a way to learn how many animals and what kinds inhabit soil. He prepared a large metal funnel with a narrow neck shielded by a screen. Into the funnel he threw a known quantity of earth spaded from a test location. The screen kept it from falling through. Over the earth he hung a strong electric light bulb, to provide illumination and heat—both anathemas to most ground dwellers. Then under the funnel tip he set a jar of preserving fluid. As heat from the lamp caused soil moisture to evaporate at the top, the creatures crept unseen, deeper into the funnel. Its metal walls hemmed them in. Gradually they worked their way to the bottom and fell through the gauze into the killing bottle.

Mites and spiders, round worms and segmented worms, insects of many kinds never found before, dropped in unbelievable abundance from the shovelful of earth. Most of them were minute and the collection grew by the hour for weeks, until the funnel's contents were bone dry all the way down. The invisible boundary of moist earth finally reached the screen, herding before it all the tenants of the soil.

Most numerous of soil inhabitants proved to be mites—tiny creatures of many types, but each showing kinship to the spiders through possession of eight legs. In the top two or three inches of forest soil, as many as four thousand of these animals occupy each square foot. Deeper down their numbers dwindle, but they are minute enough to creep through insignificant openings in the soil when winter provides a reason for greater distance from the surface. The great majority of these mites are vegetarians, with short legs carrying hard-shelled bodies at a slow pace. But some are hunting mites that hurry around on long legs, always seeking prey for their "big" jaws. Yet few are large enough to see with the unaided eye, even if induced to crawl over a sheet of white paper. Berlese sorted his catch with a microscope, and the many specialists to whom he sent the strange collections were grateful far out of proportion to the actual weight of animals they received.

Leaves falling to the ground in autumn make their first step toward becoming humus. Beneath their shelter many animals prepare for hibernation or merely put off the evil day when a hard frost will penetrate the litter and bring their death. Wasps lose their independent ways when they creep below the blanket to join the variety of centipedes and millipedes that forage in such places all year through. Crickets under the leaves chirp half-heartedly, and spiders go off by themselves to spin little silken bags in which to crouch. Woolly bear caterpillars spew saliva into fine golden threads to sew two fallen leaves together. To the loose mesh they add large numbers of their own stiff bristles until the reinforced strands make a crude cocoon. This they line with more silk and stretch out to shed the remains of their bird-repelling coat. It makes a little knot of bristles at one end of the cocoon, while the shiny brown pupa proceeds with internal changes. Already its surface markings outline the transformation of a hairy caterpillar into a flying dagger moth.

Only an astounding fecundity saves the earth dwellers from their multitude of enemies and series of calamities. Every human step on soft earth kills hundreds by crushing their bodies between soil particles. Moles and mice tunnel through the ground to seek the living bits of food. Skunks, bears and 'possums hunt for earthworms, snails, and beetles by turning over stones and rocking logs aside. Man plows the field to sow his crops and exposes the various small animals to light, dry air and an appreciative following of birds. He clears away the fallen trees and piles the rocks in dry walls replacing moisture-holding hedgerows. Only the naturalist feels for the tenants of the soil, and his care has a selfish aspect too. Meticulously he replaces the roof over the many homes he studies, so that the creatures there will be less disturbed, and may continue to be present for an unannounced inspection on the next visit to the area. "Roll the log back" and "leave the stone exactly as you find it." As George Herbert wrote:

> "More servants wait on man
> Then he'll take note of. In every path
> He treads down that which doth befriend him."

On Being the Right Size[1]

J. B. S. HALDANE

THE MOST obvious differences between different animals are differences of size, but for some reason the zoologists have paid singularly little attention to them. In a large textbook of zoölogy before me I find no indication that the eagle is larger than the sparrow, or the hippopotamus bigger than the hare, though some grudging admissions are made in the case of the mouse and the whale. But yet it is easy to show that a hare could not be as large as a hippopotamus, or a whale as small as a herring. For every type of animal there is a most convenient size, and a large change in size inevitably carries with it a change of form.

Let us take the most obvious of possible cases, and consider a giant man sixty feet high—about the height of Giant Pope and Giant Pagan in the illustrated *Pilgrim's Progress* of my childhood. These monsters were not only ten times as high as Christian, but ten times as wide and ten times as thick, so that their total weight was a thousand times his, or about eighty to ninety tons. Unfortunately, the cross sections of their bones were only a hundred times those of Christian, so that every square inch of giant bone had to support ten times the weight borne by a square inch of human bone. As the human thigh bone breaks under about ten times the human weight, Pope and Pagan would have broken their thighs every time they took a step. This was doubtless why they were sitting down in the picture I remember. But it lessens one's respect for Christian and Jack the Giant Killer.

To turn to zoology, suppose that a gazelle, a graceful little creature with long thin legs, is to become large—it will break its bones unless it does one of two things. It may make its legs short and thick, like the rhinoceros, so that every pound of weight has still about the same area of bone to support it. Or it can compress its body and stretch out its legs obliquely to gain stability like the giraffe. I mention these two beasts because they happen to belong to the same order as the gazelle, and both are quite successful mechanically, being remarkably fast runners.

Gravity, a mere nuisance to Christian, was a terror to Pope, Pagan, and Despair. To the mouse and any smaller animal it presents practically no dangers. You can drop a mouse down a thousand-yard mine shaft and, on arriving at the bottom, it gets a slight shock and walks away, provided that the ground is fairly soft. A rat is killed, a man is broken, a horse splashes. For the resistance presented to movement by the air is proportional to the surface of the moving object. Divide an animal's length, breadth, and height each by ten; its weight is reduced to a thousandth, but its surface only to a hundredth. So the resistance to falling in the case of the small animal is relatively ten times the driving force.

An insect, therefore, is not afraid of gravity; it can fall without danger, and can cling to the ceiling with remarkably little trouble. It can go in for elegant fantastic forms of support like that of the daddy longlegs. But there is a force which is as formidable to an insect as gravitation to a mammal. This is surface tension. A man coming out of a bath carries with him a film of water of about one fiftieth of an inch in thickness. This weighs roughly a pound. A wet mouse has to carry about its own weight of water. A wet fly has to lift many times its own weight and, as everyone knows, a fly once wetted by water or any other liquid is in a very serious position indeed. An insect going for a drink is in as great danger as a man leaning out over a precipice in search of food. If it once falls into the grip of the surface tension of the

[1] From *Possible Worlds* by J. B. S. Haldane. Copyright, 1928, by Harper and Brothers, publishers, and reprinted with their permission.

water,—that is to say, gets wet,—it is likely to remain so until it drowns. A few insects, such as water beetles, contrive to be unwettable; the majority keep well away from their drink by means of a long proboscis.

Of course tall land animals have other difficulties. They have to pump their blood to greater heights than a man and, therefore, require a larger blood pressure and tougher blood vessels. A great many men die from burst arteries, especially in the brain, and this danger is presumably still greater for an elephant or a giraffe. But animals of all kinds find difficulties in size for the following reason: A typical small animal, say a microscopic worm or rotifer, has a smooth skin through which all the oxygen it requires can soak in, a straight gut with sufficient surface to absorb its food, and a simple kidney. Increase its dimensions tenfold in every direction, and its weight is increased a thousand times, so that if it is to use its muscles as efficiently as its miniature counterpart, it will need a thousand times as much food and oxygen per day and will excrete a thousand times as much of waste products.

Now if its shape is unaltered, its surface will be increased only a hundred-fold, and ten times as much oxygen must enter per minute through each square millimetre of skin, ten times as much food through each square millimetre of intestine. When a limit is reached to their absorptive powers their surface has to be increased by some special device. For example, a part of the skin may be drawn out into tufts to make gills, or pushed in to make lungs, thus increasing the oxygen-absorbing surface in proportion to the animal's bulk. A man, for example, has a hundred square yards of lung. Similarly the gut, instead of being smooth and straight, becomes coiled and develops a velvety surface, and other organs increase in complication. The higher animals are not larger than the lower because they are more complicated. They are more complicated because they are larger. Just the same is true of plants. The simplest plants, such as the green algae growing in stagnant water or on the bark of trees, are mere round cells. The higher plants increase their surface by putting out leaves and roots. Comparative anatomy is largely the story of the struggle to increase surface in proportion to volume.

Some of the methods of increasing the surface are useful up to a point but not capable of a very wide adaptation. For example, while vertebrates carry the oxygen from the gills or lungs all over the body in the blood, insects take air directly to every part of their body by tiny blind tubes called tracheae which open to the surface at many different points. Now, although by their breathing movements they can renew the air in the outer part of the tracheal system, the oxygen has to penetrate the finer branches by means of diffusion. Gases can diffuse easily through very small distances, not many times larger than the average length traveled by a gas molecule between collisions with other molecules. But when such vast journeys --from the point of view of a molecule—as a quarter of an inch have to be made, the process becomes slow. So the portions of an insect's body more than a quarter of an inch from the air would always be short of oxygen. In consequence hardly any insects are much more than half an inch thick. Land crabs are built on the same general plan as insects, but are much clumsier. Yet, like ourselves, they carry oxygen around in their blood, and are therefore able to grow far larger than any insects. If the insects had hit on a plan for driving air through their tissues instead of letting it soak in, they might well have become as large as lobsters, though other considerations would have prevented them from becoming as large as man.

Exactly the same difficulties attach to flying. It is an elementary principle of aeronautics that the minimum speed needed to keep an airplane of a given shape in the air varies as the square root of its length. If its linear dimensions are increased four times, it must fly twice as fast. Now the power needed for the minimum speed increases more rapidly than the weight of the machine. So the larger airplane, which weighs sixty-four times as much as the smaller, needs one hundred and twenty-eight times its horsepower to keep up. Applying the same principles to the birds, we find

that the limit to their size is soon reached. An angel whose muscles developed no more power, weight for weight, than those of an eagle or a pigeon would require a breast projecting for about four feet to house the muscles engaged in working its wings, while to economize in weight its legs would have to be reduced to mere stilts. Actually a large bird such as an eagle or kite does not keep in the air mainly by moving its wings. It is generally to be seen soaring, that is to say balanced on a rising column of air. But even soaring becomes more and more difficult with increasing size. Were this not the case eagles might be as large as tigers and as formidable to man as hostile airplanes.

But it is time that we passed to some of the advantages of size. One of the most obvious is that it enables one to keep warm. All warm-blooded animals at rest lose the same amount of heat from a unit area of skin, for which purpose they need a food supply proportional to their surface and not to their weight. Five thousand mice weigh as much as a man. Their combined surface and food, or oxygen consumption, are about seventeen times a man's. In fact a mouse eats about one quarter of its weight of food every day, which is mainly used in keeping it warm. For the same reason small animals cannot live in cold countries. In the arctic regions there are no reptiles or amphibians, and no small mammals. The smallest mammal in Spitzbergen is the fox. The small birds fly away in the winter, while the insects die, though their eggs can survive six months or more of frost. The most successful mammals are bears, seals, and walruses.

Similarly, the eye is a rather inefficient organ until it reaches a large size. The back of the human eye on which an image of the outside world is thrown, and which corresponds to the film of a camera, is composed of a mosaic of "rods and cones" whose diameter is little more than a length of an average light wave. Each eye has about half a million, and for two objects to be distinguishable their images must fall on separate rods or cones. It is obvious that with fewer but larger rods and cones we should see less distinctly. If they were twice as broad, two points would have to be twice as far apart before we could distinguish them at a given distance. But if their size were diminished and their number increased, we should see no better. For it is impossible to form a definite image smaller than a wave length of light. Hence a mouse's eye is not a small-scale model of a human eye. Its rods and cones are not much smaller than ours, and therefore there are far fewer of them. A mouse could not distinguish one human face from another six feet away. In order that they should be any use at all, the eyes of small animals have to be much larger in proportion to their bodies than our own. Large animals, on the other hand, only require relatively small eyes, and those of the whale and elephant are little larger than our own.

For rather more recondite reasons the same general principle holds true of the brain. If we compare the brain weights of a set of very similar animals such as the cat, cheetah, leopard, and tiger, we find that as we quadruple the body weight the brain weight is only doubled. The larger animal with proportionately larger bones can economize on brain, eyes, and certain other organs.

Such are a very few of the considerations which show that for every type of animal there is an optimum size. Yet although Galileo demonstrated the contrary more than three hundred years ago, people still believe that if a flea were as large as a man it could jump a thousand feet into the air. As a matter of fact the height to which an animal can jump is more nearly independent of its size than proportional to it. A flea can jump about two feet, a man about five. To jump a given height, if we neglect the resistance of air, requires an expenditure of energy proportional to the jumper's weight. But if the jumping muscles form a constant fraction of the animal's body, the energy developed per ounce of muscle is independent of the size, provided it can be developed quickly enough in the small animal. As a matter of fact, an insect's muscles, although they can contract more quickly than our own, appear to be less efficient, as otherwise a flea or grass-

hopper could rise six feet into the air.

And just as there is a best size for every animal, so the same is true for every human institution. In the Greek type of democracy all the citizens could listen to a series of orators and vote directly on questions of legislation. Hence their philosophers held that a small city was the largest possible democratic state. The English invention of representative government made a democratic nation possible, and the possibility was first realized in the United States, and later elsewhere. With the development of broadcasting it has once more become possible for every citizen to listen to the political views of representative orators, and the future may perhaps see the return of the national state to the Greek form of democracy. Even the referendum has been made possible only by the institution of daily newspapers.

To the biologist the problem of socialism appears largely as a problem of size. The extreme socialists desire to run every nation as a single business concern. I do not suppose that Henry Ford would find much difficulty in running Andorra or Luxembourg on a socialistic basis. He has already more men on his pay roll than their population. It is conceivable that a syndicate of Fords, if we could find them, would make Belgium, Ltd., or Denmark, Inc., pay their way. But while nationalization of certain industries is an obvious possibility in the largest of states, I find it no easier to picture a completely socialized British Empire or United States than an elephant turning somersaults or a hippopotamus jumping a hedge.

Storm[1]

GEORGE R. STEWART

ENVELOPED IN the gaseous film of the atmosphere, half-covered by a skim of water forming the oceans—the great sphere of the earth spun upon its axis and moved inflexibly in its course around the sun. Continuously, in the succession of day and night, season and season, year and year, the earth had received heat from the sun, and again lost into space that same amount of heat. But this balance of the entire sphere did not hold for its individual parts. The equatorial belt received yearly much more heat than it radiated off, and the polar regions lost much more heat than they received. Nevertheless the one was not growing hotter while the others sank toward absolute zero. Instead, at once tempering cosmic extremes and maintaining equilibrium with the sun, by a gigantic and complex circulation, the poles constantly cooled the tropics and the tropics reciprocally warmed the poles.

In this process, cold currents bore icebergs toward the equator, and warm currents moved poleward. But even these vast rivers of the oceans achieved only a small part of the necessary whole.

In the stupendous work of transport the paramount agent was the atmosphere, thin and insignificant though it was in comparison with the monstrous earth itself. Within the atmosphere the chief equalizers of heat were the great winds—the trades and anti-trades, the monsoons, the tropical hurricanes, the polar easterlies, and (most notable of all) the gigantic whirling storms of the temperate zones, which in the stateliest of earthly processions moved ever along their sinuous paths, across ocean and continent, from the setting toward the rising run.

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As a crab moves on the ocean-bottom, but is of the water, so man rests his feet upon the earth—but lives in the air. Man thinks of the crab as a water-animal; illogically and curiously, he calls himself a creature of the land.

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As water environs the crab, so air surrounds, permeates, and vivifies the body of man. If traces of noxious gas mingle with it, he coughs and his complexion turns deathly gray. If it becomes overcharged with water-droplets he gropes helplessly in fog. If it moves too fast, he becomes a pitiable wind-swept creature, cowering in cellars and ditches. Even for rain he is dependent on air. If actually removed from air, he dies immediately.

Physicists describe the air as tasteless, odorless, and invisible. It could not well be otherwise. But these are not so much its qualities as adjustments of man. For if the air impressed the senses, being at the same time all-pervasive, it would necessarily obscure all other tastes, odors, and sights.

Air is so bound up with man's life that only with difficulty can he realize its existence as something in itself. To a savage it is as much an abstraction as consciousness; a child can conceive wind, which is air in motion, but not air itself. In our own language, *wind, mist,* and *rain* are ancient words, but *air* is a late and learned borrowing of a Greek word, which itself originally meant *wind.*

In his pre-natal months, indeed, man is aquatic. But thrust forth into the atmosphere —small and red—he sucks in a first breath spasmodically, and owns his allegiance to air. Seventy years later, a nurse stands by an old man's bed, waiting for what is known as "the last breath."

Even among the so-called land-animals, man is less than most bound to the earth. His tree-dwelling ancestors may have descended to the ground furtively, as to a foreign and hostile region; in civilization people spend most of their time upon raised platforms called floors.

As individual men move in a too well-known landscape without noticing its features, so man—fallaciously—takes for granted the all-pervasive air. His historians deal in lands and seas. But most movements of peoples have been not so much quests for better countries as for better atmospheric conditions. "A place in the sun" explains much of history more exactly than we usually realize, except that just as often we should say, "A place in the rain." A thunderstorm in haytime may overthrow a ministry, and a slight average rise or fall of temperature may topple a throne; a shift in the storm-track can ruin an empire. In the twentieth century a temporary variation of rainfall put Okies upon the highway by the hundred-thousand, just as in the third century a similar shift might in a single year hurl the Huns against the Chinese frontier and set the blue-painted Caledonians swarming at Hadrian's Wall. In the mass as in the individual, man is less a land-animal than a creature of the air.

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In an age all too familiar with war the yearly cycle of the weather is well imagined in terms of combat. It is a war in which a stronghold or citadel sometimes beats off assault after assault. More often the battle-line shifts quickly back and forth across thousands of miles—a war of sudden raids and swift counterattacks, of stern pitched battles, of deep forays and confused struggles high in the air. In the Northern Hemisphere the opponents are the Arctic and the Tropics, North against South. Uncertain ally to the South—now bringing, now withdrawing aid —the sun shifts among the signs of the zodiac. And the chief battle-line is known as the Polar Front.

There is no discharge in that war, nor shall be until the earth grows cold. Yet every spring as the sun swings north through Taurus, it renews the forces of the South, and they sweep forward as if to final victory. Night vanishes from the Pole, and in unbroken day Keewatin and Siberia grow warm. The northern forces shrink back into their last stronghold over the ice-cap. The sun moves from Cancer to Leo. The Polar Front is no longer a well-marked battle-line; few and weak storms, mere guerrilla skirmishes, move along it close to the pole.

Then, as if thinking the victory won or as if wishing to preserve some balance of power, the sun withdraws into Virgo and Libra. Again night falls over the Arctic. The northern ranks re-form and advance. But the forces

of the South still feel the sun at their backs and will not be routed. The line of the Polar Front becomes sharply marked—cold polar air to the north, warm tropical air to the south. And along the Front, like savage champions struggling in the death grapple, the storms move in unbroken succession.

In January the sun rides deep in Capricorn far from the northern Pole. Unbroken darkness lies over the Arctic, and from the ever-deepening chill of that night the cold air sweeps southward. Now it battles fiercely along the Polar Front, and now at some favorable point a lightning column breaks through and pierces clear to the Tropic. But still the forces of the South fight stiffly, and their ally never wholly deserts them. For even in mid-winter the broad equatorial belt lies hot in the sun, and high in the air through the great current of the anti-trades its reserves move northward toward the battle-line.

So in mid-winter the combat is fiercest, for then the forces of heat and cold both are strong, and have drawn most closely together. At that time, as in many another war, the citadels of the combatants are quiet and peaceful. In the South the trade winds blow gently, week in, week out. Far to the North the stars shine in the calm polar night. Only in that No Man's Land which is the Temperate Zone the storms raid and harry.

Then the sun moves from Aries into Taurus, and the southern forces drive northward once again.

In meteorology the use of such a military term as "front" may be a chonological accident—that the theory was developed in the years following 1914, a time when such military expressions were on everyone's tongue. The theory has become much complicated, but men still talk of the Polar Front, and may even yet talk of it when the Western Front has happily become a dim memory.

Had the discovery been made in more peaceful years, men (who involuntarily try to humanize nature) would perhaps have derived a term from marriage rather than war. This comparison also is apt—love, as well as hate, rises between unlikes, and love like hate breeds violent encounters. Best of all would be to use words unrelated to human feelings. Those great storms know neither love nor hate.

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Weather-wise after their kind, men say, the frogs from their puddles croak before rain, and the mountain goats move to the sheltered face of the peak before the blizzard strikes. Such also may have been the wisdom of man's ancestors before man was. In nerve-endings now decadent, they felt the moisture in the air; in the liquids of their joints they sensed the falling pressure.

The ages passed; brow and chin moved forward; man walked two-legged upon the earth. Hunter lying in wait, seed-gatherer wandering afield—they came to know vaguely the warnings of wind and cloud. And as fire (the new-found ally) flickered upon the cave-wall, they entrusted their knowledge to language (that great preserver of knowledge), fashioning rhymes and saws and proverbs. But language, which always said too much or too little, was also a great corrupter of knowledge. He who handled words most cunningly was seldom the wisest, but the catchiest proverbs, not the truest, survived. (So even yet those who speak English say:

Rain before seven,
Clear before eleven.

But those who speak other languages do not say that particular foolishness, not because they are wiser, but because in their speech the two numerals fail to rhyme).

Then, when many generations had passed, came high-priests and shamans and medicine-men. Self-deceived, stupid followers of tradition, or mere cynics, they beat drums for rain, and cried that the gods were wroth. They sacrificed bullocks, and gashed themselves with knives and lancets before the altars of Baal.

Next, too briefly, came the clean Hellenic mind searching rational truth. "The storm lasted three days," wrote Herodotus. "At last, by offering victims to the Winds, and charming them with the help of conjurers,

while they sacrificed to Thetis and the Nereids, the Magians succeeded in laying the storm." And then he added dryly, "Or perhaps it ceased of itself." Plato first used the word *meteorology*, meaning talk of high, celestial things, beyond the realm of air. Aristotle, canny north-country man, shunning such poetic flim-flam, took over the word for the study of all actions of wind, rain, and vapor in the air itself.

Ptolemy recorded his observations systematically, and Hippocrates studied the effect of weather upon his patients. But the Hellenic spirit withered, and the Roman mind was incurious and superstitious. Even the great Virgil commended the heifers and the rooks as divinely inspired weather-prophets, and the keen-witted Horace (more in jest than in earnest, we hope) saw the warning of Jove in an unexpected clap of thunder. Augur, astrologer, and wind-selling witch held sway through long centuries.

At last Galileo questioned nature's abhorrence of a vacuum, and recommended the problem to one of his students for investigation. From this beginning sprang modern meteorology. Temperature, wind, even humidity, man could feel through his own senses and roughly estimate. But pressure, most valuable guide of all, was too subtle for him, until he achieved the barometer. Then at last he came to know the waves and whirlpools, the swirling shallows and stagnant deeps, of that ever-changing ocean of air on the bottom of which the civilizations flourish and decay.

And since the storm knows no boundary of race or continent, men of all nations perforce have labored together to learn the ways of weather. Torricelli, the Italian, invented the barometer. Halley, the Englishman, mapped the winds. Franklin, the American, audaciously grasped the idea of a revolving and traveling storm. Coriolis, the Frenchman, discovered how the earth's own rotation shifts the wind. Buys Ballots's Law derives from a curiously named Dutchman; Dove, the German, stated the laws of storms; Bjerknes, the Norwegian, probed their nature and explained their life-history.

To these and many others man owes it that he no longer babbles a charm, or tears his flesh in supplication to a storm-demon. Ahead, if man can but conquer himself, lies every hope of greater victory. Still farther off, beyond limits of rational prophecy, lies the time when by arts as yet unimagined man may attain that dream of Magian, witch, and druid—not to predict weather, but to control it.

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. . . what was that storm?

It cannot well be compared to a mountain or a machine or any physical thing, for they exist continuously of the same materials. But a storm constantly draws into itself new air and casts out the old.

In this a storm is like a wave or whirlpool which exists in the water but never of the same water. But a storm is vastly more complicated than any wave or whirlpool.

There is a closer analogy—with a living organism, even with a human being. As a man is conceived in the fierce onset of opposing natures, so also a storm begins in the clash of the dry cold air from the north and the mild moist air of the south. Like a person, a storm is a focus of activities, continuing and varying through a longer or shorter period of time, having a birth, youth, maturity, old age, and death. It moves; in a sense, it reproduces its kind, and even takes in food, exhausts it of energy, and casts out the waste. The storm, to be sure, develops only in a manner determined by its antecedents and environment—but many philosophers think little also of man's apparent free will. As for sensation and consciousness of which we talk much and know little—a storm seems to sheer off from a high-pressure area much as the human hand shrinks from the touched nettle.

But a community or a nation yields a still better analogy. Rome or England may endure through centuries although Romans and Englishmen die and are born hourly. The new storms sprung of the old are more like colonies than children; as with Rome and Constantinople there may be doubt as to which maintains the continuity of empire. The life-cycle of a storm is like that of a nation which from apparent decadence is

sometimes renewed into full vigor. Finally a storm, like a nation, has an indefinable abstract existence. Men speak of England when they mean neither its land nor its government nor its people, but merely some symbolic centuries-old ideal. And more, when men think thus, tears come to their eyes, and they march with high hearts to battle. So also in every storm exists a something which meteorologists cumbersomely name "a center of low pressure." This is neither air, nor cloud, nor wind, nor rain—yet, as with a nation, this mere abstraction represents the continuing reality of a storm.

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While as yet he scarce walked upright steadily, man fashioned for himself many gods—of earth and of sea, of the nether world, but (most of all) gods of the sky. Of these, sometimes he imagined gods of the farther air, high and serene, celestial in the empyrean. Sometimes they were of the middle air, rulers of the four winds, of thunder and lightning, of rain. Still again, they were demons of the lower air, malignant, haunting headland and cliff and rim-rock, pouncing in squall or sand-storm. But most often, each god had many aspects, being now the far master of the sky, now the rain-bringer, and again the spiteful demon crushing the corn-field with hail.

Of all lands and peoples is the roll-call of the storm-gods. Zeus the cloud-gatherer, lord of lightning. Adad-Ramman, the duplex, sender to the Babylonian plain alike of nourishing rain and devastating tempest. Jupiter of the rain; Thor, the thunderer; Indra, freer of the waters. Pulugu of the Bengal sea, before whose wrath the pigmy Andamanese cower low. Kilima, Mahu, Dzakuta. Pase-Kamui of the Ainus; Aziak who rules the air above the far-off northern ice. Tlaloc of Mexico, thundering from his mountain-top.

Man walks the earth, but is of the air. Everywhere he pays homage, not to the air itself of which he is unconscious, but to the powers which move within the air. He bows his head before wind and rain.

And what of Jehovah? Jehovah who poured the Deluge forty days and forty nights, and then sent the rainbow, his sign and pledge! Jehovah who came as a thick cloud upon the mountain and spoke to his servant Moses through thunders and lightnings!

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The place of man's birth is unknown; but in poetic dreams (as if dimly remembering) man yearns back toward some land benign and equable, far from the path of storms. Such was the Earthly Paradise. Such was Lotus-Land, and that far country of Those-beyond-the-North-Wind. Such was the Isle of Apples, Avalon:

> *Where falls not hail or rain or any snow,*
> *Nor ever wind blows loudly.*

Still, near the Tropics, such regions may be found; in milder epochs they spread far toward the Poles.

Even yet, man seems to carry with him mementoes of some idyllic past. In his mind a grasshopper, each summer he assumes that the ever-blooming tropics still surround him. Only by hard-won wisdom, not by racial aptitude, does he lay up for the future. The birds fly south without waiting for frost; the bear stores up fat to hibernate; the bee and the beaver hoard food. If such creatures had grave and reverend philosophers, they might teach more concern with the present, and less with the future. But the average man always has difficulty in getting round to mend the roof in dry weather.

From the tropics also may stem man's dislike of the violent changes of the temperate zones. For (as the saying goes) the tropics have climate but no weather; they display a set diurnal or seasonal rhythm. In his deepest instincts man seems to expect such sameness, to resent sudden shifts. He has never learned that in mid-latitudes unusual weather is all he can expect. He always grumbles.

One belief of man's growth is that when as a proto-human he faced a more severe climate, he was forced to work harder and so survived and started on the road to civilization. But this negative theory fails to explain why man did not retreat to the tropics or

else like other species merely die off after a few uncomfortable lingering generations.

Another theory of survival stresses weather instead of climate. When the gentle epoch ended and storms became many and violent, then those very storms—the shock of constant adjustment—stimulated man out of his tropical languor, and gave him power and will to outface a harsher world. With each storm and passing front, blood pressure rises and falls, nerves react, secretions alter. So physicians have learned, and they quote from Hippocrates, father of medicine: "Air is lord."

Some theorists say even that civilization can flourish only in the lands along the storm-track, where man most often feels the bracing shift from warm and moist to cold and dry, back and forth. For evidence, they point to Ptolemy's records, which seem to show that in their times of greatness the Mediterranean lands knew more turns of weather than now in these decadent days.

This marriage of civilization and storms has not been proved, or yet refuted. If it is true, then those atmospheric powers which seem to overwhelm men in the temperate zone, also stimulate the energy to live and conquer. Civilized men are like Napoleon's grenadiers—they always grumble, but they always march.

. . . . . .

Four times in the known history of the earth have the mountains risen like a tide. Three times have the forces of air and water made head against those mountains, eating away the towering granite peaks into little rounded hills. Two hundred and fifty million years is the period of that cycle—majestic among earthly rhythms.

When, as now, the mountains have risen and stand high, then the storms rage most often and most fiercely. When the mountains again are low and the ice-caps melted and the seas grown shallow with wastage of granite, the air grows calm, and the languorous mood of the tropics reaches far toward north and south.

In this great struggle the chief allies of the hills are the plants. They bind the soil with their roots as with fine tough threads. With grass and fallen leaves they mat the earth against the rain-drops.

Dubious partners in the struggle are the animals. A few, like the beavers, work to hold back the water. Some, like the flyers and light-footed climbers, scarcely enter the conflict. The burrowers—rodents, insects, and worms—ease the rush of the water and give it entrance to the earth, but their castings of loose dirt wash away quickly. Worst of all, enemies against the hills, are the grazers and browsers. Like the stag in the fable, they eat away the cover of leaves and grass; with their sharp and hard hoofs they wear trails into the raw earth, and along the trails the running water cuts gullies.

Man, whose ancestors crawled out from the salt water, remains still a creature of the sea-margin, his habitat the low plains. A thousand feet is a small fraction of the ocean's depth; yet, if the ocean were suddenly to rise a thousand feet, man would be largely destroyed. Of Europe would remain only some mountainous islands; the United States would fare not much better. Mexico City, cupped among its mountains, would survive as the largest center of habitation in the world.

Living thus upon the plains, man is upon neutral ground between the mountains and the ocean. The torrents from the hills grow quiet, and let fall their silt. The great slow rivers here and there cut into the banks, and elsewhere build up the flood-plains or thrust forward the long fingers of their deltas into the sea.

Man allies himself now with the mountains, now with air and water. Like the beaver, he builds dams and retaining walls. Like the sheep, he strips the earth and cuts trailways. He protects his habitations against the water, so that through the centuries the level of a city rises foot by foot. In the main, swayed by immediate need and convenience, he remains through the long course of time careless of the struggle, planless.

. . . . . .

While men built Westminster Abbey and King Louis the Saint rode to his crusades, the cliff-cities of Mesa Verde—first civiliza-

tion within the area of the United States—knew their last prosperity. For seven centuries they have lain empty, shunned by Ute and Navajo as spirit-haunted ruins of the Old People. But those centuries have meant little to earth and sun; as today, the winter storms swept down when Balcony House was new and fat babies rolled on its terrace.

Most likely a storm made little difference in the life of those diminutive, nimble-footed people whose ancient toe-holds still pit the face of the cliffs. In the winter their cornfields on the mesa-top needed no care; the season held off the nomad raiders who came harrying in summer. While the storm raged and ice-glaze made the cliff-paths impassable, the dwellers in Balcony House may have settled down to their quietest and happiest days. The granaries were deep with corn and beans; the spring at the back of the rock-shelter flowed (as it still flows) with pure, cool water. Their dogs lived with them, and their turkeys were penned at the back of the houses. A fire of a few sticks sufficed in the thick-walled houses and the underground club-rooms of the men. For clothing there were deer-skins and blankets of turkey feathers. The great over-hang of arched rock was a shelter from snow and wind.

An interval for talk and laughter, for weaving, for fashioning of arrow-heads, for discussion about next year's corn-planting, for long rituals of religion—when the storm had passed by and the ice-glaze was shattered beneath the unveiled sun, then was time enough to climb the cliffs, and go visiting to the other villages.

But modern man cannot withdraw. He expects much more of his civilization; he has spread it far and wide until it sprawls; he has given hostages. Therefore, he must sally forth about his flocks and herds; he must look to his roads and ditches, his levees and culverts, his wires and rails. To protect his machines he must invent other machines and with them labor against the storm. The honor of the battle is now not so much to skill and courage as to flawless steel and cool bearings.

At the end, our cities will stand like those others. In the year when Edward of England made war on Llewellyn the Welshman and Ser Marco Polo was new in the court of Kublai Khan, the rains failed; year after year, drought lay upon the mesa-land. As some think the people began to raise a great temple to placate the gods of storm; that temple still stands unfinished. Before the twenty-four years of drought had passed, the people were gone; dry winds swirled ashes in empty courtyards.

Whether the civilization of a land withdraws before the storm or fights against it, the end will be the same. Man is of the air, and the air must rule him. Drought or flood, cold winds and ice, heat, blown dust, shift of the storm track—in the end they overcome even the imperturbable machines.

• • • • • •

Once upon a time (to tell a fable) a primitive tribe lived beside a broad, brackish river near the ocean. This river had a disconcerting and inexplicable habit. Sometimes when the people wanted to dig clams, they found the water lapping high against the banks, and the clam-beds flooded. Sometimes when the people went to fish, they found wide mud-flats where they had expected to spear salmon.

At first the people attempted no explanation. After many generations they came to realize that a river-god, capricious and sometimes malignant, was responsible for this rise and fall. They placated the god by throwing flowers and food into the water, and now and then (when famine came) a baby.

After further generations a wise man arose among the people. He showed them how to outwit the river-god, who was really stupid, or else subordinate to the sun-god. For, observing the time of high water by the position of the sun, you could return next day when the sun was in the same position, and find the water high again. The priests were horrified, and had the man stoned to death for impiety, but the people found his ideas useful.

Throughout further centuries the knowledge of the tides increased. It was learned that they followed the moon more than the

sun, that they were greater toward the north, that even the vagaries of spring- and neap-tides accorded to rule. Finally the people, having developed mathematics and printing, published tables showing for a year in advance the height and time of every tide. Local influences such as wind and rain still produced a little variation, but the tide was no longer mysterious, and fearful; it was wholly understood.

As is the tide, so is the weather; the atmosphere, like the ocean, moves under physical laws. But the atmosphere is more mobile, so that the forces seriously affecting it are more numerous. All its motions arise from the heat of the sun, but this simplicity lies obscured beneath complications. Gravity, inertia, electricity, the spherical shape of the earth, its rotation, the ocean-currents, the contrasts beween water and land and between desert and forest, the height of mountains, the compressibility of air, the almost explosive qualities of water-vapor—these and other forces combine to produce the weather.

Man is now able to make approximate short-range forecasts. He has reached about as far as the people who estimated tides by the sun. But many of the forces of weather-control have already been stated with mathematical exactitude. The way of progress lies ahead, wide and open. A century hence, Siberia and Patagonia alike, Arctic and Antarctic, the islands of the sea and the ships that cross the sea, may all report to one great bureau. Then the published tables of next year's weather may be as accurate as the published tables of next year's tides.

Only man's quarrelsomeness seems likely to prevent this consummation. To master and apply the laws of the air without a world-wide co-operation is like trying to predict tides with an imperfect knowledge of the motions of sun and moon.

If the final success is attained, what will be the effect upon man? Will he at last have to stop talking and speculating about the weather? Will the foreknowledge that he must prepare against a tornado upon a given day be more strain than grasshopper-like ignorance and sudden disaster? Will the removal of the daily mystery only serve perhaps to make life at once safer and more boring?

5

Science and Scientific Method

Contemplation of the nature of knowledge and the way to achieve it has produced many contributions to the "philosophy" of science. Even as artists have shed most light on the nature and function of the arts, so scientists have made the wisest comment on the method and purpose of their work. Yet with all that has been said, a glance within ourselves will show that even today, in the so-called age of science, the meaning and implications of science are all too little understood. The notions of the average man in this respect are often vague and shallow. Even what is called "scientific method" is less well understood than we may believe; and certainly it is not widely practiced. Often the modern reader comes to think of the inductive method as the whole story, whereas men of imagination have extended the bounds of science by creative thought as much as by experiment—sometimes in ways as startling

at first as many a modern scientific generalization. Their contemplation of science has often produced more important results than their experimental conclusions.

One of these men was Francis Bacon. Near the end of his life he was making discoveries about preservation through freezing. But today he is remembered for the impetus he gave to scientific investigation. Soon after Bacon's death, the English Royal Society was established "for the promoting of . . . Experimental Learning." To this group Bacon was a kind of patron saint, for it was he who had most clearly phrased the whole idea of experimental learning. It was a time when understanding method was of prime importance, and scientists were anxious to indicate to fellow scientists that they knew their limits. This tendency can be seen in Galileo's "Proof That the Earth Moves" and in the "Discoveries" of Newton, one of the early members of the Royal Society. Today so much self-consciousness about what, as a scientist, one could or could not say might make a man seem like a newly-instructed schoolboy. Yet Thomas Henry Huxley's lectures less than a century ago were filled with homely illustrations used to help mature and intelligent laymen understand what the scientist was trying to do—witness his "The Method of Scientific Investigation." Huxley was explaining Darwin and the theory of evolution, but he also felt impelled to explain science itself.

The story continues in our time. Bertrand Russell, philosopher and mathematician, has written about "social" science, and would, like Bacon, once more broaden the aim of science; but this time beyond mere learning to its human application. Russell considers possible relations between physical, biological, and social sciences for the betterment of society as a whole and the promotion of human happiness. He and other pioneers are the modern philosophers of science ranging widely in their creative thinking beyond laboratory walls and even "practical" ends. The reader may be startled to find Dante quoted in an article called "Science," or he may wonder at any possible linkage between mathematics and good and evil. He will find that Russell is not going off at a tangent with the Dante, and that Whitehead was not writing of "Mathematics and the Good" merely to indicate a queer association made by an ancient Greek called Plato. Both essays extend the imagination, as intended.

It may be that "science" now sees its limitations more clearly than in Bacon's day or Huxley's. One of its main features is its almost humorous recognition of these limitations—and of the empirical, not absolute, nature of scientific discovery. Both Fred L. Whipple and Gilbert H. Lewis show this quiet insistence, and Russell cites the limitations of a "scientific civilization" as well as its virtues.

What can be more clearly an idol of the marketplace than the wide-spread belief that science and philosophy no longer dwell in men together as of old? Perhaps, as Whitehead finally says, philosophy "is not a science." But in the twentieth century many scientists are good philosophers, looking critically at their own activity and relating science to a larger view of both the universe and man's doings and beliefs. Many a modern scientist turned writer has been interesting not only as scientist but as man speaking to man. Such writers do not find science all-sufficient; they do not forget common sense or put imagination on a shelf; they show themselves to be larger than their particular "science"—astronomy or economics or mathematics—and surely better and more lasting writers for so being.

Old and New Knowledge[1]

SIR FRANCIS BACON

I

MAN, being the servant and interpreter of nature, can do and understand so much and so much only as he has observed in fact or in thought of the course of nature: beyond this he neither knows anything nor can do anything.

II

Neither the naked hand nor the understanding left to itself can effect much. It is by instruments and helps that the work is done, which are as much wanted for the understanding as for the hand. And as the instruments of the hand either give motion or guide it, so the instruments of the mind supply either suggestions for the understanding or cautions.

III

Human knowledge and human power meet in one; for where the cause is not known the effect cannot be produced. Nature to be commanded must be obeyed; and that which in contemplation is as the cause is in operation as the rule.

IV

Towards the affecting of works, all that man can do is to put together or put asunder natural bodies. The rest is done by nature working within.

V

The study of nature with a view to works is engaged in by the mechanic, the mathematician, the physician, the alchemist, and the magician; but by all (as things now are) with slight endeavour and scanty success.

VI

It would be an unsound fancy and self-contradictory to expect that things which have never yet been done can be done except by means which have never yet been tried.

VII

The productions of the mind and hand seem very numerous in books and manufactures. But all this variety lies in an exquisite subtlety and derivations from a few things already known; not in the number of axioms.

VIII

Moreover the works already known are due to chance and experiment rather than to sciences; for the sciences we now possess are merely systems for the nice ordering and setting forth of things already invented; not methods of invention or directions for new works.

IX

The cause and root of nearly all evils in the sciences is this—that while we falsely admire and extol the powers of the human mind we neglect to seek for its true helps.

X

The subtlety of nature is greater many times over than the subtlety of the senses and understanding; so that all those specious meditations, speculations, and glosses in which men indulge are quite from the purpose, only there is no one by to observe it.

XI

As the sciences which we now have do not help us in finding out new works, so neither does the logic which we now have help us in finding out new sciences.

XII

The logic now in use serves rather to fix and give stability to the errors which have their foundation in commonly received notions than to help the search after truth. So it does more harm than good.

XIII

The syllogism is not applied to the first principles of sciences, and is applied in vain

[1] From *Novum Organum*, in *The Philosophical Works of Francis Bacon*, edited by Robert Leslie Ellis and James Spedding, London, 1861, vol. iv.

to intermediate axioms; being no match for the subtlety of nature. It commands assent therefore to the proposition, but does not take hold of the thing.

XIV

The syllogism consists of propositions, propositions consist of words, words are symbols of notions. Therefore if the notions themselves (which is the root of the matter) are confused and over-hastily abstracted from the facts, there can be no firmness in the superstructure. Our only hope therefore lies in a true induction.

XV

There is no soundness in our notions whether logical or physical. Substance, Quality, Action, Passion, Essence itself, are not sound notions: much less are Heavy, Light, Dense, Rare, Moist, Dry, Generation, Corruption, Attraction, Repulsion, Element, Matter, Form, and the like; but all are fantastical and ill defined.

XVI

Our notions of less general species, as Man, Dog, Dove, and of the immediate perceptions of the sense, as Hot, Cold, Black, White, do not materially mislead us; yet even these are sometimes confused by the flux and alteration of matter and the mixing of one thing with another. All the others which men have hitherto adopted are but wanderings, not being abstracted and formed from things by proper methods.

XVII

Nor is there less of wilfulness and wandering in the construction of axioms than in the formations of notions; not excepting even those very principles which are obtained by common induction; but much more in the axioms and lower propositions educed by the syllogism.

XVIII

The discoveries which have hitherto been made in the sciences are such as lie close to vulgar notions, scarcely beneath the surface. In order to penetrate into the inner and further recesses of nature, it is necessary that both notions and axioms be derived from things by a more sure and guarded way; and that a method of intellectual operation be introduced altogether better and more certain.

XIX

There are and can be only two ways of searching into and discovering truth. The one flies from the senses and particulars to the most general axioms, and from these principles, the truth of which it takes for settled and immovable, proceeds to judgment and to the discovery of middle axioms. And this way is now in fashion. The other derives axioms from the senses and particulars, rising by a gradual and unbroken ascent, so that it arrives at the most general axioms last of all. This is the true way, but as yet untried.

XX

The understanding left to itself takes the same course (namely, the former) which it takes in accordance with logical order. For the mind longs to spring up to positions of higher generality, that it may find rest there; and so after a little while wearies of experiment. But this evil is increased by logic, because of the order and solemnity of its disputations.

XXI

The understanding left to itself, in a sober, patient, and grave mind, especially if it be not hindered by received doctrines, tries a little that other way, which is the right one, but with little progress; since the understanding, unless directed and assisted, is a thing unequal, and quite unfit to contend with the obscurity of things.

XXII

Both ways set out from the senses and particulars, and rest in the highest generalities; but the difference between them is infinite. For the one just glances at experiment and particulars in passing, the other dwells duly and orderly among them. The one, again, begins at once by establishing certain abstract and useless generalities, the other rises by gradual steps to that which is prior and better known in the order of nature.

XXIII

There is a great difference between the Idols of the human mind and the Ideas of

the divine. That is to say, between certain empty dogmas, and the true signatures and marks set upon the works of creation as they are found in nature.

XXIV

It cannot be that axioms established by argumentation should avail for the discovery of new works; since the subtlety of nature is greater many times over than the subtlety of argument. But axioms duly and orderly formed from particulars easily discover the way to new particulars, and thus render sciences active.

XXV

The axioms now in use, having been suggested by a scanty and manipular experience and a few particulars of most general occurrence, are made for the most part just large enough to fit and take these in: and therefore it is no wonder if they do not lead to new particulars. And if some opposite instance, not observed or not known before, chance to come in the way, the axiom is rescued and preserved by some frivolous distinction; whereas the truer course would be to correct the axiom itself

XXVI

The conclusions of human reason as ordinarily applied in matter of nature, I call for the sake of distinction *Anticipations of Nature* (as a thing rash or premature). That reason which is elicited from facts by a just and methodical process, I call *Interpretation of Nature.*

XXVII

Anticipations are a ground sufficiently firm for consent; for even if men went mad all after the same fashion, they might agree one with another well enough.

XXVIII

For the winning of assent, indeed, anticipations are far more powerful than interpretations; because being collected from a few instances, and those for the most part of familiar occurrence, they straightway touch the understanding and fill the imagination; whereas interpretations on the other hand, being gathered here and there from very various and widely dispersed facts, cannot suddenly strike the understanding; and therefore they must needs, in respect of the opinions of the time, seem harsh and out of tune; much as the mysteries of faith do.

XXIX

In sciences founded on opinions and dogmas, the use of anticipations and logic is good; for in them the object is to command assent to the proposition, not to master the thing.

XXX

Though all the wits of all the ages should meet together and combine and transmit their labours, yet will no great progress ever be made in science by means of anticipations; because radical errors in the first concoction of the mind are not to be cured by the excellence of functions and remedies subsequent.

XXXI

It is idle to expect any great advancement in science from the superinducing and engrafting of new things upon old. We must begin anew from the very foundations, unless we would revolve forever in a circle with mean and contemptible progress.

XXXII

The honour of the ancient authors, and indeed of all, remains untouched; since the comparison I challenge is not of wits or faculties, but of ways and methods, and the part I take upon myself is not that of a judge, but of a guide.

XXXIII

This must be plainly avowed: no judgment can be rightly formed either of my method or of the discoveries to which it leads, by means of anticipations (that is to say, of the reasoning which is now in use); since I cannot be called on to abide by the sentence of a tribunal which is itself on its trial.

XXXIV

Even to deliver and explain what I bring forward is no easy matter; for things in themselves new will yet be apprehended with reference to what is old.

XXXV

It was said by Borgia of the expedition of the French into Italy, that they came with chalk in their hands to mark out their lodgings, not with arms to force their way in. I in like manner would have my doctrine enter quietly into the minds that are fit and capable of receiving it; for confutations cannot be employed, when the difference is upon first principles and very notions and even upon forms of demonstration.

XXXVI

One method of delivery alone remains to us; which is simply this: we must lead men to the particulars themselves, and their series and order; while men on their side must force themselves for awhile to lay their notions by and begin to familiarise themselves with facts.

XXXVII

The doctrine of those who have denied that certainty could be attained at all, has some agreement with my way of proceeding at the first setting out; but they end in being infinitely separated and opposed. For the holders of that doctrine assert simply that nothing can be known; I also assert that not much can be known in nature by the way which is now in use. But then they go on to destroy the authority of the senses and understanding; whereas I proceed to devise and supply helps for the same.

Proof that the Earth Moves[1]

GALILEO GALILEI

ABOUT TEN MONTHS AGO a report reached my ears that a Dutchman had constructed a telescope, by the aid of which visible objects, although at a great distance from the eye of the observer, were seen distinctly as if near; and some proofs of its most wonderful performances were reported, which some gave credence to, but others contradicted. A few days after, I received confirmation of the report in a letter written from Paris by a noble Frenchman, Jaques Badovere, which finally determined me to give myself up first to inquire into the principle of the telescope, and then to consider the means by which I might compass the invention of a similar instrument, which after a little while I succeeded in doing, through deep study of the theory of Refraction; and I prepared a tube, at first of lead, in the ends of which I fitted two glass lenses, both plane on one side, but on the other side one spherically convex, and the other concave. Then bringing my eye to the concave lens I saw objects satisfactorily large and near, for they appeared one-third of the distance off and nine times larger than when they are seen with the natural eye alone. I shortly afterwards constructed another telescope with more nicety, which magnified objects more than sixty times. At length, by sparing neither labour nor expense, I succeeded in constructing for myself an instrument so superior that objects seen through it appear magnified nearly a thousand times, and more than thirty times nearer than if viewed by the natural powers of sight alone.

FIRST TELESCOPIC OBSERVATIONS

It would be altogether a waste of time to enumerate the number and importance of the benefits which this instrument may be expected to confer, when used by land or sea. But without paying attention to its use for terrestrial objects, I betook myself to observations of the heavenly bodies; and first of all, I viewed the Moon as near as if it was scarcely two semi-diameters of the Earth distant. After the Moon, I frequently

[1] From *The Sidereal Messenger*. Translated by E. S. Carlos, 1880.

observed other heavenly bodies, both fixed stars and planets, with incredible delight. . . .

DISCOVERY OF JUPITER'S SATELLITES

There remains the matter, which seems to me to deserve to be considered the most important in this work, namely, that I should disclose and publish to the world the occasion of discovering and observing four planets, never seen from the very beginning of the world up to our own times, their positions, and the observations made during the last two months about their movements and their changes of magnitude. . . .

On the 7th day of January in the present year, 1610, in the first hour of the following night, when I was viewing the constellations of the heavens through a telescope, the planet Jupiter presented itself to my view, and as I had prepared for myself a very excellent instrument, I noticed a circumstance which I had never been able to notice before, owing to want of power in my other telescope, namely, that three little stars, small but very bright, were near the planet; and although I believed them to belong to the number of the fixed stars, yet they made me somewhat wonder, because they seemed to be arranged exactly in a straight line, parallel to the ecliptic, and to be brighter than the rest of the stars, equal to them in magnitude. The position of them with reference to one another and to Jupiter was as follows:

Ori. * * O * Occ.

On the east side there were two stars, and a single one towards the west. The star which was furthest towards the east, and the western star, appeared rather larger than the third.

I scarcely troubled at all about the distance between them and Jupiter, for, as I have already said, at first I believed them to be fixed stars; but when on January 8th, led by some fatality, I turned again to look at the same part of the heavens, I found a very different state of things, for there were three little stars all west of Jupiter, and nearer together than on the previous night, and they were separated from one another by equal intervals, as the accompanying figure shows.

Ori. O * * * Occ.

At this point, although I had not turned my thoughts at all upon the approximation of the stars to one another, yet my surprise began to be excited, how Jupiter could one day be found to the east of all the aforesaid fixed stars when the day before it had been west of two of them; and forthwith I became afraid lest the planet might have moved differently from the calculation of astronomers, and so had passed those stars by its own proper motion. I, therefore, waited for the next night with the most intense longing, but I was disappointed of my hope, for the sky was covered with clouds in every direction.

But on January 10th the stars appeared in the following position with regard to Jupiter, the third, as I thought, being

Ori. * * O Occ.

hidden by the planet. They were situated just as before, exactly in the same straight line with Jupiter, and along the Zodiac.

When I had seen these phenomena, as I knew that corresponding changes of position could not by any means belong to Jupiter, and as, moreover, I perceived that the stars which I saw had always been the same, for there were no others either in front or behind, within a great distance, along the Zodiac—at length, changing from doubt into surprise, I discovered that the interchange of position which I saw belonged not to Jupiter, but to the stars to which my attention had been drawn, and I thought therefore that they ought to be observed henceforward with more attention and precision.

Accordingly, on January 11th I saw an arrangement of the following kind:

Ori. * * O Occ.

namely, only two stars to the east of Jupiter, the nearer of which was distant from Jupiter three times as far as from the star further to the east; and the star furthest to the east

was nearly twice as large as the other one; whereas on the previous night they had appeared nearly of equal magnitude. I, therefore, concluded, and decided unhesitatingly, that there are three stars in the heavens moving about Jupiter, as Venus and Mercury round the Sun; which at length was established as clear as daylight by numerous other subsequent observations. These observations also established that there are not only three, but four, erratic sidereal bodies performing their revolutions round Jupiter. . . .

These are my observations upon the four Medicean planets, recently discovered for the first time by me; and although it is not yet permitted me to deduce by calculation from these observations the orbits of these bodies, yet I may be allowed to make statements, based upon them, well worthy of attention.

ORBITS AND PERIODS OF JUPITER'S SATELLITES

And, in the first place, since they are sometimes behind, sometimes before Jupiter, at like distances, and withdraw from this planet towards the east and towards the west only within very narrow limits of divergence, and since they accompany this planet alike when its motion is retrograde and direct, it can be a matter of doubt to no one that they perform their revolutions about this planet while at the same time they all accomplish together orbits of twelve years' length about the centre of the world. Moreover, they revolve in unequal circles, which is evidently the conclusion to be drawn from the fact that I have never been permitted to see two satellites in conjunction when their distance from Jupiter was great, whereas near Jupiter two, three, and sometimes all four, have been found closely packed together. Moreover, it may be detected that the revolutions of the satellites which describe the smallest circles round Jupiter are the most rapid, for the satellite nearest to Jupiter are often to be seen in the east, when the day before they have appeared in the west, and contrariwise. Also, the satellite moving in the greatest orbit seems to me, after carefully weighing the occasions of its returning to positions previously noticed, to have a periodic time of half a month. Besides, we have a notable and splendid argument to remove the scruples of those who can tolerate the revolution of the planets round the Sun in the Copernican system, yet are so disturbed by the motion of one Moon about the Earth, while both accomplish an orbit of a year's length about the Sun, that they consider that this theory of the universe must be upset as impossible; for now we have not one planet only revolving about another, while both traverse a vast orbit about the Sun, but our sense of sight presents to us four satellites circling about Jupiter, like the Moon about the Earth, while the whole system travels over a mighty orbit about the Sun in the space of twelve years.

Discoveries

SIR ISAAC NEWTON

CONCERNING THE LAW OF GRAVITATION [1]

HITHERTO WE have explained the phaenomena of the heavens and of our sea by the power of gravity, but have not yet assigned the cause of this power. This is certain, that it must proceed from a cause that penetrates to the very centres of the sun and planets, without suffering the least diminution of its force; that operates not according to the quantity of the surfaces of the particles upon which it acts (as mechanical causes used to do), but according to the quantity of

[1] From Newton's *Principia*, third edition, 1726. Translated by Andrew Motte, 1729. First American edition, 1848.

the solid matter which they contain, and propagates its virtue on all sides to immense distances, decreasing always in the duplicate proportions of the distances. Gravitation towards the sun is made up out of the gravitations towards the several particles of which the body of the sun is composed; and in receding from the sun decreases accurately in the duplicate proportion of the distances as far as the orb of Saturn, as evidently appears from the quiescence of the aphelions of the planets; nay, and even to the remotest aphelions of the comets, if these aphelions are also quiescent. But hitherto I have not been able to discover the cause of those properties of gravity from phaenomena, and I frame no hypotheses; for whatever is not deduced from the phaenomena is to be called an hypothesis; and hypotheses, whether metaphysical or physical, whether of occult qualities or mechanical, have no place in experimental philosophy. In this philosophy particular propositions are inferred from the phaenomena, and afterwards rendered general by induction. Thus it was that the impenetrability, the mobility, and the impulsive force of bodies, and the laws of motion and gravitation were discovered. And to us it is enough that gravity does really exist, and act 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.

LAWS OF MOTION [2]

Law I. *Every body perseveres in its state of rest, or of uniform motion in a right line, unless it is compelled to change that state by force impressed thereon.*

Projectiles persevere in their motions, so far as they are not retarded by the resistance of the air, or impelled downwards by the force of gravity. A top, whose parts by their cohesion are perpetually drawn aside from rectilinear motions, does not cease its rotation, otherwise than as it is retarded by the air. The greater bodies of the planets and comets, meeting with less resistance in more free spaces, preserve their motions both progressive and circular for a much longer time.

Law II. *The alteration of motion is ever proportional to the motive force impressed; and is made in the direction of the right line in which that force is impressed.*

If any force generates a motion, a double force will generate double the motion, a triple force triple the motion, whether that force be impressed altogether and at once, or gradually and successively. And this motion (being always directed the same way with the generating force), if the body moved before, is added to or subducted from the former motion, according as they directly conspire with or are directly contrary to each other; or obliquely joined, when they are oblique, so as to produce a new motion compounded from the determination of both.

Law III. *To every action there is always opposed an equal reaction; or the mutual actions of two bodies upon each other are always equal, and directed to contrary parts.*

Whatever draws or presses another is as much drawn or pressed by that other. If you press a stone with your finger, the finger is also pressed by the stone. If a horse draws a stone tied to a rope, the horse (if I may so say) will be equally drawn back towards the stone; for the distended rope, by the same endeavor to relax or unbend itself, will draw the horse as much towards the stone, as it does the stone towards the horse, and will obstruct the progress of the one as much as it advances that of the other. If a body impinge upon another, and by its force change the motion of the other, that body also (because of the equality of the mutual pressure) will undergo an equal change, in its own motion, towards the contrary part. The changes made by these actions are equal, not in the velocities but in the motions of bodies; that is to say, if the bodies are not hindered by any other impediments. For, because the motions are equally changed, the changes of the velocities made towards contrary parts are reciprocally proportional to the bodies.

[2] *Ibid.*

THE DISPERSION OF LIGHT [3]

In the year 1666 (at which time I applied myself to the grinding of optick glasses of other figures than spherical) I procured me a triangular glass prism, to try therewith the celebrated phaenomena of colours. And in order thereto, having darkened my chamber, and made a small hole in my window-shuts, to let in a convenient quantity of the sun's light, I placed my prism at its entrance, that it might be thereby refracted to the opposite wall. It was at first a very pleasing divertissement, to view the vivid and intense colours produced thereby; but after a while applying myself to consider them more circumspectly, I became surprised, to see them in an oblong form; which, according to the received laws of refraction, I expected should have been circular. They were terminated at the sides with straight lines, but at the ends, the decay of light was so gradual that it was difficult to determine justly, what was their figure; yet they seemed semicircular.

Comparing the length of this colour'd Spectrum with its breadth, I found it about five times greater, a disproportion so extravagant, that it excited me to a more than ordinary curiosity to examining from whence it might proceed. I could scarce think, that the various thicknesses of the glass, or the termination with shadow or darkness, could have any influence on light to produce such an effect; yet I thought it not amiss, first to examine those circumstances, and so try'd what would happen by transmitting light through parts of the glass of divers thicknesses, or through holes in the window of divers bignesses, or by setting the prism without, so that the light might pass through it, and be refracted, before it was terminated by the hole: But I found none of these circumstances material. The fashion of the colours was in all these cases the same. . . .

The gradual removal of these suspicions led me to the Experimentum Crucis, which was this: I took two boards, and placed one of them close behind the prism at the window, so that the light might pass through a small hole, made in it for the purpose, and fall on the other board, which I placed at about 12 feet distance, having first made a small hole in it also, for some of the incident light to pass through. Then I placed another prism behind this second board, so that the light trajected through both the boards might pass through that also, and be again refracted before it arrived at the wall. This done, I took the first prism in my hand, and turned it to and fro slowly about its axis, so much as to make the several parts of the image cast, on the second board, successively pass through the hole in it, that I might observe to what places on the wall the second prism would refract them. And I saw by the variation of those places, that the light, tending to that end of the image, towards which the refraction of the first prism was made, did in the second prism suffer a refraction considerably greater than the light tending to the other end. And so the true cause of the length of that image was detected to be no other, than that light is not similar or homogenial, but consists of *Difform Rays, some of which are more Refrangible than others;* so that without any difference in their incidence on the same medium, some shall be more Refracted than others; and therefore that, according to their *particular Degrees of Refrangibility,* they were transmitted through the prism to divers parts of the opposite wall. . . .

ON THE ORIGIN OF COLOURS [4]

The colours of all natural bodies have no other origin than this, that they are variously qualified, to reflect one sort of light in greater plenty than another. And this I have experimented in a dark room, by illuminating those bodies with uncompounded light of divers colours. For by that means any body may be made to appear of any colour. They have there no appropriate colour, but ever appear

[3] From Newton's "A New Theory About Light and Colours." A letter communicated to the editor of the Transactions of the Royal Society, February, 1672.

[4] From Newton's "A New Theory About Light and Colours." A letter communicated to the editor of the Transactions of the Royal Society, February, 1672.

of the colour of the light cast upon them, but yet with this difference, that they are most brisk and vivid in the light of their own daylight colour. Minimum appeareth there of any colour indifferently, with which it is illustrated, but yet most luminous in red, and so bise appeareth indifferently of any colour, but yet most luminous in blue. And therefore minimum reflecteth rays of any colour, but most copiously those endowed with red, that is, with all sorts of rays promiscuously blended, those qualified with red shall abound most in that reflected light, and by their prevalence cause it to appear of that colour. And for the same reason bise, reflecting blue most copiously, shall appear blue by the excess of those rays in its reflected light; and the like of other bodies. And that this is the entire and adequate cause of their colours, is manifest, because they have no power to change or alter the colours of any sort of rays incident apart, but put on all colours indifferently, with which they are enlightened.

These things being so, it can be no longer disputed, whether there be colours in the dark, or whether they be the qualities of the objects we see, no nor perhaps, whether light be a body. For, since colours are the quality of light, having its rays for their entire and immediate subject, how can we think those rays qualities also, unless one quality may be the subject of, and sustain another; which in effect is to call it substance. We should not know bodies for substances; were it not for their sensibile qualities, and the principle of those being now found due to something else, we have as good reason to believe that to be a substance also.

Besides, whoever thought any quality to be a heterogeneous aggregate, such as light is discovered to be? But to determine more absolutely what light is, after what manner refracted, and by what modes or actions it produceth in our minds the phantasms of colours, is not so easie; and I shall not mingle conjectures with certainties.

The Method of Scientific Investigation[1]

THOMAS HENRY HUXLEY

THE METHOD of scientific investigation is nothing but the expression of the necessary mode of working of the human mind. It is simply the mode at which all phenomena are reasoned about, rendered precise and exact. There is no more difference, but there is just the same kind of difference, between the mental operations of a man of science and those of an ordinary person, as there is between the operations and methods of a baker or of a butcher weighing out his goods in common scales, and the operations of a chemist in performing a difficult and complex analysis by means of his balance and finely-graduated weights. It is not that the action of the scales in the one case, and the balance in the other, differ in the principles of their construction or manner of working; but the beam of one is set on an infinitely finer axis than the other, and of course turns by the addition of a much smaller weight.

You will understand this better, perhaps, if I give you some familiar example. You have all heard it repeated, I dare say, that men of science work by means of induction and deduction, and that by the help of these operations, they, in a sort of sense, wring from Nature certain other things, which are called natural laws, and causes, and that out of these, by some cunning skill of their own, they build up hypotheses and theories. And it is imagined by many, that the operations of the common mind can be by no means compared with these processes, and that they have to be acquired by a sort of special apprenticeship to the craft. To hear all these

[1] From *Darwiniana* by T. H. Huxley. Reprinted by permission from Appleton-Century-Crofts, Inc.

large words, you would think that the mind of a man of science must be constituted differently from that of his fellow men; but if you will not be frightened by terms, you will discover that you are quite wrong, and that all these terrible apparatus are being used by yourselves every day and every hour of your lives.

There is a well-known incident in one of Molière's plays, where the author makes the hero express unbounded delight on being told that he had been talking prose during the whole of his life. In the same way, I trust that you will take comfort, and be delighted with yourselves, on the discovery that you have been acting on the principles of inductive and deductive philosophy during the same period. Probably there is not one here who has not in the course of the day had occasion to set in motion a complex train of reasoning, of the very same kind, though differing of course in degree, as that which a scientific man goes through in tracing the causes of natural phenomena.

A very trivial circumstance will serve to exemplify this. Suppose you go into a fruiterer's shop, wanting an apple—you take up one, and, on biting it, you find it is sour; you look at it, and see that it is hard and green. You take up another one, and that too is hard, green, and sour. The shopman offers you a third; but, before biting it, you examine it, and find that it is hard and green, and you immediately say that you will not have it, as it must be sour, like those that you have already tried.

Nothing can be more simple than that, you think; but if you will take the trouble to analyse and trace out into its logical elements what has been done by the mind, you will be greatly surprised. In the first place, you have performed the operation of induction. You found that, in two experiences, hardness and greenness in apples went together with sourness. It was so in the first case, and it was confirmed by the second. True, it is a very small basis, but still it is enough to make an induction from; you generalise the facts, and you expect to find sourness in apples where you get hardness and greenness. You found upon that a general law, that all hard and green apples are sour; and that, so far as it goes, is a perfect induction. Well, having got your natural law in this way, when you are offered another apple which you find is hard and green, you say, "All hard and green apples are sour; this apple is hard and green, therefore this apple is sour." That train of reasoning is what logicians call a syllogism, and has all its various parts and terms—its major premiss, its minor premiss, and its conclusion. And, by the help of further reasoning, which, if drawn out, would have to be exhibited in two or three other syllogisms, you arrive at your final determination, "I will not have that apple." So that, you see, you have, in the first place, established a law by induction, and upon that you have founded a deduction, and reasoned out the special particular case. Well now, suppose, having got your conclusion of the law, that at some times afterwards, you are discussing the qualities of apples with a friend: you will say to him, "It is a very curious thing, but I find that all hard and green apples are sour!" Your friend says to you, "But how do you know that?" You at once reply, "Oh, because I have tried them over and over again, and have always found them to be so." Well, if we were talking science instead of common sense, we should call that an experimental verification. And, if still opposed, you go further, and say, "I have heard from the people in Somersetshire and Devonshire, where a large number of apples are grown, that they have observed the same thing. It is also found to be the case in Normandy, and in North America. In short, I find it to be the universal experience of mankind wherever attention has been directed to the subject." Whereupon, your friend, unless he is a very unreasonable man, agrees with you, and is convinced that you are quite right in the conclusion you have drawn. He believes, although perhaps he does not know he believes it, that the more extensive verifications are—that the more frequently experiments have been made, and results of the same kind arrived at—that the more varied the conditions under which the same results are attained, the

more certain is the ultimate conclusion, and he disputes the question no further. He sees that the experiment has been tried under all sorts of conditions, as to time, place, and people, with the same result; and he says with you, therefore, that the law you have laid down must be a good one, and he must believe it.

In science we do the same thing;—the philosopher exercises precisely the same faculties, though in a much more delicate manner. In scientific inquiry it becomes a matter of duty to expose a supposed law to every possible kind of verification, and to take care, moreover, that this is done intentionally, and not left to a mere accident, as in the case of the apples. And in science, as in common life, our confidence in a law is in exact proportion to the absence of variation in the result of our experimental verifications. For instance, if you let go your grasp of an article you may have in your hand, it will immediately fall to the ground. That is a very common verification of one of the best established laws of nature—that of gravitation. The method by which men of science establish the existence of that law is exactly the same as that by which we have established the trivial proposition about the sourness of hard and green apples. But we believe it in such an extensive, thorough, and unhesitating manner because the universal experience of mankind verifies it, and we can verify it ourselves at any time; and that is the strongest possible foundation on which any natural law can rest.

So much, then, by way of proof that the method of establishing laws in science is exactly the same as that pursued in common life. Let us now turn to another matter (though really it is but another phase of the same question), and that is, the method by which, from the relations of certain phenomena, we prove that some stand in the position of causes towards the others.

I want to put the case clearly before you, and I will therefore show you what I mean by another familiar example. I will suppose that one of you, on coming down in the morning to the parlour of your house, finds that a tea-pot and some spoons which had been left in the room on the previous evening are gone—the window is open, and you observe the mark of a dirty hand on the window-frame, and perhaps, in addition to that, you notice the impress of a hob-nailed shoe on the gravel outside. All these phenomena have struck your attention instantly, and before two seconds have passed you say, "Oh, somebody has broken open the window, entered the room, and run off with the spoons and the tea-pot!" That speech is out of your mouth in a moment. And you will probably add, "I know there has; I am quite sure of it!" You mean to say exactly what you know; but in reality you are giving expression to what is, in all essential particulars, an hypothesis. You do not *know* it at all; it is nothing but an hypothesis rapidly framed in your own mind. And it is an hypothesis founded on a long train of inductions and deductions.

What are those inductions and deductions, and how have you got at this hypothesis? You have observed in the first place, that the window is open; but by a train of reasoning involving many inductions and deductions, you have probably arrived long before at the general law—and a very good one it is—that windows do not open of themselves; and you therefore conclude that something has opened the window. A second general law that you have arrived at in the same way is, that tea-pots and spoons do not go out of a window spontaneously, and you are satisfied that, as they are not now where you left them, they have been removed. In the third place, you look at the marks on the window-sill, and the shoe-marks outside, and you say that in all previous experience the former kind of mark has never been produced by anything else but the hand of a human being; and the same experience shows that no other animal but man at present wears shoes with hob-nails in them such as would produce the marks in the gravel. I do not know, even if we could discover any of those "missing links" that are talked about, that they would help us to any other conclusion! At any rate the law which states our present experience is strong enough for my present purpose. You next reach the conclusion, that as these kinds of marks have

not been left by any other animals than men, or are liable to be formed in any other way than by a man's hand and shoe, the marks in question have been formed by a man in that way. You have, further, a general law, founded on observation and experience, and that, too, is, I am sorry to say, a very universal and unimpeachable one—that some men are thieves; and you assume at once from all these premisses—and that is what constitutes your hypothesis—that the man who made the marks outside and on the window-sill, opened the window, got into the room, and stole your tea-pot and spoons. You have now arrived at a *vera causa;*—you have assumed a cause which, it is plain, is competent to produce all the phenomena you have observed. You can explain all these phenomena only by the hypothesis of a thief. But that is a hypothetical conclusion, of the justice of which you have no absolute proof at all; it is only rendered highly probable by a series of inductive and deductive reasonings.

I suppose your first action, assuming that you are a man of ordinary common sense, and that you have established this hypothesis to your own satisfaction, will very likely be to go off for the police, and set them on the track of the burglar, with the view to the recovery of your property. But just as you are starting with this object, some person comes in, and on learning what you are about, says, "My good friend, you are going on a great deal too fast. How do you know that the man who really made the marks took the spoons? It might have been a monkey that took them, and the man may have merely looked in afterwards." You would probably reply, "Well, that is all very well, but you see it is contrary to all experience of the way tea-pots and spoons are abstracted; so that, at any rate, your hypothesis is less probable than mine." While you are talking the thing over in this way, another friend arrives. And he might say, "Oh, my dear sir, you are certainly going on a great deal too fast. You are most presumptuous. You admit that all these occurrences took place when you were fast asleep, at a time when you could not possibly have known anything about what was taking place. How do you know that the laws of Nature are not suspended during the night? It may be that there has been some kind of supernatural interference in this case." In point of fact, he declares that your hypothesis is one of which you cannot at all demonstrate the truth, and that you are by no means sure that the laws of Nature are the same when you are asleep as when you are awake.

Well, now, you cannot at the moment answer that kind of reasoning. You feel that your worthy friend has you somewhat at a disadvantage. You will feel perfectly convinced in your own mind, however, that you are quite right, and you say to him, "My good friend, I can only be guided by the natural probabilities of the case, and if you will be kind enough to stand aside and permit me to pass, I will go and fetch the police." Well, we will suppose that your journey is successful, and that by good luck you meet with a policeman; that eventually the burglar is found with your property on his person, and the marks correspond to his hand and to his boots. Probably any jury would consider those facts a very good experimental verification of your hypothesis, touching the cause of the abnormal phenomena observed in your parlour, and would act accordingly.

Now, in this supposititious case, I have taken phenomena of a very common kind, in order that you might see what are the different steps in an ordinary process of reasoning, if you will only take the trouble to analyse it carefully. All the operations I have described, you will see, are involved in the mind of any man of sense in leading him to a conclusion as to the course he should take in order to make good a robbery and punish the offender. I say that you are led, in that case, to your conclusion by exactly the same train of reasoning as that which a man of science pursues when he is endeavouring to discover the origin and laws of the most occult phenomena. The process is, and always must be, the same; and precisely the same mode of reasoning was employed by Newton and Laplace in their endeavours to discover and define the causes of the

movements of the heavenly bodies, as you, with your own common sense, would employ to detect a burglar. The only difference is, that the nature of the inquiry being more abstruse, every step has to be most carefully watched, so that there may not be a single crack or flaw in your hypothesis. A flaw or crack in many of the hypotheses of daily life may be of little or no moment as affecting the general correctness of the conclusions at which we may arrive; but, in a scientific inquiry, a fallacy, great or small, is always of importance, and is sure to be in the long run constantly productive of mischievous, if not fatal results. . . .

Science[1]

BERTRAND RUSSELL

WESTERN CIVILIZATION is derived from three sources: the Bible, the Greeks, and Science—the last operating chiefly through machines. The reconciliation between the Bible and the Greeks was a slow business, achieved in the course of centuries by the Catholic Church. The Renaissance and the Reformation undid the synthesis, and left the two elements again at war, as in antiquity. On the whole, Protestanism represented the Bible and free thought represented the Greeks. Pre-industrial America was biblical rather than Hellenic, and agricultural America has remained biblical, while industrial America is developing a new attitude, not hitherto known in the history of man. It is this new attitude that makes America interesting to the student of social science.

The effects of science are of two sorts, rather sharply separable. On the one hand, there is the scientific outlook as it exists in the man of science; on the other there is the transformation of ordinary life through the practical applications of scientific knowledge, more particularly through machines. The first is best seen in Germany; the second in America. Let us begin with the first, since historically it developed earlier than the other.

The Greeks are habitually praised by cultured persons on account of their literature and their art, but in these respects they were not very greatly superior to some other ancient nations, for example, the Chinese. Where they were unquestionably superior was in their invention of the deductive method and the science of geometry. Some few Greeks were scientific in the modern sense—notably Archimedes, who combined practice and theory, experiment and inference, in a thoroughly modern way. Some of the pre-Socratics, for example, Empedocles, were as scientific as was possible in the then state of knowledge. Aristotle is habitually praised for his extensive collection of facts, more especially in zoölogy; but the "Historia Animalium" shows that he was by no means careful to verify the tales brought him by those whom he employed, and that he did not realize the difficulty of accurate observation. Plato's influence was in the direction of emphasizing morals and metaphysics rather than experiment; and in later times this attitude prevailed more and more, so that Archimedes remained an isolated figure. Plato, one feels, was led by his aristocratic mentality to think it vulgar to do anything with one's hands, and the methods of the modern laboratory would have seemed to him beneath the dignity of a gentleman. These and other causes interfered with the development of experimental science in the ancient world, so that even what had been achieved came to be forgotten.

But there existed no such obstacles to the development of geometry. Until the work of Lobatchevsky in 1829, it seemed that the

[1] From *Whither Mankind*, edited by Charles Beard. Copyright 1928 by Longmans, Green & Co., Inc., and used with their permission.

premises of geometry offered no difficulty, and that genuinely new knowledge about the actual world could be obtained by mere deduction. Consequently little attention was paid to premises and much to reasoning from them. This point of view dominated Greek philosophy and mediaeval theology. To the outlook thus generated, particular facts were uninteresting except as the conclusions of syllogisms with general premises. The fact that Socrates was mortal was not ascertained from Plato's accounts of his last moments, but from the premise that all men are mortal. With the Renaissance, the actual was rediscovered: it became interesting on its own account, not as a mere instance of a general rule. There was at first a revolt against the intellectual tyranny of system, for example, in Montaigne, who hardly ever mentions general rules except to refute them by amusing exceptions. But men tired of intellectual anarchy, and invented a new discipline for the mind. The new discipline was the scientific method, which is already complete, as a method, in the writings of Galileo.

The essence of the scientific method is the discovery of general laws through the study of particular facts. It is thus a synthesis of the Greek and renaissance outlooks. Particular facts are the basis of the whole structure, but they are used for the purpose of induction, and when they have led to general laws inductively obtained, the Greek methods of deduction are applied to infer new particular facts from the laws. This method has had the most amazing success—amazing, because it is as indefensible intellectually as the purely deductive method of the Middle Ages. Hume long ago showed it up. All philosophy since his day has consisted of sophistical refutations of his arguments: the special skill of the philosopher has consisted in making his refutations so subtle and obscure that their fallacious character was not apparent. Men of science, meanwhile, have simply ignored Hume, and have marched from triumph to triumph. Gradually, however, more especially during the last thirteen years, the best men of science, as a result of technical progress, have been led more and more to a form of skepticism closely analogous to Hume's. Eddington, in expounding the theory of relativity, tends to the view that most so-called scientific laws are human conventions. Some of the leading authorities on the structure of the atom maintain explicitly that there are no causal laws in the physical world. And some philosophers hold the same view. "Superstition," says Wittgenstein, "consists of belief in causality."

This skepticism is a canker at the heart of science, affecting, as yet, only a few leaders, but capable, in time, of paralyzing the activities of the whole army of scientific workers. At least this would be the effect if men remained in the contemplative and intellectualistic mood. But science is becoming increasingly a manner of life, a way of behaving, and is developing a philosophy which substitutes for the old conception of knowledge the new conception of successful behavior. The more skepticism seems to result from a purely theoretical attitude, the more the practical pragmatic attitude triumphs. This is likely to become true throughout the world, but for the moment it is of course more true in a country like America, where the practical success of science is very evident, than in post-war Germany, where pessimism and disillusion fit in with the prevailing tenor of the national life. It is therefore not surprising that America is leading the way in the transition from science as knowledge to science as a set of practical habits. On this ground, whoever is interested in the future should especially study America. To my mind, the best work that has been done anywhere in philosophy and psychology during the present century has been done in America. Its merit is due not so much to the individual ability of the men concerned as to their freedom from certain hampering traditions which the European man of learning inherits from the Middle ages.

Perhaps these traditions can be summed up in the one word *contemplation*. European universities were originally places for the training of monks; and monks, though they tilled the soil, existed primarily for the sake of the contemplative life. A modern European professor does not till the soil, but he

continues to believe in contemplation. In him this belief takes the form of admiration for pure learning regardless of its practical applications. I am myself sufficiently mediaeval to feel this admiration far more strongly than it is felt by the typical modern man. Nevertheless, I perceive that it is psychologically connected with an attitude of reverence towards the universe which is hardly compatible with the modern belief in man's omnipotence through the machine. We do not contemplate a flea; we catch it. The modern point of view is in its infancy, but we may foresee a time when it will lead men to regard the non-human world in general with as little reverence as we now feel towards the poor flea. This means that the philosophy of an industrial world cannot be materialism, for materialism, just as much as theism, worships the power which it believes to exist outside Man. Pious Russia, barely emerging from Byzantine ecclesiasticism, has become officially materialistic; probably the more pious portions of the American population will have to pass through this same phase. But sophisticated America, wherever it has succeeded in shaking off slavery to Europe (which is too common among the sophisticated), has already developed a new outlook, mainly as a result of the work of James and Dewey. This new outlook, embodied in the so-called instrumental theory of knowledge, constitutes the philosophy appropriate to industrialism, which is science in the sphere of practice.

The dominating belief of what may be called the industrial philosophy is that man is master of his fate, and need not submit tamely to the evils hitherto inflicted upon him by the niggardliness of inanimate nature or the follies of human nature. Man was in the past dependent upon the weather, which was beyond his control. This is still the case with peasants, who are usually pious, and still more so with fishermen, who are still more pious. It may be laid down broadly that the intensity of religious belief among seafaring folk is inversely proportional to the size of their vessel. Accidents such as the sinking of the *Titanic,* however, tend to keep some measure of religion alive even in the largest ships. But this state of affairs is passing, and its passing is accelerated by every increase in the safety of navigation.

Man, since he became capable of forethought, has been dominated by fears—fear of natural phenomena such as lightning and tempest, fear of starvation, fear of pestilence, fear of defeat in war, fear of murder by private enemies. Elaborate systems, partly rational, partly magical, have been built up to minimize these dangers. In the early ages of agriculture men dealt with the fear of starvation by means of human sacrifice, which was supposed to invigorate the Corn Spirit. It is only very gradually that scientific agriculture has displaced this attitude. Inundations, except in China, were usually dealt with by prayer to the River God. There was a general tendency to regard misfortunes as due to the anger of invisible beings, who could be propitiated by suitable ceremonies. Pestilence was viewed superstitiously down to our own day, and is still so viewed in India. The fear of war has only just begun to be treated rationally, and those who so treat it still labor under the suspicion of being cranks. Our natural view of the causes of war is more consonant with Coleridge's:

> *Kubla heard from far*
> *Ancestral voices prophesying war.*

The fear of murder by private enemies is supposed to be dealt with by the criminal law. But the criminal law, also, was in its origin superstitious, being based upon the notion of blood pollution. Even now, our emotion towards an ancient crime, such as murder, is quite different from that towards (say) forgery, which has no roots in the superstitious past. And even now, the retributive element is punishment, which is superstitious, being based upon the rage inspired by fear of the criminal, prevents our criminal law from being as effective as it might be in the prevention of crime.

Few people realize how very modern is the influence of science upon the intellectual outlook of cultivated men, let alone the ordinary citizen of a civilized community.

The Greeks, and the Romans in their best days, were, it is true, not dominated by fear. But their hopes had a different quality from ours. Compare Plato's "Republic" with any of Wells' Utopias. In Plato's hopes, men were to advance in virtue, and in a certain kind of wisdom; but he did not think of greater dominion over nature as an ingredient in the good life. Perhaps the reason for this was in part economic: where labor is performed by slaves, the free-man is not impressed with the importance of minimizing labor. But other more intellectual reasons played their part. Geometry led men to think that the truth could be discovered by reasoning, or, as Plato suggested, by reminiscence. Moral and aesthetic considerations were allowed an undue weight in framing hypotheses about the physical world: it was supposed that the physical world must be beautiful and intellectually agreeable to contemplate, which led to a preference for simple hypotheses, such as that the heavenly bodies moved in orbits which were circles or combinations of circles. As the intellectual vigor of the ancient world declined, authority became supreme, and commentaries took the place of fresh thought. Thus, although a few Greeks had achieved a scientific outlook, the ordinary cultivated man had a view of the world in which scientific investigation played no part.

This is no longer quite true of the Arabic civilization, which certainly had more scientific curiosity than the later Hellenistic centuries. But a great deal of superstition is mixed with science in all but the best of the Arabs. Alchemy, the search for the philosopher's stone, the attempt to discover the elixir of life, occupied many experimenters' thoughts to the exclusion of more genuine problems. In Europe, meanwhile, the overemphasis on ethical considerations which is visible in all Greek post-Socratic philosophy, and the subsequent undue respect for authority which was both effect and cause of intellectual inferiority to earlier centuries, prevented almost all scientific investigation throughout the Middle Ages, except by those few men who, like Roger Bacon, had been stimulated by contact with the learning of the Moors. For all these reasons, science played hardly any part in life, even for the small learned minority, until the Renaissance.

The Renaissance was, of course, primarily a literary movement, involving, at first, not an emancipation from authority, but only a change, more especially from Aristotle to Plato. However, when men realized that the ancients had disagreed with each other, they were forced to think for themselves to decide which ancient author they should follow. Copernicus discovered in Italy that some of the Greeks had taught that the earth goes round the sun; if he had not known this, it may be doubted whether he would have had the courage to propound his theory, in favor of which he had no very solid scientific reasons to offer.

Kepler and Galileo represent the real beginnings of modern science; it is in them that we first find the patient and unbiassed observation of large numbers of particular facts, leading to the formation of laws which they had not expected. The contemporaries of Galileo, especially the most learned, objected to his habit of ascertaining facts by looking at the world instead of at Aristotle. But the time was at last ripe for the victory of science. In an earlier age, Galileo might have been forgotten; as it was, a series of incredibly brilliant successors carried on his work quickly to its completion in Newton's "Principia."

Throughout the seventeenth and eighteenth centuries, though science had to fight against both theology and the humanities, it acquired an increasing ascendancy over the minds of educated men. But until after the end of this period science was conceived almost wholly from the standpoint of theoretical knowledge. It is true that Bacon had said "knowledge is power," and had viewed knowledge in relation to its practical uses. But astronomy, the dominating science of the time, had not much utility except for navigation, and there only in its elementary portions. The inventions which made physics and chemistry useful had not yet been made, or at any rate had not yet achieved success. The motive of men of science, accordingly,

was to understand the world, not to change it. This is still the motive of those who make the great theoretical advances—Einstein, Planck, Bohr, and such men. But everybody now-a-days is aware that science is likely to have practical applications, and this has greatly modified the prevailing view of the purposes of science.

From the time when Charles II founded the Royal Society down to the outbreak of the French Revolution, science was associated with "enlightenment." At first, it was a cure for "enthusiasm," i.e., for the kind of fanaticism that had been displayed by the Puritans. Then, in France, in spite of the fact that both Jesuits and Jansenists had produced many admirable men of science, the pursuit of mathematical physics became gradually associated with materialism, with opposition to the Church, and with political radicalism. This movement culminated in the Revolution, which produced, throughout Europe, a temporary diminution in the rate of scientific progress.

It is only in the nineteenth century that science came to be commonly regarded as affording a means of improving the general level of human life, not by moral regeneration, and not by political reform, but by increasing man's command over the forces of nature. This point of view was, of course, due to the industrial revolution, and to various inventions, such as steamships, railways, and telegraphs. This view of science as the handmaid of industry has now become a commonplace. As already observed, it is now possible to hope that mankind may, to a very great degree, be freed from certain age-long terrors—pestilence, famine, drought and flood, perhaps even war.

Science, in so far as it is successful, eliminates these various kinds of fear from our lives. It cannot, of course, altogether eliminate the fear of death, but it can and does cause us to live longer than our ancestors, and to this process no definite limit can be set. Fear of natural phenomena plays a very small part in modern urban life. Once in a way, some event such as the Tokyo earthquake reminds us that Nature is not yet wholly subdued. Taking a longer view, science assures us that our planet will not always remain habitable, and that, although we may migrate to Venus when the sun's heat diminishes, that can only put off the date of our extinction by a million years or so. These distant speculations, however, have no power to disturb the urban worker as he hurries for his morning train. His emotional world is a human one, trivial, boring, but safe—except from the anger of the boss. And so politics increasingly takes the place of religion, since it is in the sphere of politics that fear now finds its home.

It may be said that, while science has already greatly diminished the fear of nature, it has so far, if anything, somewhat increased men's fear of each other. Lightning conductors, which George III (rightly, as I think) regarded as impious, have destroyed fear of "the all-dreaded thunder-stone." But other inventions have enabled man to wield powers as destructive as those formerly wielded by Nature. And science has made society more organic, so that on the one hand the rebel finds it increasingly difficult to escape the vengeance of the holders of power, while on the other hand social chaos, when it occurs, becomes a much greater disaster than in more primitive communities. Perhaps for these reasons, the pressure of the herd and the fear of neighbors, are greater in America than in any other civilized country. While man collectively has been freed from bondage to the non-human world, men individually are held in bondage to their fellowmen more completely than in the pre-scientific ages.

Will science, in the end, deal also with this form of fear? I think it will. Hitherto, the practical applications of science have been mainly directed to modifications of our material environment. Whereas formerly the environment was a datum, something to be merely accepted and contemplated, it is now, so far as the surface of the earth is concerned, raw material for human manipulation. But human nature is still accepted as a datum. While we alter the environment to suit ourselves, we do not much alter ourselves to suit each other. The reason is, of course, that the sciences that deal with the formation

of human character are far less developed than those that deal with the inanimate world. This, however, is rapidly changing. It is highly probable that in a hundred years we shall have acquired the same control over the characters of children that we now have over physical forces. We shall then, if we feel so disposed, be able to eliminate fear from the relations between human beings as we are already eliminating it from the relations of human beings with the world of nature. But what men will make of these powers when they come to possess them, it would be very rash to prophesy. Doubtless they will make something which, to our inherited standard of values, would seem horrible; but to them, one must suppose, it will seem good. Let us, then, console ourselves as best we may with Hamlet's dictum:

> *There's nothing either good or bad but thinking makes it so.*

A good community is one that those who live in it think good; and that, at least, the scientific educators of the future will almost certainly be able to secure.

The philosophy inspired by industrialism is seeping away the static conception of knowledge which dominated both mediaeval and modern philosophy, and has substituted what it calls the Instrumental Theory, the very name of which is suggested by machinery. In the Instrumental Theory, there is not a single state of mind which consists of knowing a truth—there is a way of acting, a manner of handling the environment, which is appropriate, and whose appropriateness constitutes what alone can be called knowledge as these philosophers understand it. One might sum up this theory by a definition: *To know something is to be able to change it as we wish.* There is no place in this outlook for the beatific vision, nor for any notion of final excellence.

This "dynamic" conception of knowledge and of value is so ingrained in most typical modern men that they are incapable of understanding the nostalgia which it produces in a sensitive European impregnated with the older culture. European countries (except Russia) differ far less from each other than all differ from the United States. It is perhaps worth while to consider this difference impartially, since any forecast of the development of machine civilization based upon European experience is likely to prove fallacious.

The last cantos of the "Divina Commedia" may serve to illustrate the point. In these the supreme bliss is represented as a combination of contemplation and love, both at the highest pitch of intensity, but wholly static, because perfection has been achieved and nothing is left to strive for. In Milton, more briefly, we find the same conception of heaven:

> *Where the bright seraphim in burning row*
> *Their loud uplifted angel trumpets blow,*
> *And the cherubic hosts in thousand quires*
> *Touch their immortal harps of golden wires.*

It is not suggested that the trumpets and harps should be of continually improved makes, or should be played by machinery to save the angels trouble and leave them free to increase the height of the buildings in the Golden City.

The modern European artist or man of learning knows that the beatific vision cannot constitute the whole of his life, and is skeptical of any life thereafter. But if he is sensitive, whether as an artist or a man of science, a lover or an explorer, he lives for the moments which approach nearest to the ultimate ecstasy, when he is "silent upon a peak in Darien." This is as true in the pursuit of knowledge as in that of beauty, for in a new theoretic insight he finds a rapture as intense as that of new love.

Such men, however, are to be regarded as strayed ghosts from an earlier epoch. Men do not always belong to their own time: eminent men are often psychologically ahead of this epoch, but are sometimes behind it. Dante, for example, sums up preceding centuries, and does not suggest the future in anything except his use of the Italian language. It is a curious speculation to consider what various men of past ages would think of our civilization if they were miraculously

transported into it. Archimedes, I fancy, would find it wholly delightful. He would indefatigably visit factories, observatories, scientific instrument makers; he would read encyclopaedias from cover to cover; he would be immensely impressed by wireless telegraphy, and beside himself with joy over aeroplanes. He would admire, above all things, our means of scientific warfare, but would be unable to understand why they are not used to exterminate the barbarians. He would master our science and our mathematics in a few years of intense study, but our politics would puzzle him—not so much what we do, but what we say, though what we do, also, would be in part unintelligible to him.

Aristotle, I fancy, would divide his time between Oxford Common Rooms and the Zoo. In the latter, he would question the keepers as to the habits of their animals, and would be led to amend what he says on cures for insomnia in elephants. In the former, his conversation on metaphysics would be better appreciated than anywhere else in the modern world, but he would be surprised by the lack of interest in zoölogy. He would make friends with explorers and statesmen, and would take a considerable interest in anthropology. But the mechanical aspects of our civilization would bore him, and he would be profoundly shocked by democracy. (So, indeed, would even the most democratic of the Greeks.) He would not use the subway unless he could have a special train for himself and his friends.

Plato, if he could return to this world, would make friends with Dean Inge and accept his views on modern civilization *in toto*.

Bacon would be appointed editor of the Encyclopaedia Britannica, but would be dismissed for inserting advertising matter under the guise of articles. He would admire museums, card catalogues, and machine politicians. He would enthsuiastically praise industrial technique, but would regard relativity and quantum theory as unduly subtle, and as fantastic speculations of no practical importance. He would have many friends among the eminent, and would feel thoroughly at home in our world as soon as he had acquired a comfortable fortune.

Newton, I fancy, would regret that he had ever allowed the world to become acquainted with his researches. He would be fairly happy so long as he remained within the gates of Trinity College, but motor cars and even bicycles would alarm him, and he would say that whenever he began to think about mathematics they ran into him. Machines, he would complain, have made present-day England less agreeable to the philosopher than the England of Queen Anne. And as Master of the Mint he would be inexpressibly shocked to find that paper had taken the place of gold.

I fear that a passion for psychological truth has led me to make these imagined reactions of distinguished ghosts more trivial than seems appropriate to their eminence, except in the case of Archimedes. Even the greatest men, however, are often influenced by very minor factors in forming their judgments; and this is an important fact, which should put us on our guard in attempting to sum up our own age. When we try to be as objective as possible in singling out the most important external differences between the present and the past before the nineteenth century, I think the following deserve emphasis.

First: greater mobility both of men and goods. From the time when the horse was first domesticated down to the invention of the locomotive, the greatest possible speed of land travel remained approximately constant. The Imperial Post in the Roman Empire travelled at about the same rate as Dickens' stage coaches. Trains made a rapid revolution, but soon achieved very nearly their present speed. Aeroplanes represent a new revolution. Sea travel, although there was a vast addition to geographical knowledge, did not very greatly increase in speed until the invention of steamboats.

Second: speed in sending messages. Here the three stages, so far, are the telegraph, the telephone, and wireless. It is theoretically impossible to surpass the speed of wireless, which is that of light. In this matter, therefor, we have, in a certain sense, achieved perfection.

Third: the substitution of machinery for handicrafts in industry, with the consequent enormous increase of material well-being in all classes.

Fourth: the improvement in public health, which has been particularly noteworthy since the beginning of the present century.

Fifth: the application of science to methods of warfare. But this is a trite theme, as to which I propose to say nothing further.

The intellectual changes brought about by science are in part considerably older than the above practical changes, but in part they also belong to the last hundred years. It may be said, broadly, that science has simultaneously, and in equal measure, increased man's power and diminished his pride. In the Middle Ages, the earth was the centre of the universe, and the human race was the principal object of divine solicitude. The first blow to this outlook, and perhaps the greatest, was the Copernican system, with the discovery that the earth is one of the smaller planets. The next blow was the doctrine of evolution, as to which traditionalists are still fighting a rearguard action. The next, which is only beginning to be delivered, is the analysis of mind and soul by behaviorists and bio-chemists. I have heard it suggested by a bio-chemist that mysticism is due to excessive alkalinity of the blood. This particular doctrine may or may not be true, but some equally painful explanation of the mystic emotion is pretty sure to be found before long. Physics, biology, psychology, have each in turn passed over from superstition to science, and have each in turn demanded sacrifices dear to our human conceit. The increase of power which men derive from science has, however, made these sacrifices endurable, and has allowed the scientific outlook to triumph in practice even with those who continue to reject it in its general and speculative aspects.

Theoretical science itself has changed its character in the course of its development. Newton's "Principia" has a statuesque perfection; a modern man of science does not attempt to give his work this character. Final truth is no longer demanded of a scientific theory, or claimed for it by its inventor. There is no longer the same conception of "truth" as something eternal, static, exact, and yet ascertainable. Consequently even the best modern theories are more satisfying to the practical than to the theoretical side of our nature. The more physics advances, the less it professes to tell us about the external world. To the Greek atomist, an atom was a little hard lump, just like an ordinary body except that it was small. To the modern physicist, it is a set of radiations coming out from a centre, and as to what there may be in the centre nothing can be known. Even when we say that there are radiations coming out from a centre, we are saying something which, when correctly interpreted is found to mean much less than it seems to mean at first sight. More and more, science becomes the art of manipulating nature, not a theoretical understanding of nature. The hope of understanding the world is itself one of those daydreams that science tends to dissipate. This was not formerly the case; it is an outcome of the physics of the last twenty-five years. Undoubtedly it tends to strengthen the instrumentalist philosophy.

The influence of the theory of relativity has been in this same direction. Einstein's law of gravitation is better than Newton's, and represents an equal triumph of human genius; but its effect upon scientific mentality has been quite different. Both in England and in France, Newton's work led men to think that they had at last penetrated the secrets of the universe; fine ladies tried to understand the "Principia," and philosophers took pleasure in expounding it to them. But Einstein's work has, on the whole, made men think that they know less than they had supposed. It seems that, although physics enables us, within certain limits, to predict our own experiences, it gives us only an abstract and formal kind of knowledge concerning what lies outside. If we continue to use pictorial language, and say (for example) that the earth describes an orbit round the sun, we must not suppose that "earth" and "sun" and "orbit" mean what one naturally imagines them to mean—they are merely names for certain mathematical expressions. Einstein, therefore, has not brought men the

same sense of triumph as Newton brought, although his work is just as remarkable. "Laws of nature" have turned out to be in some cases human conventions, in others mere statistical averages. This may not be always the case, but at any rate the old glad certainty is gone.

In conclusion, I wish to consider some of the social effects of science, and some of the hopes and fears for the future to which these effects give rise.

There is one regrettable feature of scientific civilization as hitherto developed: I mean, the diminution in the value and independence of the individual. Great enterprises tend more and more to be collective, and in an industrialized world the interference of the community with the individual must be more intense than it need be in a commercial or agricultural régime. Although machinery makes man collectively more lordly in his attitude towards nature, it tends to make the individual man more submissive to his group. Perhaps this is one cause of the fact that herd instinct is much more insistent in America than in England, and that individual liberty is less respected both politically and socially. I think, however, that a more important cause is the mixture of races and nationalities in the United States, which makes herd instinct a necessary unifying force. Even if a diminution of individual liberty be an essential feature of a scientific civilization, the mastery over nature is so great a boon that it is worth while to pay even a high price in order to achieve it. And it is probable that, as men's habits become more adjusted to the new régime, the interference with liberty will become very much less.

The omnipotence of man collectively and the feebleness of each individual man, which are features of a scientific civilization, should logically entail certain changes in values, religious, moral, and aesthetic. Belief in the infinite value of the individual soul arose as a consolation for the powerless subjects of the Roman Empire: ego-compensation had to be placed in another world, because the ordinary man had no share of political power. In the modern machine-world, owing to democracy and to the achievements of science, other compensations are possible, more especially nationalism, which identifies the individual emotionally with the power of his group. But in order that such compensations may satisfy, it is necessary to belittle the individual wherever he is not contributing to a totality. Lyric love, for example, which has inspired half the poetry of the world, has been a product of courts and aristocracies. Its revival after the Dark Ages was due to the Emperor Frederick II. The loves of an Emperor were events of public importance, and he saw nothing ridiculous in taking them seriously. His courtiers saw nothing ridiculous in imitating him. And so lyric love became a tradition. But in a civilization dominated by the machine, such seriousness about a mere emotion is impossible.

Changes in religion and morals come slowly, owing to our emotional resistance; yet they seem almost inevitable if a scientific civilization remains dominant for several centuries. In morals, we may expect a substitution of hope for fear, and an increase in the sense of the rights of the community as against the individual. Traditional morality, historically, was concerned with the relation of the individual soul to God. Political obligations formed part of the republic morality of Greece and Rome, but not of early Christianity, which grew up among populations without political power and therefore without political responsibility. This explains why many people still consider adultery a greater crime than acceptance of bribes by a politician or public official. Again: the State increasingly interferes between parents and children—for example, by insisting on education and forbidding physical cruelty. It would seem likely that this tendency will continue; more particularly, the State may be expected to assume the role of the father by taking over economic responsibility for the child, on the ground that many fathers cannot be trusted in this matter. If so, there will inevitably be a breakdown of the family, which must modify social psychology profoundly, producing, in place of individuals, well-drilled armies of intelligent but submissive

Janissaries, without individual differences, and without loyalties other than their loyalty to the State.

There remains the question: Can a scientific society be stable? Or does it contain within itself some poison which must ultimately produce its downfall? The Greeks produced an admirable way of life, but it was incapable of survival. Something of what they created passed into the Roman Empire, and thence into the Catholic Church, but in a diluted form. So it may be that the intensity of the scientific element in life will have to be diminished before men arrive at a stable polity. This possibility is worth examining.

There is, to begin with, an intellectual inconsistency in the scientific outlook. The nominal practice of science is to accept nothing without evidence, to test all its assertions by means of facts. But in reality, as Dr. Whitehead has pointed out in "Science and the Modern World," science has dogmas as ill grounded as those of any theological system. All science rests upon induction, and induction rests upon what Mr. Santayana calls "animal faith." The proofs of the validity of induction are as numerous as the proofs of the existence of God; but not one of them is calculated to carry conviction to a candid mind. This will not impede the progress of science so long as most men of science remain genuinely unaware of their theoretical insecurity, but as soon as they have to practise a semi-deliberate shutting of the eyes, they will lose the ardor of fearless explorers, and will tend to become defenders of orthodoxy. If, on the other hand, the instrumental theory of knowledge prevails, and theoretical problems are put to one side as merely scholastic, the inspiration to fundamental discoveries will fail. I am not arguing that the instrumental theory is false; on the contrary, I incline to think that it is true. But I am arguing that it does not afford a sufficient incentive to the precarious labor of serious thinking. When Egyptian priests discovered the periodicity of eclipses, they did so because superstition had led them to record such phenomena with scrupulous care. A false belief may be an essential ingredient in discovery, and perhaps the progress of science will cease on the day when the men of science become completely scientific. If so, they will turn to superstition for relief, and the Dark Ages will return. All this, however, is no more than a doubtful speculation.

More serious is the effect of a scientific civilization upon population—not upon quantity, which is unimportant, but upon quality. The most intelligent individuals, on the average, breed least, and do not breed enough to keep their numbers constant. Unless new incentives are discovered to induce them to breed, they will soon not be sufficiently numerous to supply the intelligence needed for maintaining a highly technical and elaborate system. And new incentives will have to be far more powerful than any that seem politically feasible in any measurable future. In America and Great Britain, the fetish of democracy stands in the way; in Russia, the Marxian disbelief in biology. Wherever the Catholic Church is strong, mere quantity tends to be thought alone important. In France, the economic system that has grown up around the Code Napoléon makes any eugenic reform impossible. Probably the best chance is in Germany, but even there it is small. Meanwhile, we must expect, at any rate for the next hundred years, that each generation will be congenitally stupider than its predecessor. This is a grave prospect.

In the ancient world, it is clear that Greece in the age of Pericles and Rome in the Augustan age were more intelligent than at later times; it is also fairly clear that the decay of Rome was primarily a decay of intelligence. Will this kind of decadence repeat itself? Not if biological science can obtain the same hold over men's minds as physical and mechanical sciences have now. In that case, by positive and negative eugenics the average intelligence can be increased in each generation, instead of being diminished, as at present. Unfortunately the concern of biology is with the most intimate part of human life, where emotions, morals, and religion alike stand in the way of progress. It may be doubted whether human nature could bear so great an interference with the life of instinct as would be involved in a really effective application of eugenics. What-

ever may be thought disagreeable in the machine age would be greatly intensified by the application of science to parenthood, and men might well think the price not worth paying.

What does seem clear is that we cannot stand still with the measure of science that exists at present in western civilization. We must either have more science, in particular biological science, or gradually become incapable of wielding the science we already have. In that case the forces of ignorance and obscurantism will gradually creep back into power. For a while, the old machinery will survive, just as Roman aqueducts survived in the sixth and seventh centuries; but gradually there will be an increasing collapse, until the skyscrapers become as strange as Maya ruins in Yucatan. Let us not flatter ourselves that this is impossible; all past history proves the reverse.

In the course of this chapter, I have not sought to minimize what may be considered the defects of the machine civilization. I do not doubt, however, that its merits far outweigh its defects. Take two items alone: the diminution of poverty, and the improvement in public health. These two alone represent an almost incalculable increase in average happiness, and each of them is capable of being carried very much further than has yet been done.

The remedy for the one-sidedness and harshness of our present civilization is to be sought, not in less science, but in more. Psychology, physiology, and the study of heredity have much to contribute. But if they are to add to human happiness, it is essential that we should learn to use the machine without worshipping it. Studies of industrial fatigue with a view to facilitating a greater output are not the most important part of psychology. The effect of stimulants in diminishing work on Monday morning is not their only effect deserving of study. Nor is suitability as a factory hand the only quality the eugenist should aim at producing. The machine was made for man, not man for the machine. The important thing about work is that it affords leisure for play; if it does not do this, it is not fulfilling its social purposes. When the same scientific acumen comes to be applied to human nature as has already been applied to the physical world, it may be expected, with some confidence, that the importance of happiness will no longer be forgotten. And evidently the honeymoon intoxication of the machine age will pass soonest in the countries which have been the first to experience it. I look, therefore, to the western nations, and more particularly to America, to establish first that more humane, more stable, and more truly scientific civilization towards which, as I hope, the world is tending.

Mathematics and the Good[1]

A. N. WHITEHEAD

ABOUT two thousand three hundred years ago a famous lecture was delivered. The audience was distinguished: among others it included Aristotle and Xenophon. The topic of the lecture was The Notion of The Good. The lecturer was competent; he was Plato.

The lecture was a failure, so far as concerned the elucidation of its professed topic; for the lecturer mainly devoted himself to Mathematics. Since Plato with his immediate circle of disciples, the Notion of The Good has disengaged itself from mathematics. Also in modern times eminent Platonic scholars with a few exceptions successfully conceal

[1] From *The Philosophy of Alfred North Whitehead*, Volume III, of the "Library of Living Philosophers," a series published by The Library of Living Philosophers, Inc.

their interest in mathematics. Plato, throughout his life, maintained his sense of the importance of mathematical thought in relation to the search for the ideal. In one of his latest writings he terms such ignorance "swinish." That is how he would characterize the bulk of Platonic scholars of the last century. The epithet is his, not mine.

But undoubtedly his lecture was a failure; for he did not succeed in making evident to future generations his intuition of mathematics as elucidating the notion of The Good. Many mathematicians have been good men—for example, Pascal and Newton. Also many philosophers have been mathematicians. But the peculiar associations of mathematics and The Good remains an undeveloped topic, since its first introduction by Plato. There have been researches into the topic conceived as an interesting characteristic of Plato's mind. But the doctrine, conceived as a basic truth of philosophy, faded from active thought after the first immediate Platonic epoch. Throughout the various ages of European civilization, moral philosophy and mathematics have been assigned to separate departments of university life.

It is the purpose of the present essay to investigate this topic in the light of our modern knowledge. The progress of thought and the expansion of language now make comparatively easy some slight elucidation of ideas which Plato could only express with obscure sentences and misleading myths. You will understand, however, that I am not writing on Plato. My topic is the connection between modern mathematics and the notion of The Good. No reference to any detailed mathematical theorems will be essentially involved. We shall be considering the general nature of the science which is now in process of development. This is a philosophic investigation. Many mathematicians know their details but are ignorant of any philosophic characterization of their science.

II

Within the period of sixty or seventy years preceding the present time, the progressive civilization of the European races has undergone one of the most profound changes in human history. The whole world has been affected; but the origination of the revolution is seated in the races of western Europe and Northern America. It is a change of point of view. Scientific thought had developed with a uniform trend for four centuries, namely, throughout the sixteenth, seventeenth, eighteenth, and nineteenth centuries. In the seventeenth century, Galileo, Descartes, Newton, and Leibniz elaborated the set of concepts, mathematical and physical, within which the whole movement was confined. The culmination may be placed in the decade from 1870 to 1880. At that time Helmholtz, Pasteur, Darwin, and Clerk-Maxwell were developing their discoveries. It was a triumph which produced the death of the period. The change affects every department of thought. In this chapter I emphasize chiefly the shift in the scope of mathematical knowledge. Many of the discoveries which were effective in producing this revolution were made a century earlier than the decade which is here chosen as the final culmination. But the wide realization of their joint effect took place in the fifty years subsequent in 1880. May I add, as an aside, that in addition to its main topic of mathematics and The Good, this chapter is also designed to illustrate how thought develops from epoch to epoch, with its slow half-disclosures? Apart from such knowledge you cannot understand either Plato, or any other philosopher.

III

In order to understand the change, let us conceive the development of an intellectual life which initiated its growth about the year 1870, at the age of about nine or ten years. The whole story reads like a modern version of a Platonic dialogue—for example, the *Theaetetus* or the *Parmenides*. At the commencement of his intellectual life the child would have known the multiplication table up to twelve-times-twelve. Addition, subtraction, multiplication, and division had been mastered. Simple fractions were familiar notions. The decimal notation for fractions was added in the next two or three years. In this way, the whole basis of arithmetic was soon mastered by the young pupil.

In the same period Geometry and Algebra were introduced. In Geometry, the notions of points, lines, planes, and other surfaces are fundamental. The procedure is to introduce some complex pattern of these entities defined by certain relationships between its parts and then to investigate what other relationships in that pattern are implicitly involved in these assumptions. For example, a right-angled triangle is introduced. It is then proved that—assuming Euclidean Geometry—the square of the hypotenuse is equal to the sum of the squares on the other sides.

This example is interesting. For a child can easily look on a figure of a right-angled triangle—as drawn on the black-board by his teacher—without the notion of the squares on the various sides arising in his consciousness. In other words, a defined pattern—such as a right-angled triangle—does not disclose its various intricacies to immediate consciousness.

This curious limitation of conscious understanding is the fundamental fact of epistemology. The child knew what his teacher was talking about, namely, the right-angled triangle quite evidently suggested on the board by the thick chalk lines. And yet the child did not know the infinitude of properties which were implicitly involved.

The primary factors in the boy's concept of a right-angled triangle—as he looked at the black-board—were points, lines, straightness of lines, angles, right-angles. No one of these notions has any meaning apart from the reference to the all-enveloping space. A point has definite position in space, but does not (as then explained) share in any spatial extension. Lines and straight lines have position and also do share in spatial relations between straight lines. Thus no one of the notions involved in the concept of a right-angled triangle has any meaning apart from reference to the spatial system involved.

IV

At that date, apart from a small selection even among eminent mathematicians, it was presupposed that there was only one coherent analysis of the notion of space; in other words, that any two people talking about space must refer to the same system of relations, provided that you expressed a full analysis of every ramification of their meanings. The aim of mathematics, according to their belief, and according to Plato's belief, and according to Euclid's belief, was the adequate expression of this unique, coherent notion of spatiality. We now know that this notion, which had triumphed for about two thousand four hundred years as the necessary foundation for any physical science, was a mistake. It was a glorious mistake: for apart from the simplification thus introduced into the foundations of thought, our modern physical science would have had no agreed simplification of presuppositions by means of which it could express itself.

Thus, the error promoted the advance of learning up to the close of the nineteenth century. At the close of that period, it obstructed the proper expression of scientific ideas. Luckily the mathematicians—at least some of them—had got ahead of the sober thoughts of sensible men of science, and had invented all sorts of fantastic variations from orthodox geometry. At the turn of the centuries, that is, between 1890 and 1910, it was discovered that these variant types of geometry were of essential importance for the expression of our modern scientific knowledge.

From the faint beginnings of geometry, in Egypt and Mesopotamia, up to the present is a stretch of time extending for almost four thousand years. Throughout the whole period this error of a unique geometry has prevailed. Our notions of today have a history of about one hundred to a hundred and fifty years. We enjoy the pleasurable satisfaction that "Now we know."

We shall never understand the history of exact scientific knowledge unless we examine the relation of this feeling "Now we know" to the types of learning prevalent in each epoch. In some shape or other it is always present among the dominant group who are preserving and promoting civilized learning. It is a misapplication of that sense of success which is essential for the maintenance of any enterprise. Can this misapplication be characterized? We may complete the

phrase "Now we know" by an adverb. We can mean "Now we know—*in part*;" or we can mean "Now we know—*completely*." The distinction between the two phrases marks the difference between Plato and Aristotle, so far as their influence on future generations is concerned. The notion of the complete self-sufficiency of any item of finite knowledge is the fundamental error of dogmatism. Every such item derives its truth, and its very meaning, from its unanalyzed relevance to the background which is the unbounded Universe. Not even the simplest notion of arithmetic escapes this inescapable condition for existence. Every scrap of our knowledge derives its meaning from the fact that we are factors in the universe, and are dependent on the universe for every detail of our experience. The thorough sceptic is a dogmatist. He enjoys the delusion of complete futility. Wherever there is the sense of self-sufficient completion, there is the germ of vicious dogmatism. There is no entity which enjoys an isolated self-sufficiency of existence. In other words, finitude is not self-supporting.

The summarized conclusion of this discussion is that geometry, as studied through the ages, is one chapter of the doctrine of Pattern; and that Pattern, as known to finite discrimination, is a partial disclosure with an essential relevance to the background of the Universe. Also the term "Geometry" refers to a genus of patterns; and this genus includes a variety of species.

V

We now turn to the discussion of Number, considered as a fundamental mathematical notion. This section can be shortened, because many relevant deflections have already been expressed in the previous examination of geometry.

The doctrine of number from the Greek period onwards has always included queer little contradictions which thoughtful people disregarded. In the last quarter of the nineteenth century, a more thorough examination of the whole subject, initiated by Georg Cantor and Frege in Germany and Austria, and by Peano and Pieri in Italy, and in England by students of symbolic logic, disclosed a number of awkward questions. Finally Bertrand Russell produced a peculiarly glaring self-contradiction in the current reasoning. I well remember that he explained it to Frege in a private letter. Frege's answer commenced with the exclamation, "Alas, arithmetic totters!"

Frege was correct: Arithmetic tottered and still totters. But Bertrand Russell was equal to the occasion. We were then in the midst of writing a book entitled, *Principia Mathematica*. Russell introduced the notion of "types" of entities. According to that doctrine, the notion of number should only be applied to a group of entities of the same type. Thus the number "three" as applied to entities of one type has a different meaning to the number "three" as applied to entities of another type. For example, if we are considering two different types, there are two different meanings of the number "three."

Russell was perfectly correct. By confining numerical reasoning within one type, all the difficulties are avoided. He had discovered a rule of safety. But unfortunately this rule cannot be expressed apart from the presupposition that the notion of number applies beyond the limitations of the rule. For the number "three" in each type, itself belongs to different types. Also each type is itself of a distinct type from other types. Thus, according to the rule, the conception of two different types is nonsense, and the conception of two different meanings of the number three is nonsense. It follows that our only way of understanding the rule is nonsense. It follows that the rule must be limited to the notion of a rule of safety, and that the complete explanation of number awaits an understanding of the relevance of the notion of the varieties of multiplicity to the infinitude of things. Even in arithmetic you cannot get rid of a sub-conscious reference to the unbounded universe. You are abstracting details from a totality, and are imposing limitations on your abstraction. Remember that a refusal to think does not imply the non-existence of entities for thought. Our

conscious thought is an abstraction of entities from the background of existence. Thought is one form of emphasis.

VI

Finally in this survey of mathematical notions we come to Algebra. Who invented Algebra? It was invented "in Arabia" or "in India," you all want to tell me. In one sense that is true—namely, the useful symbolism for the algebraic ideas started in one or other, or in both, of those countries. But there is a further question, which, I am sure, would have interested Plato if he had known about Algebra. Who invented the fundamental idea which is thus symbolized?

What is the fundamental notion at the base of Algebra? It is the notion of "*Any* example of a given sort, in abstraction from some particular exemplification of the example or of the sort."

VII

The first animal on this Earth, who even for a moment entertained this notion, was the first rational creature. You can observe animals choosing between *this thing* or *that thing*. But animal intelligence requires concrete exemplification. Human intelligence can conceive of a type of things in abstraction from exemplification. The most obvious disclosures of this characteristic of humanity are mathematical concepts and ideals of the Good—ideals which stretch beyond any immediate realization.

Any practical experience of exactness of realization is denied to mankind: Whereas mathematics, and ideals of perfection, are concerned with exactness. It is the difference between practice and theory. All theory demands exact notions, somewhere or other, however concealed. In practice exactness vanishes: the sole problem is, "Does it Work?" But the aim of practice can only be defined by the use of theory; so the question "Does it Work?" is a reference to theory. Also the importance of theory resides in its reference to practice. The vagueness of practice is energized by the clarity of ideal experience.

No one has ever observed in practice any exact mathematical notion. Consider the child as he learnt his geometry. He never observed an exact point or an exact line, or exact straightness, or an exact circle. Such things were unrealized ideals in the child's mind. So much will be conceded by the man of practical good sense. But when we pass to arithmetic he stalls. You can hear him saying—perhaps you are saying it yourselves —"I can see one chair, two chairs, three chairs, four chairs, and five chairs, and I can observe that two chairs and three chairs when assembled together form a group of five chairs." In this way, our sensible friend has observed exactly exemplifications of arithmetical notions and of an arithmetic theorem.

Now the question is—Has he observed exactly, or, Has he had exact notions elicited in his conceptual experience? In what sense did he observe exactly one chair? He observed a vague differentiation of the general context of his visual experience. But suppose we pin him down to one billionth of an inch. Where does the chair end and the rest of things begin? Which atom belongs to the chair, and which atom belongs to surrounding space? The chair is perpetually gaining and losing atoms. It is not exactly differentiated from its surroundings, nor is it exactly self-identical as time slips by. Again, consider the chair during long periods. It gradually changes, even throughout its solid wooden parts. At the end of a million years in a cave, it becomes fragile, and dissolves at a touch. A slow, imperceptible change is always in progress.

Remember that the human concepts of one inch in length, and of one second of time, as being reasonable basic quantities, are purely relevant to human life. Further, the modern discoveries of physicists and astronomers have disclosed to us the relevance of minute, and of immense, happenings. Our exact conceptual experience is a mode of emphasis. It vivifies the ideals which invigorate the real happenings. It adds the perception of worth and beauty to the mere transition of sense-experience. It is by reason of the conceptual stimulus that the sunset displays the glory of the sky. By this statement, it is not meant that a feeble train of explicit

thoughts works the miracle. It is the transformation of the real experience into its ideal limit. Our existence is invigorated by conceptual ideals, transforming vague perceptions.

We cannot understand the flux which constitutes our human experience unless we realize that it is raised above the futility of infinitude by various successive types of modes of emphasis which generate the active energy of a finite assemblage. The superstitious awe of infinitude has been the bane of philosophy. The infinite has no properties. All value is the gift of finitude which is the necessary condition for activity. Also activity means the origination of patterns of assemblage, and mathematics is the study of pattern. Here we find the essential clue which relates mathematics to the study of the good, and the study of the bad.

VIII

You will notice that earlier in this essay we have emphasized that there are no self-existent finite entities. The finite essentially refers to an unbounded background. We have now arrived at the converse doctrine, namely, that infinitude in itself is meaningless and valueless. It acquires meaning and value by its embodiment of finite entities. Apart from the finite, the infinite is devoid of meaning and cannot be distinguished from nonentity. The notion of the essential relatedness of all things is the primary step in understanding how finite entities require the unbounded universe, and how the universe acquires meaning and value by reason of its embodiment of the activity of finitude.

Among philosophers, Spinoza emphasized the fundamental infinitude and introduced a subordinate differentiation by finite modes. Also conversely, Leibniz emphasized the necessity of finite monads and based them upon a substratum of Deistic infinitude. Neither of them adequately emphasized the fact that infinitude is mere vacancy apart from its embodiment of finite values, and that finite entities are meaningless apart from their relationship beyond themselves. The notion of "understanding" requires some grasp of how the finitude of the entity in question requires infinity, and also some notion of how infinity requires finitude. This search for such understanding is the definition of philosophy. It is the reason why mathematics, which deals with finite patterns, is related to the notion of the Good and to the notion of the Bad.

The great religions illustrate this doctrine. Buddhism emphasizes the sheer infinity of the divine principle, and thereby its practical influence has been robbed of energetic activity. The followers of the religion have lacked impulse. The doctrinal squabbles of Christianity have been concerned with the characterization of the infinite in terms of finitude. It was impossible to conceive energy in other terms. The very notion of goodness was conceived in terms of active opposition to the powers of evil, and thereby in terms of the limitation of deity. Such limitation was explicitly denied and implicitly accepted.

IX

The history of the science of algebra is the story of the growth of a technique for representation of finite patterns. Algebra is one chapter in the larger technique, which is language. But, in the main, language indicates its meanings by means of casual associations as they arise in human history. It is true that language strives to embody some aspects of those meanings in its very structure. A deep sounding word embodies the deep solemnity of grief. In fact, the art of literature, vocal or written, is to adjust the language so that it embodies what it indicates.

But the larger part of what language physically presents is irrelevant to the meaning indicated. The sentence is a sequence of words. But this sequence is, in general, irrelevant to the meaning. For example, "Humpty-Dumpty sat on a wall" involves a sequence which is irrelevant to the meaning. The wall is in no sense subsequent to Humpty-Dumpty. Also the posture of sitting might have been realized simultaneously with the origination of the sitter and the wall. Thus the verbal order has the faintest reference to the idea conveyed. It is true that by exciting expectation, and by delay, the

verbal order does work on the emotions of the recipient. But the sort of emotion, thus aroused, depends on the character of the recipient. Algebra reverses the relative importance of the factors in ordinary language. It is essentially a written language, and it endeavours to exemplify in its written structures the patterns which it is its purpose to convey. It may not be always wholly successful in this endeavour. But it does invert the ordinary habits of language. In the usage of Algebra, the pattern of the marks on paper is a particular instance of the pattern to be conveyed to thought.

Also there is an enlargement of the notion of "any." In arithmetic we write "two plus three" equals "three plus two." We are considering two processes of assemblage. The type of assemblage is indicated by the word —or sign—"plus," and its meaning is restricted by the reference to number. The two procedures are asserted to issue in groups with identical number of members. This number is in fact "five;" but it is not mentioned.

Now in algebra, the restriction of thought to particular numbers is avoided. We write "$x + y = y + x$," where x and y are any two numbers. Thus the emphasis on pattern, as distinct from the special entities involved in the pattern, is increased. Thus algebra in its initiation involved an immense advance in the study of pattern. Relationships of diverse patterns, such as that involved in the Binomial Theorem, entered into human thought. Of course, algebra grew slowly. For centuries it was conceived as a mode of asking for the solution of equations. Somewhere in medieval times, an unfortunate emperor, or other bigwig, together with his court, had to listen to a learned Italian expounding the solution of a cubic equation. Poor men—a lovely Italian afternoon was wasted! They would have yawned if their interest had not been sustained by the sense of magic.

X

At the beginning of the nineteenth century, Algebra was the study of patterns involved in the various ways of assembling numbers, so that each assemblage issued in the indication of one number, conceived as the outcome of that assemblage. The relation of equality between two assemblages meant that both assemblages indicated the same number. But the interest was directed to the two patterns of assemblage, with their identical indications. In this way, certain general characteristics of patterns of number as realized in the evolving universe were identified with characteristics of patterns of marks on two-dimensional surfaces—usually sheets of paper. Such identities of pattern of meaning with pattern of written marks, or sound variation, are a subordinate characteristic of ordinary language, though of some importance in respect to spoken language. But this identity is the major characteristic of algebraic language.

Today, surveying the first half of the twentieth century, we find an immense extension of algebra. It has been extended beyond the field of number, and applies to a large group of patterns in which number is a subordinate factor. Very often when number is explicitly admitted, its major use is to provide names, as it is employed for the naming of houses. Thus mathematics is now being transformed into the intellectual analysis of types of pattern.

The notion of the importance of pattern is as old as civilization. Every art is founded on the study of pattern. Also the cohesion of social systems depends on the maintenance of patterns of behaviour; and advances in civilization depend on the fortunate modification of such behaviour patterns. Thus the infusion of pattern into natural occurrences, and the stability of such patterns, and the modification of such patterns, is the necessary condition for the realization of the Good.

Mathematics is the most powerful technique for the understanding of pattern, and for the analysis of the relationships of patterns. Here we reach the fundamental justification for the topic of Plato's lecture. Having regard to the immensity of its subject-matter mathematics, even modern mathematics, is a science in its babyhood. If civilization continues to advance, in the next

two thousand years the overwhelming novelty in human thought will be the dominance of mathematical understanding.

The essence of this generalized mathematics is the study of the most observable examples of the relevant patterns; and applied mathematics is the transference of this study to other examples of the realization of these patterns.

XI

Pattern is only one factor in our realization of experience, either as immediate value or as stimulus to activity for future value. For example in a picture, the geometrical pattern may be good, but the relationship of colours may be horrible. Also each individual colour may be poverty-stricken, indeterminate, and feeble. This example elicits the truth that no entity is merely characterized by its individual character, or merely by its relationships. Each entity possesses essentially an individual character, and also is essentially a terminal of relationship, potential or actual. Some of the factors of individual character enter into the relationships, and conversely the relationships enter into the character. In other words, no entity can be considered in abstraction from the universe, and no entity can be divested of its own individuality. The traditional logic overstressed the notion of individual character. The notion of "any" frees us from individual character: but there is no entity which is merely "any." Thus when algebra is applied, factors beyond algebraic thought are relevant to the total situation. Returning to the picture, mere geometry is not the whole tale. Colours are relevant.

In a picture colour (including black and white) may be reduced to a minimum, as in a pen-and-ink sketch. But some differentiation of colour is necessary for the physical presentation of geometrical design. On the other hand, colour may be dominant in some glorious work of art. Again, the drawing may be good, and colour effect may be a failure. The whole topic of Good and Evil arises. And you cannot discuss Good and Evil without some reference to the interweaving of divers patterns of experience. The antecedent situation may demand depth of realization, and a thin pattern may thwart conceptual expectation. There is then the evil of triviality —a sketch in place of a full picture. Again, two patterns eliciting intense experience may thwart each other. There is then the intense evil of active deprivation. This type has three forms; a concept may conflict with a reality, or two realities may conflict, or two concepts may conflict.

There may be other types of evil. But we are concerned with the mal-adjustment of patterns of experience. The total pattern has inhibited the insistent effect of either of its parts. But this notion is meaningless except as a reference to the background of feeling—namely emotional and analytic experience—within which that total pattern arises. Every abstraction derives its importance from its reference to some background of feeling, which is seeking its unity as one individual complex fact in its immediate present. In itself a pattern is neither good nor bad. But every pattern can only exist in virtue of the doom of realization, actual or conceptual. And this doom consigns the pattern to play its part in an uprush of feeling, which is the awakening, of infinitude to finite activity. Such is the nature of existence: it is the acquisition of pattern by feeling, in its emphasis on a finite group of selected particulars which are the entities patterned—for example, the spatial arrangements of colours and sounds. But the particulars concerned are not necessarily purely qualitative. A human being is more than an assortment of colours and sounds. The notion of pattern emphasizes the relativity of existence, namely, how things are connected. But the things thus connected are entities in themselves. Each entity in a pattern enters into other patterns, and retains its own individuality in this variety of existence. The crux of philosophy is to retain the balance between the individuality of existence and the relativity of existence. Also each individual entity in one pattern may be capable of analysis, so as to display itself as the unity of achieved pattern. The point that I am emphasizing is the function of pattern in the

production of Good or Evil in the finite unit of feeling which embraces the enjoyment of that pattern. Also the essential characterization of mathematics is the study of pattern in abstraction from the particulars which are patterned.

XII

When Plato in his lecture connected mathematics with the notion of the Good, he was defending—consciously or unconsciously—the traditional ways of thought spread through all races of mankind. The novelty was the method of abstraction which the Greek genius was gradually emphasizing. Mathematics, as studied in his own Academy, was an abstraction of geometrical and numerical characterizations from the concrete facts of Athenian life. Aristotle was dissecting animals, and was analysing political constitutions. He conceived of genera and species. He thus abstracted the logical characters from the full-blooded experience. The new epoch of scientific abstractions was arising.

One danger in the use of this technique is the simple-minded use of Logic, whereby an erroneous proposition is merely discarded. All propositions are erroneous unless they are construed in reference to a background which we experience without any conscious analysis. Every scientific proposition which the great scientists of the mid-nineteenth century entertained, was erroneous in the sense in which it was then construed. Their doctrine of space was wrong: their doctrine of matter was wrong: their doctrines of evidence were wrong. The abiding interest of Plato's Dialogues does not lie in their enunciation of abstract doctrines. They are suffused with the implicit suggestion of the concrete unity of experience, whereby every abstract topic obtains its interest.

XIII

Abstraction involves emphasis, and emphasis vivifies experience, for good, or for evil. All characteristics peculiar to actualities are modes of emphasis whereby finitude vivifies the infinite. In this way Creativity involves the production of value-experience, by the inflow from the infinite into the finite, deriving special character from the details and the totality of the finite pattern.

This is the abstraction involved in the creation of any actuality, with its union of finitude with infinity. But consciousness proceeds to a second order of abstraction whereby finite constituents of the actual thing are abstracted from that thing. This procedure is necessary for finite thought, though it weakens the sense of reality. It is the basis of science. The task of philosophy is to reverse this process and thus to exhibit the fusion of analysis with actuality. It follows that Philosophy is not a science.

The Solar System and Its Origin[1]

FRED L. WHIPPLE

THE FIVE bright planets have been known to man for many thousands of years, but in antiquity as mysterious celestial deities whose very motions seemed to reflect the caprices of superhuman beings. The old Greek and Roman legends are well known. Mars was the God of War, Venus the Goddess of Love, while Mercury was a sort of messenger boy. And thus the planets remain today—to the poets, that is, and to others for whom imagery is the essence of life. But to the scientist the planets have assumed a new character; the massive spheres of stone and iron and gas are even more interesting and exciting individually than were their mythical other-selves. Their mo-

[1] Reprinted from *Earth, Moon and Planets* by Fred L. Whipple. The Blakiston Company, Philadelphia, by permission from the publishers. Copyright 1941 by The Blakiston Company.

tions are now a matter of mathematical calculation, not of caprice. The question of what lies within and beneath the cloud-filled atmosphere of Venus is, for the scientist, more conducive to mental activity than the folklore of dead generations.

Each planet acquires more individuality and becomes more interesting as the astronomer, by observation and reasoning, deduces additional facts. Every year some of the problems of the preceding year are solved and new ones, once beyond the expectation of solution, appear within reach. To appreciate the current discoveries and deductions in planetary astronomy, we must be familiar with the fund of knowledge already accumulated. . . .

The planets are really so small compared to the vast distances between them, and their reflected sunlight is so weak in comparison with the great brilliancy of the Sun, that all of them can never show to good advantage from any one location. As a vantage spot for observations, our present position on the Earth is actually quite satisfactory, except for the thick atmosphere above us. Since we must surmount this obstacle, we might as well, in imagination, go out farther from the Sun to about the distance of Jupiter. From there the inner part of the solar system is easily visible. The orbits of the planets show first that the Sun is almost exactly in the center. The reason is very simple; the Sun possesses 99.866 per cent of the entire mass, so that by gravitational attraction it completely dominates the motions of the planets.

We notice next that the orbits lie almost in a plane, very close to the *ecliptic* or the plane of the Earth's orbit about the Sun. This favoritism on the part of the planets in adopting a common plane of motion is probably not due to chance. Although no rigorous proof has been given, it is possible that Jupiter is responsible, because this planet is 317 times as massive as the Earth and possesses seven tenths of the combined mass of all the planets. Jupiter is certainly the master planet and by gravitational attraction may have regulated the orbits of the others. There is the more likely possibility, of course, that the planets were all formed in a plane —but we must investigate this matter later on.

Mercury, the smallest planet, moves in the smallest orbit of all, but one that is tipped from the common plane with an inclination of seven degrees, while the other inner planets keep within about three degrees of the plane.

For measuring distances in the solar system we must use a larger unit than for distances on the Earth. The most convenient is the astronomical unit (A.U.), which equals the mean of the largest and least distances from the Earth to the Sun, technically called the Earth's mean distance. In miles it is 92,870,000, the zeros shouting that we do not know what numbers to put in for them, and that we are not very certain about even the number seven. This basic astronomical unit is very difficult to measure accurately in miles, and is known barely to one part in ten thousand.

The distance to the Sun is enormous in terms of ordinary distances on the Earth. An airplane, moving with the velocity of sound, 750 miles per hour, would require fourteen years for the trip (necessarily one-way), while a cannon projectile moving a mile per second would arrive in a little less than three years. If such distances seem large, remember that we spend our lives confined to one of the smaller planets of the solar system, and are denied the privilege of a "fuller" existence in the universe at large. The astronomical unit is actually much too small for conveniently listing the distances between the stars; a much larger unit is used for that purpose.

Mercury has a mean distance from the Sun of only 0.39 astronomical units, Venus 0.72, the Earth 1.00, Mars 1.52, and Jupiter 5.20, a rather uniform sequence of increasing distances except for the large gap between Mars and Jupiter. In this gap we find more than a thousand small planets called asteroids that fill the space where a planet might well move. These asteroids range from mountain size, a mile or so in diameter, up to

Ceres which is about 480 miles across—comparable to a large island. Pallas comes second with a diameter of 304 miles and Vesta third, 240 miles. There are certainly no large asteroids that have not been discovered but there must be many smaller ones, perhaps 40,000 that could be photographed with the larger telescopes. These fly-weight planets, although contributing a negligible part to the mass of the system (perhaps $\frac{1}{500}$ of the Earth's mass), provide astronomers with a great amount of work in observation and calculation. They are fine test specimens for theories of various kinds and may eventually assist materially in finding the key to the origin of the system.

The planets themselves have much of the character of the ancient gods for whom they were named. Mercury is indeed swift and small, characteristic of a messenger. It requires only 88 days for a complete revolution about the Sun, less than one fourth the length of our year. Its diameter is only 0.4 that of the Earth. Even this small diameter, 3,100 miles, is enough greater than the diameter of Ceres to distinguish Mercury definitely as a planet rather than as a large asteroid. The period of rotation remains quite uncertain at present but probably equals the period of revolution about the Sun. The planet is, unfortunately, so small and always remains so close to the Sun as observed from the Earth, that surface markings are difficult to discern.

Venus is certainly the "sister" planet of the Earth. The diameter is almost identical (97.3 per cent), the period of revolution about the Sun somewhat shorter (225 days), and the mass about 0.8. Venus too is cloaked with a large atmosphere; it is this opaque atmosphere that hides the surface features so completely that we cannot be certain of the rate of rotation. From indirect evidence we judge the period probably to be long—more than three weeks. The actual observations of both of these inner planets are made difficult by the circumstance that we can see only part of the sunlit face at any time. When nearest to the Earth, only a thin crescent of Venus can be seen, as is the case for the Moon when new, because the bodies are almost on a line between the Earth and the Sun. . . .

Mars may best be described as a pygmy Earth (one half its diameter) with a thin atmosphere, distinct surface features, but no oceans. It moves more slowly about the Sun, in 687 days. Mars, however, boasts two moons or satellites, while Mercury and Venus have none. These two satellites are little more than medals for Mars, the God of War, since the largest, Phobos, is only fifteen miles across. Deimos, the smaller, is just one half of Phobos in diameter. The existence of these Lilliputian satellites, strangely enough, was narrated by Jonathan Swift in his "Gulliver's Travels," some one hundred and fifty years before their discovery in 1877. According to Gulliver's account, the astronomers of the cloud island, Laputa, possessed small but most excellent telescopes and had "discovered two lesser stars, or satellites, which revolve about Mars; whereof the innermost is distant from the center of the primary planet exactly three of his diameters, and the outermost, five; the former revolves in the space of ten hours, and the latter in twenty-one and a half."

These periods of revolution are remarkably close to the truth, for Phobos revolves about Mars in 7 h. 39 m. while Deimos requires 30 h. 18 m. The mythical distances from the center of Mars, are, however, too great; Phobos is distant only 1.4 of the planet's diameter, and Deimos 3.5 diameters. It would be enlightening to have learned more of the Laputian discoveries, but Gulliver mentions only that they had "observed ninety-three different comets, and settled their periods with great exactness."

The rapid motion of Phobos makes this satellite unique in the solar system. Its period of revolution is less than the Martian day, 24 h. 37 m. As seen from the surface of Mars, Phobos would rise in the west and set in the east!

Before going on to the outermost planets, we note that the four planets Mercury, Venus, Earth, and Mars are really very much alike, of somewhat the same size, and all fairly dense, as though they were made of stone or iron. They are justly classed as the *terrestrial* planets because of their similarity

to the Earth. Probably Pluto is much like the Earth or Venus. Jupiter, Saturn, Uranus and Neptune, on the other hand, are of an entirely different species, giants compared to the Earth, and only about as dense as water. . . .

Jupiter is conspicuous as the greatest of the planets. It has eleven times the diameter of the Earth, but rotates faster than any other planet, its day being slightly less than ten hours in length. It rotates so fast, indeed, that the equator is much bulged out by the centrifugal force. Since Jupiter is only a third denser than water we are not surprised to find that it possesses an enormously thick atmosphere, how thick we cannot know. The depth of the atmosphere, if indeed there is a distinct solid surface below, can be calculated only on the basis of estimates of the chemical composition and temperatures within the planet. Ammonia and methane (marsh gas) are known to be present in the gigantic clouds that we can see from outside. These markings are certainly clouds because their forms are ever changing. The general structure is banded parallel to the equator as though clouds were being blown along by "trade winds" that result from the rapid rotation.

The atmospheres of the other giant planets are very similar to that of Jupiter, the differences being attributable in a large measure to the fact that the planets farther from the Sun are colder at their surfaces. Neptune, 30 A.U. from the Sun, is a frigid world by our standards because it receives only $\frac{1}{900}$ as much heat and light from the Sun as we receive. Solid carbon dioxide (dry ice) near its melting point is hot compared to the probable temperature at the surface of Neptune, about 330° F. Nitrogen gas would be frozen, likewise oxygen.

Although the giant planets are cold and uninhabitable, their great masses and wide separation in space allow them to control astonishingly large families of satellites. Jupiter is again first, with eleven moons. Saturn is second with nine, while Uranus has four and Neptune only one. Of these, the four brightest of Jupiter's family, one of Saturn's, and the single satellite of Neptune are about the size of our Moon, while the others range in diameter from that of small asteroids to about half the Moon. The systems of Jupiter and Saturn are really miniature solar systems in every respect except that the primary planets do not send out light by themselves but shine by reflected sunlight only. The great planets are more massive when compared to their largest satellites than is the Sun when compared to Jupiter or Saturn.

The similarity with the whole solar system is even more striking in the system of Saturn because this planet controls not only nine satellites, equal to the number of known planets about the Sun, but also possesses a family of miniature asteroids, which comprise the great rings. These rings are so close to Saturn itself that in the early telescopes they looked like ears or appendages. Galileo, who was the first scientist of the modern world to see Jupiter's four bright satellites, sometimes drew Saturn as consisting of three pieces—a central body with symmetrical side sections. We know now that the rings are made of small fragments of matter revolving about Saturn in nearly a plane, relatively thinner than a sheet of paper. When seen at different angles they present different appearances, from invisibility, if seen edge on, to wide rings at the brightest angle possible.

On beyond Neptune lies the more recently discovered Pluto. Little is known about Pluto as a planet. Our best information suggests that it is slightly smaller and less massive than the Earth, but its rate of rotation is uncertain. Probably there is no atmosphere because the surface seems to reflect sunlight very poorly; the planets with heavy atmospheres reflect much better than those with thin atmospheres. The Moon is an especially poor reflector, and Pluto may be even worse.

To complete this quick introduction to the solar family, some mention must be made of the ever-baffling comets. These strange wanderers have excited more superstitious fear in the human mind than any other class of celestial bodies. Today their continued existence is in itself a major riddle of the solar system and the phenomena that they manifest are far from well explained. Most

comets move in exceedingly elongated orbits, approaching the Sun for only a very small fraction of one period of revolution. When distant from the Sun they become too faint for observation but they brighten enormously at perihelion, when closest to the Sun. At this time they become so active that they waste an appreciable part of their substance into space, and produce a great coma of gases and small dust particles about their nuclei. The strong sunlight forces these gases and dust back from the comet in a great tail, sometimes multiple and always complicated in structure. . . .

No longer can the philosopher in his easy chair expect to solve the basic problems of the origin and evolution of the solar system. A great array of observational facts must be explained by a satisfactory theory, and the theory must be consistent with the principles of dynamics and modern physics. All of the hypotheses so far presented have failed, when physical theory has been properly applied. The modern attack on the problem is less direct than the old method, which depended upon an all-embracing hypothesis. The new method is perhaps slower, but it is much more certain. By a direct study of the facts, we can specify, within an increasingly narrow range, the physical conditions under which the planets evolved. The manner of their origin must finally become apparent. . . .

It is an interesting commentary on modern science that the *age* of the Earth has been determined, although its origin remains a baffling problem. The oldest rocks in the Earth's crust solidified some two billion years ago. Radioactive substances within the rocks leave minute traces of lead and helium which constitute a measure of the time elapsed since the Earth cooled. Studies of meteorites show that none of these visitors from space have been solid for a much longer period than the crustal rocks. If the meteorites represent fragments of the solar system, we may conclude that the system is coeval with the Earth. The problem of the origin of the Earth is, therefore, synonymous with the problem of the origin of the entire system. Something happened about three billion years ago to generate the planetary bodies and to produce the order and regularity that we observe today.

Outstanding orderliness is apparent in the planetary motions. The members of the solar system move in the same direction along a common plane. Not only do the planets and a thousand or so asteroids follow this plane in their revolution about the Sun, but the great majority of the satellites move about their primaries in a similar fashion. The Sun, moreover, and all but one of the planets exhibit the same phenomenon in their axial rotation. Even Saturn's rings share in the common motion. We have noted the few exceptions, the Uranus system, Neptune's satellite, a few of the outer satellites of Jupiter and Saturn and notably the comets. Since the comets seem to share so few of the properties of the planets and asteroids, we may well exclude them from our main discussion; cometary evolution appears to constitute a separate and independent problem.

The common motion of so many bodies suggests an initial rotary action, as though the solar system were once sent spinning by some cosmic finger. There is, in fact, so much motion in the outer bounds of the system that the older evolutionary hypotheses have failed in one respect; they cannot explain the *angular momentum* of the major planets. The angular momentum of a planet moving in a circular orbit at a given distance from the Sun[2] is the product of the mass, distance and speed. Since the speed diminishes only as the square root of the distance, a given mass contributes more angular momentum at a greater distance from the Sun. For a planet moving in an elliptical orbit, Kepler's law of areas expresses the constancy of the angular momentum at all times. When the planet is near the Sun it moves more rapidly than when it is farther away. No force toward or away from the Sun can change the angular momentum of a planet. Only an external push or drag along the orbit can increase

[2] Practically at the center of gravity of the solar system.

or diminish this fundamental quantity of motion.

Jupiter, with its great mass, carries about six tenths of the entire angular momentum of the solar system. The four giant planets contribute about ninety-eight per cent, and the terrestrial planets a fifth of a per cent. The Sun, with a thousand times the mass of Jupiter, rotates so slowly that its angular momentum is only two per cent of the whole. If all planets could be put into the Sun and could carry with them their present angular momentum, the augmented Sun would rotate in about twelve hours, rather than a month.

A satisfactory hypothesis for the origin of the solar system must first account for the existence of the planets, satellites and asteroids. It must then explain how they were set moving in the remarkable manner already noted, and must provide the system theoretically with the observed amount of angular momentum. Two types of hypotheses have been suggested. In the first type, the system condensed from a gigantic cloud of glowing gases. In the second, the planets were torn from the Sun by an encounter with a passing star. Neither is satisfactory, but both have contributed greatly to astronomy by their impetus to thought.

The hypothesis that was believed for the longest time, excepting the Biblical account, was presented apologetically by the great French mathematician Laplace. According to his Nebular Hypothesis, a rotating and flattened nebula of diffuse material cooled slowly and contracted. In the plane of motion, successive rings of matter were supposed to have split off, to condense into the planets of our present solar system. Most of the matter finally contracted to form the Sun. Between the present orbits of Mars and Jupiter, the ring failed to "jell," and produced many asteroids instead of a planet. . . .

The Nebular Hypothesis is untenable for several reasons, particularly because a speed of rotation sufficient to leave nebular rings at the present distances of the planets would provide the nucleus with many times the angular momentum of the rings. The Sun, according to the Hypothesis should have *more* angular momentum than the planets, not one fiftieth as much. Furthermore, James Clerk Maxwell showed that a fluid ring could not coalesce into large planets but would be transformed into a ring of *planetoids,* such as Saturn's ring or the belt of asteroids.

The collision or encounter theories attempt to avoid the difficulties of angular momentum. If another star collided with the sun or passed very close to it, material would be ejected from its surface and might condense to form the planets. Several variations of the encounter theory have been propounded. In the Planetesimal Theory, proposed early this century by T. C. Chamberlin and F. R. Moulton, the passing star was supposed to have raised gigantic tides on the Sun. An appreciable quantity of matter, several times the present masses of the planets, was then ejected from the Sun's surface, and sent spiraling around it by the passing star. Most of the matter was lost or fell back into the Sun, but part remained, with a highly elliptical motion. The gases then condensed into small fragments, the planetesimals, and as time progressed the larger fragments swept up the smaller, to form the planets. The rapid motion of the passing star provided the angular momentum for the orbital motions of the planets, their rotations and the satellite systems. Within twenty million years after the encounter the formation of the planets would have been essentially complete.

Sir James Jeans and Harold Jeffreys have proposed an alternative version of such an encounter. They argue, in their Tidal Theory, that a long tidal filament was drawn out of the Sun by the passing star. The inner part of the filament returned to the Sun while the outer portion escaped into space. A central portion coalesced into a string of beadlike condensations, the embryo planets.

Jeffreys has more recently abandoned the Tidal Theory as untenable, and has substituted a collisional hypothesis in which the approaching star brushed by the Sun in actual contact. The subsequent phenomena of the filament and planet formation follow

essentially the same plan as in the original Tidal Theory. R. A. Lyttleton of Cambridge, England has proposed that the Sun was a double star at the time of the collision. Its companion star was gravitationally torn away by a third star which closely approached the Sun. H. N. Russell had suggested previously that a companion star was struck, and that the panets evolved from its débris.

A number of serious objections have been raised against all of these encounter hypotheses. In particular, when mathematical analysis is applied, the observed distribution of angular momentum in the solar system has not yet been explained. A basic objection of another kind has more recently been presented.

Lyman Spitzer, while at the Harvard Observatory, proved by a physical and mathematical demonstration that the planets cannot be formed by a direct condensation of material taken forcibly from the Sun's surface or interior. Any star such as the Sun consists entirely of superheated gases. At a depth above which there is sufficient material to form the planets, either by a tidal or collisional process, the temperature is approximately 18,000,000° F. These tremendously hot gases would expand and escape except for the enormous pressure of the overlying layers, which are forced down by the Sun's great surface gravity. A tidal or collisional ejection, however, would remove the pressure and enable the gases to expand immediately. During a collision, two stars would remain in contact for only an hour or two, and the ejection would occur at velocities of hundreds of miles per second. Spitzer has shown that within a few minutes after their release, the gases would literally explode, long before they could cool by radiation. Even the internal gravitational attraction of a mass twice that of Jupiter would not hold the gases and permit them to condense. Hence planets cannot be formed directly out of matter that is removed catastrophically from the Sun.

We are left, apparently, with some form of the planetesimal hypothesis as the least objectionable explanation for the origin of the planetary system. Spitzer's arguments have not been applied mathematically to the formation of the small planetesimals, but certainly it is true that only a minute fraction of the gases ejected from the Sun would ever be available for forming the planets. Moreover, a stellar collision, rather than an encounter, is required. . . .

So far, our new approach to the problem of origin and evolution has not led to a complete solution. Nevertheless, considerable progress has been made. These conclusions are fairly certain. (1) The planets were once very hot, far above the temperature of melting rock. Even Pluto, now cold enough to hold helium and hydrogen, must have been sufficiently hot to lose the ordinary gases of the Earth's atmosphere. (2) The planets, therefore, grew from a fairly rapid condensation of material, not from a slow accretion process. (3) The planets developed probably from the Sun or possibly from another star. This third conclusion is based largely upon similitudes of chemical composition, but is strengthened by the first two conclusions. Interstellar material, the only alternative to stellar material for planet building, is, within our present knowledge, diffuse. Only an accretion process could produce the planets from diffuse material.

The problem of the possible existence of planets about other stars is still unsolved. If a stellar collision is required to produce planets, there will be only a few systems such as ours among millions of stars. If a single star, unaided, can generate a system of planets, then the number of planets may be enormous. . . .

The Scientific Meaning of Chance[1]

GILBERT N. LEWIS

. . . DO YOU believe in miracles? Let us consider a box with a one-gram weight resting on its floor. Let us place this box in a bath maintained at an extremely constant temperature, we will say 65° F, and let the whole be protected by the most perfect mechanism that we can think of to shield it from external jars. Let us, in other words, shut it off from all external influences, leaving only a small hole through which we may observe. We may look into the box millions of times and always find the weight upon the floor, and then state this to be a law of nature. But the time will come when we look in and find the weight some distance from the floor It will not happen often, but we can calculate with a high degree of accuracy the chance of finding it, let us say, ten centimeters or more from the floor. This chance is so very small that I cannot express it in any ordinary way. We state chances as fractions, but to denote this chance I should have to put down a decimal point and zero after zero, and should spend my whole lifetime before I could write down a number not a zero. But the calculation is none the less exact.

The chance becomes larger if I consider smaller weights and lesser heights from the floor. Let the height be one hundred million times as small and the weight also one hundred million times as small, and then the calculation shows that if we look every second we shall find the weight as far off the floor as this 6.32 times in every million years. If you bet five to one on the appearance of this phenomenon in a million years, you might lose at first, but you would come out ahead in the long run.

If we take a still smaller weight the chance goes up very rapidly, and if we examine particles which are just visible with a good microscope, we find them hopping about in what is known as the Brownian movement, and which we now know to be identical with that thermal agitation which all molecules or groups of molecules exhibit, and which always increases with increasing temperature. From a study of these movements Perrin was able to draw some extremely important deductions with the aid of the same formula as I have used in these calculations.

If the jumping of the one-gram weight was a miracle, here in the Brownian movement thousands of such miracles are constantly occurring before our eyes. It is not true that things left to themselves approach a constant state, but only that they approach a state which ordinarily appears constant to us because of the dullness of our perceptions.

It was Maxwell who made the ingenious suggestion of a little demon who could see and distinguish between the individual molecules. Let us consider, as a type of irreversible phenomenon, the mixing of two gases. A container with a partition in the middle has oxygen on one side, nitrogen on the other. If a small hole is made in the partition, the gases mix by diffusion, so that ultimately we cannot distinguish between the contents of the two sides. This, according to the ideas of classical thermodynamics, is a completely irreversible phenomenon. But suppose the demon stationed at the orifice with a small shutter which he can open or close at will, and suppose that he decides to let only oxygen molecules pass in one direction and only nitrogen molecules in the other. Can he not through this exercise of *conscious choice* ultimately restore the original condition, with all the oxygen on the one side and all the nitrogen on the other? That such a reversal of a so-called irreversible process may occur, even without a demoniacal agency, was first recognized by Willard Gibbs, who an-

[1] Reprinted from *The Yale Review*. Copyright 1926 by The Yale University Press, and used by permission.

nounced that such a reversal is not an impossibility but only an improbability; and this idea was most successfully developed by Boltzmann.

In order to illustrate the modern statistical view of thermodynamics, let us consider a fresh pack of cards, all sorted, for example, ace, king, queen of spades, ace, king, queen of clubs, and so on. Such a grouping of the cards is easily described and easily discernible. If I spread the pack before you, one-half is obviously black, the other red. If I should put this pack into some sort of shuffling and dealing machine the first deals might give some very singular hands, but as the process continued, a point would be reached where we would say that the pack was well shuffled. Now, any one of the particular arrangements obtained by shuffling is just as improbable *a priori* as the first well-sorted arrangement, and by this we mean that if we note the arrangement, card by card, in a well-shuffled pack, this identical arrangement is no more likely to recur than the arrangement of the fresh pack. Nevertheless, while the number of possible well-sorted or easily *describable* arrangements is very small, there is an enormous number of arrangements of a *nondescript* character. As the shuffling continues, the arrangement constantly changes; there is no approach to any one particular arrangement, but, on the other hand, it rarely happens that a remarkably distinguished arrangement occurs. If one picks up a bridge hand with thirteen trumps, he will probably tell of it to all his friends, and indeed such a hand is a very rare fluctuation from the general run of nondescript hands.

There is a psychological element in all this. If we look down from a window upon a street of New York and see the people emerging from a subway exit, some occurrence may draw our attention to one group of ten people. We make note of their faces and their clothes. They thus become in some measure familiar to us, and it strikes us as remarkable that these ten people are about to melt into the crowds of the great city and will never again meet together. Yet all through the day each will be one of a group which differs from the first only in that we have not become acquainted with its members.

Since the rules of chance arrangement contain every essential feature of the second law of thermodynamics, let me further illustrate by considering a box containing ten black balls at the left and ten white balls at the right. If we shake the box, there will still perhaps be only a few black balls to the right, but if we continue to shake, they will soon be well mixed. Yet as the mixing continues we come not nearer and nearer to the even distribution of the five blacks and five whites on each side. On the contrary, the arrangement of six and four occurs more frequently than that of five and five, and occasionally greater fluctuations from the mean occur. Indeed, if we have the patience to shake the box two or three hundred thousand times we shall probably come to the original well-sorted arrangement, all whites on one side and all blacks on the other; and if we have recorded the result of each shaking, the record will show no particular dissymmetry with respect to the earlier and to the later shakings.

If instead of the twenty balls we had taken a million grains of white and black sand, the mixing would have appeared to be more thorough, but the fluctuations, although not so evident, would still be there, and if we should take an enormously greater number of particles we would have a complete analogy to the mixing of the molecules of oxygen and nitrogen. And here again we must assume the existence of fluctuations from the mean, sometimes small, sometimes great, and after the lapse of a vast period of time even so great as to give once more pure oxygen and pure nitrogen. Here again if there were a way of recording these fluctuations between the original distribution of pure oxygen and pure nitrogen until we arrive once more at the same distribution there would be nothing in all these fluctuations which would not be symmetrical with respect to past and future.

Are all cases of irreversible phenomena as simple as this? For many years I have found this one of the most perplexing and tantalizing of scientific questions. As long as it was

supposed that radiation, even from a single atom, goes out in a way which can never be entirely reversed, there seemed an insurmountable obstacle to the view that all irreversible processes are mere mixings and shufflings, with no element of novelty except that which arises from the vast number of elementary processes involved. But if we now regard radiation also as a process of exchange of energy between two atoms, the emitting and absorbing atoms playing symmetrical parts, this obstacle is removed.

We then find not even a shred of truth left in the statement that an isolated system moves towards a state of equilibrium. It will move towards it and move away from it, and in the long run as often in one direction as in the other. It is only when we start far away from the state of equilibrium, that is, when we start with some state of unusual distinction, and when we follow the system a little way along its path, that we can state that it will as a rule proceed towards more *nondescript* states.

The second law of thermodynamics has come to be regarded as one of the most powerful and inexorable of nature's laws. It is beginning to dominate chemistry and the biological sciences, and its sway extends from the pure sciences into the various domains of technology. Now, however, that we have looked behind the scenes, it almost seems as though it were all a sham, like some silly clown garbed in the ermine of royalty. Stripped of its finery, we find that the second law states that if a pack of cards is thrown into a shuffling machine, the chances are that it will become shuffled.

If this discovery comes to us as a great disillusionment it is only because our minds are tinged from infancy with the hoary superstition of the absolute. We say, "If this great law is not always true what becomes of our other exact laws?" But can we have no reverence for any institution without making the childish assumption of its infallibility? Can we not see that exact laws, like all the other ultimates and absolutes, are as fabulous as the crock of gold at the rainbow's end? We have a sense of contentment as we travel day by day through the beautiful and fertile lands into which we are led by one of these will-o'-the-wisps. It is only after someone cries, "I have caught it in my hands," that we experience the bitterness of disappointment.

Our respect for the great law of entropy need be no less because it has its exceptions, nor yet because it can be reduced to the obvious. Think of all the propositions of Euclidean geometry which can be reduced to the simple statement that there are parallel lines and that there are circles. Familiarity breeds contempt only for artificiality and pretense; and the law of entropy becomes a greater law as we now must limit it by the following statement: an isolated system always proceeds in the direction of greater entropy, provided that it be so far removed from the state of equilibrium that the chance fluctuations in that state may be ignored.

A law of nature becomes a better law when we can predict the exceptions to it. If someone tells you that the sun will continue to rise and set through all future time, you are not deceived by the finality of this statement. You know that here and there through the galaxy of stars many cataclysms occur which would wipe out whole solar systems. If through a study of the average frequency of such occurrences, or through a study of the movements of all known bodies in the neighborhood of the sun, we predict that the earth will be safe for another trillion years, we have far more information than is furnished by the trivial statement that the sun will go on rising forever.

6

Literature and the Arts

The arts invite attention, and they have received it ever since the first story, the first dance, and the first painting which made a story graphic on the walls of a cave. The results of that attention have often been put into language, until the literature about literature and the other arts is perhaps the most prolific in the world. Technique, history, theory, criticism, analysis—every art has felt them all. Artists themselves have been impelled to talk about their own medium and their contributions within it. Truly individual writers or painters or musicians have often had good reason to feel neglected, but for the arts as a whole the word *neglect* cannot apply.

When we ask why so much has been written about the arts, we may first say it is because there are so many different arts. And this is partly true. But if we go a little further, we shall see the bigger reason. all the arts are the work of human beings, of individuals or groups. What is so much a favorite with us all for thought, talk, writing as our fellow men and women? And in the arts those of our kind articulate enough, and bold enough, are telling us that here is their best doing—and what, for one reason or another, do we make of it? For centuries we have responded.

It takes much time and reading to obtain a really comprehensive view of the literature about the arts. A few selections can at best hint at some aspects of some arts and touch on but a few individual artists. Here we have tried to choose pieces that are good in themselves and that suggest the almost infinite number of approaches and attitudes that can be used.

Literature has its advocates, general and special. Arnold Bennett was one of the most active and most patient. He would make more and better readers if he could. He and Virginia Woolf openly recognized the reader as a potent force, a kind of patron, whether his tastes and demands seem educated or not. Virginia Woolf pays tribute to the reader's influence on the writer even before he writes. Bennett considers what may happen to the work once it appears. Out of good taste arise the "passionate few," who by their written judgments keep alive the "classics" of this art or that—though notably writing—and promote a wider knowledge of the things they love in current art. Through what these people say we realize more and more that our tastes have insistence, though the artist may resist such pressures.

In the last two centuries another kind of critic, reviewers, have written innumerable words about what has appeared in their own time. Reviewers have varied in taste and judgment and in their place as intermediary between artist and public. But every art has its reviewers. Our two reviews by Krutch and Canby show a philosophy of criticism and a knowledge of the trust

placed in a reviewer's report of his experience to a busy world. Since the eighteenth century, when many people felt they *had* to know the critical opinions of Samuel Johnson and the Club, there have been strong believers in the worth of reviews and critics. There have, of course, been disbelievers too. But the sceptical and credulous alike will read reviews—and who more than the artists themselves? For the reviewer is a special kind of patron. And sometimes, maybe after years, an artist's whole work may be re-surveyed, particularly such great life-contributions as Willa Cather's.

A book like Lillian Smith's *Strange Fruit* is published, reviewed, attacked, defended. After all this, what does the writer have to say? Perhaps we have not had enough of revelation such as this author gives us. Again, the regional reception of a work may be worth comment, though the comment may not always be as caustic as DeVoto's on how Boston "mobbed" *Strange Fruit*. A kind of social history might be written on the way works of art through the centuries have been received by the artists' fellow men.

A history of this kind might mention Thomas Hart Benton's gay account of how he came to paint the portrait of a Tammany ward-heeler. " 'I paint what I see,' said Rivera." So did Benton—but the result had to be kept for others through disguise. This episode among the politicians raises the whole issue of conscious or unconscious dictation to the artist, an issue burningly alive today.

Those who built the "White City" for Chicago's great Exposition in 1893 borrowed from Rome the faces of their buildings but not the structure. And they foisted their "Imperial Facade" on a whole epoch of American architecture. As Lewis Mumford shows, they could be bolder than Thomas Benton, happy in their dependence on the past and the broad shield it gave them from current social imagination. But in after-years the scorn of Mumford, and his insight as social historian, caught them up. Posterity will have *its* way with artists too. Informal and formal, judgments are infinite in possibility, given the work of the artist to start with. But none is ever final, and one age will reject what another may acclaim. No work of art exists in a vacuum.

In music, too, disputes are numerous—over the nature of music and its function, the merits of composers, the "right" interpretation of their works. But private disagreements melt before the almost universal faith that music itself is personal and good, a matter of the spirit's health. Whomever we praise, he may be for all time, but certainly he is for us. To celebrate this thought is one of the most difficult of tasks. Lucien Price has used the art of language to make eloquent beyond ordinary measure this certitude. The musician has need of writing like "Amphion's Lyre." And so do we, to help us know that beyond all technique art is a human matter. The artist and his public, now or later, whether at odds or happy together, have this humanness in common. Nothing in art is more important for us to discover.

On Literary Taste[1]

ARNOLD BENNETT

1. THE AIM

AT THE BEGINNING a misconception must be removed from the path. Many people, if not most, look on literary taste as an elegant accomplishment, by acquiring which they will complete themselves, and make themselves finally fit as members of a correct society. They are secretly ashamed of their ignorance of literature, in the same way as they would be ashamed of their ignorance of etiquette at a high entertainment, or of their inability to ride a horse if suddenly called upon to do so. There are certain things that a man ought to know, or to know about, and literature is one of them: such is their idea. They have learnt to dress themselves with propriety, and to behave with propriety on all occasions; they are fairly "up" in the questions of the day; by industry and enterprise they are succeeding in their vocations; it behooves them, then, not to forget that an acquaintance with literature is an indispensable part of a self-respecting man's personal baggage. Painting doesn't matter; music doesn't matter very much. But "everyone is supposed to know" about literature. Then, literature is such a charming distraction! Literary taste thus serves two purposes: as a certificate of correct culture and as a private pastime. A young professor of mathematics, immense at mathematics and games, dangerous at chess, capable of Haydn on the violin, once said to me, after listening to some chat on books, "Yes, I must take up literature." As though saying: "I was rather forgetting literature. However, I've polished off all these other things. I'll have a shy at literature now."

This attitude, or any attitude which resembles it, is wrong. To him who really comprehends what literature is, and what the function of literature is, this attitude is simply ludicrous. It is also fatal to the formation of literary taste. People who regard literary taste simply as an accomplishment, and literature simply as a distraction, will never truly succeed either in acquiring the accomplishment or in using it half-acquired as a distraction; though the one is the most perfect of distractions, and though the other is unsurpassed by any other accomplishment in elegance or in power to impress the universal snobbery of civilised mankind. Literature, instead of being an accessory, is the fundamental *sine qua non* of complete living. I am extremely anxious to avoid rhetorical exaggerations. I do not think I am guilty of one in asserting that he who has not been "presented to the freedom" of literature has not wakened up out of his prenatal sleep. He is merely not born. He can't see; he can't hear; he can't feel, in any full sense. He can only eat his dinner. What more than anything else annoys people who know the true function of literature, and have profited thereby, is the spectacle of so many thousands of individuals going about under the delusion that they are alive, when, as a fact, they are no nearer being alive than a bear in winter.

I will tell you what literature is! No—I only wish I could. But I can't. No one can. Gleams can be thrown on the secret, inklings given, but no more. I will try to give you an inkling. And, to do so, I will take you back into your own history, or forward into it. That evening when you went for a walk with your faithful friend, the friend from whom you hid nothing—or almost nothing . . . ! You were, in truth, somewhat inclined to hide from him the particular matter which monopolized your mind that evening, but somehow you contrived to get on

[1] From *Literary Taste* by Arnold Bennett. Copyright 1927 by Doubleday & Co., Inc. and reprinted in the United States with their permission. Circulated in Canada by permission of the Owners of the Copyright and of Messrs. Jonathan Cape Ltd.

to it, drawn by an overpowering fascination. And as your faithful friend was sympathetic and discreet, and flattered you by a respectful curiosity, you proceeded further and further into the said matter, growing more and more confidential, until at last you cried out, in a terrific whisper: "My boy, she is simply miraculous!" At that moment you were in the domain of literature.

Let me explain. Of course, in the ordinary acceptation of the word, she was not miraculous. Your faithful friend had never noticed that she was miraculous, nor had about forty thousand other fairly keen observers. She was just a girl. Troy had not been burnt for her. A girl cannot be called a miracle. If a girl is to be called a miracle, then you might call pretty nearly anything a miracle . . . That is just it: you might. You can. You ought. Amid all the miracles of the universe you had just wakened up to one. You were full of your discovery. You were under a divine impulsion to impart that discovery. You had a strong sense of the marvellous beauty of something, and you had to share it. You were in a passion about something, and you had to vent yourself on somebody. You were drawn towards the whole of the rest of the human race. Mark the effect of your mood and utterance on your faithful friend. He knew that she was not a miracle. No other person could have made him believe that she was a miracle. But you, by the force and sincerity of your own vision of her, and by the fervour of your desire to make him participate in your vision, did for quite a long time cause him to feel that he had been blind to the miracle of that girl.

You were producing literature. You were alive. Your eyes were unlidded, your ears were unstopped, to some part of the beauty and the strangeness of the world; and a strong instinct within you forced you to tell someone. It was not enough for you that you saw and heard. Others had to see and hear. Others had to be wakened up. And they were! It is quite possible—I am not quite sure—that your faithful friend the very next day, or the next month, looked at some other girl, and suddenly saw that she, too, was miraculous! The influence of literature!

The makers of literature are those who have seen and felt the miraculous interestingness of the universe. And the greatest makers of literature are those whose vision has been the widest, and whose feeling been the most intense. Your own fragment of insight was accidental, and perhaps temporary. *Their* lives are one long ecstasy of denying that the world is a dull place. Is it nothing to you to learn to understand that the world is not a dull place? Is it nothing to you to be led out of the tunnel on to the hillside, to have all your senses quickened, to be invigorated by the true savour of life, to feel your heart beating under that correct necktie of yours? These makers of literature render you their equals.

The aim of literary study is not to amuse the hours of leisure; it is to awake oneself, it is to be alive, to intensify one's capacity for pleasure, for sympathy, and for comprehension. It is not to affect one hour, but twenty-four hours. It is to change utterly one's relations with the world. An understanding appreciation of literature means an understanding appreciation of the world, and it means nothing else. Not isolated and unconnected parts of life, but all of life, brought together and correlated in a synthetic map! The spirit of literature is unifying; it joins the candle and the star, and by the magic of an image shows that the beauty of the greater is in the less. And, not content with the disclosure of beauty and the bringing together of all things whatever within its focus, it enforces a moral wisdom by the tracing everywhere of cause and effect. It consoles doubly—by the revelation of unsuspected loveliness, and by the proof that our lot is the common lot. It is the supreme cry of the discoverer, offering sympathy and asking for it in a single gesture. In attending a University Extension Lecture on the sources of Shakespeare's plots or in studying the researches of George Saintsbury into the origins of English prosody, or in weighing the evidence for and against the assertion that Rousseau was a scoundrel, one is apt to forget what literature really is and is for. It is well to remind ourselves that literature is first and last a means of life, and that the enterprise

of forming one's literary taste is an enterprise of learning how best to use this means of life. People who don't want to live, people who would sooner hibernate than feel intensely, will be wise to eschew literature. They had better, to quote from the finest passage in a fine poem, "sit around and eat blackberries." The sight of a "common bush afire with God" might upset their nerves.

2. YOUR PARTICULAR CASE

The attitude of the average decent person towards the classics of his own tongue is one of distrust—I had almost said, of fear. I will not take the case of Shakespeare, for Shakespeare is "taught" in schools; that is to say, all authorities pedagogic bind themselves together in a determined effort to make every boy in the land a lifelong enemy of Shakespeare. (It is a mercy they don't "teach" Blake.) I will take, for an example, Sir Thomas Browne, as to whom the average person has no offensive juvenile memories. He is bound to have read somewhere that the style of Sir Thomas Browne is unsurpassed by anything in English literature. One day he sees the *Religio Medici* in a shop-window (or, rather, outside a shop-window, for he would hesitate about entering a bookshop) and he buys it, by way of a mild experiment. He does not expect to be enchanted by it; a profound instinct tells him that Sir Thomas Browne is "not in his line"; and in the result he is even less enchanted than he expected to be. He reads the introduction, and he glances at the first page or two of the work. He sees nothing but words. The work makes no appeal to him whatever. He is surrounded by trees, and cannot perceive the forest. He puts the book away. If Sir Thomas Browne is mentioned, he will say, "Yes, very fine!" with a feeling of pride that he has at any rate bought and inspected Sir Thomas Browne. Deep in his heart is a suspicion that people who get enthusiastic about Sir Thomas Browne are vain and conceited *poseurs*. After a year or so, when he has recovered from the discouragement caused by Sir Thomas Browne, he may, if he is young and hopeful, repeat the experiment with Congreve or Addison. Same sequel! And so on for perhaps a decade, until his commerce with the classics finally expires! That, magazines and newish fiction apart, is the literary history of the average decent person.

And even your case, though you are genuinely preoccupied with thoughts of literature, bears certain disturbing resemblances to the drab case of the average person. You do not approach the classics with gusto—anyhow, not with the same gusto as you would approach a new novel by a modern author who had taken your fancy. You never murmured to yourself, when reading Gibbon's *Decline and Fall* in bed: "Well, I really must read one more chapter before I go to sleep!" Speaking generally, the classics do not afford you a pleasure commensurate with their renown. You peruse them with a sense of duty, a sense of doing the right thing, a sense of "improving yourself," rather than with a sense of gladness. You do not smack your lips; you say: "That is good for me." You make little plans for reading, and then you invent excuses for breaking the plans. Something new, something which is not a classic, will surely draw you away from a classic. It is all very well for you to pretend to agree with the verdict of the elect that *Clarissa Harlowe* is one of the greatest novels in the world—a new Wodehouse, or even a new number of a magazine, will cause you to neglect *Clarissa Harlowe*, just as though Wodehouse, etc., could not be kept for a few days without turning sour! So that you have to ordain rules for yourself, as: "I will not read anything else until I have read Richardson, or Gibbon, for an hour each day." Thus proving that you regard a classic as a pill, the swallowing of which merits jam! And the more modern a classic is, the more it resembles the stuff of the year and the less it resembles the classics of the centuries, the more easy and enticing do you find that classic. Hence you are glad that George Eliot, the Brontës, Thackeray, are considered as classics, because you really *do* enjoy them. Your sentiments concerning them approach your sentiments concerning a "rattling good story" in a magazine.

I may have exaggerated—or, on the other hand, I may have understated—the unsatisfactory characteristics of your particular case, but it is probable that in the mirror I hold up you recognize the rough outlines of your likeness. You do not care to admit it; but it is so. You are not content with yourself. The desire to be more truly literary persists in you. You feel that there is something wrong in you, but you cannot put your finger on the spot. Further, you feel that you are a bit of a sham. Something within you continually forces you to exhibit for the classics an enthusiasm which you do not sincerely feel. You even try to persuade yourself that you are enjoying a book, when the next moment you drop it in the middle and forget to resume it. You occasionally buy classical works, and do not read them at all: you practically decide that it is enough to possess them, and that the mere possession of them gives you a *cachet*. The truth is, you are a sham. And your soul is a sea of uneasy remorse. You reflect: "According to what Matthew Arnold says, I ought to be perfectly mad about Wordsworth's *Prelude*. And I am not. Why am I not? Have I got to be learned, in order to be perfectly mad about Wordsworth's *Prelude*? Or am I born without the faculty of pure taste in literature, despite my vague longings? I do wish I could smack my lips over Wordsworth's *Prelude* as I did over that splendid story by L. A. G. Strong, *The White Cottage*, in the *Grand Magazine*!" . . . Yes, I am convinced that in your dissatisfied, your diviner moments, you address yourself in these terms. I am convinced that I have diagnosed your symptoms.

Now the enterprise of forming one's literary taste is an agreeable one; if it is not agreeable it cannot succeed. But this does not imply that it is an easy or a brief one. The enterprise of beating Colonel Bogey at golf is an agreeable one, but it means honest and regular work. A fact to be borne in mind always! You are certainly not going to realize your ambition—and so great, so influential an ambition!—by spasmodic and half-hearted effort. You must begin by making up your mind adequately. You must rise to the height of the affair. You must approach a grand undertaking in the grand manner. You ought to mark the day in the calendar as a solemnity. Human nature is weak, and has need of tricky aids, even in the pursuit of happiness. Time will be necessary to you, and time regularly and sacredly set apart. Many people affirm that they cannot be regular, that regularity numbs them. I think this is true of a very few people, and that in the rest the objection to regularity is merely an attempt to excuse idleness. I am inclined to think that you personally are capable of regularity. And I am sure that if you firmly and constantly devote certain specific hours on certain specific days of the week to this business of forming your literary taste, you will arrive at the goal much sooner. The simple act of resolution will help you. This is the first preliminary.

The second preliminary is to surround yourself with books, to create for yourself a bookish atmosphere. The merely physical side of books is important—more important than it may seem to the inexperienced. Theoretically (save for works of reference), a student has need for but one book at a time. Theoretically, an amateur of literature might develop his taste by expending sixpence a week, or a penny a day, in one sixpenny edition of a classic after another sixpenny edition of a classic, and he might store his library in a hatbox or a biscuit-tin. But in practice he would have to be a monster of resolution to succeed in such conditions. The eye must be flattered; the hand must be flattered; the sense of owning must be flattered. Sacrifices must be made for the acquisition of literature. That which has cost a sacrifice is always endeared. A detailed scheme of buying books will come later, in the light of further knowledge. For the present, buy—buy whatever has received the *imprimatur* of critical authority. Buy without any immediate reference to what you will read. Buy! Surround yourself with volumes, as handsome as you can afford. And for reading, all that I will now particularly enjoin is a general and inclusive tasting, in order to attain a sort of familiarity with the look of

"literature in all its branches." A turning over of the pages of a volume of Chambers's *Cyclopaedia of English Literature*, the third for preference, may be suggested as an admirable and a diverting exercise. You might mark the authors that flash an appeal to you.

3. WHY A CLASSIC IS A CLASSIC

The large majority of our fellow-citizens care as much about literature as they care about archaeology or the programme of the Legislature. They do not ignore it; they are not quite indifferent to it. But their interest in it is faint and perfunctory; or, if their interest happens to be violent, it is spasmodic. Ask the two hundred thousand persons whose enthusiasm made the vogue of a popular novel ten years ago what they think of that novel now, and you will gather that they have utterly forgotten it, and that they would no more dream of reading it again than of reading Bishop Stubb's *Select Charters*. Probably if they did read it again they would not enjoy it—not because the said novel is a whit worse now that it was ten years ago; not because their taste has improved—but because they have not had sufficient practice to be able to rely on their taste as a means of permanent pleasure. They simply don't know from one day to the next what will please them.

In the face of this one may ask: Why does the great and universal fame of classical authors continue? The answer is that the fame of classical authors is entirely independent of the majority. Do you suppose that if the fame of Shakespeare depended on the man in the street it would survive a fortnight? The fame of classical authors is originally made, and it is maintained, by a passionate few. Even when a first-class author has enjoyed immense success during his lifetime, the majority have never appreciated him so sincerely as they have appreciated second-rate men. He has always been reinforced by the ardour of the passionate few. And in the case of an author who has emerged into glory after his death the happy sequel has been due solely to the obstinate perseverance of the few. They could not leave him alone; they would not. They kept on savouring him, and talking about him, and buying him, and they generally behaved with such eager zeal, and they were so authoritative and sure of themselves, that at last the majority grew accustomed to the sound of his name and placidly agreed to the proposition that he was a genius; the majority really did not care very much either way.

And it is by the passionate few that the renown of genius is kept alive from one generation to another. These few are always at work. They are always rediscovering genius. Their curiosity and enthusiasm are exhaustless, so that there is little chance of genius being ignored. And, moreover, they are always working either for or against the verdicts of the majority. The majority can make a reputation, but it is too careless to maintain it. If, by accident, the passionate few agree with the majority in a particular instance, they will frequently remind the majority that such and such a reputation has been made, and the majority will idly concur: "Ah, yes. By the way, we must not forget that such and such a reputation exists." Without that persistent memory-jogging the reputation would quickly fall into the oblivion which is death. The passionate few only have their way by reason of the fact that they are genuinely interested in literature, that literature matters to them. They conquer by their obstinacy alone, by their eternal repetition of the same statements. Do you suppose they could prove to the man in the street that Shakespeare was a great artist? The said man would not even understand the terms they employed. But when he is told ten thousand times, and generation after generation, that Shakespeare was a great artist, the said man believes—not by reason, but by faith. And he too repeats that Shakespeare was a great artist, and he buys the complete works of Shakespeare and puts them on his shelves, and he goes to see the marvellous stage-effects which accompany *King Lear* or *Hamlet*, and comes back religiously convinced that Shakespeare was a great artist. All because the passionate few could not keep their admiration of Shakespeare to themselves. This is not cynicism,

but truth. And it is important that those who wish to form their literary taste should grasp it.

What causes the passionate few to make such a fuss about literature? There can be only one reply. They find a keen and lasting pleasure in literature. They enjoy literature as some men enjoy beer. The recurrence of this pleasure naturally keeps their interest in literature very much alive. They are forever making new researches, forever practising on themselves. They learn to understand themselves. They learn to know what they want. Their taste becomes surer and surer as their experience lengthens. They do not enjoy to-day what will seem tedious to them to-morrow. When they find a book tedious, no amount of popular clatter will persuade them that it is pleasurable; and when they find it pleasurable no chill silence of the street-crowds will affect their conviction that the book is good and permanent. They have faith in themselves. What are the qualities in a book which give keen and lasting pleasure to the passionate few? This is a question so difficult that it has never yet been completely answered. You may talk lightly about truth, insight, knowledge, wisdom, humour, and beauty. But these comfortable words do not really carry you very far, for each of them has to be defined, especially the first and last. It is all very well for Keats in his airy manner to assert that beauty is truth, truth beauty, and that that is all he knows or needs to know. I, for one, need to know a lot more. And I shall never know. Nobody, not even Hazlitt nor Sainte-Beuve, has ever finally explained why he thought a book beautiful. I take the first fine lines that come to hand—

> The woods of Arcady are dead,
> And over is their antique joy—

and I say that those lines are beautiful, because they give me pleasure. But why? No answer! I only know that the passionate few will, broadly, agree with me in deriving this mysterious pleasure from those lines. I am only convinced that the liveliness of our pleasure in those and many other lines by the same author will ultimately cause the majority to believe, by faith, that W. B. Yeats is a genius. The one reassuring aspect of the literary affair is that the passionate few are passionate about the same things. A continuance of interest does, in actual practice, lead ultimately to the same judgments. There is only the difference in width of interest. Some of the passionate few lack catholicity, or, rather, the whole of their interest is confined to one narrow channel; they have none left over. These men help specially to vitalize the reputations of the narrower geniuses: such as Crashaw. But their active predilections never contradict the general verdict of the passionate few; rather they reinforce it.

A classic is a work which gives pleasure to the minority which is intensely and permanently interested in literature. It lives on because the minority, eager to renew the sensation of pleasure, is eternally curious and is therefore engaged in an eternal process of rediscovery. A classic does not survive for any ethical reason. It does not survive because it conforms to certain canons, or because neglect would not kill it. It survives because it is a source of pleasure, and because the passionate few can no more neglect it than a bee can neglect a flower. The passionate few do not read "the right things" because they are right. That is to put the cart before the horse. "The right things" are the right things solely because the passionate few *like* reading them. Hence—and I now arrive at my point—the one primary essential to literary taste is a hot interest in literature. If you have that, all the rest will come. It matters nothing that at present you fail to find pleasure in certain classics. The driving impulse of your interest will force you to acquire experience, and experience will teach you the use of the means of pleasure. You do not know the secret ways of yourself: that is all. A continuance of interest must inevitably bring you to the keenest joys. But, of course, experience may be acquired judiciously or injudiciously, just as Putney may be reached via Walham Green or via Moscow.

4. WHERE TO BEGIN

I wish particularly that my readers should not be intimidated by the apparent vastness and complexity of this enterprise of forming the literary taste. It is not so vast nor so complex as it looks. There is no need whatever for the inexperienced enthusiast to confuse and frighten himself with thoughts of "literature in all its branches." Experts and pedagogues (chiefly pedagogues) have, for the purpose of convenience split literature up into divisions and sub-divisions—such as prose and poetry; or imaginative, philosophic, historical; or elegiac, heroic, lyric; or religious and profane, etc., *ad infinitum*. But the greater truth is that literature is all one—and indivisible. The idea of the unity of literature should be well planted and fostered in the head. All literature is the expression of feeling, of passion, of emotion, caused by a sensation of the interestingness of life. What drives an historian to write history? Nothing but the overwhelming impression made upon him by the survey of past times. He is forced into an attempt to reconstitute the picture for others. If hitherto you have failed to perceive that an historian is a being in strong emotion, trying to convey his emotion to others, read the passage in the *Memoirs* of Gibbon, in which he describes how he finished the *Decline and Fall*. You will probably never again look upon the *Decline and Fall* as a "dry" work.

What applies to history applies to the other "dry" branches. Even Johnson's Dictionary is packed with emotion. Read the last paragraph of the preface to it: "In this work, when it shall be found that much is omitted, let it not be forgotten that much likewise is performed . . . It may repress the triumph of malignant criticism to observe that if our language is not here fully displayed, I have only failed in an attempt which no human powers have hitherto completed . . ." And so on to the close "I have protracted my work till most of those whom I wish to please have sunk into the grave, and success and miscarriage are empty sounds: I therefore dismiss it with frigid tranquillity, having too little to fear or hope from censure or from praise." Yes, tranquillity; but not frigid! The whole passage, one of the finest in English prose, is marked by the heat of emotion. You may discover the same quality in such books as Spencer's *First Principles*. You may discover it everywhere in literature, from the cold fire of Pope's irony to the blasting temperatures of Swinburne. Literature does not begin till emotion has begun.

There is even no essential, definable difference between those two great branches, prose and poetry. For prose may have rhythm. All that can be said is that verse will scan, while prose will not. The difference is purely formal. Very few poets have succeeded in being so poetical as Isaiah, Sir Thomas Browne, and Ruskin have been in prose. It can only be stated that, as a rule, writers have shown an instinctive tendency to choose verse for the expression of the very highest emotion. The supreme literature is in verse, but the finest achievements in prose approach so nearly to the finest achievements in verse that it is ill work deciding between them. In the sense in which poetry is best understood, all literature is poetry—or is, at any rate, poetical in quality. Macaulay's ill-informed and unjust denunciations live because his genuine emotion made them into poetry, while his *Lays of Ancient Rome* are dead because they are not the expression of a genuine emotion. As the literary taste develops, this quality of emotion, restrained or loosed, will be more and more widely perceived at large in literature. It is the quality that must be looked for. It is the quality that unifies literature (and all the arts).

It is not merely useless, it is harmful, for you to map out literature into divisions and branches, with different laws, rules, or canons. The first thing is to obtain some possession of literature. When you have actually felt some of the emotion which great writers have striven to impart to you, and when your emotions become so numerous and puzzling that you feel the need of arranging them and calling them by names, then—and not before—you can begin to study what has been attempted in the way of classifying and ticketing literature. Manuals and treatises are excellent things in their kind, but they are simply dead weight at the start. You can

only acquire really useful general ideas by first acquiring particular ideas, and putting those particular ideas together. You cannot make bricks without straw. Do not worry about literature in the abstract, about theories as to literature. Get at it. Get hold of literature in the concrete as a dog gets hold of a bone. If you ask me where you ought to begin, I shall gaze at you as I might gaze at the faithful animal if he inquired which end of the bone he ought to attack. It doesn't matter in the slightest degree where you begin. Begin wherever the fancy takes you to begin. Literature is a whole.

There is only one restriction for you. You must begin with an acknowledged classic; you must eschew modern works. The reason for this does not imply any depreciation of the present age at the expense of past ages. Indeed, it is important, if you wish ultimately to have a wide, catholic taste, to guard against the too common assumption that nothing modern will stand comparison with the classics. In every age there have been people to sigh: "Ah, yes. Fifty years ago we had a few great writers. But they are all dead, and no young ones are arising to take their place." This attitude of mind is deplorable, if not silly, and is a certain proof of narrow taste. It is a surety that in 1959 gloomy and egregious persons will be saying: "Ah, yes. At the beginning of the century there were great poets like Swinburne, Meredith, Francis Thompson, and Yeats. Great novelists like Hardy and Conrad. Great historians like Stubbs and Maitland, etc. etc. But they are all dead now, and whom have we to take their place?" It is not until an age has receded into history, and all its mediocrity has dropped away from it, that we can see it as it is—as a group of men of genius. We forget the immense amount of twaddle that the great epochs produced. The total amount of fine literature created in a given period of time differs from epoch to epoch, but it does not differ much. And we may be perfectly sure that our own age will make a favourable impression upon that excellent judge, posterity. Therefore, beware of disparaging the present in your own mind. While temporarily ignoring it, dwell upon the idea that its chaff contains about as much wheat as any similar quantity of chaff has contained wheat.

The reason why you must avoid modern works at the beginning is simply that you are not in a position to choose among modern works. Nobody at all is quite in a position to choose with certainty among modern works. To sift the wheat from the chaff is a process that takes an exceedingly long time. Modern works have to pass before the bar of the taste of successive generations. Whereas, with classics, which have been through the ordeal, almost the reverse is the case. *Your taste has to pass before the bar of the classics.* That is the point. If you differ with a classic, it is you who are wrong, and not the book. If you differ with a modern work, you may be wrong or you may be right, but no judge is authoritative enough to decide. Your taste is unformed. It needs guidance, and it needs authoritative guidance. Into the business of forming literary taste faith enters. You probably will not specially care for a particular classic at first. If you did care for it at first, your taste, so far as that classic is concerned, would be formed, and our hypothesis is that your taste is not formed. How are you to arrive at the stage of caring for it? Chiefly, of course, by examining it and honestly trying to understand it. But this process is materially helped by an act of faith, by the frame of mind which says: "I know on the highest authority that this thing is fine, that it is capable of giving me pleasure. Hence I am determined to find pleasure in it." Believe me that faith counts enormously in the development of that wide taste which is the instrument of wide pleasures. But it must be faith founded on unassailable authority.

The Patron and the Crocus[1]

VIRGINIA WOOLF

YOUNG MEN and women beginning to write are generally given the plausible but utterly impracticable advice to write what they have to write as shortly as possible, as clearly as possible, and without other thought in their minds except to say exactly what is in them. Nobody ever adds on these occasions the one thing needful: "And be sure you choose your patron wisely," though that is the gist of the whole matter. For a book is always written for somebody to read, and, since the patron is not merely the paymaster, but also in a very subtle and insidious way the instigator and inspirer of what is written, it is of the utmost importance that he should be a desirable man.

But who, then, is the desirable man—the patron who will cajole the best out of the writer's brain and bring to birth the most varied and vigorous progeny of which he is capable? Different ages have answered the question differently. The Elizabethans, to speak roughly, chose the aristocracy to write for and the playhouse public. The eighteenth-century patron was a combination of coffee-house wit and Grub Street bookseller. In the nineteenth century the great writers wrote for the half-crown magazines and the leisured classes. And looking back and applauding the splendid results of these different alliances, it all seems enviably simple, and plain as a pikestaff compared with our own predicament—for whom should we write? For the present supply of patrons is of unexampled and bewildering variety. There is the daily Press, the weekly Press, the monthly Press; the English public and the American public; the best-seller public and the worst-seller public; the high-brow public and the red-blood public; all now organised self-conscious entities, capable through their various mouthpieces of making their needs known and their approval or displeasure felt. Thus the writer who has been moved by the sight of the first crocus in Kensington Gardens has, before he sets pen to paper, to choose from a crowd of competitors the particular patron who suits him best. It is futile to say, "Dismiss them all; think only of your crocus," because writing is a method of communication; and the crocus is an imperfect crocus until it has been shared. The first man or the last may write for himself alone, but he is an exception and an unenviable one at that, and the gulls are welcome to his works if the gulls can read them.

Granted, then, that every writer has some public or other at the end of his pen, the high-minded will say that it should be a submissive public, accepting obediently whatever he likes to give it. Plausible as the theory sounds, great risks are attached to it For in that case the writer remains conscious of his public, yet is superior to it—an uncomfortable and unfortunate combination, as the works of Samuel Butler, George Meredith, and Henry James may be taken to prove. Each despised the public; each desired a public; each failed to attain a public; and each wreaked his failure upon the public by a succession, gradually increasing in intensity, of angularities, obscurities, and affectations which no writer whose patron was his equal and friend would have thought it necessary to inflict. Their crocuses, in consequence, are tortured plants, beautiful and bright, but with something wry-necked about them, malformed, shrivelled on the one side, overblown on the other. A touch of the sun would have done them a world of good. Shall we then rush to the opposite extreme and accept (if in fancy alone) the flattering proposals which the editors of the *Times* and the *Daily News* may be supposed to make

[1] From *The Common Reader* by Virginia Woolf, copyright, 1925, by Harcourt Brace and Company, Inc., and used with their permission.

us—"Twenty pounds down for your crocus in precisely fifteen hundred words, which shall blossom upon every breakfast table from John o'Groats to the Land's End before nine o'clock to-morrow morning with the writer's name attached"?

But will one crocus be enough, and must it not be a very brilliant yellow to shine so far, to cost so much, and to have one's name attached to it? The Press is undoubtedly a great multiplier of crocuses. But if we look at some of these plants, we shall find that they are only very distantly related to the original little yellow or purple flower which pokes up through the grass in Kensington Gardens early in March every year. The newspaper crocus is an amazing but still a very different plant. It fills precisely the space allotted to it. It radiates a golden glow. It is genial, affable, warm-hearted. It is beautifully finished, too, for let nobody think that the art of "our dramatic critic" of the *Times* or of Mr. Lynd of the *Daily News* is an easy one. It is no despicable feat to start a million brains running at nine o'clock in the morning, to give two million eyes something bright and brisk and amusing to look at. But the night comes and these flowers fade. So little bits of glass lose their lustre if you take them out of the sea: great prima donnas howl like hyenas if you shut them up in telephone boxes; and the most brilliant of articles when removed from its element is dust and sand and the husks of straw. Journalism embalmed in a book is unreadable.

The patron we want, then, is one who will help us to preserve our flowers from decay. But as his qualities change from age to age, and it needs considerable integrity and conviction not to be dazzled by the pretensions or bamboozled by the persuasions of the competing crowd, this business of patron-finding is one of the tests and trials of authorship. To know whom to write for is to know how to write. Some of the modern patron's qualities are, however, fairly plain. The writer will require at this moment, it is obvious, a patron with the book-reading habit rather than the play-going habit. Nowadays, too, he must be instructed in the literature of other times and races. But there are other qualities which our special weaknesses and tendencies demand in him. There is the question of indecency, for instance, which plagues us and puzzles us much more than it did the Elizabethans. The twentieth-century patron must be immune from shock. He must distinguish infallibly between the little clod of manure which sticks to the crocus of necessity, and that which is plastered to it out of bravado. He must be a judge, too, of those social influences which inevitably play so large a part in modern literature, and able to say which matures and fortifies, which inhibits and makes sterile. Further, there is emotion for him to pronounce on, and in no department can he do more useful work than in bracing a writer against sentimentality on the one hand and a craven fear of expressing his feeling on the other. It is worse, he will say, and perhaps more common, to be afraid of feeling than to feel too much. He will add, perhaps, something about language, and point out how many words Shakespeare used and how much grammar Shakespeare violated, while we, though we keep our fingers so demurely to the black notes on the piano, have not appreciably improved upon *Antony and Cleopatra*. And if you can forget your sex altogether, he will say, so much the better; a writer has none. But all this is by the way —elementary and disputable. The patron's prime quality is something different, only to be expressed perhaps by the use of that convenient word which cloaks so much—atmosphere. It is necessary that the patron should shed and envelop the crocus in an atmosphere which makes it appear a plant of the very highest importance, so that to misrepresent it is the one outrage not to be forgiven this side of the grave. He must make us feel that a single crocus, if it be a real crocus, is enough for him; that he does not want to be lectured, elevated, instructed, or improved; that he is sorry that he bullied Carlyle into vociferation, Tennyson into idyllics, and Ruskin into insanity; that he is now ready to efface himself or assert himself as his writers require; that he is bound to them by a more than maternal tie; that they are twins indeed, one dying if the other dies,

one flourishing if the other flourishes; that the fate of literature depends upon their happy alliance—all of which proves, as we began by saying, that the choice of a patron is of the highest importance. But how to choose rightly? How to write well? Those are the questions.

Personal History of *Strange Fruit*[1]

LILLIAN SMITH

THERE ARE two forces in every reader that an author cannot long remain unaware of: a resistance to knowledge of self and a consuming curiosity about people. If, by reading a book, one can satisfy this curiosity about others without having to acquire in the process painful knowledge of one's self, pleasure ensues. The author will likely be pleased also, both by sales and comments, and his book will not be misunderstood, for there will be no need for misunderstanding. But should he tactlessly compel the reader to identify himself with a character or situation unflattering to self-esteem, then heaven help us! Whether it be a good book or a poor one, it has to be misunderstood, and the pasting of labels is inevitable.

There is, however, a third alternative. By happy chance, so delicate a balance may be achieved that knowledge of self rises no higher than one's toleration, and knowledge of others reaches no deeper than one's credulity. In which event, the reader may shout to the world that he has discovered a masterpiece. It is possible.

I wouldn't know. For as an author I have not experienced this artistic counterpart of the blessed state of repose between life and death of which Ferenczi writes with such eloquence. "Strange Fruit," somehow, did not turn out that way.

By even the most generous of white critics it was not treated as literature—not even as bad literature. The author's "purpose," they told the reader, was to better race relations, to uncover the "Negro problem"; hence, it was a problem novel. Why else would she have bothered to make of equal importance human beings of two colors, when one color is enough for any "real" novel! Unlike the lady on the library board of a North Carolina city, they did not write in and ask if her purpose was "noble." They assumed that it was. No matter how successful the characters, how interesting the story, how profound the insight, how subtle the imagination—or how otherwise—this "noble purpose" disqualified the author as artist, taking her amateur standing away from her.

The Negro reviewers were not so sure of the nobility of purpose. Some said if the author's purpose was noble, then why did she have Nonnie and Bess, graduates of a well-known college, cook in white folks' kitchens? "Because" (their answer was immediate) "the author is white and wants young Negro college graduates to work in white folks' kitchens; and probably also, she does not like Negro colleges." "Why," came the next question, "did the author let Bess, a college graduate, take off her shoes on a hot evening when her corns hurt?" "Because," came the answer, "Bess was Negro and should not, according to the white author's deep unconscious wishes, have had on shoes at all." The third question was always as follows: "Why did she let Tracy fall in love with a 'light' Negro?" "Because" (swelled the chorus), "the author scorns dark skin and thinks the lighter the skin, the better."

"No," other Negro reviewers said, "she doesn't think that. She wrote primarily about children and mothers; she was trying to break old stereotypes, black and white, and show the human beings beneath them." "But," cried the hearts of sensitive, edu-

[1] From *The Saturday Review of Literature*. Reprinted by permission of Lillian Smith.

cated Negroes, "we cannot bear to be shown as human beings in literature unless we are treated like human beings in culture." Which is fair enough.

Quickly, the lunatic fringe of the C.P. took up the chant, word having gone out apparently that the Negro is to be flattered and new stereotypes more pleasing must supersede old displeasing ones. Soon there appeared on the West Coast a pamphlet on the subject "*Strange Fruit* Attacks the Negro and Labor." And here and there in the East, columnists commented that "Strange Fruit" belittles the Negro and is unfair to labor. The most interesting were the "re-appraisals" —in certain journals—second reviews written by the original reviewer who had the squeamish job of taking back the favorable comments he had innocently and spontaneously made in his first review.

All this time, the lunatic fringe of the fascist groups and the White supremacy crowd (lunatic to the core) were writing editorials and reviews declaring that "Strange Fruit" advocates the mongrelizing of the white race. Gene Talmadge's paper described it as a story of a white girl in love with a Negro boy (the real story being too commonplace for hardened old rural Southerners) and defined it as a "literary corncob" (you may or may not know the varied uses to which the corncob is put in our South), and the once-edited-by-Mark-Ethridge *Macon Telegraph* repeated the corncob story on its editorial page. In the meantime, the *Southern Watchman* screamed in headlines that Alabama must not vote for Roosevelt because the author of "Strange Fruit" once wrote a piece in praise of our President.

Up North, the Boston banners, not to be outdone by Dixie demagogues, seized also upon sex, choosing as their battling stick a none-too-isolated word, in contrast to the Southerners' none-too-isolated situation.

In Washington the postal authorities banned—

But why go on? What does it add up to?

It may add up to no more than the notion that an author would do well not to subscribe to a clipping bureau!

Or it may mean that a lot of the characters in Maxwell, Georgia, have migrated to other parts of the country and react to S. F. exactly as one would expect them to do at home.

It may mean, also, that Boston banners and Dixie demagogues are always right, but for the wrong reasons. Boston banners and White supremacists felt endangered by the core of the book. The analysis of family life, childhood fantasies, opened too many doors in their memories. Feeling threatened, each chose a symbol by which to express this fear. Boston, eroticizing its literacy, chose a "word"; Dixie, eroticizing its blood stream, chose a situation. Each rationalized its fear consciously by projecting it on "race"—Boston in whispers, Dixie with rebel yells—as the white man has been doing for three centuries. And each betrayed his real fear by the choice of his symbol, as men have done since the beginning of time.

Or it may mean that this book cannot easily harmonize the conflicting forces in readers. It is obviously difficult for the reader (black or white) to forget his skin color long enough to identify with the common humanity of black and white characters. Some do, and close the book, stripped of their color—only to find themselves back in a world where color is a garment custom decrees that everyone must wear.

During all this time, thousands of letters were coming into Clayton saying things quite different from what appeared in the papers—suggesting a deep underground current of human warmth that few of us are aware of.

Among the good letters there naturally are others, the prize one being this brief note: "I have read your book. But since you did not write a preface to it, I do not know what it is about." After reading newspaper clippings for a year, there are times when I am not too sure that I know, either.

But it began, I think, like this:

When I was a little girl I lived in Maxwell, a town more easily found in your own childhood than on any road map. I lived on College Street in a big rambling house set under oak trees, the kind of house that catches memories like dust. . . . Rimming

the town, a great shadow behind Maxwell, were the shanties of colored folk, and in the north of town were the mills of which my father was owner: white mill town, colored mill town, little white church, little colored church—and one big commissary for all. Across the street from my home was a big white church and out near the graveyard was the unpainted half-tumbled-down church where colored folks worshipped. When I was little, I was rocked to sleep by an old colored nurse who eased the pain of the coming of a new baby in the household by a singing of songs that swept across bruised feelings in warm, soothing waves of sound. When I was older—though still a child—and lay in my bed at night, I listened to the same songs which came now, not from my old nurse, but from the little unpainted church, backwashing across town, filling the heart with a great burden, making me cry, though I did not know why I was crying. It was then, perhaps, that I first began to feel an invisible wall between human beings, between white folks and colored folks in Maxwell, yes; but also between a child and the people she loves. It did not seem like a strange wall—for nothing seems strange to a child because everything is so strange—but it was there, and I knew it was easy to hurt one's self against it. It was not until many years later that I heard the word "segregation," but I understood it long before I could say its syllables. I knew, and have never forgotten, that segregation has something to do with white and black people—as everyone in America knows—but it has to do also with childhood, and with mothers and their children, and it has to do with the heart's deepest fears and the child's earliest dreams.

I left Maxwell. And for a long time I did not want to go back there. Instead I traveled a good portion of the earth's surface, and I read a good portion of what wise men had written, and I learned quite a few big words and for a time was impressed with my learning, until I discovered that too often a word is only a mask to cover up the real meaning of life. Peeling off masks was a full time job for a while. . . . In the process, I learned to be unimpressed by the phrase "Negro problem"; and "race conflict" began to seem to me an euphonious term for a painful and profound struggle that was tearing the breast of the white man; and "Jim Crow" was only a devil mask for elaborate ceremonials by which the troubled white man tried to wall himself off from "infection." That he called this "infection" the "Negro problem" did not mean that the Negro had caused it. It meant only that the Negro was a handy thing on which to project it. We do not need the word "paranoid" to give us understanding of a habit of mankind so common as this of thrusting out upon an external object his internal feelings. But it is not an irrelevant word.

To understand what is troubling the white race so deeply that a great part of its culture is devoted to walling away this trouble, one might have to take a long journey that would lead down interesting by-paths. We might have to look long and hard at certain road signs: at Calvinism, monogamy, at the Western small family, at the high esteem Nordic culture puts on "sex purity" which in practice becomes autoeroticism instead of mature genitality. We might have to look also at the Protestant God-the-Father image in contrast to the Catholic Mary-Mother-of-Christ; and we might need to travel to countries where love and mature sex life are honorable and race prejudice is dishonorable, for there may be a close connection between the two—a far closer connection than between poverty and race prejudice. I think, along the way, we would discover that over-esteem of one's skin color, whether in individuals or in masses of men, is a regressive narcism, a symptom of psychosexual maladjustment that involves sex, religion, family life, and yes, money also. We might have to look at the whole of white culture and travel backward in time far beyond that date when the first Negro was enslaved by the first white Christian.

After many years of "traveling," I was ready to go back to Maxwell. And I wrote down in "Strange Fruit" what I found there. I thought of my book as a fable about a son in search of a mother, about a race in search

of surcease from pain and guilt—both finding what they sought in death and destruction.

So when people ask "Is 'Strange Fruit' a race book; is it about the Negro problem?" I say, "I don't think so." For it seems to me a book about human beings journeying across deep chasms, and down into forbidding areas, but journeying also back to childhood, always back to the room where they were born, seeking to find, wherever they travel, that which they left there, so long ago.

Boston Mobs *Strange Fruit*[1]

BERNARD DEVOTO

LET ME summarize some ideas about the South which we tend to believe in Boston. We understand that the South is culturally backward. We know that many Southerners are well-bred, well-educated people—cosmopolitan, of liberal minds, tolerant, interested in ideas, cultivated in the arts and occasionally adept at them. We think of them, however, as a minority which is made impotent by the surrounding illiteracy, ignorance, and prejudice, and by a social myth which looks back to a romanticized, unreal past and has kept the Southern mind from adjusting to the modern world. We understand that educational standards in the South are low and though we concede that this is due in part to poverty we believe that it is also due to traditions which set no great value on education. Moreover, a primitive form of Christianity, economic discrimination against Negroes, economic medievalism, fear of miscegenation, and a defensive psychology which goes back to defeat in the Civil War and back of that to the necessity of defending slavery —such additional matters, we tolerantly realize, have helped to make the Southerner bigoted, emotional, and reactionary. His prejudices are violent, his defensiveness makes him aggressive, he cannot permit the objective discussion of ideas that is one of the marks of a civilized man, he settles all questions by force.

We do not, in Boston, expect much from Southern civilization, and especially we do not expect liberality. We have, for instance, been trying to solve the Negro problem for well over a century, and for well over a century what has prevented us from solving it is Southern prejudice, Southern passion, and Southern intolerance. Naturally we do not expect much devotion to the arts down South. Liberal thinking and artistic thinking require a kind of cultural leadership which the South lacks. We realize that even cultivated Southerners are too indelibly stained with the prejudices of the section to provide that kind of leadership. It follows that we do not expect a mature literature from the South. The soil is unfavorable, and even if one should germinate in it, Southern intolerance would stamp it out.

A Southern woman has lately published a novel about the South. It is both a courageous novel and a good one, serious, mature, wise, excellently written. It may be something of a landmark, but all these facts are irrelevant. It contains some words which were certain to arouse the bigotry of the South's primitive backwoods religion. Worse still, its theme is the most inflammatory of all themes down South, miscegenation. That is a topic on which no Southerner can hold an objective opinion. It strikes home to his deepest fears and taboos, he cannot tolerate any discussion of it, he cannot permit anyone to express an opinion about it. It was easy enough to predict that this novel, Miss Lillian Smith's *Strange Fruit*, would be suppressed by a culturally backward society, illegally but with complete social assent, in

[1] From *Harpers Magazine*, May, 1944, "The Easy Chair." Reprinted by permission of Bernard de Voto.

the distorted violence and prejudice which animate such a society. And that in fact has occurred.

It has not occurred, however, exactly as predicted. *Strange Fruit* is being sold freely in for example Atlanta and Birmingham, as freely as in more advanced cultures like Oshkosh, Davenport, and Three Rivers. It is being sold just as freely in those ominous little Southern towns which we Bostonians recognize as socially sick and from which we fear an American fascism may emerge sometime. It is being discussed intelligently, temperately, and frequently with high praise in the Southern press which we have learned to regard as one of the most dangerous bulwarks of Southern prejudice. The mobbing of *Strange Fruit* did not take place down South. It took place in Boston.

That reversal may momentarily disconcert outlanders who do not understand Boston, and I feel that a decent respect to the opinions of mankind requires me to explain my home town.

To begin with, you must understand that the suppression was in fact a mobbing. It occurred, that is, outside the law—so far outside that both the official and the unofficial suppressors are announcing that no suppression has occurred. As yet—I send this to the press on March 25th—the book has not been subjected to review by any official board or any socially accountable officer whomsoever. The truth is, we learned better than that long ago. There was a time when the police used to proceed against books which they thought Bostonians ought not to read. We did not object to the assumption of such authority by the police but we found that their exercise of it exposed us to ridicule, to the ridicule of even backward cultures. Furthermore it proved profitable to publishers. They inserted "Banned in Boston" in their advertising and readers soon came to understand that if Boston suppressed a book, that book was a serious treatment of an important subject by a writer of considerable skill—for exceedingly few books of any other kind were ever suppressed here. So we resorted to an ingenious expedient.

Many of us in Boston are Republicans and many more are anti-New Deal Democrats. As such we realize that one of the most dangerous threats to our institutions is government by fiat. Executive commissions and similar agencies which are not restrained by statutory law and are not accountable to elected representatives of the people, we have proclaimed, are despotic, essentially totalitarian, and incompatible with democracy. We believe in a government of laws, not men. With that principle in mind we have set up a committee of the Board of Trade of Boston Book Merchants. Whenever that committee thinks that a book may be prosecuted by the police, it notifies the booksellers that that book has been withdrawn from sale—withdrawn, that is, by the stores represented on the committee. That notification suffices. No Boston bookseller sells that book, knowing that if the police should prosecute him the Board of Trade would not come to his defense. (He is perfectly free to do what he likes, the head of the committee explained to me, but the committee has done its part.) Everyone is happy. The affair has been conducted in complete privacy, free alike of official dictation and social control. There has been no official censorship, no one has received any objectionable publicity, the police are tranquil and the booksellers safe, and if any freedom of any Bostonian or any author has been infringed, Boston does not give a damn.

Next you must realize that literature is not important in Boston. It has been seventy-five years since there was any general respect for literature hereabout and fully fifty years since there was any general interest in it. Books which make a lot of money are respected, of course, and it remains possible for a writer to be respected and even admired if he achieves eminence as a fisherman or a skier, if he makes money on the stock market, or if his collection of porcelains or even his love affairs create newspaper publicity, which is fully appreciated in Boston. But it is inconceivable that literature could be made a public issue here. There was a time when men like Ralph Waldo Emerson and Henry Thoreau could summon public opinion to the defense of such obscenity as

Whitman's *Leaves of Grass,* but that was many years ago.

Again, you must understand that *Strange Fruit* was not mobbed because of its inflammatory theme. It is true that racial tensions are increasing in Boston, as I shall report in a later Easy Chair, but we are extremely tolerant about discussions of the Negro problem at a distance. In holding this attitude we are living up to our traditions. The typical Boston reformer was a factory owner who felt deeply about slavery in Georgia, as Thoreau said, or a corporation lawyer who longed to bestow economic justice on the Filipinos, as Thoreau would have said if he had lived long enough. The cause of this suppression was not at all the theme of the book, miscegenation, it was sex. It was in fact three lines of sexual phraseology. The head of the booksellers' committee has told me that he assured the publisher that the book could be sold in Boston if the author would make deletions amounting to no more than three lines. (I asked him if he did not consider it an insult to me as a writer, a buyer of books, and a citizen of Massachusetts. He said no.)

Here it must be made clear that Boston is not uninterested in sex, afraid of sex, or opposed to the portrayal, representation, or exploitation of sex. All we have ever objected to is an honest, decent, or artistic treatment of sex. In the name of righteousness and for our taste's sake we insist that sex be treated with a leer and a snigger. Pornography circulates as freely in Boston as in any other city, as any casual visitor may determine. Boston is a town where strip-teasers flourish but the ballet must wear tights, where sexual and homosexual humor in night clubs is immune from prosecution provided only that it is kept vulgar enough, but three frank lines will get a novel lynched provided only that it is a decent and serious novel. Burlesque shows do a rousing business and we are the best town on the road for revues, but *Strange Interlude* cannot play here at all. You may freely patronize any kind of pornography in Boston, but the local standards of taste and morality, which the booksellers' committee accurately translates, will see to it that you cannot buy distinguished books which treat sex seriously. The much-repeated allegation that we are over-squeamish about indecency is a libel: we object only to decency.

True, Massachusetts has an anti-obscenity statute rather more idiotic than most such laws. Right here one is supposed to stop talking out loud and to whisper, as several who say they have been outraged by this latest suppression have whispered to me, that nothing can be done to attack that statute because it is supported by the Catholic Church. Protestant Bostonians tend to speak about the Catholic Church in whispers and one of them lately put it to me this way, "The cops run straight to the Cardinal." As one reared in and shaped by the Catholic Church, I deny both the statement and the implication. Both are a comforting alibi for Bostonians; they enable the timorous to excuse themselves from taking action. Certainly, though the Catholic Church has not officially backed the statute and though a very great many Catholics are opposed to it, certainly it has Catholic support. Also it has the support of the Watch and Ward Society (yes, that really is its name), which is Protestant, and of several queer remnants of Puritan heresies—Puritanism was never to my knowledge Catholic. Even an alliance between Catholic bigotry and Protestant bigotry, however, could not have put this statute on the books and enforced it (as the experience of New York, for one instance, shows) if that alliance were not supported by still a third group. Actually it is made effective by a third group, the well-born, the rich, the cultivated, the heirs of the old ruling class, from whom social and cultural leadership would normally be expected. It is made effective because this group—generalize them as the Harvard alumni—will not accept social responsibility or exercise leadership.

For many years Boston has been unable to buy good books legally because this group has refused to act—from indifference, the profit motive, or simple cowardice. These people do not believe in suppression or approve of the anti-obscenity statute, they

denounce it in private, they know that the situation is ridiculous and dangerous, but they will do nothing about it. Why? Well, literature is not important in the Boston culture and neither are civil rights. Not important enough, certainly, to make a fight for them. Boston will not defend a writer in the exercise of his freedom. And if either a bigot or a committee which has no legal status chooses to infringe Boston's own freedoms, that is perfectly all right with Boston.

You may suggest that a determined stand by anyone, even a bookseller, would certainly overturn the statute and restore literature to a respectable status in Boston and Boston to a decent respect in the opinions of mankind. That is true. The Society for the Suppression of Vice, for instance, can no longer successfully attack a decent book in New York—it no longer even tries to. The fight for freedom of expression in literature has been won everywhere except in Boston because it has been made everywhere except in Boston. You may think that the mere existence and still more the public toleration of a socially uncontrolled and irresponsible body like the booksellers' committee—which deprives both writers and readers of a basic freedom without any process of law whatever—you may think that its existence and public toleration are considerably more important than an absurd law or the suppression of a few books. You fail to understand how repugnant that idea is to the committee. It sees its motives as pure beyond expression and is proud of the fact that its activities assure every Boston bookseller who acts on its warnings that he will never go to jail, at least not for obscenity. It cannot see that any other issue is involved. And you must understand that it accurately expresses Boston's point of view. Boston does not mind being under the subjection of bigotry and it sees no reason to make a fight against either intolerance or the infringement of personal liberty.

You may keep coming back to that self-evident fact, after thinking over the history of censorship in Boston. You may end by deciding that there probably is in Boston a minority of liberal, tolerant people who are interested in ideas, cultivated in the arts, and occasionally adept at them. But that minority, you may decide, appears to be made impotent either by an absurd social myth which looks backward to an unreal past or by the ignorance and prejudices of the society that surrounds it. For the Bostonian, you observe, has violent prejudices, they make him aggressive, he will not permit the objective, detached discussion of ideas that is one of the marks of a civilized man. Boston, you may decide, must be backward culture.

It seems possible that the mobbing in Boston of one more serious, decent novel may suggest such conclusions to you. This sort of suppression is routine in Boston, it happens every once in a while, and you are forced to make two observations about it. The suppression is not even legal, and it is done with complete public assent—with only the most scattered and perfunctory protest. Not only a backward culture, you may think, but something else as well. For in this comfortable acceptance of the intolerable, beginning moreover in the area of civil rights where early decay is always significant, you catch a whiff of something sick and dangerous.

Farewell to Arms, A Review[1]

HENRY SEIDEL CANBY

WHEN MR. HEMINGWAY dawned upon his native land with "The Sun Also Rises" he was received with mingled praise and doubt. His skill as a story-teller was evident, his dialogue was superb, he had that gift of creating a vivid reality which makes any

[1] From *The Saturday Review of Literature*, October 12, 1929; reprinted by permission.

suit trumps for a novelist, but his subject matter troubled the serious minded. So much art seemed wasted upon the lovable but futile revellers who ran from cocktail to cocktail up and down France, self-tortured, but flippant, as unmoral as monkeys yet pathetically appealing for sympathy in their mental woes (which were usually aggravated by a headache).

Since then we have had many short stories and this full-length novel, and now his scope and purpose become clearer. Those restless, witty youngsters of "The Sun Also Rises," charming even when drunk, were not trying to escape from life so much as from the anarchic whirl of their own minds. They were war neuroses, the electrons of a youthful generation dislodged by the rays of conflict and bombarding through the ether. Whether good physics or not, the comparison is instructive, for an electron, never still, meaning nothing except as a symbol, never all at one place at one time, is an exact similitude of the nervous wanderers from bar to bar and *plage* to bull ring.

The physical disturbance has subsided since "The Sun Also Rises." In "Farewell to Arms," war is confessedly the disintegrant, but the hero has found meaning in existence again. While the futile Italian army beats in vain against the white Austrian peaks, and the war sickens, and there is no more sense in valor or loyalty and only kindliness and good humor left in the world; when the fugitives crowd down from Caparetto, and honest men are shot as traitors, and the best soldiers want only to go home; then the trifling amour between an American lieutenant in the Italian service and an English nurse, which is the opening theme of this novel, intensifies to a love which is something to grip the imagination and risk life for. Human particle uniting to human particle turns accident into substance again. And in place of the know-nothingness of his earlier philosophy, Hemingway gives us a youth who hates fate because it attacks "the very good and the very gentle and the very brave impartially. If you are none of these you can be sure it will kill you too, but there will be no special hurry." He stands up against fate and defies it and makes of his love tragedy an experience to hold fast to in the midst of a general debacle. We have passed from the anarchic to the stoic view of things. Youth that stuck out its tongue at the world is playing the game. This is not reversal, it is only development.

I do not think that this attempted philosophic analysis is taking Hemingway too seriously. You cannot take too seriously a novel of such vivid reality as "Farewell to Arms," nor an observer and auditor of such uncanny powers. Hundreds of writers have told the story . . . weariness of routine . . . a casual love affair . . . an obsession with loving . . . the subtle change from mistress to wife (Henry never actually marries Catherine, but that is irrelevant) . . . tragedy impending upon too much happiness . . . the poignant end. But it is not the plot that counts, it is the circumstance and the complete realization of the characters. In this book you get your own times in typical essence to wonder about the interpret.

Yet I do not believe that Hemingway's strength lies in character creation. His Catherine and his Henry have nothing strange or novel in their personalities. Catherine is a fine girl who needs a lover. Henry is an individualist who acts by instinct rationalized, not by principle, and makes his friends love him. Hemingway's art is to make such not unfamiliar characters articulate when he finds them. His minor people, like the pagan and affectionate Rinaldi, or old Count Greffi, playing billiards and discoursing wisdom at 94, are more original than his protagonists. It isn't *what* they are, it is *how* they are that seems important, and of course that is a true principle in art. Anyone can outline a psychology, but how many can give you, whole and self-interpreting, just a darky crossing the road, or a man nursing his first wound!

Hemingway works almost entirely through a simple record of incident and dialogue which he stretches to include meditation in the rhythm of thought. It is a fine art. He plays upon a principle which Robert Frost stated years ago, that every speaker has his own style and rhythm, unmistakable as his finger prints, and adds a discovery in which

Gertrude Stein (who carries it into absurdity) helps him, that the recurrent rhythms of thought carry word repetitions with them, so that both dialogue and meditation can be charged with so much personality that further description is unnecessary.

"I'm going to have a baby, darling. It's almost three months along. You're not worried, are you? Please, please don't. You mustn't worry."

"All right."

"Is it all right?"

"Of course."

"I did everything. I took everything but it didn't make any difference."

"I'm not worried."

"I couldn't help it, darling, and I haven't worried about it. You mustn't worry or feel badly."

"I only worry about you."

"That's it. That's what you mustn't do. People have babies all the time. Everybody has babies. It's the natural thing."

"You're pretty wonderful."

"No I'm not. But you musn't mind, darling. I'll try and not make trouble for you. I know I've made trouble now. But haven't I been a good girl until now? You never knew it, did you?"

"No."

"It will all be like that. You simply mustn't worry. I can see you're worrying. Stop it. Stop it right away. Wouldn't you like a drink, darling? I know a drink always makes you feel cheerful."

"No. I feel cheerful. And you're pretty wonderful." . . .

We were quiet awhile and did not talk. Catherine was sitting on the bed and I was looking at her but we did not touch each other. We were apart as when one comes into a room and people are self-conscious. She put out her hand and took mine.

"You aren't angry are you, darling?"

"No."

"And you don't feel trapped?"

"Maybe a little. But not by you."

"I didn't mean by me. You mustn't be stupid. I meant trapped at all."

"You always feel trapped biologically." She went away a long way without stirring or removing her hand.

" 'Always' isn't a pretty word."

"I'm sorry."

"It's all right. But you see I've never had a baby and I've never even loved any one. And I've tried to be the way you wanted and then you talk about 'always.' "

"I could cut off my tongue," I offered.

"Oh, darling!" she came back from wherever she had been. "You mustn't mind me." We were both together again and the self-consciousness was gone. "We really are the same one, and we mustn't misunderstand on purpose. . . . Because there's only us two and in the world there's all the rest of them. If anything comes between us we're gone and then they have us."

"They won't get us," I said. "Because you're too brave. Nothing ever happens to the brave. . . . You're brave."

"No," she said. "But I would like to be."

Nothing more is needed than just this for a story. Of course there are other ways. Dialogue can be conventionalized (like Elinor Wylie's) and then it is the ideas set in their own personal rhythm which give the effect of life. Or it can be made realistic as when taken out of a note-book record, and this, if the worst way, is sometimes effective. But Hemingway is seeking voice rhythms and voice contrasts. It is the way these people talk not what they say that lifts the scene into reality.

I see that he is being criticized for writing in English that teachers of writing would despair of because of its devastations of grammar and syntax. If the teachers despair, they are ignorant. Few experimenters are always successful, and when he does go really wrong, which is seldom, it is because in the attempt to make his English more expressive he overstrains an instrument which, at its best, is crude.

Lying on the floor of the flat-car with the guns beside me under the canvas I was wet, cold and very hungry. . . . I could remember Catherine but I knew I would get crazy if I thought about her when I was not sure yet I would see her. . . . Hard as the floor of the car to lie not thinking only feeling, having been away too long, the clothes wet and the floor moving only a little each time and lonesome inside and alone with wet clothing and hard floor for a wife.

The rhythm of this last sentence is lovely, its success complete except just for an item of wilfulness which stopped him short in the last labor necessary to reconcile rhythm and sense.

> "I stay too long and talk too much." He was worried that he really did.

This is just sloppy English.

> Sometimes still pleasant and fond and warm and breakfast and lunch. Sometimes all niceness gone and glad to get out on the street but always another day starting and then another night and the difference between the night and the day and how the night was better unless the day was very clear and cold and I could not tell it; as I cannot tell it now.

This (in its context) is for all its looseness an admirable rendering of half articulate thought Hemingway knows what he is about. Let his imitators beware lest they copy him, twisting syntax, not as he does to fit necessity, but out of bravado and freakishness. English is a great language, which makes rules for textbooks, and its genius is to become more expressive not more correct.

I am sorry to have written so technically of such a human book, and yet cannot keep off this aspect where the author so loves his story that he makes a new style to get out all that he feels in it. It is not all style. There is a focussing of incident in the retreat from Caparetto, in the escape by night of the two on Lake Maggiore, and in the superb scene of childbirth that belongs to the great art of story-telling in general and would be admirable even if written in the straightforward method of the "Arabian Nights." But the vividness is from style.

"Farewell to Arms" is an erotic story, shocking to the cold, disturbing to the conventional who do not like to see mere impersonal amorousness lifted into a deep, fierce love, involving the best in both man and woman, without changing its dependence upon the senses, or trafficking with social responsibility. It deals with life where the blood is running and the spirit active —that is enough for me. As for Hemingway's frankness of language, to object to it would be priggish. There is no decadence here, no overemphasis on the sexual as a philosophy. Rather, this book belongs with those studies of conjugal love which just now are interesting the French. If you set out to write of the love life of a man and his wife when that love life is central in their experience, why that love life is what you write about and frankness belongs to the theme.

A good Victorian, I think, would have admired the frankness of this book, and also its style, but might have felt it to be narrow to the point of triviality in its concentration. Our most skilful writers today are more interested in vivid snap shots than in cosmologies. They prefer carved peach stones to panoramas. I prefer either myself to the dull tales of "cases" so much admired a few years ago, in which fiction began to look like sociology. Hemingway does lack scope. He is attracted by the vivid, and doesn't care what is vivid so that he gets it right. It's a better way to begin than the opposite method of biographing the universe as one sees it and calling that a novel. Nevertheless, his eroticism will deserve a less specific name when he has learned how to do it (I think he has learned) and begins to use it as a factor in synthesis. Not that "Farewell to Arms" is a "youthful," an "experimental" novel. It is absolutely done; and, even cosmically speaking, the flow of great social resolutions down and away from battle in the Alps to disillusion in the plains until all that is left of emotion is canalized into the purely personal business of love—that is a big enough theme for any novel. It is only that his stories seem to lack experience beyond the baffled, the desperate, the indifferent, the defiant so far. Which means, I suppose, that he is wise not to have written in that penetrative way of his about what has not yet engaged the imagination of his generation. In fiction, he is worthy to be their leader.

A Drama in Verse[1]

JOSEPH WOOD KRUTCH

AT *Winterset* (Martin Beck Theater) the curtain rises on a stage of somber but breath-taking beauty. To the right the huge concrete pier of a bridge lifts itself sheer into the darkness above, and to the left a sullen block of tenements balances the opposing mass. In the remote gloom of these lower depths the solid foundation of the proud bridge equates itself with the dismal despair of the tenements, and the fact adds meaning to the pure plastic beauty of the forms. Physically and spiritually the foundations upon which the city rests are seen from the perspective of those who crawl about their bases, and it is not often that the creative possibilities of stage design have been so convincingly demonstrated.

During the three or four seconds which immediately succeeded the rising of the curtain, many spectators must have had time to reflect that if Maxwell Anderson's play could live up to the promise of Jo Mielziner's set it would win for itself a very high place in our dramatic literature. Long before the final curtain went down, the audience had divided itself into two camps, and I have no doubt that critical opinions on this play will be as fiercely irreconcilable as they were last year during the discussion of Mr. O'Casey's *Within the Gates*. Then I was among those who turned thumbs down, and in recent years I have also been among those who found in Mr. Anderson's romantic historical dramas something pretentiously literary. But in the present case I have no desire to hedge. *Winterset* seems to me bold, original, and engrossing. In its most general aspect the play might be described as an attempt to treat some of the material of contemporary life in a manner more richly imaginative than the method of realism permits. Thus, while the time is the present and the plot one which might serve for a tragic melodrama, the whole emphasis of the treatment is such as to stress the eternal rather than the local aspects of the passions involved and to lay the emphasis less upon the action itself than upon its reverberations in the souls.

Long before the play begins, a radical agitator (vaguely reminiscent of Vanzetti) has been railroaded to death by a court which shared the popular determination to fix the guilt of murder upon a man whom it had other reasons to hate. More recently, a college professor, reopening the case, has pointed the finger of suspicion at a gangster just released from prison, and thus a ghost has been raised to plague those who had had a part in the now almost forgotten events. The key to the mystery is held by a young witness lost in the obscurity of the lower depths, and upon him converge all those most deeply concerned—the actual murderer, determined at all cost to prevent the truth from coming to light, the outcast son of the man who paid the penalty for the crime he did not commit, and, finally, the presiding judge, now driven out of his wits by the unsuccessful effort to convince himself that he had done only what duty compelled him to do. Obviously there is in all this no lack of exciting action or of opportunities for direct socio-political argument. But both are subordinated as they would be in a classic tragedy to a brooding and poetic treatment of the themes which the action suggests—namely, the nature of guilt and of justice and the meaning of revenge.

Much of the dialogue is cast in the form of blank verse, and the fact is of course significant chiefly for what it implies. It means that the author, in claiming the right to make his characters speak more pointedly and more richly than ordinary people do, claims at the same time the right to make

[1] From *The Nation*, October 9, 1935. Reprinted by permission.

them think and feel more richly too. It means that even the lowest of his characters is, like the characters in Shakespeare, permitted to be both a poet and a philosopher, limited in certain ways no doubt by the limitations of his soul, but by virtue of poetic and philosophical gifts, capable of defining and expressing that soul with the clarity and intensity of the poet and the philosopher. It means, in other words, that the play is at least capable of being more interesting than any other kind of play just because only poets and philosophers are capable of realizing and feeling to its full depth the meaning of the experiences through which they pass.

Mr. Anderson's play immediately suggests comparison with two—and only two—other recent plays, *Within the Gates* and Robert Sherwood's *The Petrified Forest*. In a very general way both aimed at something of the same sort, but neither is precisely comparable since Mr. Sherwood kept considerably closer to realistic melodrama while Mr. O'Casey, abandoning representation entirely, wrote exclusively in terms of symbolism. More significant, perhaps, would be a comparison between *Winterset* and Mr. Anderson's previous play *Gods of the Lightning*, which dealt specifically and in the mood of direct social protest with the Sacco-Vanzetti case. Doubtless many will argue that the former was the better or at least the more "useful" play, but to me the contention would seem to indicate a fantastic misconception of the whole nature of literature and drama. Probably *Winterset* would never have been written if Mr. Anderson had not concerned himself with the famous case. But if the earlier play represents the immediate reaction of the citizen, *Winterset* is the product of a poet's brooding. It represents no change of opinion; the social protest is still here if one cares to look for it. But here also is that deeper penetration into thoughts and passions and souls which it is the dramatist's business to achieve. In the production two performances are outstanding: Burgess Meredith, as the son, is both fiery and ingratiatingly youthful; Richard Bennet, as the judge, is both brilliant and subtle.

Willa Cather's Novels of the Frontier: A Study in Thematic Symbolism[1]

EDWARD A. BLOOM AND LILLIAN D. BLOOM

I

THERE IS LITTLE critical dispute today over Willa Cather's position as a first-rate American novelist.[2] Despite this agreement, few other contemporary novelists have been so consistently damned by faint praise; nor have many other novelists been so consistently evaluated by means of a single fixed interpretation of the author's purpose. Because of at least two important factors, a novel may convey and absorb a variety of meanings: the most essential quotient is the author's skill in the manipulation of his creative framework; another is the reader's experience, for each brings to the work he is reading his own power of intellect, intensity of feeling, and weight of experience. Miss Cather's specialized readers have been many, among them Clifton Fadiman, Lionel Trill-

[1] Reprinted from *American Literature*, Vol. 21, No. 1, March, 1949, by permission.

[2] Each of the novels examined in this study is in whole or in part directly related to Miss Cather's idea of the frontier. For permission to quote from the works of Willa Cather, we wish to acknowledge our indebtedness to the following publishers: to Houghton Mifflin Company, Boston and New York, for permission to quote from *O Pioneers!* (1913), *The Song of the Lark* (1915), *My Ántonia* (1918); to Alfred A. Knopf, New York, for permission to quote from *One of Ours* (1922), *A Lost Lady* (1923), *The Professor's House* (1925), *Death Comes for the Archbishop* (1927), *Shadows on the Rock* (1931), *Not Under Forty* (1936).

ing, Louis Kronenberger, Alfred Kazin, Maxwell Geismar, Percy H. Boynton, and E. K. Brown.[3] With the exception of the last two critics, each of the others has for the most part tended to evaluate her work primarily by the standards—complex though they may be—of a social historian. Consequently, Miss Cather emerges, according to their tenets, as the novelist of a reactional agrarian movement, an escapist unable to deal with the problems of a progressive society, a "malicious" commentator upon a new American materialism. Such evaluations may or may not be justified but certainly they are limited. The critical weakness of Miss Cather's interpreters stems from their divorce of the content and form of the novels. The critic must be concerned not only with what is being said, but with the how and why of its saying. The divorce is a dangerous short cut, and its weakening effects have been written large over Willa Cather's reputation. Very few of Miss Cather's critics have attempted to see the over-all pattern of her novels, their profound basis of moral values which gives them universality of theme, their classical unity and selectivity of details which enable the writer to co-ordinate structure and moral meaning. For Miss Cather, "the design is the story and the story is the design."[4]

The timeless frontiers of the American continent have given Miss Cather her most significant creative materials. In her novels which are concerned with the frontier, the clue to both "design" and "story" is the seeming simplicity which characterizes them. This is a deceptive simplicity since it emerges not from naïveté but from her deliberate and conscious theory of art. According to Miss Cather, "The higher processes of art are all processes of simplification. The novelist must learn to write, and then he must unlearn it; just as the modern painter learns to draw, and then learns when utterly to disregard his accomplishment. . . ."[5] In short, Willa Cather derives her simplicity from the effort to subordinate all details and all subsidiary meanings to what she terms a "higher and truer effect."[6] While she frequently—particularly in her descriptions—appears unnecessarily rhetorical, she presents a general impression of casual unaffectedness in her writing. Nevertheless, Willa Cather writes purposefully in all her novels of the frontier, directing her talents in each to the exposition of one lofty theme and always arriving, with varying success, at her ultimate moralistic goal. In the fulfilment of her aim, Miss Cather is singularly impressed by the artistic principle enunciated by the elder Dumas, who said that "to make a drama, a man needed one passion, and four walls."[7]

By evidence of her own often-repeated statements, Willa Cather centers her frontier novels about a single "passion" or theme, characterized by "persistence, survival, recurrence in the author's mind." That this single theme should "have 'teased' the mind for years"[8] is no psychological or intellectual aberration. Indeed, according to I. A. Richards, "when a writer has found a theme or image which fixes a point of relative stability in the drift of experience, it is not to be expected that he will avoid it. Such themes are a means or orientation."[9] Thus, Miss Cather found the "point of relative stability"

[3] Louis Kronenberger, "Willa Cather," *Bookman*, LXXIV, 134-140 (Oct., 1931); Clifton Fadiman, "Willa Cather: The Past Recaptured," *Nation*, CXXXV, 563-565 (Dec. 7, 1932); Lionel Trilling, "Willa Cather," *New Republic*, XC, 10-13 (Feb. 10, 1937); Alfred Kazin, "Elegy and Satire: Willa Cather and Ellen Glasgow," *On Native Grounds* (New York, 1942), pp. 247-257; Maxwell Geismar, "Willa Cather: Lady in the Wilderness," *The Last of the Provincials* (Boston, 1947), pp. 153-222; Percy H. Boynton, "Willa Cather," *Some Contemporary Americans* (Chicago, 1924), pp. 162-177; E. K. Brown, Willa Cather and the West," *University of Toronto Quarterly*, V, 544-566 (July, 1936).

[4] "Miss Jewett," *Not Under Forty*, pp. 77-78.

[5] "The Novel Démeublé," *Not Under Forty*, pp. 48-49.

[6] *Ibid.*

[7] *Ibid.*, p. 51. Earlier, Miss Cather had cited this same dictum in *The Song of the Lark*, p. 140.

[8] "Miss Jewett," *Not Under Forty*, p. 77. It is interesting to note that E. K. Brown (*op. cit.*) hints at a continuity of thematic characterization; that is, he suggests a few resemblances between the pioneers of the early Western novels and those of *Death Comes for the Archbishop* and *Shadows on the Rock*.

[9] As cited by Robert Penn Warren in *The Rime of the Ancient Mariner—A Poem of Pure Imagination: An Experiment in Reading* (New York, 1946), p. 87.

in the universal theme of man's perpetual pilgrimage and struggle to find an ethical ideal, or in that of the barriers that circumvent his attainment of that end.

Part of the novelist's art, Miss Cather well realized, is to associate and to make clear a moral purpose with each tale that is related. She therefore presents characters and situations that do more than form the framework of a story; they represent large and broad issues that she has observed in her experiences and readings and that she believes to be true. Each of her novels to be considered in this discussion, then, becomes in whole or in part an allegory built upon the one dominating theme mentioned above. By allegory we do not mean an arbitrary, static diagram of point-to-point equations; rather we wish merely to make clear that the surface narrative in Miss Cather's novels is connected with a background meaning. Since allegories, with some remarkable exceptions like those of Franz Kafka, are essentially simple in treatment, Miss Cather's avowed aim of simplicity is decidedly to the point. Far from presenting depths of personality, her characters offer a flat surface; her situations, in so far as they are counterparts of specific occurrences, are for the most part devoid of psychological complexity. In this respect Willa Cather may be compared with two notable allegorical writers, Hawthorne and Melville, who likewise presented few animated characters. Their symbolic figures are vague when compared with the realistic people drawn by Fielding, Austen, Thackeray, or Dickens. Like Hawthorne and Melville, Miss Cather is interested primarily in the broad outline of human destiny, not in the motivation of individual quirks and foibles. Her people and places are mainly convenient vehicles for ideas, presented in conventional novel form. The idea is the thing, and once the reader has grasped the intellectual motif, all the other elements fall into readily perceivable patterns.

Examined in the aggregate, Miss Cather's novels of the frontier reveal an allegory of the individual's quest—his seeking and finding a direction of life.[10] Born of the spirit, the quest is barren of all external and materialistic prompting. The pioneer's yearning is, indeed, so basic to the inner spirit that it becomes a creative power, rich in imagination and spiritual values. "Desire is creation," Miss Cather iterates, "is the magical element in that process."[11] Because the search for an ideal is synonymous with an innate groping for perfectibility, it has great moral value. And because, in Miss Cather's philosophy, the mere desire for the ideal is in itself an act of creation, the creative instinct has aesthetic significance. That is to say, there is an indivisible union of the moral and the aesthetic, for, as Miss Cather writes, "artistic growth is, more than it is anything else, a refining of the sense of truthfulness."[12] Hence Miss Cather's characters, visionaries and mystics, heed only that something within themselves which they divine instinctively to be their real lives and consciousness. They choose as a result to forsake the fixed conventions of civilized society. They wander forth, instead, orphan souls, searching for an ideal—a divine presence in the early novels, or a Christian God in the later novels. Whether this ineffable being is a divine presence, pagan or Christian, He is endowed with certain immutable qualities. He is not

[10] In an early critical work dealing necessarily with incomplete materials, Percy H. Boynton (*op. cit.*) concluded that Miss Cather's artistic theme is the portrayal of self-fulfilment. The focus is not on the individual as such, we believe, but upon the individual in his relationship to a higher order.

[11] *The Professor's House*, p. 29. In *The Song of the Lark*, pp. 75-76, the idea is repeated: "Nothing is far and nothing is near, if one desires. . . . There is only one big thing—desire.'" Translated into the doctrine of Catholicism, desire becomes synonymous with the miracle. "The people have loved miracles for so many hundred years, not as proof or evidence, but because they are the actual flowering of desire. In them the vague worship and devotion of the simple-hearted assumes a form. From being a shapeless longing, it becomes a beautiful image; a dumb rapture becomes a melody that can be remembered and repeated; and the experience of a moment, which might have been a lost ecstasy, is made an actual possession and can be bequeathed to another" (*Shadows on the Rock*, p. 137).

[12] *The Song of the Lark*, p. 477.

a form but a power, a palpable presence but never imprisoned in matter.[13]

This spiritual odyssey drawn by Miss Cather is an eternal one, transcending both time and place. When she began her series of frontier novels, the West of America was her logical setting. She, like the Burdens of *My Ántonia*, had left the fixed conventions of Virginia for a crude and rigorous Nebraska. Like the Burdens, she came to know the simple joys of a new land and the admirable qualities of an emigrant folk, Bohemians, Swedes, and the like. So at first she tapped her own limited experiences to present the pioneer spirit in a locale she came to know well. And always in the frontier novels, in the early as well as in the later ones, she underscores the yearning, the emotional grasping which give shape and substance to the spirit itself.

When the road began to climb the first long swells of the Divide, Alexandra hummed an old Swedish hymn, and Emil wondered why his sister looked so happy. Her face was so radiant that he felt shy about asking her. For the first time, perhaps, since that land emerged from the waters of the geologic ages, a human face was set toward it with love and yearning. It seemed beautiful to her, rich and strong and glorious. Her eyes drank in the breadth of it, until her tears blinded her. Then the Genius of the Divide, the great, free spirit which breathes across it, must have bent lower than it ever bent to a human will before. The history of every country begins in the heart of a man or a woman.[14]

[13] Such a concept is typical of Miss Cather's fusion of Roman Stoicism and basic Christianity. In the early novels she speaks of divinity in philosophical terminology; in the later novels she translates her ideas of divinity into purely Christian terms. But whether Stoic or Christian her conception of the godhead is always the same: ". . . in his essence a living all-wise Being; in his attributes immortal, immutable, active and benevolent; in his disposition occupied in contemplating and controlling his great work the universe, and in his relation to his creatures constantly concerned for their comfort and happiness." (Such is the Stoic definition of the first-moving principle as stated by E. Vernon Arnold, *Roman Stoicism*, Cambridge, 1911, p. 229.) For a further discussion of this same problem, see below.

[14] *O Pioneers!*, p. 65.

But the prairie of the Middle West, Miss Cather came to realize, was only one frontier, and the pioneer immigrants were only a single people. Her expanding interests, for example, revealed to her the possibilities of establishing the same spiritual motivation among the cliff dwellers and the fulfilment of their primitive culture. In their houses of hewn rock, Miss Cather said, "a dream had been dreamed . . . long ago, in the night of ages, and the wind had whispered some promise to the sadness of the savage."[15]

The rock of Ácoma had never been taken by a foe but once,—by Spaniards in armour. It was very different from a mountain fastness; more lonely, more stark and grim, more appealing to the imagination. The rock, when one came to think of it, was the utmost expression of human need; even mere feeling yearned for it; it was the highest comparison of loyalty in love and friendship. Christ Himself had used that comparison for the disciple to whom He gave the keys of His Church. And the Hebrews of the Old Testament, always being carried captive into foreign lands,—their rock was an idea of God, the only thing their conquerors could not take from them.[16]

In *Shadows on the Rock* the spiritual seeking, again, was the chief stimulus for the pioneer French in seventeenth-century Canada. And on the strength of this seeking, they, like the cliff dwellers, found their rock and built a civilized island in the midst of barbarism.

Why, the priest wondered, were these fellows always glad to get back to Kebec? Why did they come at all? Why should this particular cliff in the wilderness be echoing tonight with French songs, answering to the French tongue? He recalled certain naked islands in the Gulf of the St. Lawrence; mere ledges of rock standing up a little out of the sea, where the sea birds came every year to lay their eggs and rear their young in the caves and hollows; where they screamed and flocked together and made a clamour, while the winds howled around them, and the spray beat over them. This headland was scarcely more than that; a crag where for some reason

[15] *The Song of the Lark*, p. 306.

[16] *Death Comes for the Archbishop*, p. 98.

human beings built themselves nests in the rock, and held fast.[17]

And finally, it brought the Catholic missionaries of *Death Comes for the Archbishop* to the great Southwest. In this unbounded area of the Ur-Americas the reverend fathers finally approach their goal—primitive Christianity untainted by materialism. It is this kind of setting that can make altogether credible the parable of the Holy Mexican Family.[18] And from such a setting the French fathers drew the full force of their religion.

> Beautiful surroundings, the society of learned men, the charm of noble women, the graces of art, could not make up to him for the loss of those light-hearted mornings of the desert, for that wind that made one a boy again. He had noticed that this particular quality in the air of new countries vanished after they were tamed by man and made to bear harvests. Parts of Texas and Kansas that he had first known as open range had since been made into rich farming districts, and the air had quite lost that lightness, that dry aromatic odour. The moisture of plowed land, the heaviness of labour and growth and grain-bearing, utterly destroyed it, one could breathe that only on the bright edges of the world, on the great grass plains or the sage-brush desert.
>
> That air would disappear from the whole earth in time, perhaps; but long after his day. He did not know just when it had become so necessary to him, but he had come back to die in exile for the sake of it. Something soft and wild and free, something that whispered to the ear on the pillow, lightened the heart, softly, softly picked the lock, slid the bolts, and released the prisoned spirit of man into the wind, into the blue and gold, into the morning, into the morning![19]

Thus, Miss Cather's conception of spiritual desire and yearning is for the most part associated with the frontier. But the frontier is not the scene of melodramatic adventure and outlawry; it is not an economic, sociological force. It is the locale of idealistic quests, spiritual struggles, and religious awareness. Her frontier is as much a philosophical concept as it is a physical actuality.

Just as Miss Cather's idea of the frontier was one of subtle fusion of the real and the ideal, so her handling of the spiritual quest is a similar blend of the intangible and the material. The quest was always against the odds of monumental, physical struggle, being inextricably linked with a seemingly cruel, insensitive nature. It is this aspect of the seeking that Willa Cather treats most capably. With artistic insight she saw and portrayed the paradox involved in the struggle itself. Her characters, whether immigrant pioneers or erudite Frenchmen, are long sheltered by fixed social traditions. Suddenly they find themselves engaged in conflict with a primeval force that is infinitely older than the traditions themselves. The irony implicit in the paradox is further enforced by the realism with which the struggle is described. Indeed, Miss Cather, who was so skeptical of the validity of physical concreteness,[20] limits her use of realistic details largely to the description of this struggle. Actually, the realism was implicit in the situation itself. Her pioneers were a people fighting to master a language, to conquer the soil, to hold their land, and to establish for themselves a set of working ethical doctrines. Abandoning their earlier unsatisfactory environment with its decadent mores, they bring only their yearning, their religion, and the best of their culture into the wilderness to prepare themselves for a newly purposeful life.

Inferretque deos Latio. When an adventurer carries his gods with him into a remote and sav-

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[17] *Shadows on the Rock*, pp. 225-226.

[18] The entire atmosphere of *Death Comes for the Archbishop* is one of a primitive Christianity. It is an atmosphere which draws its "greatness" from its "simplicity." For Miss Cather "there is always something charming in the idea of greatness returning to simplicity—the queen making hay among the country girls—but how much more endearing was the belief that They, after so many centuries of history and glory, should return to play Their first parts, in the persons of a humble Mexican family, the lowliest of the lowly, the poorest of the poor,—in a wilderness at the end of the world, where the angels could scarcely find Them!" (*Death Comes for the Archbishop*, p. 284). See also the story of the Pima Indian convert in the same work, pp. 207-208.

[19] *Ibid.*, pp. 276-277.

[20] See below, pp. 254-255.

age country, the colony he founds will, from the beginning, have graces, traditions, riches of the mind and spirit.[21]

Obviously, there is no despair in Miss Cather's philosophy of an absolute idealism. Accordingly, the pioneer spirit was innately victorious because—and only because—it was an ideal, a dream of youth; and "to fulfill the dreams of one's youth," argued the missionary priests in *Death Comes for the Archbishop*, "that is the best that can happen to man."[22] Indeed, to Captain Forrester of *A Lost Lady*, the dream, the idea was at its very inception "an accomplished fact."[23] Thus, for the pioneer the hardships which he endures and the struggles which he undergoes are merely a test. For after long strife he seems to advance in his spiritual quest, arriving at a triumph that for him is ultimate proof that his way is the only right way.

Human experience is a graph of rising and falling events, corresponding to man's fortunes and misfortunes. And man, Miss Cather believed, is responsible for his periods of rise and of decline. Once he begins to lose sight of spiritual ideals and to give precedence to material gains, he negates his spiritual advance. The frontiersman or pioneer—the term is of little consequence—represents for Willa Cather the creature of his own desires, for good or evil. In recording his adventures she constantly emphasizes his inner strength and weakness and the decay that results once he permits himself the luxury of material desire. The wish for good demands particular strength if the pioneer is to withstand the debilitating force of a materialistic society. Good intentions alone are insufficient; the man of true spirit must supplement purpose with active striving. This recognition leads Miss Cather to her philosophical interpretation of life as a kind of gigantic tug-of-war, with idealism tugging against materialism. The theme that develops throughout her novels is devastatingly plausible, for materialism inevitably seems to exhibit the superior strength. But the essentially optimistic Willa Cather searches beyond contemporary society. Instead she examines man's trials in other eras. Always the conclusion is the same and implacable. Cyclically, even as material progress and evil flower from yearning and desire, good must ultimately come from the temporary condition of evil.

Unlike many of the other novelists of her generation who set themselves up as dispassionate or satirical observers of mankind, Willa Cather records her theme with delicate, subjective adumbrations. In so doing she follows an anti-realistic tradition already established in the nineteenth century by Hawthorne and James, and by E. M. Forster in the twentieth. Turning away from a tendency current in her generation toward muscular realism, Miss Cather says:

> There is a popular superstition that "realism" asserts itself in the cataloguing of a great number of material objects, in explaining mechanical processes, the methods of operating manufactories and trades, and in minutely and unsparingly describing physical sensations. But is not realism, more than it is anything else, an attitude of mind on the part of the writer toward his material, a vague indication of the sympathy and candour with which he accepts, rather than chooses, his theme?[24]

She objects, then, to the merciless uninterpretative reports on the condition of mankind—mere photographic observations. She strives, instead, to modify physical probability with moral necessity. Miss Cather arrives at an artistic theory that is much akin to Hawthorne's when he proposed the dis-

[21] *Shadows on the Rock*, p. 98. There occurs in this same work, pp. 24 ff., a long discussion of the need for transplanting in modified form the age-old traditions and conventions of European society into the new soil of the frontier.

[22] *Death Comes for the Archbishop*, pp. 263-264.

[23] *A Lost Lady*, p. 55. See also *The Professor's House*, p. 29: "A man can do anything if he wishes to enough, St. Peter believed. . . . If there were an instrument by which to measure desire, one could foretell achievement." In *O Pioneers!*, p. 48, Miss Cather says that "a pioneer should have imagination, should be able to enjoy the idea of things more than the things themselves." And in *One of Ours*, the idea appears in the following form: "Ideals were not archaic things, beautiful and impotent; they were the real sources of power among men." (p. 420).

[24] "The novel Démeublé," *Not Under Forty*, p. 45

tinction between Romance and Novel."[25] But even closer is she to Henry James's opinion of the realistic and the romantic.

> . . . the real represents to my perception the things we cannot possibly *not* know, sooner or later, in one way or another. . . . The romantic stands, on the other hand, for the things that, with all the facilities in the world, all the wealth and all the courage and all the wit and all the adventure, we never can directly know, the things that can reach us only through the beautiful circuit and subterfuge of our thought and desire.[26]

And Willa Cather is undeniably motivated throughout her works by the twin ideas, beauty and desire. Although there is danger of conventional tags and diversity of terms, it is apparent that all three novelists—Hawthorne, James, and Cather—were defending romanticism and in particular that aspect of romanticism commonly called moral realism, "which is not the awareness of morality itself but of the contradictions, paradoxes and dangers of living the moral life."[27]

II

For the enunciation of her theme Miss Cather turns inevitably to the use of symbols. The moral idea for her is always an empirical one. As a novelist she faces the necessity of making clear and credible her underlying theme. This she discovers she can do most readily with symbols which illustrate and magnify her ideas in concrete terms. To understand Willa Cather, therefore, is to understand her meaningful employment of a system of symbols, all of which are segments of the whole theme. Each symbol is a part of but inseparable from the whole. For a better understanding of Miss Cather as a symbolist, we may refer to Coleridge on this particular aspect of symbolism.

> . . . A Symbol . . . is characterized by a translucence of the Special in the Individual or of the General in the Especial or of the Universal in the General. Above all by the translucence of the Eternal through and in the Temporal. It always partakes of the Reality which it renders intelligible; and while it enunciates the whole, abides itself as a living part in that Unity; of which it is the representative.[28]

In Miss Cather's work, by this criterion, the symbol concretely represents the idea, giving it strength, magnitude, and reality. So tightly co-ordinated are her symbols with the ideas they project that no one may be divorced or altered without inestimable damage to the whole. This becomes particularly apparent from the systematic, chronological examination of her writings. The idea is the reality, the reality is the idea.

Although Willa Cather built up a careful scheme of symbols, she was in no sense a formal devotee of any of the "schools" that followed the European *symbolistes* of the late nineteenth century. Never does she indulge in the private, excessively subjective symbolism that began with Mallarmé and Baudelaire and culminated with Yeats. Hers is not an imagination that can work with the obscure and the esoteric. She does not say with Verlaine, "*Pas de couleur, rien que la nuance.*" To the contrary, the aesthetic is for her never an isolated measure of artistic skill, art for art's sake. The aesthetic she always associates with her moral purpose, and this she must exemplify through the use of crystalline, objective symbols. Her symbols are not like Yeats's, tests of private ingenuity and nebulosity. They are symbols of necessity;[29] that is, they have their origins in the meaningful pattern of universal human experience.

For her principal symbol Miss Cather takes the vast panorama of an untamed land. Now any symbol, be it the remotely subjective, aesthetic tool of Yeats or the relatively objective device of Miss Cather, may have a complexity of meanings. No symbol can submit to arbitrary definition, although it must of course have a fundamental meaning in the author's intention. The meaning

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[25] Preface to *The House of the Seven Gables.*

[26] As cited by F. O. Matthiessen, *Henry James: The Major Phase* (New York, 1944), p. 103.

[27] Lionel Trilling, *E. M. Forster* (Norfolk, Conn., 1943), pp. 11-12.

[28] *The Statesman's Manual* (London, 1816), p. 37.

[29] For this term we are indebted to Robert Penn Warren, *op cit.*, p. 75.

must be interpreted, rather than defined, in the light of the experience brought to the work by each reader. Since, as we have already suggested, no two sets of experience are identical, there must be considerable diversity of exact interpretation. The writer, likewise, may frequently emboss levels and degrees of meaning on each symbol. This becomes the case with Miss Cather. Thus in her work we must recognize the complex function of her symbols. For example, the symbol of the land has several thematic levels, all essentially and inevitably integrated. Note, for instance, that she sees in the land a common and spiritual meeting ground for her idealistic pioneers. Then she links to this idea the importance of the land as a place of spiritual sanctuary. Yet she is impressed that the land, or nature, is an overwhelming force often capable of rigorous subjection even while it may offer protection. But, above all, she will never have us forget that the land is the manifestation of a divine, supersensible force.

As a place of communion for idealistic pioneers, Miss Cather exalts the land. It is the consecrated, tangible evidence of a superior authority and is imbued with the might of that force. The irresistible sense of a God-inspiring unity is intuitive for Miss Cather's pioneers; such a recognition of the divine workings of creation is the root of her theosophic implications. For to obey authority man must in some way identify authority. The pioneer's chief awareness is based on the original unity of the earth. He sees the earth, the spirit of a stern but not necessarily orthodox deity, jealously protecting its harmony which he must associate with his own well-being. Jealously, as Miss Cather describes it, and at any cost, the dominance of the deity with its fierce and overwhelming strength must be retained.

> The little town behind them had vanished as if it had never been, had fallen behind the swell of the prairie, and the stern frozen country received them into its bosom. The homesteads were few and far apart; here and there a windmill gaunt against the sky, a sod house crouching in a hollow. But the great fact was the land itself, which seemed to overwhelm the little beginnings of human society that struggled in its sombre wastes. It was from facing this vast hardness that the boy's mouth had become so bitter; because he felt that men were too weak to make any mark here, that the land wanted to be let alone, to preserve its own fierce strength, its peculiar, savage kind of beauty, its uninterrupted mournfulness.[30]

In all of the frontier novels is a pervasive religious spirit of the land that is Miss Cather's deliberate attempt to arrive at a tone parallel with that of the introspective searching of the Old Testament. The entire frontier tradition with which she deals is molded in the cast of a stern element; simplicity and goodness are derived from harsh nature through an awareness of, and an acquiescence in, some divine supervision. Miss Cather's pioneers, like the ancient wandering tribes of Israel, have gone into the wilderness, at once searching for an ideal and seeking a sanctuary from a troubled existence. And there, in the wilderness, they often find their sanctuary.

In an example already cited from *Death Comes for the Archbishop*, we see the summation of everything that Miss Cather means by sanctuary.[31] For pagan and Christian, for skeptic and believer, there was always a refuge. The symbol was simple and elemental. In *O Pioneers!* and *My Ántonia* it was the land itself. But frequently the symbol was narrowed and made more specific. In *The Song of the Lark*, *The Professor's House*, *Death Comes for the Archbishop*, and *Shadows on the Rock*, the concentrated symbol becomes a rock rising out of the land. The rock is at once accessible to the comfort of a primitive devotion, and a warning to materialistic desire. At the same time it is in a profoundly mysterious way the end of the quest. This is the lesson that makes itself clear through the Catholic eyes of a Bishop Latour or of the people of seventeenth-century Canada. And again it is the lesson to be sought by those people who seek a

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[30] *O Pioneers!*, p. 15. See also pp. 19 ff. and 118 in the same work.

[31] See above, n. 16.

spiritual belief in an absolute unimpaired by creed. This is the revelation that comes to a Thea Kronborg and a Tom Outland.

Man stands in an enigmatic relationship to nature, in Miss Cather's world of the frontiersman. His world, in juxtaposition to the universal scheme of creation, is microcosmic. The larger macrocosm, the essence of an omnipresent divinity, looms as a protection and a threat. But the threat need trouble only those who fail to pay due homage to a superior will. Shelter, not harm, will be the reward of those who have learned the lesson of a supernal order and are sincerely reverent in their acknowledgment. The reader of Miss Cather must be aware that nature, as she depicts it, is capable of objective beneficence but has no anthropomorphic properties to link it directly with man. Nature is at once a barrier and a refuge. But always nature is the *idée fixe* in the pioneer's life. The laws of nature are immutable. They are the eternal verities with which man must comply; they never bend to man's will. In an attempt to crystallize this relationship, Miss Cather uses a constantly recurring artistic device. She always portrays man on a reduced scale, and at the same time she projects the phenomena of nature in heroic proportions.

> Presently we saw a curious thing: There were no clouds, the sun was going down in a limpid, gold-washed sky. Just as the lower edge of the red disc rested on the high fields against the horizon, a great black figure suddenly appeared on the face of the sun . . . On some upland farm, a plough had been left standing in the field. The sun was sinking just behind it. Magnified across the distance by the horizontal light, it stood out against the sun, was exactly contained within the circle of the disc; the handles, the tongue, the share—black against the molten red. There it was, heroic in size, a picture writing on the sun.
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> Even while we whispered about it, our vision disappeared; the ball dropped and dropped until the red tip went beneath the earth. The fields below us were dark, the sky was growing pale, and that forgotten plow had sunk back to its own littleness somewhere on the prairie.[32]

[32] *My Ántonia,* p. 279.

Miss Cather depicts the pioneer in an ironic, uneven fight against the inflexible force of the land. This is a conflict that he may win only by spiritual submission, not by physical strength. By his act of submission the pioneer is in effect helping the fulfilment of his own destiny.[33] The idea becomes paradoxical because the very land that harbors him is set forth as cruel and elemental. For her principle she cogitates a scheme of existence hypothesized long before by the Roman Stoics.[34] They too promulgated the need for obeisance to a superior force. With the Stoics Willa Cather adopts the position that man cannot reject destiny.[35] His

[33] Miss Cather draws two portraits of individuals submerged and destroyed by the land. These are the portraits of Bergson in *O Pioneers!* and Shimerda in *My Ántonia.* Both men were already old when they came to the prairie of the Middle West. They clung tenaciously to the habits, traditions, and motivations of their European environments. They were either unwilling or unable to modify their earlier belief or to adjust it to a locale which left no room for the softness and sentimental overtones of European culture. For example, "John Bergson had the Old-World belief that land, in itself, is desirable. But this land was an *enigma.* It was like a horse that no one knows how to break to harness, that runs wild and kicks things to pieces" (*O Pioneers!,* pp. 21-22). With such an attitude, John Bergson's desire for the land turned to hatred and rebellion. And so he dies, destroyed by the land which he once so desired. His daughter, however, by her own admission looks to the land only with "love and understanding." And she waits *passively* and *submissively* for the land to redeem her faith (*ibid.*, pp. 307 ff.).

[34] For the parallel, cf. E. Vernon Arnold, *op cit.,* pp. 199-200.

[35] This idea is so implicit in Miss Cather's theme that it is difficult to find an overt statement. Alexandra in *O Pioneers!* and Ántonia in *My Ántonia* are both called fatalists, both maintaining an impervious calm and both subordinating their own personalities to that of the land itself. Claude Wheeler in *One of Ours* indulges in a sentimental and quasi-philosophical fatalism and attributes all the events in his life to a destiny which he simultaneously condemns and exalts. Monsieur Auclair in *Shadows on the Rock,* Miss Cather's closest approximation to the Roman Stoic, sees all of human life governed by a philosophical principle over which one has no control and which he identifies with "fate" or "destiny." The most clear-cut statement of fatalistic submission occurs in *My Ántonia.* "I tried to go to sleep, but the jolting made me bite my tongue, and I soon began to ache all over. When the straw settled down I had a hard bed. Cautiously I slipped from under the

success lies in submission to the demiurge that controls his fate, his failure in rebellion against that same spirit. Like the Stoics, Miss Cather finds submission a virtue, restlessness and indecision its opposite. Nature for all its apparent cruelty, consequently, is the force that will temper the pioneer and bring him to his peace—his ultimate goal—as a result of his acquiescence. Only by an ethical courage can he withstand the land. The warm, pleasant summers lull him into a false sense of security. But in winter the land is another matter. "It is like an iron country, and the spirit is oppressed by its rigor and melancholy. One could easily believe that in that dead landscape the germs of life and fruitfulness were extinct forever."[36] Man is but a tiny element in a supreme irony, struggling like an animal while nature withdraws her support "in the season in which [she] recuperates, in which she sinks to sleep between the fruitfulness of autumn and the passion of spring."[37] But certainly Miss Cather's philosophy is not one of despair. The seasons are merely tests of determination.[38] "And yet," she writes, "down under the frozen crusts, at the roots of the trees, the secret of life was still safe, warm as the blood in one's heart; and the spring would come again! Oh, it would come again."[39]

Again drawing inspiration from a source common to both Stoicism and biblical Christianity, Willa Cather sees conclusive and definite proof of a supernal will in the natural order and harmony everywhere about the pioneer. Whether in the orderly arrangement of forests, prairies, and mountains, or of the constellations overhead, the regularity that betokens the perfection of the works of a divine power is ever apparent. To Miss Cather, as to Cicero and Seneca and the Psalmist,[40] the contemplation of the celestial bodies leads to the full perception of a divine spirit and the magnificence of its work.

> Alexandra drew her shawl closer about her and stood leaning against the frame of the mill, looking at the stars which glittered so keenly through the frosty autumn air. She always loved to watch them, to think of their vastness and distance, and of their ordered march. It fortified her to reflect upon the great operations of nature, and when she thought of the law that lay behind them, she felt a sense of personal security.[41]

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buffalo hide, got up on my knees and peered over the side of the wagon. There seemed to be nothing to see; no fences, no creeks or trees, no hills or fields. If there was a road, I could not make it out in the faint starlight. There was nothing but land: not a country at all, but the material out of which countries are made. No, there was nothing but land. . . . I had the feeling that the world was left behind, that we had got over the edge of it, and were outside man's jurisdiction. . . . But this was the complete dome of heaven, all there was of it. . . . Between that earth and that sky I felt erased, blotted out. I did not say my prayers that night: here, I felt, what would be would be" (*My Antonia*, pp. 7-8).

At the same time that the over-all pattern of one's life is shaped by an uncontrollable destiny, one has the power to work within the limits of that destiny; one has the power to shape the single day, the single event. See *Shadows on the Rock*, p. 198.

[36] *O Pioneers!*, pp. 187-188.

[37] *Ibid.*, p. 187.

[38] The hardships which the pioneer must sustain are not in themselves evil. Actually, they are tests imposed by a divine power upon man so that man himself can prove his worth. In setting forth this thesis, Miss Cather follows in part the Stoic conception of the origin of evil. According to Seneca, " 'No man . . . seems to me more unhappy than one who has never met with adversity.' For such a man has never had an opportunity to test himself. Though all things have flowed to him according to his prayer, though even before his prayer, nevertheless the gods have passed an adverse judgment upon him. He was deemed unworthy ever to gain the victory over Fortune. . . ." ("On Providence," *Moral Essays*, ed. John W. Basore, Loeb Classical Library, 1928, p. 17).

[39] *O Pioneers!*, p. 202.

[40] Cicero, *De natura deorum*, ed. H. Rackham, Loeb Classical Library, 1933, pp. 137-139. See also pp. 125-127 in the same work. The idea appears constantly in Seneca's essays and epistles. See particularly, *Of Benefits*, *Epistle XC*, and *The Natural Questions*, *passim*. At least two notable expressions of this idea are to be found in the Old Testament: Psalm 19; Daniel 5.

[41] *O Pioneers!*, pp. 70-71. The idea is repeated in *One of Ours*, p. 229: ". . . Claude walked . . . under the frosty brilliance of the winter stars. As he looked up at them, he felt more than ever that they must have something to do with the fate of nations, and with the incomprehensible things that were happening in the world. In the ordered universe there must be some mind that read the riddle of this one unhappy planet, that knew what was forming in the dark eclipse of this hour."

It is not enough for the successful pioneer merely to recognize this natural order as the law of a superior force. He must seek to reaffirm it in his own everyday life. Thus Alexandra in her farm, which is the test of her personality and the expression of her being, seeks to imitate the order of a form which she vaguely and unconsciously recognizes as divine.

When you go out of the house into the flower garden, there you feel again the order and fine arrangement manifest all over the great farm; in the fencing and hedging, in the windbreaks and sheds, in the symmetrical pasture ponds, planted with scrub willow to give shade to the cattle in fly-time. There is even a white row of bee-hives in the orchard, under the walnut trees. You feel that, properly, Alexandra's house is the big out-of-doors, and that it is in the soil that she expresses herself best.[42]

For the pioneer, success and failure alike, the land is everywhere and inescapable. Ultimately all distinction vanishes between the pioneer spirit and the land. One merges into the other, and each is an extension of the other. By this measure, to cite an instance, Alexandra, the essence of the pioneer spirit, and the land, the symbol of the conclusive goal of the pioneer quest, coalesce their identities.

There were certain days in her life, outwardly uneventful, which Alexandra remembered as peculiarly happy; days when she was close to the flat, fallow world about her, and felt, as it were, in her own body the joyous germination in the soil.[43]

[42] *O Pioneers!*, p. 84. For the translation of this idea into Catholic terms, see Miss Cather's description of the nuns in Quebec, their recognition of the "well-ordered universe about them" and their subsequent devotion to order in their own daily lives (*Shadows on the Rock*, pp. 97-98).

[43] *O Pioneers!*, pp. 203-204. The idea is repeated again in this same work (p. 309): "Fortunate country, that is one day to receive hearts like Alexandra's into its bosom, to give them out again in the yellow wheat, in the rustling corn, in the shining eyes of youth!" And in *My Ántonia* the identification continues. "More than any other person we remembered, [Ántonia] seemed to mean to us the country, the conditions, the whole adventure of our childhood" (*My Ántonia,* p. x).

III

The land is, indeed, Miss Cather's chief symbol through which she may interpret a spiritual striving in realistic detail. The land is tangible evidence of man's ability to thrust himself into an alien wilderness, to abandon his old modes of living and thinking, and to seek a course of moral good. The land with its paradoxical union of violent force and fruitful beneficence symbolizes the final and absolute peace which satisfies and concludes man's spiritual quest. As such, it is part of an experience that at some time has been common to all peoples. Yet as a symbol, it does not completely satisfy Miss Cather; she gropes for new devices to express this same idea and finds that the pioneer spirit of the ancient past correspondingly leads to an answer. Hence she lessens her emphasis on the ideal nature of the land in novels other than *O Pioneers!* and *My Ántonia*, and focuses on the image of the historical absolute (or ideal, since the two terms are synonymous in Miss Cather's ethic). Although Miss Cather chooses to minimize the symbol of the land or reduce it to relative obscurity in her later novels, she never allows it to vanish completely. Even if often only by suggestion, the magnetic attraction of the land draws her people in *The Song of the Lark, One of Ours, A Lost Lady, Death Comes for the Archbishop*, and *Shadows on the Rock*. Actually, we must recognize that the land and the historical absolute are parallel for her in symbolic meaning; both become the manageable representation of the ideal of the primal quest. This is best exemplified in the ancient struggle of the cliff dwellers treated in *The Song of the Lark*, where Miss Cather first initiates the idea, and in *The Professor's House* and *Death Comes for the Archbishop*, where she further expands the idea.

The symbol of the historical ideal is more complex than the symbol of the land. The historical ideal is an abstraction which Miss Cather employs to modify another abstraction—man's spiritual quest. Her use of an abstract symbol is a seeming contradiction in terms, but any misinterpretation is readily

clarified by analysis of her second major symbol. The logical point of departure is the question: Precisely what is Miss Cather's symbol of the historical ideal? The symbol is the novelist's subjective interpretation of a primitive people whose culture survives only as meager archeological remains on the mesas of the Southwest. The symbol is effective because of its complexity. It is not merely a sign or "picture writing"; nor is it only an idea. Actually, the symbol is an indivisible combination of both and draws its strength from the special complex of emotional attitudes with which Miss Cather handles it. A casual analysis would suggest an apparent paradox in the symbol itself because Miss Cather turns to an elemental society for the lesson that she would teach to her contemporaries. In all actuality this is no paradox. The cliff dwellers are primitive but not in degree of culture or civilization. Indeed, their culture is comparable, in her eyes, with the best in all cultures. Timeless in spirit, the cliff dwellers are yet primitive only in point of time of historical existence. The idea becomes clearer upon comparison with Miss Cather's earlier symbol of the land. In her use of this symbol she arrived at the ultimate conclusion that the ethically best man is he who lives closest to nature. She turns then to the cliff-dwellers and finds that their ethical goodness stems, in accentuated significance, from spiritual proximity to nature.

Miss Cather's perception of the historical ideal as a dual device for coupling man's perpetual quest and the eternal victory of good is most effective in *The Song of the Lark*, *The Professor's House*, and *Death Comes for the Archbishop;* for in them she adapts the culture of the cliff dwellers to her theory of the ideal and finds it propitious. Like the tales of the pioneers in the novels of the West, the legends of the cliff dwellers typify man's struggle for an absolute. During their searching for this same absolute, the cliff dwellers were confronted by the grim necessity of fighting for existence, harried as they were by the rigors of nature and the persecutions of their Spanish or Indian inquisitors. Actually theirs too was the eternal struggle of idealism against materialism.

> I see them here, isolated, cut off from other tribes, working out their destiny, making their mesa more and more worthy to be a home for man, purifying life by religious ceremonies and observances, caring respectfully for their dead, protecting the children, doubtless entertaining some feelings of affection and sentiment for this stronghold where they were at once so safe and so comfortable, where they had practically overcome the worst hardships that primitive man had to fear. They were, perhaps, too far advanced for their time and environment.
>
> They were probably wiped out, utterly exterminated, by some roving Indian tribe without culture or domestic virtues, some horde that fell upon them in their summer camp and destroyed them for their hides and clothing and weapons, or from mere love of slaughter. I feel sure that these brutal invaders never even learned of the existence of this mesa, honeycombed with habitations. If they had come here, they would have destroyed. They killed and went their way.[44]

For Miss Cather, then, the cliff dwellers symbolize the victory of good through the perpetuation of their cultural remains and the condemnation by history of their oppressors.

The philosophical truths of the past as they offer a solution to existence in the present are understood by people with transcendent imaginations and deep-rooted spiritual values.[45] As the land offers a way of ethical

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[44] *The Professor's House*, pp. 220-221.

[45] The reaction of Thea Kronborg and Tom Outland to the remains of the cliff dwellers takes the form of a vague mystic experience. Thus Tom, speaking of the mesa, says: "This was the first time I ever saw it as a whole. It all came together in my understanding, as a series of experiments do when you begin to see where they are leading. Something had happened in me that made it possible for me to co-ordinate and simplify, and that process, going on in my mind, brought with it great happiness. It was possession. The excitement of my first discovery was a very pale feeling compared to this one. For me the mesa was no longer an adventure, but a religious emotion. I had read of filial piety in the Latin poets, and I knew that was what I felt for this place. It had formerly been mixed up with other motives, but

life to those with the genuine humility that stems from a sympathetic understanding of a superior force, so a knowledge of the historical ideal offers strength to those who can convert their knowledge to true understanding. Miss Cather, as a result of this consistent thesis, selects visionaries or people with acute inward perception to motivate her symbolism of the historical ideal and to give it immediate application. Thea Kronborg, Ray Kennedy, and Tom Outland are all spiritual introverts able to profit from the lesson of the past. Father Latour, likewise, is introspective and capable of deep understanding, though he already has the strength of a dogmatic, yet nonetheless intensely emotional and introverted, religious experience. He, in short, discovered the goal of his quest in Catholicism; but he can understand the inspiration of a comparable if pagan philosophy. All these dreamers are admirable tools for the development of Miss Cather's symbolism because they are responsive to the mystic associations of a buried past that would find a realist impervious.

For those near-mystics who, unlike Father Latour, are still groping for philosophical values, the lesson of the cliff dwellers becomes a rock as steadfast as the biblical conception of God. The visionary, in Miss Cather's sense, has not successfully come to grips with life. He needs a sanctuary that will give him respite from the present, even as the pioneers of the West require an inward haven. But Miss Cather's dreamers are not escapists in the aesthetic sense of the term. Each, for some reason, needs a justification for being, and symbolically, the recaptured culture of the cliff dwellers provides that justification.[46] Thea Kronborg is an artist who chafes against material restraints. For this struggle she needs the strength which she finds among the ghosts of a spiritual ideal, a triumphant ideal which has fought against materialistic standards even at the cost of its own existence. Once understanding that, she dedicates herself in action to the same ideal.

> O eagle of eagles! Endeavor, achievement, desire, glorious striving of human art! From a cleft in the heart of the world she saluted it . . . It had come all the way; when men lived in caves, it was there. A vanished race: but along the trails, in the stream, under the spreading cactus, there still glittered in the sun the bits of their frail clay vessels, fragments of their desire.[47]

Similarly, Tom Outland, himself tortured by the conflict between the acceptance or renunciation of material values, adheres finally to the *modus vivendi* of the cliff dwellers, as he translates their standards and course of action into his own.

The relationship of Tom and Thea to the cliff dwellers and their mesa is not to be confused with pure artistic escape from the moil of an ugly society. Indeed, there is strength in this temporary retreat even as there is weakness in the romantic, indeterminate longings of Professor St. Peter's interest in the historical past for its own sake. The vestiges of the ancient cliff dwellers combine for Thea and Tom spiritual and physical certainty. From antiquity they extract the will to take their place in the present, not the longing to seal themselves hermetically in the void of the past. This active, essential, intelligent reaction to the idealism of the past must be remembered as the extreme pole to the Professor's inactive, illusory

now that they were gone, I had my happiness unalloyed. . . . I can scarcely hope that life will give me another summer like that one. It was my high tide. Every morning, when the sun's rays first hit the mesa top, while the rest of the world was in shadow, I wakened with the feeling that I had found everything, instead of having lost everything. Nothing tired me. Up there alone, a close neighbour to the sun, I seemed to get the solar energy in some direct way. And at night, when I watched it drop down behind the edge of the plain below me, I used to feel that I couldn't have borne another hour of that consuming light, that I was full to the brim, and needed dark and sleep" (*The Professor's House*, pp. 250-252). For a like statement of Thea's reaction, see *The Song of the Lark*, pp. 302-303.

[46] E. K. Brown (*op. cit.*, p. 561) has made an inconclusive allusion to this same idea, limiting his interpretation to the regenerative function of the cliff remains. This is only partially true since the association not only "invigorates and enriches" but also provides a way of life.

[47] *The Song of the Lark*, p. 321.

immersion in the verbal past of history books.[48]

Miss Cather is not reluctant to point out the lesson to be learned from an examination of the lives of the cliff dwellers. For them, she reasoned, existence was a primal struggle against barbarism and irreverence. They sought such spiritual goods as would bring them to their final goal of an untroubled peace. This was their ideal quest, and as Miss Cather frequently points out, one that moderns might well imitate.

> Like you, I feel a reverence for this place. Wherever humanity has made that hardest of all starts and lifted itself out of mere brutality, is a sacred spot. Your people were cut off here without the influence of example or emulation, with no incentive but some natural yearning for order and security. They built themselves into this mesa and humanized it.[49]

It is at this point that Miss Cather's homiletic leanings become most pronounced. So intent does she become at teaching her lesson, that she forgets the outward trappings of her story and presents instead bald statements which have no other purpose than the justification of her particular moral belief.

IV

While Miss Cather was symbolizing the positive qualities of the frontier spirit, she became increasingly conscious of the negative force of materialism upon that spirit. This awareness is foreshadowed in all of the early novels until it culminates in her attack upon the exploitation of the West in *A Lost Lady*, her definitive exposition of anti-progress.[50] The West of *A Lost Lady* is a narrower embodiment of all Miss Cather's frontiers, whether those of Colorado and Nebraska, or of the great Southwest and Canada. Geographic location and historic time are less important to her than the spiritual quests of the pioneers with whom she deals, and she condemns exploitation in any frontier as an irritant to the moral purpose of the pioneers. Through her focus on the historical ideal Miss Cather discovers comparable corrosive forces at work throughout the entire record of mankind. And always her conclusion is that good must triumph over evil, and that the morality of the spirit must defeat opportunism. Because she is a philosopher of hope, she tells us that the degeneracy of a single frontier such as that of the West is not defeat. This particular degeneracy appears to her but an instance of man's *immediate* failure to adjust to a purer spirit. Miss Cather's inference is that if, ironically, some men have failed because of their civil-

[48] The symbol of the historical ideal should not be identified with a vague and romantic interest in the past for its own sake. Miss Cather's historical sense was largely directed toward the study of early struggles of idealism against materialism. There is, however, a single occasion in which she develops a theory of the historical past as an avenue of aesthetic escape for one who finds active reality unsatisfactory. For this purpose she develops the character of Godfrey St. Peter in *The Professor's House*. Addicted to what he called "the pomp and circumstance" of a vague historical past, St. Peter lives vicariously in the pages of his history books, for through them he becomes "a principal in a gorgeous drama with God, glittering angels on one side and the shadows of evil coming and going on the other." And according to St. Peter, "that's what makes men happy, believing in the mystery and importance of their own little individual lives" (pp. 67 ff.). This particular attitude towards the historical past which Miss Cather projects through St. Peter is untypical and results in a twisted, enervated character. The explanation is simple. Miss Cather, consciously or unconsciously, is out of sympathy with an inactive or dead devotion to history. For her the successful test of history is its association with contemporary experience. St. Peter's ostrich-like renunciation of life is Miss Cather's unsuccessful experiment with history as pure escape. She does not repeat it. Her belief in history in action is verified by her success with the constantly recurring symbol of the cliff dwellers.

[49] *The Professor's House*, p. 221. See also *The Song of the Lark*, p. 306.

[50] Because Willa Cather's doctrine of the true frontier is essentially positive, and because space limitations obviate complete analysis, we have reduced her third major symbol—the negative one of anti-progress—to summary. Early intimations of her displeasure with exploitation may be found in *O Pioneers!*, p. 118; and especially in *My Ántonia*, pp. 249 ff., 225-226; and *One of Ours*, pp. 101-102. Excellent examples of fulmination are everywhere in *A Lost Lady*, especially pp. 22-25, 106. The attack on exploitation, however, does not end with *A Lost Lady*. There are anti-progress allusions and situations in *Death Comes for the Archbishop*, pp. 124-125, 142 ff.; and in *Shadows on the Rock*, pp. 119, 269 ff., 280.

ized progress, which to her is synonymous with exploitation, others will always seek and find other frontiers. The West of *A Lost Lady,* then, is but the essence of an unrealized ideal. The conclusion to be drawn is inevitable upon recognition that the novelist's concept of the land—whether harsh and cruel or orderly and tranquil—is always that of the constructive expression of divine order. As she represents it, the historical ideal is the record of man's reconciliation with and subordination to the divine will. In effect, therefore, the ideals of both the past and nature are good. Destructive exploitation and materialism, being contrary to the laws of nature and spiritual order, are therefore evil. That is the moral and aesthetic belief of Willa Cather.

Amphion's Lyre[1]

LUCIEN PRICE

LAST JANUARY I heard your concert in Sanders Theatre. Of course you know you are good! But I wonder if you quite know how good you are. Your Bach and Händel were majestic, your madrigals in Italian, French, and English were pleasing, your new music by Ballantine, Copland, and Irving Fine was interesting, and I laughed immoderately over Mr. Fine's musical wit. But you may be surprised when I tell you what impressed me most. It was not your Händel and Bach, magnificent though they were; it was something which happened when you began singing those choruses from Gershwin's comic opera. They are easy. All you had to do was enjoy yourselves. The tunes are good, the words are comical, and you could let yourselves go. Spontaneity and high spirits are infectious: you remember how the audience made you sing one of them over again:

Love is sweeping the country,
There never was so much love. . . .

(That tune kept on running through my head for days, until I cursed you roundly for it.) But all through the concert I saw something which I had often seen before when your Glee Club has sung, though never quite as clearly as in the gaiety of those comic choruses. Had I had the time and strength I would have gone home and written several pages in my note book of memoranda to myself about what I saw. But there happened to be two wars on, one in Europe and another in Asia; the European war was detonating toward its close, and I had to hang over teletype despatches several hours a day. And yet, as I have noticed so often, in the life of the spirit, nothing is lost or wasted; and what I would have written to myself last January I can now say to you face-to-face. What I saw that evening were young men, and young women, in the act of expressing themselves through an art-form, energized to the fullness of their powers. You were all alive and vibrant to the roots of your beings. The air tingled. Everything in you that is most gracious and beautiful, from religious worship to the laughter of high animal spirits, was set flowing. It flowed through you into the audience and sent us home happy and invigorated.

Now just *what was going on*? That was not, as I have said, the first time I had seen this singular manifestation. Several years ago one winter evening I happened to be passing Symphony Hall. It was lighted. I remembered that the Harvard Glee Club was singing. I went in. (There were plenty of seats, you are regretfully informed, so I bought a good one.) The concert was half over—Pablo Casals was the assisting artist, and the next piece was a song by Brahms,

[1] An address to the Harvard Glee Club, May 31, 1945, copyright by the author and reprinted with his permission.

I hear a harp so mild and soft,
It tells of love and longing . . .

yes, a bit sentimental, but I still have a soft spot in my head for a good sentimental ballad. This one had a harp accompaniment with violoncello obbligato. Señor Casals set his chair and 'cello peg on one of those low wooden platforms which solo 'cellists sometimes use to increase the sonority of the instrument in a large hall. He then put on a pair of horn-rimmed spectacles the better to read the music on his desk, and Dr. Davison, who then conducted the club, raised his hand to begin . . .

(But come now: wouldn't this be a bit risky? Mr. Alfred Holy, the virtuoso harpist of the Boston Symphony Orchestra, Señor Pablo Casals, who is the wonder and admiration of his colleagues,—"Casals" who, they tell us, "is master of us all, the greatest living player of a stringed instrument"—and a male chorus of musical amateurs, no more. What would happen?)

What happened was a rich flood of sonorous choral tone, with just a tinge of that unconscious melancholy which sounds its undernote in the voices of young men when they sing together well; and this to the accompaniment of harp arpeggii and that sustained cantilena in which no instrument equals the 'cello . . . As this went on I noticed a singular thing. Without being aware that he did it, Dr. Davison bent his ear over that sonority of choral tone the way a violinist bends his ear over his instrument to savour its richness. That was the first time I saw what was happening: through music he had found a way to release into articulation the emotions, the minds, the yearnings, the aspirations,—in two words, the essential being,—of these young men. "That," thought I then and there, "is something to have done." Professional musicians slave during the first part of a lifetime for a technique by which to express themselves for the second part of a lifetime. In so doing they may gain their own souls, but they often forfeit something else, youthful spontaneity. These amateur singers had it: they sang acceptably enough (Davison had seen to that) but through their singing came that distinctive electricity of youth, which is in all youth, but which rarely gets expressed through an art-form. *What was going on here?* The human soul, being released in music, was experiencing unawares one of the most profound varieties of religious experience.

In a civilization which is not yet sure whether it will survive or perish; in a world where men are commandeered to slaughter one another by the millions, why pause seriously over a concord of harmonious sounds? Isn't it just a little silly?

Let me state a case. You may then, as you would anyhow, decide for yourselves. A good many years ago and a good many miles from here I was a lad in a country town. The scenery was mediocre; there were, it is true, small lakes and woodlands, and the rolling fields under tillage had in summer a certain placid and smiling beauty; but we knew that to keep our souls alive something must be done, and we did it. We did it with books and music. The books were mostly great books, and the music was good music. Of course we had to make it ourselves. About half a dozen families set the tone, but scores of others followed. My father being the country doctor had Darwin's *Origin of Species* on his shelves twenty years, I suppose, before anyone else in the county, and, being also the conductor of the village Philharmonic orchestra, he studied at brief intervals between professional calls Hector Berlioz's *Treatise on Instrumentation.*

My own instrument was the 'cello. (I learned to play it under heavy pressure and strong protest.) That is, until a brilliant virtuoso 'cellist of the Chicago Orchestra, still a young man and a remote sort of kinsman, came for a visit. For the first time I heard what the 'cello could do. A good deal of chamber music was played in the village and we were working at Haydn's Trios. "Why don't you try Beethoven's?" proposed our guest. It was the first we knew that Beethoven had written any trios. We went to New York for them. They came. Quite a bulky volume, the piano-score; paper-bound in that pale greenish blue of the Edition Peters.

Our violinist was talented; our pianist was more than talented: she was a virtuosa schooled by some of the best pianists in the country, but prevented by an affliction of unsteady nerves from the career of the concert platform. So she gave piano lessons in an old white wooden mansion with a portico of Doric columns in a grove of pines about a mile and a half up the river road, and there she also gave for her friends private recitals of the very best music. Our 'cello was the weak link. So we started looking through the trios for something *he* could play at sight. And of all trios, which must we pitch upon but the one in B-flat, Opus 97!

The *andante cantabile* looks easy. It isn't. By the time you reach the second variation the going is rough for an adolescent 'cellist. All the same we kept going. And, as we did so, our eyes bulged with amazement. You know the history of that trio. It was written in 1812, a difficult year in Beethoven's life. His affairs were going badly and the work was not published until 1816. Although two unwritten symphonies were roaring in his head during this same period, it is possible, and a good many people think it probable, that had the pressure of his hardships been less severe, the material in this trio might have become an orchestral symphony. Its grandeur goes on increasing; one of the later variations in the *andante cantabile* sounds like a passage of free fantasia in a pianoforte concerto.

We played the movement again. We spent that whole evening playing it again, and played nothing else. The time was midsummer and rain had been falling. It was my office to drive the pianist home,—"drive" in the equine sense of that verb, to drive a horse, by reins, and hitched into a phaeton carriage. On my way home, alone, the horse plodding at a walk, for streets were unpaved and the mud was heavy, Pallas Athene sent me a thought:

This town is no great shakes. You are only a boy of sixteen. The future is uncertain, and there is no telling what may become of you. But one thing is *certain: so long as there is such music in the world there is always something you can do about the worst that the world can do to you.*

Now why should I detain you over the solitary meditation of a boy about a piece of music,—and a good many years ago too? Surely your thoughts must be preoccupied with far graver concerns. So are mine during the working-day, or night, telegraph wires tingling and wave-lengths crackling with horrors that reduce the hell of theology to the status of a feeble joke. At such times, that world seems the only real one. But I know better. God was not in the great and strong wind, nor in the fire, not yet in the earthquake. The spirit is in the still, small voice.

We live in an exploding universe. This is the point to which I speak. We live in a period when the educated classes, and a good many more important people than the educated classes only—let me call them the thinking classes—are outgrowing their traditional religion. We have had no choice. The roof of inherited belief has been burnt over our heads. Each new technology profoundly alters, if it do not destroy, the society built on the old technology. The bronze sword destroyed the society based on the stone axe; iron destroyed the society based on bronze; steel supplanted iron; gunpowder is assigned as one of the forces which destroyed the feudal system. And so we come to the 19th century and the most revolutionary discovery of all. What was discovered in the 19th century was a *method of discovery.* Since then we have lived in an exploding universe.

Our apparatus of daily living has changed faster in the past hundred years—one could even say the past fifty—than it had changed in the previous three thousand. And not our physical existence alone. There is not an intellectual edifice but has been jostled in this earthquake: politics, economics, science, theology, art, ethics . . . including morals, not in the narrow and often contemptible 19th century bourgeois definition of morals, but the whole immense and majestic range of that problem: what in man constitutes virtue, ἀρετῆ, excellence, nobility?

Certitude has vanished. In 1880 the New-

tonian physics were still unquestioned. Sir Isaac Newton's *Principia*, published in 1687, had, so far as anyone then knew, established mathematically the laws which underlay the workings of the universe,—earth, sky, and all that therein is. There remained, it is true, a few obscure spots, but these were thought to be relatively minor points which a few years' investigation would suffice to clarify. That investigation went forward. By 1900 the Newtonian physics had blown up. They were, and are, still useful as a way of looking at things, but can no longer be considered absolutely true—only a convenient half-truth. Yet the Newtonian physics dealt with that which is generally supposed to be the most real thing in existence, matter, the physical universe.

If the physical universe is not real, then what is? This little silver spoon for after dinner coffee, which the Harvard Club of Boston sends in with our crimson-rimmed demitasse, looks solid enough. You can whack it on your cup. Solid? Hah! It is a raging mass of activity. And if our notions of time were not so arbitrarily conditioned by our own brief life-spans of seventy or eighty years (as our notions of size are almost as absurdly governed by the spatial dimensions of our bodies) we might see this little spoon disintegrating before our eyes. Reality? What is reality? In one of these little pearl buttons which hold your cuffs together, the distances of the infinitely small in the universe of electrons are, we are told, relatively as enormous as the distances up there in

The starry conclave of the midnight sky . . .

No one has ever seen an electron. Its very existence has to be inferred, and this by processes at once intricate and elaborate. So much, then, for physical reality, that which we can touch and handle between thumb and fingers. We must seek elsewhere.

Politics, too, has blown up. This was to be expected since political government is a manifestation of the material world. By "politics" understand "property," for government is the expressed pleasure of a ruling class. In fact, property and theology may almost be said to have been blown up in the same year, 1859, when Darwin published his *Origin of Species* and Karl Marx his *Critique of Political Economy*. The invention of machinery dating roughly from the late 18th century and continuing in a steadily accelerating crescendo ever since, has made inevitable the collectivization of our society—if our society do not first eviscerate itself by turning these scientific techniques to lethal weapons for mutual extermination. The airplane is symbol. At the turn of the 19th century into the 20th, man for the first time built himself a practicable pair of wings and learned to fly.

Our economic system, then, has blown up. Let me mention one simple illustration. There was a politico-economic concept which was bound to appear as the 19th century went on, and did in fact appear in the year 1870 during the Paris Commune after the defeat of France by the Prussians, though for its full blooming it had to wait another forty-seven years, until the Russian Revolution of 1917. I do not mean the March revolution of that year, a Parliamentarian regime, —something quite respectable, of the sort which might have happened at Philadelphia in 1776, on the 18th century political model. (Here the gentlemen of the Glee Club laughed, it seemed to me, not unsympathetically.) No. I mean the November revolution of that same year, 1917, which sent a chill of fear up the spines of every middle class on earth; November, 1917, when Lenin said, "*Now,* comrades, we have a revolution!"

The English, American, and French political systems, being predominantly agrarian in their origins, were based on territorial representation. Machinery, by collectivizing industry, shifted the industrial workers' grubstake from the land to the machine. That concept which I said was bound to appear as the Machine Age went on, was a shift from territorial representation as your sole form of voting, to occupational representation. What else is a labor union but voting in accordance with one's occupation? Being asked one time to speak before an irreproachable Rotary Club, I scandalized the brethren by pointing out to them that their system of

representation, one member each from a variety of occupations, is in fact a Soviet. Being good Americans they laughed at their own expense. Where your own sympathies lay with regard to Communism I didn't know and was trying not to step on any toes. Since evidently I haven't, let me go on and tell you something that--Col. Charles Erskine Scott Wood, I think it was--said in the old *Masses* (it was then being called *The Liberator* after Lloyd Garrison's abolitionist paper): this was in 1919 or 1920. "I am accused of sympathy with the Bolshevik Revolution," said he. "That is not true. When I see a sick souse sitting on the railroad track and the Twentieth Century Limited coming down the rails, my sympathies are not with the locomotive."

We come now to the one subject in our exploding world that is touchier than property. That subject is sex. Sex has exploded. (Here again the gentlemen of the Glee Club permitted themselves to laugh, and again, or so it seemed to me, not unsympathetically.) Be that as it may . . . you have all probably heard of the late Dr. Sigmund Freud, sometime resident in Vienna. How many present have seen either the play or the film, *The Barretts of Wimpole Street?* . . . Then I can illustrate the situation quite simply from that. I went to see Miss Katharine Cornell play it at the Shubert Theatre here in Boston innocently supposing that what I had bought was an evening's entertainment. Pfouff! *Bang!* What I had bought was a sociological cannon cracker. It went off in our faces. As the performance went on, the tension in that audience was palpable, like an emanation of psychic electricity. Others felt it too and spoke of it afterwards. What the play did was confront the two generations, the children of the two centuries: those who were young in the late 19th century, and those who were young in the 20th: those who grew up before the revolution which for want of a better word, though the word is inadequate, we may call "Freudian," and those who have grown up since it has had time to permeate; say 1914 to 1920. There we sat, both crops, elbow-to-elbow, while the issues were being fought out on the stage before us. Still in my innocence I supposed this play to be a legitimate subject for polite discussion by mixed companies, parents and children, in urbane households among the educated classes. I found it wasn't! In no time at all, both sides were at it hammer and tongs, and both factions white with anger. That play split hearthstones. And there was no telling which way a given person would jump. Age was no determinant; neither was sex nor previous condition of domestic servitude or felicity: the most unlikely persons landed on the most improbable side, and landed with both feet. I make no secret of where my own sympathies lie. They lie with your generation. I grew up under that system of psychic terrorism, that imposition of hush and taboo which flourished at its most ruthless in the two decades before 1914; and no one could have loathed its falsehood, its ignobility, more than I loathed it, and loathed it even as a boy. Your generation may be forced to face death in battle anywhere from Europe to Asia, but at least you have known what it is to call your souls your own.

How the art-forms have exploded I need hardly remind you. Verse which affects a cult of unintelligibility; painting so bizarre and eccentric as to suggest the psychopathic; architecture harsh and bleak in its new vestments of ferro-concrete, sculpture that is arthritic if not dropsical,--though drama seems relatively immune from the extremities of this nervous disorder; because, I suppose, if you bore your audience they walk out. In music, written since 1926, much of that which I have heard I do not understand. The deficiency may be entirely in myself, and yet most of us know beauty when we hear it, for, to paraphrase Euripides, "Beauty is that which when heard is loved." In contemporary writing, you know that much of it is plumb illiterate. Illiterate, I mean, in the sense of the higher uses of language. Some of this I attribute to the neglect of Greek and Latin. Ignorant of the ancient languages, writers can not know their own. They are as painters who never learned to draw; as sculptors who never studied anatomy.

If I do not linger over this chaos in the

art-forms, it is not because the subject is unimportant, but because we are just now hunting bigger game. In leaving it let me quote Mr. W. G. Constable, curator of paintings at the Boston Museum of Fine Arts. Last autumn on a railway train coming down from Vermont we met unexpectedly and had a leisurely afternoon as seat-companions in which to thresh out this problem. We hammered it flat and we hammered it round. At the end Mr. Constable remarked:

"The artists have their World Wars from ten to twenty years ahead of everybody else."

Of the sea we expect instability; but when the ground trembles under our feet our sensation of dismay is that the very earth has failed us. Among all these earthquakes of our time, the most shattering is the earthquake in religion. The first to feel it are those whom I call the thinking classes. In periods of rapid change they are the first to outgrow their traditional beliefs. This has happened more than once in recorded history, but the classic instance is 5th century Athens. One can watch the process from Aeschylus to Plato, from the victories over Persia to the collapse of the Athenian Empire after the Peloponnesian War. It was at first a period of rapid social development and ever widening diffusion of knowledge. Myth and folklore are subjected to critical scrutiny; the validity of religious beliefs and the authenticity of their moral mandates are exposed to the challenge of philosophy and science. This procession of beacon fires kindled from mountain peak to mountain peak of the Athenian dramatists, historians, philosophers, and pioneers of science illumines the Great Age. Aeschylus is passionately concerned with religion, now a rebel against religious authority, as in *Prometheus Bound*, again on the side of divine justice, as in the *Oresteia;* Sophocles is more at ease in Zion, though still deeply concerned; Euripedes, anxious and unhappy over the clash between the old and the new epoch, makes the Athenians so uncomfortable about it so often, that they finally drive him out of their city into Macedon to write the *Bacchae* and to die. Even Aristophanes, prince of comic dramatists though he is, returns again and again to this collision between advanced ideas and inherited beliefs, until we come to Thucydides and Plato, who knew quite well that they lived in a disintegrating social system and asked themselves what they could salvage from its best thinking which would be of worth to posterity. Our present civilization, at its worthiest, is based largely on what they, their colleagues, and their successors contrived to save. I know of no age in which this recurrent crisis, when a thinking class is forced to move beyond its traditional religion, was faced as honestly or met with a wisdom equally fraught with value to the future of mankind.

Christianity arose among Galilean peasants who were never responsible for maintaining a social system. Its precepts are personal. It arose amongst a people devoid of the plastic arts. These were, in fact, forbidden by their traditional religion. It arose amongst a people devoid of science. That, too, would have been forbidden had they known what it was. It arose amongst a pastoral people with next to no technology, yet its mandates have lingered on into an age dominated by the impact of novel scientific techniques. This conflict, this dichotomy in our spiritual life, is felt by multitudes who do not know what it means and many of whom are scandalized or terrified when its meaning is pointed out to them. I cite you the experience of ancient Hellas because the Greeks are the only people in the western world who ever created from the ground up a culture on the grand scale, who ever faced with candor the problems incurred in so doing, and bequeathed to us a heritage of thought and experience which may see us through our own ordeal.

In a destructible world, where is something indestructible? Our sense of beauty has not been repealed by the Machine Age. One form of beauty is music. The paradox here is violent. What could be more fragile than music? No sooner does it sound than it is gone; no sooner it is than it is not. What is indestructible here? No one even knows what music is. It has never been seen

by human eye any more than an electron has been seen. Perhaps both are of the same stuff and perhaps their texture is the ultimate stuff of being—a mere rate of vibration. You who in youth have enjoyed the inestimable privilege of access to an art-form as participant performers in works of genius form an audience to whom I can speak freely, and that is why I am here, for you, whether aware of it or not, have had the experiences to which these ideas can be addressed. How often, as I have heard and watched you and your predecessors sing the choral parts of Beethoven's Ninth Symphony or his *Missa Solemnis*, or Bach's *B-Minor Mass* or *Matthew Passion Music*, or Brahms' *Requiem*,[2] how often have I reflected, "To have sung this music with a virtuoso orchestra and in youth must be one of the decisive events in a lifetime. A man would be one person before it; he would be another ever afterward. For no one need tell him that a world of the creative spirit exists. He has lived in it. *He knows.*"

Music is a form of religious meditation. It clears the mind, cleanses the heart, stills the chatterbox of trivial ideas, and fortifies the will. These men of genius who compose the masterworks of musical literature are able to carry us on voyages of discovery over vast interior seas to the empurpled shores of strange continents which we never could have found for ourselves and which perhaps they could never find for us a second time,

> *But we have felt the good ship riding free*
> *And watched the dawn on purple islands break.*

You must know from your own experience of music how it fructifies one's creative impulses. It kindles in us something akin to that which is first kindled in its composer and performers. Everything is in it from tears to laughter, from flesh to spirit, from revelry to worship. You are men; I will say it. Everything is in music from the sexual orgasm to the noblest aspirations of mankind, and every note in that infinite scale can be harmonious, beautiful and ennobling.

These are the inner sonorities. You know that in listening to music, as you hear the same work repeatedly until it is so familiar that you know what is coming from measure to measure and from note to note, the themes or tunes are the first elements which your memory retains. After that, the harmonization, the instrumental color, the inner voices. As these repeated hearings go on, first the themes are relegated to the unconscious part of one's attention: you know those anyhow, your ear hears them without trying, and it is more interesting to listen to the harmonic structure into which these themes have been wrought by an *artifex maximus*—like looking at the setting instead of at the gem which shines with such lustre that eyes take that in without effort. Finally, when both the themes and structure are so firmly grasped as no longer to need conscious attention, the ear turns to the inner sonorities of the music. These are the distinctive quality, the unique and peculiar texture of tone which can now at last speak to the imagination directly. They are perhaps what in its final essence the music is, that which the composer felt most deeply when creating it, perhaps so deeply that he was not aware of feeling it at all. These inner sonorities could have been apprehended only by his inner ear, the ear of his imagination. The excitation of imaginary images which they arouse in the listener is utterly unpredictable, is seldom if ever the same for any two persons among thousands, and even for the individual may vary from one performance to another, though they may also be sufficiently vivid the first time to become fixed with each repetition. Again, these imaginary images may seem, or be, totally irrelevant to the music. The composer has no power to govern their effects; he looses these sounds and they produce whatsoever

[2] Beauty of form may outlast acceptability of content. It is not likely that the monkish copyists found themselves completely in agreement with the comedies of Aristophanes or even with all of the Dialogues of Plato and yet these MSS survived the Middle Ages, and today the Mediaeval cathedrals make a profound aesthetic impression on those who find the theological concepts which are supposed to have inspired them abhorrent. The same may be true of music written to Biblical or missal texts. Aesthetic perceptions would appear to be more durable than ethical concepts.

effects they may on the listener according to his capacities. These inner sonorities convey the deepest part of his consciousness to the deepest part of ours; they are abstract, amoral, and, like other elemental forces of nature, quite indifferent to our formal categories.

And yet they are related to the conduct of life—are themselves the conduct of life. A man's thoughts and acts are his thematic material (tunes) and harmonization; his development from childhood to maturity as a human being is the *durchführung*, the working-out of his themes in sonata form, the same tunes often recurring, deepened and enriched; but the abstruse inner sonorities of him are the sum of what he has experienced, endured, conquered, lost, survived, outgrown, matured into . . . Actually that part of him which most weighs, most prevails, most goes forth into other lives, is this unconscious cumulative self of him—all that he has fought through, most of it so long ago that he has forgotten. It is this which makes him what he is: he is unaware of it: those who feel it and respond do not know what this substance is, but they do know that something is there. These are his inner sonorities, the ultimate music of his being, the full flower of his life as an art-form, and, like the inner sonorities of great music, they have passed out of their creator's custody and beyond his control. They move freely among other human beings to produce in them, not predictable results, but whatsoever responses those human beings are attuned to resonate. Tolstoy found in Beethoven's *Kreutzer Sonata* a novel of homicidal sexuality: others find in it only the noblest aspirations of their own souls. In these higher voltages of the spirit one is creating at levels both above and below the consciously worded thought or the consciously planned act. The totality of him goes forth and exerts itself on the totality of other personalities. They will respond at that level to which they are attuned. Perhaps this is what we mean when we say that we are not influenced by what a man says, or even by what he does, but by what he is. What he is is this totality of his being, expressed like music through his inner sonorities.

We live in a destructible world, yet somehow we must go on building. An ancient myth says that Amphion had a golden lyre given him by Hermes to whose strains the stones of Thebes rose one above another until the city walls were built. Not only must the city walls of world security, if possible, be built; some edifice of the spirit must be built also and built by us to house the soul of man in an epoch to come. That will be the labor of many brains and many hands, yet the spirit of man is not many but one, and its inner sonorities are a golden lyre which can cause the very stones to stir at the touch of Amphion, son of Zeus. For we are all sons of Zeus in that we are all created to be creators.

One summer in the 1930's being in Europe I went up to Finland to see Dr. Sibelius. He was most gracious and we had long conversations. As you probably know, he lives about twenty-five miles outside of Helsinki at a place called Jarvenpaa, which means "Lake's End." One can go out from the capital by a little train in about an hour, or by motor car in less. His villa is built of logs and stands on a knoll among pines and silver birches overlooking the lake to the westward. At the foot of this knoll but still in the grove is an assemblage of heavy out-of-door wooden chairs around a table, all of them painted white, and down here one sunny afternoon late in August Mme. Sibelius had the coffee service carried. The lake glittered under a westering sun and in the meadow close at hand peasants were reaping golden rye. In Finland the age of myth and legend is still just around the corner and doors stand open to the great winds which blow from the past out of the Kalevala, the Sagas and the Edda. Let me give you an idea of how close it is. That evening these same peasants were cooking their supper over a fire of twigs on a raised, open hearth. The hearth was like the one you see on the stage in Act I of Wagner's *Die Walküre*.

Dr. Sibelius had put on his white suit and that broad-brimmed, flat-crowned hat of tan felt which so often appears in his photographs. He was in high spirits and conversation was lively. It was about history, literature, music, philosophy, ethics, the daemonic element in the creative process, and a good deal else which I have never felt at liberty to repeat. He also talked of Goethe, Byron, Wagner, Ibsen, Emerson, Brahms, of his own preference in working hours, of what to do when the spring refuses to flow, and about his relationships with his publishers . . . Then of a sudden he was speaking of Beethoven, and of a sudden I realized that he was speaking of that *andante cantabile*, the slow movement of the B-flat Trio. He stopped speaking and began to sing. It was as though the composer, impatient of words, had found speech an impertinence in the presence of such music. The conversation ceased while he sang the theme through to its end. Then he resumed:

"And it does not end . . . The variations go on until they seem to merge into a purple horizon, and vanish."

How often since then in these dreary war-years, I have thought of him at Järvenpää, burdened with his share of his nation's and the world's grief. But I have thought also that, knowing and loving that trio of Beethoven, and having composed perhaps as great music of his own, he too must know, and far better than you or I, that although this world may be no great shakes, the future problematical, and no telling what may become of us, one thing is certain—so long as there is such music in the world, there is always something we can do about the worst that the world can do to us.

For eternal life is not a duration; it is an intensity.

An American Portrait[1]

Thomas Hart Benton

The life I lived in New York had no significance for my art. For me, as for all my kind, art was a purity divorced from the common ways of the day. Though some lip service was given to the relations of art and life, in our gatherings, and we talked of art and social idealism and discussed the effect on art of the war that raged in Europe, none of this affected what we did. We were studio painters. We were essentially Bohemians, adrift from the currents of our land and contemptuous of them. We cultivated romantic and esoteric notions and beliefs. New York's high temple of aesthetic pose and lunatic conviction was maintained by Alfred Stieglitz, the engaging and romantic photographer at 291 Fifth Avenue. In his shop, the artistic elite would gather and spout for hours on end. Up in the Bronx a rival station was maintained by John Weichsel, a learned man with Utopian urges about an abstraction called "the people" which he believed would support art if given a chance. Apart from his Utopian urges, Weichsel was a man of sound sense who held the run of conversation and discussion in his place of a saner level than was maintained downtown. Weichsel's allusions set me to reading the theoretical literature of the day, and I made the acquaintance of James, Dewey, Freud, and Karl Marx, among others.

At this time I got involved in psychological theory and worked up elaborate though confused psychological defenses of my painting. But my painting practice itself remained tied to studio habit, to an eclectic combination of classic and ultramodern ways. I did constantly improve my drawing by sketching the girl models who were always hanging around the studios looking for entertainment

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and by an intensive study of my own anatomy in a mirror. But I regarded drawing as an exercise existing apart from the higher abstract values of painting toward which, though I couldn't define them, I had deep hankerings. I still professed to believe, with the other young men of my entourage, that no really fine art was representative. I declared that it must convey abstract *principles* to have eternal value. I pretended to see, in those Renaissance masters I loved so much, nothing but geometrical orders. I was full of *principle*. And yet, at bottom, I didn't believe in my own logic. I carried a front, but, unlike my friend Wright, I couldn't carry my professions to their logical end and paint geometrical abstractions with the facets of the spectrum.

When the time for America's entrance into the World War arrived, I was in the most confused and, secretly, depressed state of mind I had ever been in. Chicago, Paris, and New York had left me finally in a purposeless void. The great cities and the "life of art" had failed me.

Tom Craven and I were living together when the news of America's mobilization plans hit the country. We were in line for the draft. We did a lot of tall thinking. Neither of us relished the idea of stopping bullets. We were well aware of the fact that the country was out to defend the affairs of citizens with whom we had little or nothing in common. We could see no point in taking risks for dollars which we could never share. Weighing all the propositions in sight, from a declared pacifism to flight to Mexico, we decided that the safest and least troublesome asylum would be the Navy. Others had decided the same thing earlier than we, and we had some difficulty getting in. I was shut out, at first, because of my height. The height ruling, I suspected, was devised to keep such shirkers as myself in the soldiering business. I had no faith that it would save me when the drums began to roll. Remembering that I was the son of a Democratic politician and that we were going to war under a Democratic administration, I lit out for Washington.

I went in to see old Governor Dockery of Missouri, a friend and political crony of my father's. He was Assistant Postmaster under Wilson. Getting into his office I introduced myself. He looked me up and down with squinty eyes.

"So you're old M. E.'s boy Tom, the artist feller. . . . Well, Tom, what can I do for you?"

"Governor," I said, deciding to be frank, "I'm in line for the next draft and I don't want to interfere with the progress of any German bullets."

The old boy nearly fell out of his chair laughing. He laughed till he cried.

"Why Tom," he said, "I don't blame you. I wouldn't want to get in the way of any of them things either but what can I do. The country's at war!"

I told him I had naval ambitions. After considering the matter a little, he gave me some letters and I not only got in the Navy but in the intelligence service, where I figured things would be pretty soft. I heaved a sigh of relief and returning to New York settled down to await my call.

My call finally came, but through some mix-up in my papers it led me to the coal pile and I found myself, not in a swivel chair, but down in Virginia with a shovel, loading boats with dirty coal. This was tough. But I was strong, just thirty years old, and I could take it.

Along with all the art business in New York, I had maintained enough interest in athletics to hang around gymnasiums. I swam much in the summers and prided myself on my physical condition. Still, the coal pile was not the most desirable location for exercise, and I began looking about for ways to escape it. I noticed that a group of privileged young men hung about doing nothing. These, I found, were athletes and athletic instructors. Conniving with one who was friendly, I declared myself an athlete and escaped the pile. I paid for this escape by taking a beating every Saturday night, for the entertainment of the sailors. I set up as a boxer, and though I looked good in preparatory performance, I had poor ring psychology and got licked by boys that I should have handled

easily. After a month of this, my papers got straightened out and I found myself in Norfolk at the new naval base. I was put in the architectural service as a draftsman. Having had no training in the business I had visions of a return to the coal pile. There were thousands of them around Hampton Roads. So I set about making drawings of the base as records for the architects.

This was the most important thing that, so far, I had ever done for myself as artist. My interests became, in a flash, of an objective nature. The mechanical contrivances of building, the new airplanes, the blimps, the dredges, the ships of the base, because they were so interesting in themselves, tore me away from all my grooved habits, from my play with colored cubes and classic attenuations, from my aesthetic drivelings and morbid self-concerns. I left for good the art-for-art's-sake world in which I had hitherto lived. Although my technical habits clung for a while, I abandoned the attitudes which generated them and opened thereby a way to a world which, though always around me, I had not seen. That was the world of America.

There were forces, however, beyond blimps and airplanes which worked for a change in me. Down there in Virginia, I was thrown among boys who had never been subjected to any aesthetic virus. They were boys from the hinterlands of the Carolinas, from the Tennessee country, from all over the South, in whom I discovered, despite all the differences in our experiences, bonds of sympathy. They possessed characteristics which I had known in my childhood companions around Neosho. I got along with them easily. I realized that psychologically I was much nearer to these boys than I was to the cultivated people of the Chicago, Paris, and New York art worlds. Their egos were not of the frigid, touchy sort developed by brooding much on the importance of the self. They were objective. They were interested in things, rather than selves. With them my own secret internal animosities, which were always boiling in me against people, ideas, or pretensions, faded away. I felt perfectly natural and at ease for the first time since the old creek-bank days in Missouri.

When the War was over I came back to the city full of a cockiness that I had not known since I discovered, in Paris, that my "genius" was not a thing to be much depended upon. I had found that it was not necessary to look into myself and my "genius" to find interesting things. I had found that these things existed in the world outside myself and that it made no difference whether I had any "genius" or not. I was released from the tyranny of the prewar soul which everybody so assiduously cultivated in the world of art and which was making of it such a precious field of obscurities. I proclaimed heresies around New York, talked on the importance of subject matter, then under rigid taboos among the aesthetic elite, and ridiculed the painters of jumping cubes, of cock-eyed tables, blue bowls, and bananas, who read cosmic meanings into their effusions. In a little while, I set out painting American histories in defiance of all the conventions of our art world. I talked too much, and trod on all sorts of sensibilities and made enemies. But I didn't care.

Our old prewar aesthetic world had disintegrated. Its power to put a blanket of gloom over me was gone. Alfred Stieglitz had given up his 291 Fifth Avenue and the droning talk of the aesthetic soul probers he sheltered was ended. It was usually empty talk but always insidious to young artists.

Now that it is well in the past and its troublesome effects on my youth forever gone, I think sometimes of that 291 crowd with a sort of regret. It had a kind of glamorous character which I never expect to find again. I think of little quiet Abe Walkowitz so deeply serious that you could never understand anything he said, of Max Weber so in love with his own "genius" that he preserved his every brush stroke as a gift to posterity. I think of Marsden Hartley with his distressed egotism and his fishlike hand, of Leo Stein (brother of the famous Gertrude) with his keen but tortured intelligence, and of old Stieglitz himself, with his Socratic poses and his boundless, infinitely shaded egotism.

It was a picturesque crowd that Stieglitz gathered under the roof of 291. I never fitted

very well under that roof but I must give it its due for the sheltering of more intellectual curiosities than I have ever seen anywhere else.

There was Willard Huntington Wright, young enough at that time to think that he could rationalize aesthetics. He was a brother of Stanton Wright. Willard was a character in those days, before he became the famous S. S. Van Dine. He wore a square beard and was ostentatiously pro-German when that was most unpopular. He was devoted to Nietzsche and did all that was possible to live up to his conception of the iron-willed and ruthless Nietzschean superman, taking haughty attitudes with doorkeepers, elevator men, hotel flunkies, and any of his acquaintances who would stand for it. He patronized German delicatessen stores, going into them with the airs of a Junker aristocrat and combing his beard over the potato salads to the consternation of the Teutonic proprietors, who were afraid to say anything to him for fear that he might really be one of the great ones of the Fatherland over on some secret mission.

There was Traubel, who had sunk his personality into that of Walt Whitman and who lived completely in reminiscence of the master. There was the extraordinarily genteel Henry McBride, who was trying, and for that matter still is, to be the delicately cultivated wit of art criticism. And there was Cortissoz of the *Tribune,* who was so much in love with art that he never saw any of it. There was Lee Simonson, now a famous scenic designer, who runs over to Europe every summer and brings back the latest fads to incorporate into American scenic technique.

Lee in those days still thought he was a painter. He thought it on the surface, however. In his soul he was in much doubt. Stanton Wright, who had a sadistic genius for torturing the uncertain, used to turn poor Simonson inside out by telling him he looked like a Hungarian rug dealer who'd got a paint brush in his hand by mistake. I always thought Simonson looked like one of those ifrits in the *Arabian Nights* who had somehow or other escaped from the bottle in which Solomon had sealed him and who was in constant fear of being put back. Simonson had all the effrontery of the fearful-minded.

And then there was Stanton Wright, the only one for whom I had any real use in that crowd. Stanton went away after the War to California. He was tired, he said, of "chasing art up the back alleys of New York." He was certainly the most intelligent fellow in the whole outfit, and the most talented. With the exception of Tom Craven, Wright was the closest friend I ever had. He was an incalculable friend in some respects. He'd get the girl I was interested in or even my mother, and, under the guise of witty conversation which would hide the lapse of good taste, let them in on all the secrets of my career. When my doings weren't interesting enough or low enough he'd embroider them. But in spite of this twist of loyalty I depended a good deal on Stanton Wright's friendship, and in spite of the mounting self-assurance that came to me after the War I had a sincere regret when he departed for the nut state.

With the dissolution of that old prewar crowd which formed the nucleus of artistic society in New York, somehow or other I began to expand and live. Their cultivated sensibilities had always affected me adversely. When I got among them I felt as if I were down cellar with a lot of toadstools. I always secretly thought they were an intellectually diseased lot but I didn't have enough confidence in myself to break with them and turn my mind out into the real world.

After the experiences of the War I got free of them—of all their sickly rationalizations, their inversions, and their God-awful self-cultivations.

. . . . .

In time I came to like Denny and Sally and their friends a great deal and looked forward to their parties. Sally, whose heart embraced the welfare of everything and everybody, induced Denny to buy my pictures and pretty soon the brocaded walls of her apartment were full of them. Every time Denny saw a new one hung he'd study it

with long, serious, and doubtful stares. When observed by any of his legal or political cronies, he'd take quick refuge in Broadway wisecracks. Denny was very skeptical about my paintings at first but in time he became proud of them and they got to be one of the main topics of conversation of his dinner table. There was one picture, a big exercise in figure arrangement, about which there was much argument for a proper title. The name *Figure Composition* didn't suit Denny's crowd, so after several sessions of hilarious and liquid discussion, the painting became known as *Basketball in Hell.* I took a lot of kidding about my pictures at Denny's but as long as I had my face over a highball I didn't mind and returned as much as was given me. Denny paid money for my pictures, Sally was continually giving Rita things for our apartment, and we lived well.

For a while I had some pretty mixed-up feelings about Denny and his kind. Their activities ran plainly into shady places, the people they brought around were frequently coarse and brutalized. But in time I came to see that in spite of this they were very human and that their extravagant sentiments had a sort of reality for them. I found that lawyers with burnt fingers and politicians with an easy sense of municipal responsibility could be very loyal and entertaining friends, and that their wisecracks never took on the malicious character of the witticisms of the artistic world. Strange as it may seem, lots of these fellows in comparing themselves with me found that I was calloused and cynical. This was because I found it impossible to share their sentimentality, or look upon their moral views as other than compensatory frauds. I was never quite able to reconcile the sweetness of their sentiments with the devious nature of their actual ways, and my undisguised and simple realism shocked them. But in spite of this I got along extraordinarily well with the most of the crowd. Maybe it was because I knew how to laugh.

One day after I had known Denny a long time he came into my studio and announced enthusiastically that he had found a way for me to turn up a lot of dough. I was to go over to a certain Tammany club, he explained, and introduce myself as the artist commissioned to do the portrait of the new alderman—who had had his instructions and would sit for me. I was to make a good snappy portrait, for the club had agreed to buy it. Denny had the idea that once such a precedent was set all the Tammany organizations in New York would be calling me in to memorialize their chiefs.

I regarded this proposition with my tongue in my cheek, but I didn't want to offend Denny or seem to spurn his generous effort to help me along, so I took my painting outfit the next day and went to the club as directed. The clubhouse was uptown just off the skirts of black Harlem. It was a conventional brownstone affair. Its window shades were drawn and it looked forbidding. I went inside. The rooms, dimly lit, were full of lounging men. Cigar and cigarette butts littered the floors. Wooden camp chairs and some big tables did for furniture. At most of the tables card games were in progress. I stood around a few minutes and looked at the faces of the men, trying to catch an eye. A low coarse set of faces they were for the most part—stupid but at the same time shrewd.

Putting my canvas and paintbox down I approached a couple of young fellows inspecting a racing sheet and asked for Mr. So-and-so, the alderman.

"Wot'cha want wid 'um?" said one.

"I'm the artist Denny sent to make his portrait," I replied. As they looked blankly and suspiciously at me, I explained the matter. Denny's name, once it became plain that I knew him, was enough to fire interest and one of the boys left for the back of the house. The other returned to his sheet. I stood around. Generally I can make some sort of talk with people, but against the dead cold indifference of the faces in this house I was dumb.

After a long time my messenger returned and took me down a flight of back stairs. He made me sit down on a bench in the basement hallway while he briskly opened and shut a door leading into a side room. In the split second that the door was open he

shouted, "Here he is, Benny!" Then he went back up stairs and left me.

I sat in the faint light of the hall for fully twenty minutes. Enraged finally, I got up and opened the side room door myself. Jammed close together, a pack of men surrounded a table in the center of the room. Some kind of game was going on but I couldn't see what it was.

"Say gentlemen," I called, "Denny So-and-so sent me down here on business. I can't wait all day. Where's the man I'm to make the picture of?"

The men about the table turned with amazed stares. There was a guffaw from inside the circle. "Aw, it's Denny's nut," a voice said. "Take care of 'um, Sam, I'll be there in a minute."

A short kinky-haired fellow disengaged himself from the circle and took me by the arm. I resisted. "Say, buddy," I said talking loud but trying to be friendly, "if it's Benny I'm to make the picture of, let's get a look at him. I can't paint if it gets dark. Denny told me everything was fixed for me here." Sensing its potency, I stressed Denny's name.

The circle of men parted and out came the very prince of young aldermen, the very archetype of young Tammany's schemers. Benny, the neighborhood political genius, took me off my feet. He was *it* so thoroughly, so completely, that without my eyes to show me I shouldn't have believed him real. He was immaculately dressed. His swank derby was cocked at the exactly correct aldermanic angle. His broken, flattened nose was squashed over his fat lips and his uptilted cigar was a silent cock's crow to the world.

"Hello there." He extended his hand with a grand good-humored air of patronage. "So you're Denny's boy. Well, anything I can do fer Denny goes easy with me. Wot's yer name?"

"Benton." I ignored his lofty manner for the magnificence of his style.

"Eyetalian?"

"No—Missouri Benton. Old Democratic family, you know." It occured to me that this might impress him but it didn't. His political background didn't extend beyond his own ward. "Denny told me," I went on, trying flattery, "that you were the up-and-coming man in this town and that your friends wanted an oil painting of you."

"That's right, that's right," he agreed. "The boys do want the pitchur. But I'm a busy man and haven't got no time so I brought some good photos fer yuh. You can do yer stuff from them and I'll come in with the boys and help you out ever once in a while. Git them photos, Sam," he commanded.

"No, no," I remonstrated as Sam produced a bulky envelope. "Let the photos go. Give me just half or three-quarters of an hour and I'll do you a real job."

Benny revolted, but with a liberal use of Denny's name and all the tricks of persuasion I could think of, I finally got him to consent to sit for me. He wanted to get back to his game and was a little self-conscious about yielding to me before his gang, but we finally proceeded to an empty room on the second floor. Sam led the way with the envelope of photographs.

"Show 'im them pitchurs, Sam," Benny commanded.

"No, no," I protested. "Just sit down and let me get started. I'll look at the pictures later."

I got Benny down in a chair, put my canvas on another, whipped out my palette and colors, and began to sketch. Benny jerked off his derby, straightened his necktie, and took his cigar out of his mouth.

"Stay as you are," I pleaded. "Put your hat back on."

Benny turned on me. "Hey, you!" A gleam of suspicion came into his eyes. "None o' that. Wot yuh think I am—a mug, to have my pitchur taken wid a hat on! This here's a clubhouse pitchur. Show 'im them photos, Sam."

Well, I had to look at the photos. As I expected, they looked more like Rudolph Valentino than Benny the alderman. His busted nose had been smoothed over and all the other marks of his picturesque individuality wiped out.

"I can do better than these," I said. "I'll make you look like a man."

"Yeah," said Benny, a little hurt.

"Yes," I urged, "just keep still and give me a chance."

Benny wouldn't put the derby back on but he settled down and I began to work as fast as I could. Sam stood behind my back. He was joined pretty soon by some of the loafers from downstairs who'd got wind of Benny's ordeal. They watched me silently. I put on all the steam I could, drawing with stains of brown paint on the white canvas. I got the aldermanic head in rapidly.

Forgetting all about Denny's plan to treat this portrait as the start of a money racket, I simply painted the face in front of me as it was. Absorbed, I forgot the onlookers at my back. As I put the last dent in the broken nose and was preparing some flesh tones to lay over the basic drawing, I saw the aldermanic eye look past me to his loafing henchmen. I caught the restless question in its glance and sensed the negative sign that replied. Benny jumped up and looked over my canvas.

"Hey, wot's that!" he growled indignantly. "Wot yuh think this is? Yuh think Denny sent yuh here to make a monkey out o' me?"

"What's the matter with it?" I asked, blind in my enthusiasm over my sitter's picturesque countenance.

"Git them photos, Sam."

He held one out. "That's me," he barked with crackling emphasis.

"Sure," I replied, coming out of my painter's trance and waking up to the situation, "but I'm not finished. Wait a little, I'll get you all right."

"Work from them photos till I come back. Sam and the boys'll help you." He pushed out of the room. That was the last I saw of him.

Sam spoke up. "Say, yuh don't want to make no pitchur like that. Ain't you got no respec' for a man's position? Tha's a mug you made there."

It seemed to me that there was a touch of menace in Sam's voice, veiled but positively there. I thought a minute.

"Do you think I got the shape of his head?" I asked in as conciliatory a tone as I could muster.

"A pitchur ought not to be so fat in the back of the neck," one of the ward boys behind me spoke up.

"That's right," said Sam. "A pitchur is a pitchur."

I picked up one of Benny's photographs. "Does that look like the chief?"

"That's a good pitchur," said Sam.

"But the chief has a broken nose," I insisted.

"That's a accident," replied Sam. "We don't want no pitchurs of accidents. You make the chief like he is without any accidents. You better get it fixed. The boss don't feel so good about you."

I began to feel certain that I was going to lose my sketch if I didn't do something about it. I sensed that these fellows would never let me take it out of the building. I didn't give a damn about the commission, but I wanted my young alderman.

I felt my canvas and knew that it was sufficiently absorbent to hold what I had so far done. I coated it with retouching varnish. Then deliberately taking my time so that the varnish would dry, I mixed up a lot of thick flesh-colored paint. I picked up one of the photographs and with a light touch copied it over my original. I worked an hour or more. Sam kept around me. He'd go away for a while and then come back with suggestions. The other fellows left for good.

By the time it was dark I had a pretty fair copy of the photograph. I asked Sam how it was.

"It's a better pitchur but it still don't look so much like the chief," said Sam.

"You're a pretty good critic," I ventured.

"Yes," Sam agreed. "You know I'm an artist myself. I'm a barber. I'm Benny's barber. I shave him every day. I know how he looks."

"Well, I'll have to come back and finish this from the chief himself," I said. "You think we can get him to pose if I phone tomorrow? You seem to have some influence with him," I insinuated flatteringly, "maybe you can help me."

Sam responded to my suggestion of his importance. He spoke with a sort of friendliness.

"I'll help you O.K.," he said. "You just call me here at noon. I'll fix it with the chief."

I packed my stuff. "I'll have to take this home," I said, picking up my canvas, "to keep the paint from drying."

"That's O.K.," said Sam. "You call me tomorrow noon. I'll fix it for you. One mistake ain't nothin' with the boss." Then he whispered, "Don't forget who helped you out with this."

He let me out the front door.

I rushed home with my canvas. Tenderly I scraped off the surface paint with a palette knife. My original was there, blurred a little but easy to fix. While my memory was good I touched up my alderman.

That was the first of a long series of American portraits.

When Denny saw the picture he was sore.

"Can't help a nut," he said. "You threw away a gold mine."

Later, however, he confided to Sally, "Tom sure nailed that mug."

The Imperial Facade[1]

LEWIS MUMFORD

THE DECADE between 1890 and 1900 saw the rise of a new period in American architecture. This period had, it is true, been dimly foreshadowed by the grandiose L'Enfant, but if the superficial forms resembled those of the early republic, and if the precedents of classic architecture again became a guide, the dawning age was neither a revival nor a continuation.

In the meanwhile, fresh influences had entered. The generation of students who had studied in the Ecole des Beaux Arts after the Civil War was ready, at last, to follow the lone trail which Richard H. Hunt had blazed. Richardson's most intimate disciples reacted against the stamp of his personality and sought a more neutral mode of expression, consecrated by established canons of good taste. On top of this, the introduction of steel-cage construction removed the necessity for solid masonry, and placed a premium upon the mask. The stage was set for a new act of the drama.

All these influences shaped the style of our architecture when it arose; but the condition that gave it a substantial base was the rise of a new order in America's economic life. Up to this time, the chief industrial problem had been to improve the processes of mechanical production and to stake out new areas for exploitation. One may compare these economic advances to the separate sorties of an army operating on a wide front: any lone adventurer might take his courage in his hands and exploit an invention, or sink an oil well, if he could find it. By 1890 the frontier had closed; the major resources of the country were under the control of the monopolist; it became more important to consolidate gains than freshly to achieve them. Separate lines of railroads were welded into systems; separate steel plants and oil plants were wrought into trusts; and where monopoly did not rest upon a foundation of natural advantage, the "gentleman's agreement" began its service as a useful substitute. The popular movements which sought to challenge the forces of this new régime—the labor movement, socialism, populism—had neither analyzed the situation with sufficient care nor attracted the adherence of the majority. The defeat of Henry George as a local political candidate was symbolic: by 1888 a humane thinker like Edward Bellamy had already accepted the defeat, had embraced the idea of the trust, and had conceived a comprehensive utopia on the basis

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of letting the process of monopoly go the limit, so that finally, by a mere yank of the levers, the vast economic organizations of the country would become the "property" of the people.

The drift to the open lands came to a full pause. The land-empire had been conquered, and its overlords were waxing in power and riches; the name "millionaire" became the patent of America's new nobility. With the shift from industry to finance went a shift from the producing towns to the spending towns: architecture came to dwell in the stock exchanges, the banks, the shops, and the clubs of the metropolis; if it sought the countryside at all, it established itself in the villas that were newly laid out on hill and shore in the neighborhood of the great cities. The keys to this period are opulence and magnitude: "money to burn."

These years witnessed what the Roman historian, Ferrero, has called a "*véritable recommencement d'histoire.*" In the new centers of privilege there arose a scale of living and a mode of architecture which, with all its attendant miseries, depletions, and exploitations, recalled the Rome of the first and second centuries after Christ. It is needless to say that vast acres of buildings, factories, shops, homes, were erected which had no relation at all to the imperial régime for not everyone participated in either the benefits or the depressions that attended the growth of monopoly; but the accent of this period, the dominant note, was an imperial one. While the commonplace building of the time cannot be ignored, it remains, so to say, out of the picture.

II

Hardly had the process of concentration and consolidation begun before the proper form manifested itself. The occasion for its appearance was the World's Columbian Exposition, opened in 1893. In creating this fair, the enterprise and capacity for organization which the architects of Chicago had applied to the construction of the skyscraper transformed the unkempt wilderness of Jackson Park into the Great White City in the space of two short years. Here the architects of the country, particularly of New York and Chicago, appeared for the first time as a united profession, or, to speak more accurately, as a college. Led by the New Yorkers, who had come more decisively under European influence, they brought to this exposition the combination of skill and taste in all the departments of the work that had, two centuries earlier, created the magnificent formalities of Versailles. There was unity of plan in the grouping of the main buildings about the lagoon; there was unity of tone and color in the gleaming white façades; there was unity of effect in the use of classic orders and classic forms of decoration. Lacking any genuine unity of ideas and purposes—for Root had initially conceived of a variegated oriental setting—the architects of the exposition had achieved the effects of unity by subordinating their work to an established precedent. They chanted a Roman litany above the Babel of individual styles. It was a capital triumph of the academic imagination. If these main buildings were architecture, America had never seen so much of it at one time before. Even that belated Greco-Puritan, Mr. Charles Eliot Norton, was warm in praise.

It would be foolish to quarrel with the style that was chosen for these exposition buildings, or to deny its propriety. Messrs. McKim, White, Hunt, and Burnham divined that they were fated to serve Renaissance despots and emperors with more than Roman power, and unerringly they chose the proper form for their activities. Whereas Rome had cast its spell over the architects of the early Renaissance because they wished once more to enter into its life, the life of its sages and poets and artists, it attracted the architects of the White City because of its external features—because of its stereotyped canons and rules—because of the relatively small number of choices it offered for a lapse in taste—because of its skill in conspicuous waste, and because of that very noncommittal quality in its massive forms which permitted the basilica to become a church, or the temple to become a modern bank.

Of all the Renaissance architects, their impulses and interests were nearest, perhaps,

to Robert Adam, whose church at West Wycombe could be turned into a ballroom by the simple act of removing the pews, and permitting the gay walls and decorations to speak for themselves. Behind the white staff façade of the World's Fair buildings was the steel and glass structure of the engineer: the building spoke one language and the "architecture" another. If the coming of the skyscraper had turned masonry into veneer, here was a mode of architecture which was little but veneer.

In their place, at the Fair, these classic buildings were all that could be demanded: Mr. Geoffrey Scott's defense of the Baroque, in *The Architecture of Humanism*, applies particularly to its essential manifestations in the Garden and the Theater—and why not in the Fair? Form and function, ornament and design, have no inherent relation, one with the other, when the mood of the architect is merely playful: there is no use in discussing the anatomy of architecture when its only aim is fancy dress. As a mask, as a caprice, the classic orders are as justifiable as the icing on a birthday cake: they divert the eye without damaging the structure that they conceal. Unfortunately, the architecture of the Renaissance has a tendency to imitate the haughty queen who advised the commons to eat cake. Logically, it demands that a Wall Street clerk shall live like a Lombardy prince, that a factory shall be subordinated to esthetic contemplation; and since these things are impossible, it permits "mere building" to become illiterate and vulgar below the standards of the most debased vernacular. Correct in proportion, elegant in detail, courteous in relation to each other, the buildings of the World's Fair were, nevertheless, only the simulacra of a living architecture: they were the concentrated expression of an age which sought to produce "values" rather than goods. In comparison with this new style, the romanticism of the Victorian Age, with its avid respect for the medieval building traditions, was honesty and dignity itself.

The Roman precedent, modified by the work of Louis XIV and Napoleon III, by Le Nôtre and Haussmann, formed the basis not merely for the World's Fair, but for the host of city plans that were produced in the two decades that followed. It seemed for a while as if the architect might take the place of the engineer as city planner, and that the mangled regularity of the engineer's grid-iron plan, laid down without respect to topographic advantage or to use, might be definitely supplanted in the remodeled central districts and in the new extensions and suburbs of the American city. The evil of the World's Fair triumph was that it suggested to the civic enthusiast that every city might become a fair: it introduced the notion of the City Beautiful as a sort of municipal cosmetic, and reduced the work of the architect to that of putting a pleasing front upon the scrappy building, upon the monotonous streets and the mean houses, that characterized vast areas in the newer and larger cities.

If the engineer who had devoted himself to sewers and street-plans alone had been superficial, the architectural city planner who centered attention upon parkways alone, grand avenues alone, and squares like the Place de l'Etoile alone, was equally superficial. The civic center and the parkway represented the better and more constructive side of this effort: in Cleveland, in Pittsburgh, in Springfield, Mass., harmonious groups of white buildings raised their heads above the tangle of commercial traffic, and in the restoration of L'Enfant's plan for Washington, the realities of the imperial régime at length caught up with the dreamer born out of his due time. A good many of these plans, however, were pathetically immature. One of the reports for Manhattan, for example, devoted pages and pages to showing the improvement that would follow the demolition of the wall around Central Park —and the importance of clipped trees in the design of grand avenues!

Plainly, the architect did not face with sufficient realism the colossal task with which he was confronted in the renovation of the city. He accepted his improvements too much at the value placed upon them by the leaders of Big Business—as a creator of land-values, as an element in increasing the commercial attractiveness of the city. Did

not Mr. Daniel Burnham himself point to the improvements in Periclean Athens, not as the embodiment of Athenian citizenship and religion at its highest point, but as a measure for increasing the attractiveness of the city to visitors from abroad? Cut off from his true function to serve and beautify the community, made an accessory of business itself, like the merest salesman or advertising agent, it is no wonder that the architect speedily lost his leadership; and that the initiative went once again into the hands of the engineer.

The main merit of all these efforts to perpetuate the World's Fair is that they sought to achieve some of the dignity and decisiveness of the formal plan. Their weakness was that they neglected new elements, like the billboard, the skysign, the subway, the tall building, which undermined the effects of the plan even when it was achieved. In their efforts to escape from the welter of misguided commercial enterprise, the advocates of the city beautiful placed too great reliance upon spots of outward order and decency; they took refuge in the paper symmetry of axial avenues and round-points, as one finds them in Haussmann's Paris, and neglected the deeper and more genuine beauties of, let us say, the High Street in Oxford or Chipping Camden, or of many another European town that had achieved completion in its essentials before the nineteenth century.

In short, the advocates of the city beautiful sought a remedy on paper which could be purchased only by a thorough reorganization of the community's life. If all this applies to the better side of the World's Fair, it touches even more emphatically the worse.

The twenty years between 1890 and 1910 saw the complete rehabilitation of the Roman mode, as the very cloak and costume of imperial enterprise. The main effort of architecture was to give an effect of dignity and permanence to the façades of the principal thoroughfares: the public buildings must dominate the compositions, numerous boulevards and avenues must concentrate the traffic at certain points and guide the stranger to the markets and amusements: where possible, as in the Chicago plan, by Messrs. Burnham and Bennett, avenues must be cut through the gridiron pattern of blocks in order to achieve these effects. If this imperial street system is somewhat arbitrary, and if the necessary work of grading, filling, demolishing, and purchasing existing property rights is extremely costly, the end, nevertheless, justifies the means—the architecture impresses and awes a populace that shares vicariously in its glories. Should the effect prove a little too austere and formidable, the monuments will be offset with circuses and hippodromes.

In all this, the World's Fair was a precise and classic example, for it reproduced in miniature the imperial order. When the panic of 1893 kept people away from the exhibitions of art, industry, and culture, sideshows were promptly introduced by the astute organizers. Beyond the serene classic façades, which recalled the elevation of a Marcus Aurelius, sprawled the barkers, the freaks, and the tricksters, whose gaudy booths might have reminded the spectator of the other side of the imperial shield—the gaminism of Petronius Arbiter. The transformation of these white façades into the Gay White Ways came during the next decade; whilst the sideshows achieved a separate existence as "Coney Island." On top of this came the development of the mildly gladiatorial spectacles of football and baseball: at first invented for playful exercise, they became a standard means of exhibition by more or less professional performers. The erection of numerous amphitheaters and arenas, such as the Yale Bowl, the Harvard Stadium, the Lewisohn Stadium, and their counterparts in the West, rounded out the imperial spectacle.

By a happy congruence of forces, the large-scale manufacture of Portland cement, and the reintroduction of the Roman method of concrete construction, came during the same period. Can anyone contemplate this scene and still fancy that imperialism was nothing more than a move for foreign markets and territories of exploitation? On the contrary, it was a tendency that expressed itself in every department of Western civilization,

and if it appears most naked, perhaps, in America, that is only because, as in the earlier periods, there was so little here to stand in its way. Mr. Louis Sullivan might well complain, in *The Autobiography of an Idea*, that imperialism stifled the more creative modes of architecture which might have derived from our fine achievements in science, from our tentative experiments in democracy. It seems inevitable, however, that the dominant fact in our civilization should stamp the most important monuments and buildings with its image. In justice to the great professors of the classic style, Messrs. McKim and Burnham and Carrere and Hastings, one must admit that the age shaped them and chose them and used them for its ends. Their mode of building was almost unescapably determined by the milieu in which they worked.

The change in the social scene which favored an imperial setting was not without its effects upon the industries that supplied the materials for architecture, and upon the processes of building itself. Financial concentration in the stone quarries, for example, was abetted by the creation of a national system of rail transportation, and partly, perhaps, by the elaboration of the mechanical equipment for cutting and trimming stone beyond a point where a small plant could work economically. The result was that during this period numerous small local quarries, which had been called into existence by Richardson's fine eye for color contrasts, were allowed to lapse. Vermont marble and Indiana limestone served better the traditions that had been created in the White City.

The carrying of coals to Newcastle is always a pathetic practice; it remained for the imperial age to make it a subject for boasting. Just as many Connecticut towns whose nearby fields are full of excellent granite boulders, boast a bank or a library of remote marble, so New York City, which has a solid foundation of schist, gneiss, and limestone, can point to only a handful of buildings, notably the College of the City of New York and Mr. Goodhue's Church of the Intercession, in which these excellent local materials were used. The curious result of being able by means of railway transportation to draw upon the ends of the earth for materials has been, not variety, but monotony. Under the imperial order the architect was forced to design structures that were identical in style, treatment, and material, though they were placed thousands of miles apart and differed in every important function. This ignorance of regional resources is not incompatible with grand effects, or even on occasion with decently good architecture. But it does not profit that fine adaptation to site, that justness of proportion in the size of window and slope of roof, which is an earnest of the architect's mastery of the local situation. Substitute Manila for the military colony of Timgad, or Los Angeles for Alexandria, and it is plain that we have here another aspect of Ferrero's generalization. Even architects whose place of work was nearer to the site of their buildings were, nevertheless, compelled to copy the style of the more successful practitioners in New York and Chicago.

In government, in industry, in architecture, the imperial age was one. The underlying policy of imperialism is to exploit the life and resources of separate regions for the benefit of the holders of privilege in the capital city. Under this rule, all roads lead literally to Rome. While, as the German historian, W. H. Riehl, points out, the provincial highroads served to bring the city out into the countryside, the railroads served to bring the major cities together and to drain the products of rural regions into the metropolis. It was no accident that the great triumphs of American architecture during the imperial period were the railroad stations; particularly the Pennsylvania and the Grand Central in New York, and the Union Station in Washington. Nor is it by mere chance that the Washington and the Pennsylvania stations are the monuments to two architects, McKim and Burnham, who worshiped most wholeheartedly at the imperial shrine. With capital insight, these men established the American Academy at Rome: they recognized their home.

Esthetically considered, it is true, perhaps, that the finest element in the Pennsylvania station is the train hall, where the architect

has dealt sincerely with his steel elements and has not permitted himself to cast a fond, retrospective eye upon the Roman baths. When all allowances are made, however, there remains less for criticism in the railway stations and the stadiums—those genuinely Roman bequests—than in any of the other imperial monuments. Indeed, so well does Roman architecture lend itself to the railroad station that one of the prime virtues of such a building, namely, ease of circulation, was even communicated to the New York Public Library, where it is nothing but a nuisance, since it both increases the amount of noise and diminishes the amount of space for reading rooms that are already overcrowded.

Here, indeed, is the capital defect of an established and formalized mode: it tends to make the architect think of a new problem in terms of an old solution for a different problem. Mr. Charles McKim, for example, found himself hampered in competition over the New York Public Library because the demands of the librarian for a convenient and expeditious administration of his business interfered with the full-blown conception which Mr. McKim had in mind. All this happened after years of demonstration in the Boston Library of Messrs. McKim and White's failure to meet that problem squarely; and it apparently was not affected by Mr. McKim's experience with the great Columbia Library, which has ample space for everything except books. In short, the classic style served well enough only when the building to be erected had some direct relation to the needs and interests of the Roman world—the concourse of idlers in the baths or the tiers of spectators in the circuses and hippodromes. When it came face to face with our own day, it had but little to say, and it said that badly, as anyone who will patiently examine the superimposed orders on the American Telegraph Building in New York will discover for himself.

III

With the transition from republican to imperial Rome, numerous monuments were erected to the Divine Caesar. Within a much shorter time than marked the growth of the imperial tradition in America, a similar edification of patriotic memories took place.

In the restoration of the original plan of Washington, which began in 1901, the axis of the plan was so altered as to make it pass through the Washington Monument; and at the same time the place of the Lincoln Memorial, designed by the late Mr. Henry Bacon, a pupil of Mr. McKim's, was assigned. This was the first of a whole series of temples devoted to the national deities. In the Lincoln Memorial, in the McKinley Memorial at Niles, Ohio, in the Hall of Fame at New York University, and in their prototype, Grant's Tomb, one feels not the living beauty of our American past, but the mortuary air of archaeology. The America that Lincoln was bred in, the homespun and humane and humorous America that he wished to preserve, has nothing in common with the sedulously classic monument that was erected to his memory. Who lives in that shrine, I wonder—Lincoln, or the men who conceived it: the leader who beheld the mournful victory of the Civil War, or the generation that took pleasure in the mean triumph of the Spanish-American exploit, and placed the imperial standard in the Philippines and the Caribbean?

On the plane of private citizenship a similar movement took place: while before 1890 one can count the tombs in our cemeteries that boast loudly of the owner's earthly possessions and power, from that time onward the miniature temple-mausoleum becomes more and more frequent. In fact, an entire history of architecture could be deduced from our cemeteries; all that has so far been described could be marked in the progress from the simple slab, carved in almost Attic purity with a weeping willow or a cubistic cherub, that characterized the eighteenth century, to the bad lettering and the more awkward headstones of the early nineteenth century; and from this to the introduction of polished granite and iron ornament in the post-Civil War cemetery, down to the mechanically perfect mausoleum, where the corpses are packed like the occupants of a subway train, that some of our more effu-

sively progressive communities boast of today. As we live, so we die: no wonder Shelley described Hell as a place much like London.

The Roman development of New York, Chicago, Washington, and the lesser metropolises, had an important effect upon the homes of the people. Historically, the imperial monument and the slum-tenement go hand in hand. The same process that creates an unearned increment for the landlords who possess favored sites, contributes a generous quota—which might be called the unearned excrement—of depression, overcrowding, and bad living, in the dormitory districts of the city. This had happened in imperial Rome; it had happened again in Paris under Napoleon III, where Haussmann's sweeping reconstructions created new slums in the districts behind the grand avenues, quite as bad, if far less obvious, as those that had been cleared away; and it happened once again in our American cities. Whereas in Rome a certain limit, however, was placed upon the expansion of the city because of the low development of vehicular traffic, the rise of mechanical transportation placed no bounds at all on the American city. If Rome was forced to create huge engineering projects like aqueducts and sewers in order to cleanse the inhabitants and remove the offal of its congested districts, the American city followed the example of the modern Romes like London and Paris by devising man-sewers, in which the mass of plebians could be daily drained back and forth between their dormitories and their factories.

So far from relieving congestion, these colossal pieces of engineering only made more of it possible: by pouring more feeder lines into the central district of New York, Boston, Chicago, or where you will, rapid transit increased the housing congestion at one end and the business-congestion at the other. As for the primary sewer system devised for the imperial metropolis, it could scarcely even claim, with rapid transit, that it was a valuable commercial investment. The water outlets of New York are so thoroughly polluted that not merely have the shad and the oyster beds vanished from the Hudson River, where both once flourished, but it is a serious question whether the tides can continue to transport their vast load of sewage without a preliminary reduction of its content. Like the extension of the water conduits into the Adirondacks, all these necessary little improvements add to the per capita cost of living in an imperial metropolis, without providing a single benefit that a smaller city with no need for such improvements does not enjoy. In the matter of public parks, for example, the Committee on Congestion in New York, in 1911, calculated that the park space needed for the East Side alone, on the scale provided by the city of Hartford, would be greater than the entire area of Manhattan Island. In short, even for its bare utilitarian requirements, the mass-city, as the Germans call it, costs more and gives less than communities which have not had imperial greatness inflicted upon them.

As to the more positive improvements under the imperial régime, history leaves no doubt as to their dubious character, and current observation only reënforces history's lesson. In discussing the growth of the tenement in Rome after the Great Fire, Friedlander says:

"The motives for piling up stories were as strong as ever: the site for Caesar's Forum had cost over £875,000 compensation to tenants and ground landlords. Rome had loftier houses than the modern capital. A disproportionately large part of the area available for building was monopolized by the few, in consequence of the waste of space in the plethoric architecture of the day, and a very considerable portion was swallowed up by the public places, such as the imperial forums, which took up six hectares, as well as by the traffic regulations and extensions of the streets. The transformation and decoration of Rome by the Cæsars enhanced the scarcity of housing, as did Napoleon III's improvements in Paris. A further adjutory cause of the increase in the price of dwellings was the habit of speculation in house property (which Crassus had practiced in great style) and the monopoly of the proprietors, in consequence of which houses were let and sublet."

It would be tedious to draw out the paral-

lel: given similar social conditions in America we have not been able to escape the same social results, even down to the fact that the palliatives of private philanthropy flourish here again as they had not flourished anywhere on the same scale since the Roman Empire. So much for imperial greatness. When an architect like Mr. Edward Bennett can say, as he did in *The Significance of the Fine Arts*: "House the people densely, if necessary, but conserve great areas for recreation," we need not be in doubt as to who will profit by the density and who will profit, at the other end, by the recreation. It is not merely that the park must be produced to remedy the congestion: it is even more that the congestion must be produced in order to provide for the park. To profit by both the disease and the remedy is one of the masterstrokes of imperialist enterprise. Mr. Daniel Burnham said of the World's Fair, according to Mr. Bennett and Mr. Charles Moore, "that it is what the Romans would have wished to create in permanent form." One may say of our imperial cities that they are what the Romans did create—but whether the form will be permanent or not is a matter we may leave to the sardonic attentions of history.

For my own part, I think we have at last acquired a criterion which will enable us to sum up the architecture of the imperial age, and deal justly with these railroad stations and stadiums, these sewers and circuses, these aqueducts and parkways and grand avenues. Our imperial architecture is an architecture of compensation: it provides grandiloquent stones for people who have been deprived of bread and sunlight and all that keeps man from becoming vile. Behind the monumental façades of our metropolises trudges a landless proletariat, doomed to the servile routine of the factory system; and beyond the great cities lies a countryside whose goods are drained away, whose children are uprooted from the soil on the prospect of easy gain and endless amusements, and whose remaining cultivators are steadily drifting into the ranks of an abject tenantry. This is not a casual observation: it is the translation of the last three census reports into plain English. Can one take the pretensions of this architecture seriously; can one worry about its esthetics or take full delight in such finer forms as Mr. Pope's Temple of the Scottish Rite in Washington, or Mr. Bacon's Lincoln Memorial? Yes, perhaps—if one refuses to look beyond the mask.

Even in some of its proudest buildings, the imperial show wears thin; and one need not peer into the slums beyond in order to realize its defects. The rear of the Metropolitan Museum or the Brooklyn Museum, for example, might be the rear of a row of Bronx tenements or Long Island City factories, so gaunt and barren and hideous is their aspect. If the imperial age was foreshadowed in the World's Fair, it has received its apotheosis in the museum. In contrast to the local museums one still finds occasionally in Europe, which are little more than extensions of the local curio cabinet, the imperial museum is essentially a loot-heap, a comprehensive repository for plunder. The sage Viollet-le-Duc once patly said that he preferred to see his apples hanging on a tree, rather than arranged in rows in the fruit shop: but the animus of the museum is to value the plucked fruit more than the tree that bore it.

Into the museum come the *disjecta membra* of other lands, other cultures, other civilizations. All that had once been a living faith and practice is here reduced to a separate specimen, pattern, or form. For the museum, the world of art has already been created: the future is restricted to a duplication of the perfected past. This animus is identic with that which made the Romans so skillful in copying Greek statues and so dull in carving their own; a desirable habit of humility were it not for the fact that the works of art in the past could not have been created had our ancestors been so punctual in respect to finished designs. The one thing the museum cannot attempt to do is to supply a soil for living art: all that it can present is a pattern for reproduction. To the extent that an insincere or imitative art is better than no art at all, the Imperial Age marked an advance: to the extent, however, that a living art is a fresh gesture of

the spirit, the museum confessed all too plainly that the age had no fresh gestures to make; on that score, it was a failure, and the copying of period furniture and the design of period architecture were the livid proofs of that failure.

The museum is a manifestation of our curiosity, our acquisitiveness, our essentially predatory culture; and these qualities were copiously exhibited in the architecture of imperialism. It would be foolish to reproach the great run of architects for exploiting the characteristics of their age; for even those who in belief and design have remained outside the age—such resolute advocates of a medieval policy as Dr. Ralph Adams Cram—have not been able to divert its currents. In so far as we have learned to care more for empire than for a community of freemen, living the good life, more for dominion over palm and pine than for the humane discipline of ourselves, the architect has but enshrined our desires. The opulence, the waste of resources and energies, the perversion of human effort represented in this architecture are but the outcome of our general scheme of working and living. Architecture, like government, is about as good as a community deserves. The shell that we create for ourselves marks our spiritual development as plainly as that of a snail denotes its species. If sometimes architecture becomes frozen music, we have ourselves to thank when it is a pompous blare of meaningless sounds.

7

Meeting the Occasion

Nothing is harder for most students in high school or the first year of college than writing a theme of so many words "on one of the following topics." This is a kind of contrived "occasion." Some few students are resourceful enough to meet it intelligently and come out with at least a passing mark. They are all getting experience for the times when they will be called upon to speak and will be reported as uttering a "few well-chosen words."

More often than not a speaker or writer, when solicited, does a little genteel fumbling, recovers a bit, utters the expected in perfunctory manner, and retires as gracefully as possible. Classic examples are the king's birthday and the New Year's poems which until Tennyson were the task of English poets laureate. Funeral and memorial orations are generally as undistinguished work as can be found in any language. But Spenser's marriage hymns and Milton's *Lycidas* endure. In plays, two excellent speeches for the occasion are Mark Antony's over Caesar in *Julius Caesar* and the disastrous speech of Coriolanus in the play of that name. But one needs neither verse nor the theatre for illustrious examples. Such are the speech of Patrick Henry and the Declaration of Independence.

There were two speeches made on one occasion at Gettysburg. Abraham Lincoln and a famous orator delivered them. That by the latter was well arranged and delivered; the sentiments were fitting. Perhaps no other pro-

fessional speaker could have done better. But Lincoln could. The greatest speeches, like Lincoln's, and the enduring letters and poems and editorials and proclamations do more than merely meet the occasion. One senses in them something prepared unconsciously over a long while, so that the ultimate request is but a pressing of the button which affords release. Emerson's "The American Scholar" ranks with Lincoln's address in its extraordinary appropriateness. It is another declaration of independence that had been waiting its occasion for utterance. Phi Beta Kappa poems and addresses are generally good, since the speakers are carefully chosen, but few have the inspiring quality of Emerson's "Scholar."

In the greatest of these responses something of central importance to the speaker or writer is stirred into expression, and the pattern of a man's whole absorption over a period of time comes clear. He and his whole culture are almost startlingly revealed. So was it in the Exposition speech of Booker T. Washington at Atlanta in 1895. This was no mere adroit side-stepping of the wrong remarks and uttering of the ephemeral. Through this sincere, impassioned speech breathes Washington's whole way of living, the way of the visionary who is still fully aware of his social heritage, and of what it means that he has been asked to speak at all. Patterns of living reveal themselves in the private letter of Vanzetti and the inaugural address of Franklin D. Roosevelt. Interchange these occasions and thus put these three men in different situations—they would not have produced communication so significant and so much more than merely appropriate. The way times and the man make the occasion an opportunity is at times almost breathtaking. Our minds tell us it is all a matter of lucky chance, nothing mystical about it. But the whole exciting result on certain occasions is hard to explain rationally.

We can return, though, to the idea that the rightness of a speech or a piece of writing comes not overnight but out of a way of life. That is why the Thanksgiving proclamations of Governor Wilbur T. Cross were so superior—think how many such proclamations have been issued and forgotten! It was a way of life that forced young Wendell Phillips to abandon his set speech at the Lovejoy meeting in Faneuil Hall and rise to his feet out of turn, with an impromptu reply to another's challenge. That other was to Phillips so anti-American and so wrong that his whole being met the challenge. A kind of philosophy of life and love and death enabled Alexander Woollcott to write that remarkable letter to his dead sister's friend. For years William Allen White's life ran apparently in two parallel grooves—his newspaper work and his happy life as husband and father. There came a time when those courses crossed, and Mr. White was ready. His readiness was not achieved overnight, or by any conscious preparation.

Because he is an editor or governor or President, because he must defend a faith (like Vanzetti or Plato's Socrates), a man is called upon to speak or write. For greatness of utterance on such occasions, for thought and expression transcending the ordinary, his whole life until that time is tested—his philosophy of good and evil, of what is important and what is not, or what passes and what is permanent; his studying and thinking over years; his imagination about himself and those to whom he speaks. The test of the result is how long it endures beyond the casual hour.

The Declaration of Independence[1]

PREAMBLE

WHEN, in the course of human events, it becomes 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, a decent respect to the opinions of mankind requires that they should declare the causes which impel them to the separation.

We hold these truths to be self-evident: That all men are created equal; that they are endowed by their Creator with certain unalienable rights; that among these are life, liberty, and the pursuit of happiness; that, to secure these rights, governments are instituted among men, deriving their just powers from the consent of the governed; 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 new government, laying its foundation on such principles, and organizing its powers in such form, as to them shall seem most likely to effect their safety and happiness. Prudence, indeed, will dictate that governments long established should not be changed for light and transient causes; and, accordingly, all experience hath shown that mankind are more disposed to suffer while evils are sufferable, than to right themselves by abolishing the forms to which they are accustomed. But when a long train of abuses and usurpations, pursuing invariably the same object, evinces a design to reduce them under absolute despotism, it is their right, it is their duty, to throw off such government and to provide new guards for their future security. Such has been the patient sufferance of these colonies; and such is now the necessity which constrains them to alter their former systems of government.

SPECIFIC CHARGES AGAINST THE KING

The history of the present King of Great Britain is a history of repeated injuries and usurpations, all having in direct object the establishment of an absolute tyranny over these States. To prove this, let facts be submitted to a candid world:

He has refused his assent to laws, the most wholesome and necessary for the public good.

He has forbidden his Governors to pass laws of immediate and pressing importance, unless suspended in their operation till his assent should be obtained; and, when so suspended, he has utterly neglected to attend to them.

He has refused to pass other laws for the accommodation of large districts of people, unless those people would relinquish the right of representation in the Legislature, a right inestimable to them and formidable to tyrants only.

He has called together legislative bodies at places unusual, uncomfortable, and distant from the depository of their public records, for the sole purpose of fatiguing them into compliance with his measures.

He has dissolved representative Houses repeatedly for opposing with manly firmness his invasions on the rights of the people.

He has refused for a long time after such dissolutions to cause others to be elected; whereby the legislative powers, incapable of annihilation, have returned to the people at large for their exercise; the State remaining, in the meantime, exposed to all the dangers of invasions from without and convulsions within.

He has endeavored to prevent the population of these States; for that purpose obstructing the laws for naturalization of foreigners,

[1] The unanimous Declaration of the Thirteen United States of America, made in Congress, July 4, 1776.

refusing to pass others to encourage their migration hither, and raising the conditions of new appropriations of lands.

He has obstructed the administration of justice by refusing his assent to laws for establishing judiciary powers.

He has made judges dependent on his will alone for the tenure of their offices and the amount and payment of their salaries.

He has erected a multitude of new offices, and sent hither swarms of officers to harass our people and eat out their substance.

He has kept among us, in times of peace, standing armies, without the consent of our Legislatures.

He has affected to render the military independent of, and superior to, the civil power.

He has combined with others to subject us to a jurisdiction foreign to our Constitution and unacknowledged by our laws, giving his assent to their acts of pretended legislation:

For quartering large bodies of armed troops among us;

For protecting them, by a mock trial, from punishment for any murders which they should commit on the inhabitants of these States;

For cutting off our trade with all parts of the world;

For imposing taxes on us without our consent;

For depriving us, in many cases, of the benefits of trial by jury;

For transporting us beyond seas to be tried for pretended offenses;

For abolishing the free system of English laws in a neighboring province, establishing therein an arbitrary government, and enlarging its boundaries so as to render it at once an example and fit instrument for introducing the same absolute rule into these colonies;

For taking away our charters, abolishing our most valuable laws, and altering fundamentally the forms of our governments;

For suspending our own Legislatures, and declaring themselves invested with power to legislate for us in all cases whatsoever.

He has abdicated government here by declaring us out of his protection and waging war against us.

He has plundered our seas, ravaged our coasts, burnt our towns, and destroyed the lives of our people.

He is at this time transporting large armies of foreign mercenaries to complete the works of death, desolation, and tyranny, already begun with circumstances of cruelty and perfidy scarcely paralleled in the most barbarous ages, and totally unworthy the head of a civilized nation.

He has constrained our fellow citizens, taken captive on the high seas, to bear arms against their country, to become the executioners of their friends and brethren, or to fall themselves by their hands.

He has excited domestic insurrections amongst us, and has endeavored to bring on the inhabitants of our frontiers the merciless Indian savages, whose known rule of warfare is an undistinguished destruction of all ages, sexes, and conditions.

In every stage of these oppressions we have petitioned for redress in the most humble terms: our repeated petitions have been answered only by repeated injury. A prince, whose character is thus marked by every act which may define a tyrant, is unfit to be the ruler of a free people.

Nor have we been wanting in attentions to our British brethren. We have warned them from time to time of attempts by their Legislature to extend an unwarrantable jurisdiction over us. We have reminded them of the circumstances of our emigration and settlement here. We have appealed to their native justice and magnanimity, and we have conjured them by the ties of our common kindred to disavow these usurpations which would inevitably interrupt our connections and correspondence. They, too, have been deaf to the voice of justice and consanguinity. We must, therefore, acquiesce in the necessity which denounces our separation, and hold them, as we hold the rest of mankind, enemies in war; in peace, friends.

CONCLUSION AND DECLARATION

WE, THEREFORE, THE REPRESENTATIVES OF THE UNITED STATES OF AMERICA, in General Congress assembled, appealing to the Supreme Judge of the world for the rectitude of our intentions, do, in the name and by the authority of the good people of these colonies, solemnly publish and declare that these United Colonies are, and of right ought to be, FREE AND INDEPENDENT STATES; that they are absolved from all allegiance to the British Crown, and that all political connection between them and the State of Great Britain is, and ought to be, totally dissolved; and that as free and independent States they have full power to levy war, conclude peace, contract alliances, establish commerce, and to do all other acts and things which independent States may of right do. And for the support of this declaration, with a firm reliance on the protection of Divine Providence, we mutually pledge to each other our lives, our fortunes, and our sacred honor.

The Apology of Socrates[1]

PLATO

THERE ARE many reasons why I am not grieved, O men of Athens, at the vote of condemnation. I expected this, and am only surprised that the votes are so nearly equal; for I had thought that the majority against me would have been far larger; but now, had thirty votes gone over to the other side, I should have been acquitted. And I may say that I have escaped Meletus. And I may say more; for without the assistance of Anytus and Lycon, he would not have had a fifth part of the votes, as the law requires, in which case he would have incurred a fine of a thousand drachmæ, as is evident.

And so he proposes death as the penalty. And what shall I propose on my part, O men of Athens? Clearly that which is my due. And what is that which I ought to pay or to receive? What shall be done to the man who has never had the wit to be idle during his whole life; but has been careless of what the many care about—wealth and family interests, and military offices, and speaking in the assembly, and magistracies, and plots, and parties. Reflecting that I was really too honest a man to follow in this way and live, I did not go where I could do no good to you or to myself; but where I could do the greatest good privately to every one of you, thither I went, and sought to persuade every man among you that he must look to himself, and seek virtue and wisdom before he looks to his private interests, and look to the State before he looks to the interests of the State; and that this should be the order which he observes in all his actions. What shall be done to such a one? Doubtless some good thing, O men of Athens, if he has his reward; and the good should be of a kind suitable to him. What would be a reward suitable to a poor man who is your benefactor, who desires leisure that he may instruct you? There can be no more fitting reward than maintenance in the Prytaneum, O men of Athens, a reward which he deserves far more than the citizen who has won the prize at Olympia in the horse or chariot race, whether the chariots were drawn by two horses or by many. For I am in want, and he has enough; and he only gives you the appearance of happiness, and I give you the reality. And if I am to estimate the penalty justly, I say that maintenance in the Prytaneum is the just return.

Perhaps you may think that I am braving you in saying this, as in what I said before about the tears and prayers. But that is not the case. I speak rather because I am convinced that I never intentionally wronged anyone, although I cannot convince you of

[1] Translated by Benjamin F. Jowett.

that—for we have had a short conversation only; but if there were a law at Athens, such as there is in other cities, that a capital cause should not be decided in one day, then I believe that I should have convinced you; but now the time is too short. I cannot in a moment refute great slanders; and, as I am convinced that I never wronged another, I will assuredly not wrong myself. I will not say of myself that I deserve any evil, or propose any penalty. Why should I? Because I am afraid of the penalty of death which Meletus proposes? When I do not know whether death is a good or an evil, why should I propose a penalty which would certainly be an evil? Shall I say imprisonment? And why should I live in prison, and be the slave of the magistrates of the year—of the Eleven? Or shall the penalty be a fine, and imprisonment until the fine is paid? There is the same objection. I should have to lie in prison, for money I have none, and I cannot pay. And if I say exile (and this may possibly be the penalty which you will affix), I must indeed be blinded by the love of life if I were to consider that when you, who are my own citizens, cannot endure my discourses and words, and have found them so grievous and odious that you would fain have done with them, others are likely to endure me. No, indeed, men of Athens, that is not very likely. And what a life should I lead, at my age, wandering from city to city, living in ever-changing exile, and always being driven out! For I am quite sure that into whatever place I go, as here so also there, the young men will come to me; and if I drive them away, their elders will drive me out at their desire: and if I let them come, their fathers and friends will drive me out for their sakes.

Someone will say: Yes, Socrates, but cannot you hold your tongue, and then you may go into a foreign city, and no one will interfere with you? Now I have great difficulty in making you understand my answer to this. For if I tell you that this would be a disobedience to a divine command, and therefore that I cannot hold my tongue, you will not believe that I am serious; and if I say again that the greatest good of man is daily to converse about virtue, and all that concerning which you hear me examining myself and others, and that the life which is unexamined is not worth living—that you are still less likely to believe. And yet what I say is true, although a thing of which it is hard for me to persuade you. Moreover, I am not accustomed to think that I deserve any punishment. Had I money I might have proposed to give you what I had, and have been none the worse. But you see that I have none, and can only ask you to proportion the fine to my means. However, I think that I could afford a mina, and therefore, I propose that penalty: Plato, Crito, Critobulus, and Apollodorus, my friends here, bid me say thirty minæ, and they will be the sureties. Well then, say thirty minæ, let that be the penalty; for that they will be ample security to you.

Not much time will be gained, O Athenians, in return for the evil name which you will get from the detractors of the city, who will say that you killed Socrates, a wise man; for they will call me wise even although I am not wise when they want to reproach you. If you had waited a little while, your desire would have been fulfilled in the course of nature. For I am far advanced in years, as you may perceive and not far from death. I am speaking now only to those of you who have condemned me to death. And I have another thing to say to them: You think that I was convinced through deficiency of words—I mean, that if I had thought fit to leave nothing undone, nothing unsaid, I might have gained an acquittal. Not so; the deficiency which led to my conviction was not of words—certainly not. But I had not the boldness or impudence or inclination to address you, weeping and wailing and lamenting, and saying and doing many things which you have been accustomed to hear from others, and which, as I say, are unworthy of me. But I thought that I ought not to do anything common or mean in the hour of danger: nor do I now repent of the manner of my defense, and I would rather die having spoken after my manner, than speak in your manner and live. For neither in war nor yet at law ought any man

to use every way of escaping death. For often in battle there is no doubt that if a man will throw away his arms, and fall on his knees before his pursuers, he may escape death; and in other dangers there are other ways of escaping death, if a man is willing to say and do anything. The difficulty, my friends, is not in avoiding death, but in avoiding unrighteousness; for that runs faster than death. I am old and move slowly, and the slower runner has overtaken me, and my accusers are keen and quick, and the faster runner, who is unrighteousness, has overtaken them. And now I depart hence condemned by you to suffer the penalty of death, and they, too, go their ways condemned by the truth to suffer the penalty of villainy and wrong; and I must abide by my award—let them abide by theirs. I suppose that these things may be regarded as fated—and I think that they are well.

And now, O men who have condemned me, I would fain prophesy to you; for I am about to die, and that is the hour in which men are gifted with prophetic power. And I prophesy to you who are my murderers, that immediately after my death punishment far heavier than you have inflicted on me will surely await you. Me you have killed because you wanted to escape the accuser, and not to give an account of your lives. But that will not be as you suppose: far otherwise. For I say that there will be more accusers of you than there are now; accusers whom hitherto I have restrained: and as they are younger they will be more severe with you, and you will be more offended at them. For if you think that by killing men you can avoid the accuser censuring your lives, you are mistaken; that is not a way of escape which is either possible or honorable; the easiest and noblest way is not to be crushing others, but to be improving yourselves. This is the prophecy which I utter before my departure, to the judges who have condemned me.

Friends, who would have acquitted me, I would like also to talk with you about this thing which has happened, while the magistrates are busy, and before I go to the place at which I must die. Stay then awhile, for we may as well talk with one another while there is time. You are my friends, and I should like to show you the meaning of this event which has happened to me. O my judges—for you I may truly call judges—I should like to tell you of a wonderful circumstance. Hitherto the familiar oracle within me has constantly been in the habit of opposing me even about trifles, if I was going to make a slip or error about anything; and now as you see there has come upon me that which may be thought, and is generally believed to be, the last and worst evil. But the oracle made no sign of opposition, either as I was leaving my house and going out in the morning, or when I was going up into this court, or while I was speaking, at anything which I was going to say; and yet I have often been stopped in the middle of a speech; but now in nothing I either said or did touching this matter has the oracle opposed me. What do I take to be the explanation of this? I will tell you. I regard this as a proof that what has happened to me is a good, and that those of us who think that death is an evil are in error. This is a great proof to me of what I am saying, for the customary sign would surely have opposed me had I been going to evil and not to good.

Let us reflect in another way, and we shall see that there is great reason to hope that death is a good, for one of two things: either death is a state of nothingness and utter unconsciousness, or, as men say, there is a change and migration of the soul from this world to another. Now if you suppose that there is no consciousness, but a sleep like the sleep of him who is undisturbed even by the sight of dreams, death will be an unspeakable gain. For if a person were to select the night in which his sleep was undisturbed even by dreams, and were to compare with this the other days and nights of his life, and then were to tell us how many days and nights he had passed in the course of his life better and more pleasantly than this one, I think that any man, I will not say a private man, but even the great king, will not find many such days or nights, when compared with the others. Now if death is like this,

I say that to die, is gain; for eternity is then only a single night. But if death is the journey to another place, and there, as men say, all the dead are, what good, O my friends and judges, can be greater than this? If indeed when the pilgrim arrives in the world below, he is delivered from the professors of justice in this world, and finds the true judges who are said to give judgment there, Minos and Rhadamanthus and Æacus and Triptolemus, and other sons of God who were righteous in their own life, that pilgrimage will be worth making. What would not a man give if he might converse with Orpheus and Musæus and Hesiod and Homer? Nay, if this be true, let me die again and again. I, too, shall have a wonderful interest in a place where I can converse with Palamedes, and Ajax the son of Telamon, and other heroes of old, who have suffered death through an unjust judgment; and there will be no small pleasure, as I think, in comparing my own sufferings with theirs. Above all, I shall be able to continue my search into true and false knowledge; as in this world, so also in that; I shall find out who is wise, and who pretends to be wise, and is not. What would not a man give, O judges, to be able to examine the leader of the great Trojan expedition; or Odysseus or Sisyphus, of numberless others, men and women too! What infinite delight would there be in conversing with them and asking them questions! For in that world they do not put a man to death for this; certainly not. For besides being happier in that world than in this, they will be immortal, if what is said is true.

Wherefore, O judges, be of good cheer about death, and know this of a truth—that no evil can happen to a good man, either in life or after death. He and his are not neglected by the gods; nor has my own approaching end happened by mere chance. But I see clearly that to die and be released was better for me; and therefore the oracle gave no sign. For which reason also, I am not angry with my accusers, or my condemners; they have done me no harm, although neither of them meant to do me any good; and for this I may gently blame them.

Still I have a favor to ask of them. When my sons are grown up, I would ask you, O my friends, to punish them; and I would have you trouble them, as I have troubled you, if they seem to care about riches, or anything, more than about virtue; or if they pretend to be something when they are really nothing—then reprove them, as I have reproved you, for not caring about that for which they ought to care, and thinking that they are something when they are really nothing. And if you do this, I and my sons will have received justice at your hands.

The hour of departure has arrived, and we go our ways—I to die, and you to live. Which is better, God only knows.

The American Scholar

Ralph Waldo Emerson

Mr. President and Gentlemen:

I GREET YOU on the re-commencement of our literary year. Our anniversary is one of hope, and, perhaps, not enough of labor. We do not meet for games of strength or skill, for the recitation of histories, tragedies, and odes, like the ancient Greeks; for parliaments of love and poesy, like the Troubadours; nor for the advancement of science, like our co-temporaries in the British and European capitals. Thus far, our holiday has been simply a friendly sign of the survival of the love of letters amongst a people too busy to give to letters any more. As such, it is precious as the sign of an indestructible instinct. Perhaps the time is already come, when it ought to be, and will be, something else;

when the sluggard intellect of this continent will look from under its iron lids, and fill the postponed expectation of the world with something better than the exertions of mechanical skill. Our day of dependence, our long apprenticeship to the learning of other lands, draws to a close. The millions, that around us are rushing into life, cannot always be fed on the sere remains of foreign harvests. Events, actions arise, that must be sung, that will sing themselves. Who can doubt, that poetry will revive and lead in a new age, as the star in the constellation Harp, which now flames in our zenith, astronomers announce, shall one day be the pole-star for a thousand years?

In this hope I accept the topic which not only usage but the nature of our association seem to prescribe to this day,—the AMERICAN SCHOLAR. Year by year we come up hither to read one more chapter of his biography. Let us inquire what light new days and events have thrown on his character and his hopes.

It is one of those fables which, out of an unknown antiquity, convey an unlooked-for wisdom, that the gods, in the beginning, divided Man into men, that he might be more helpful to himself; just as the hand was divided into fingers, the better to answer its end.

The old fable covers a doctrine ever new and sublime; that there is One Man,—present to all particular men only partially, or through one faculty; and that you must take the whole society to find the whole man. Man is not a farmer, or a professor, or an engineer, but he is all. Man is priest, and scholar, and statesman, and producer, and soldier. In the *divided* or social state, these functions are parcelled out to individuals, each of whom aims to do his stint of the joint work, whilst each other performs his. The fable implies, that the individual, to possess himself, must sometimes return from his own labor to embrace all the other laborers. But unfortunately, this original unit, this fountain of power, has been so distributed to multitudes, has been so minutely subdivided and peddled out, that it is spilled into drops, and cannot be gathered. The state of society is one in which the members have suffered amputation from the trunk, and strut about so many walking monsters,—a good finger, a neck, a stomach, an elbow, but never a man.

Man is thus metamorphosed into a thing, into many things. The planter, who is Man sent out into the field to gather food, is seldom cheered by any idea of the true dignity of his ministry. He sees his bushel and his cart, and nothing beyond, and sinks into the farmer, instead of Man on the farm. The tradesman scarcely ever gives an ideal worth to his work, but is ridden by the routine of his craft, and the soul is subject to dollars. The priest becomes a form; the attorney, a statute-book; the mechanic, a machine; the sailor, a rope of the ship.

In this distribution of functions, the scholar is the delegated intellect. In the right state, he is *Man Thinking*. In the degenerate state, when the victim of society, he tends to become a mere thinker, or, still worse, the parrot of other men's thinking.

In this view of him, as Man Thinking, the theory of his office is contained. Him nature solicits with all her placid, all her monitory pictures; him the past instructs; him the future invites. Is not, indeed, every man a student, and do not all things exist for the student's behoof? And, finally, is not the true scholar the only true master? But the old oracle said, "All things have two handles: beware of the wrong one." In life, too often, the scholar errs with mankind and forfeits his privilege. Let us see him in his school, and consider him in reference to the main influences he receives.

I. The first in time and the first in importance of the influences upon the mind is that of nature. Every day, the sun; and, after sunset, night and her stars. Ever the winds blow; ever the grass grows. Every day, men and women, conversing, beholding and beholden. The scholar is he of all men whom this spectacle most engages. He must settle its value in his mind. What is nature to him? There is never a beginning, there is never an end, to the inexplicable continuity of this web of God, but always circular power re-

turning into itself. Therein it resembles his own spirit, whose beginning, whose ending, he never can find,—so entire, so boundless. Far, too, as her splendors shine, system on system shooting like rays, upward, downward, without centre, without circumference, —in the mass and in the particle, nature hastens to render account of herself to the mind. Classification begins. To the young mind, every thing is individual, stands by itself. By and by, it finds how to join two things, and see in them one nature; then three, then three thousand; and so, tyrannized over by its own unifying instinct, it goes on tying things together, diminishing anomalies, discovering roots running under ground, whereby contrary and remote things cohere, and flower out from one stem. It presently learns, that since the dawn of history, there has been a constant accumulation and classifying of facts. But what is classification but the perceiving that these objects are not chaotic, and are not foreign, but have a law which is also a law of the human mind? The astronomer discovers that geometry, a pure abstraction of the human mind, is the measure of planetary motion. The chemist finds proportions and intelligible method throughout matter; and science is nothing but the finding of analogy, identity, in the most remote parts. The ambitious soul sits down before each refractory fact; one after another, reduces all strange constitutions, all new powers, to their class and their law, and goes on for ever to animate the last fibre of organization, the outskirts of nature, by insight.

Thus to him, to this school-boy under the bending dome of day, is suggested, that he and it proceed from one root; one is leaf and one is flower; relation, sympathy, stirring in every vein. And what is that Root? Is not that the soul of his soul? A thought too bold,—a dream too wild. Yet when this spiritual light shall have revealed the law of more earthly natures,—when he has learned to worship the soul, and to see that the natural philosophy that now is, is only the first gropings of its gigantic hand, he shall look forward to an ever expanding knowledge as to a becoming creator. He shall see, that nature is the opposite of the soul, answering to it part for part. One is seal, and one is print. Its beauty is the beauty of his own mind. Its laws are the laws of his own mind. Nature then becomes to him the measure of his attainments. So much of nature as he is ignorant of, so much of his own mind does he not yet possess. And, in fine, the ancient precept, "Know thyself," and the modern precept, "Study nature," become at last one maxim.

II. The next great influence into the spirit of the scholar, is the mind of the Past,—in whatever form, whether of literature, of art, of institutions, that mind is inscribed. Books are the best type of the influence of the past, and perhaps we shall get at the truth,—learn the amount of this influence more conveniently,—by considering their value alone.

The theory of books is noble. The scholar of the first age received into him the world around; brooded thereon; gave it the new arrangement of his own mind, and uttered it again. It came into him, life; it went out from him, truth. It came to him, short-lived actions; it went out from him, immortal thoughts. It came to him, business; it went from him, poetry. It was dead fact; now, it is quick thought. It can stand, and it can go. It now endures, it now flies, it now inspires. Precisely in proportion to the depth of mind from which it issued, so high does it soar, so long does it sing.

Or, I might say, it depends on how far the process had gone, of transmuting life into truth. In proportion to the completeness of the distillation, so will the purity and imperishableness of the product be. But none is quite perfect. As no air-pump can by any means make a perfect vacuum, so neither can any artist entirely exclude the conventional, the local, the perishable from his book, or write a book of pure thought, that shall be as efficient, in all respects, to a remote posterity, as to contemporaries, or rather to the second age. Each age, it is found, must write its own books; or rather, each generation for the next succeeding. The books of an older period will not fit this.

Yet hence arises a grave mischief. The

sacredness which attaches to the act of creation,—the act of thought,—is transferred to the record. The poet chanting, was felt to be a divine man: henceforth the chant is divine also. The writer was a just and wise spirit: henceforward it is settled, the book is perfect; as love of the hero corrupts into worship of his statue. Instantly, the book becomes noxious: the guide is a tyrant. The sluggish and perverted mind of the multitude, slow to open to the incursions of Reason, having once so opened, having once received this book, stands upon it, and makes an outcry, if it is disparaged. Colleges are built on it. Books are written on it by thinkers, not by Man Thinking; by men of talent, that is, who start wrong, who set out from accepted dogmas, not from their own sight of principles. Meek young men grow up in libraries, believing in their duty to accept the views which Cicero, which Locke, which Bacon, have given, forgetful that Cicero, Locke, and Bacon were only young men in libraries, when they wrote these books.

Hence, instead of Man Thinking, we have the bookworm. Hence, the book-learned class, who value books, as such; not as related to nature and the human constitution, but as making a sort of Third Estate with the world and the soul. Hence, the restorers of readings, the emendators, the bibliomaniacs of all degrees.

Books are the best of things, well used; abused, among the worst. What is the right use? What is the one end which all means go to effect? They are for nothing but to inspire. I had better never see a book, than to be warped by its attraction clean out of my own orbit, and made a satellite instead of a system. The one thing in the world, of value, is the active soul. This every man is entitled to; this every man contains within him, although, in almost all men, obstructed, and as yet unborn. The soul active sees absolute truth; and utters truth, or creates. In this action, it is genius; not the privilege of here and there a favorite, but the sound estate of every man. In its essence, it is progressive. The book, the college, the school of art, the institution of any kind, stop with some past utterance of genius. This is good, say they,—let us hold by this. They pin me down. They look backward and not forward. But genius looks forward: the eyes of man are set in his forehead, not in his hindhead: man hopes: genius creates. Whatever talents may be, if the man create not, the pure efflux of the Deity is not his;—cinders and smoke there may be, but not yet flame. There are creative manners, there are creative actions, and creative words; manners, actions, words, that is, indicative of no custom or authority, but springing spontaneous from the mind's own sense of good and fair.

On the other part, instead of being its own seer, let it receive from another mind its truth, though it were in torrents of light, without periods of solitude, inquest, and self-recovery, and a fatal disservice is done. Genius is always sufficiently the enemy of genius by over-influence. The literature of every nation bears me witness. The English dramatic poets have Shakespearized now for two hundred years.

Undoubtedly there is a right way of reading, so it be sternly subordinated. Man Thinking must not be subdued by hs instruments. Books are for the scholar's idle times. When he can read God directly, the hour is too precious to be wasted in other men's transcripts of their readings. But when the intervals of darkness come, as come they must,—when the sun is hid and the stars withdraw their shining,—we repair to the lamps which were kindled by their ray, to guide our steps to the East again, where the dawn is. We hear, that we may speak. The Arabian proverb says, "A fig tree, looking on a fig tree, becometh fruitful."

It is remarkable, the character of the pleasure we derive from the best books. They impress us with the conviction that one nature wrote and the same reads. We read the verses of one of the great English poets, of Chaucer, of Marvell, of Dryden, with the most modern joy,—with a pleasure, I mean, which is in great part caused by the abstraction of all *time* from their verses. There is some awe mixed with the joy of our surprise, when this poet, who lived in some past world, two or three hundred years ago, says that which lies close to my own soul,

that which I also had well nigh thought and said. But for the evidence thence afforded to the philosophical doctrine of the identity of all minds, we should suppose some pre-established harmony, some foresight of souls that were to be, and some preparation of stores for their future wants, like the fact observed in insects, who lay up food before death for the young grub they shall never see.

I would not be hurried by any love of system, by any exaggeration of instincts, to underrate the Book. We all know, that, as the human body can be nourished on any food, though it were boiled grass and the broth of shoes, so the human mind can be fed by any knowledge. And great and heroic men have existed who had almost no other information than by the printed page. I only would say that it needs a strong head to bear that diet. One must be an inventor to read well. As the proverb says, "He that would bring home the wealth of the Indies, must carry out the wealth of the Indies." There is then creative reading as well as creative writing. When the mind is braced by labor and invention, the page of whatever book we read becomes luminous with manifold allusion. Every sentence is doubly significant, and the sense of our author is as broad as the world. We then see, what is always true, that, as the seer's hour of vision is short and rare among heavy days and months, so is its record, perchance, the least part of his volume. The discerning will read, in his Plato or Shakspeare, only that least part,—only the authentic utterances of the oracle;—all the rest he rejects, were it never so many times Plato's and Shakspeare's.

Of course, there is a portion of reading quite indispensable to a wise man. History and exact science he must learn by laborious reading. Colleges, in like manner, have their indispensable office,—to teach elements. But they can only highly serve us, when they aim not to drill, but to create; when they gather from far every ray of various genius to their hospitable halls, and by the concentrated fires, set the hearts of their youth on flame. Thought and knowledge are natures in which apparatus and pretension avail nothing. Gowns, and pecuniary foundations, though of towns of gold, can never countervail the least sentence or syllable of wit. Forget this, and our American colleges will recede in their public importance, whilst they grow richer every year.

III. There goes in the world a notion, that the scholar should be a recluse, a valetudinarian,—as unfit for any handiwork or public labor as a penknife for an axe. The so-called "practical men" sneer at speculative men, as if, because they speculate or *see*, they could do nothing. I have heard it said that the clergy,—who are always, more universally than any other class, the scholars of their day,—are addressed as women; that the rough, spontaneous conversation of men they do not hear, but only a mincing and diluted speech. They are often virtually disfranchised; and, indeed, there are advocates for their celibacy. As far as this is true of the studious classes, it is not just and wise. Action is with the scholar subordinate, but it is essential. Without it, he is not yet man. Without it, thought can never ripen into truth. Whilst the world hangs before the eye as a cloud of beauty, we cannot even see its beauty. Inaction is cowardice, but there can be no scholar without the heroic mind. The preamble of thought, the transition through which it passes from the unconscious to the conscious, is action. Only so much do I know, as I have lived. Instantly we know whose words are loaded with life, and whose not.

The world,—this shadow of the soul, or *other me*, lies wide around. Its attractions are the keys which unlock my thoughts and make me acquainted with myself. I run eagerly into this resounding tumult. I grasp the hands of those next me, and take my place in the ring to suffer and to work, taught by an instinct, that so shall the dumb abyss be vocal with speech. I pierce its order; I dissipate its fear; I dispose of it within the circuit of my expanding life. So much only of life as I know by experience, so much of the wilderness have I vanquished and planted, or so far have I extended my being, my dominion. I do not see how any

man can afford, for the sake of his nerves and his nap, to spare any action in which he can partake. It is pearls and rubies to his discourse. Drudgery, calamity, exasperation, want, are instructors in eloquence and wisdom. The true scholar grudges every opportunity of action past by, as a loss of power.

It is the raw material out of which the intellect moulds her splendid products. A strange process too, this, by which experience is converted into thought, as a mulberry leaf is converted into satin. The manufacture goes forward at all hours.

The actions and events of our childhood and youth, are now matters of calmest observation. They lie like fair pictures in the air. Not so with our recent actions,—with the business which we now have in hand. On this we are quite unable to speculate. Our affections as yet circulate through it. We no more feel or know it, than we feel the feet, or the hand, or the brain of our body. The new deed is yet a part of life,—remains for a time immersed in our unconscious life. In some contemplative hour, it detaches itself from the life like a ripe fruit, to become a thought of the mind. Instantly it is raised, transfigured; the corruptible has put on incorruption. Henceforth it is an object of beauty, however base its origin and neighborhood. Observe, too, the impossibility of antedating this act. In its grub state, it cannot fly, it cannot shine, it is a dull grub. But suddenly, without observation, the self-same thing unfurls beautiful wings, and is an angel of wisdom. So is there no fact, no event, in our private history, which shall not, sooner or later, lose its adhesive, inert form, and astonish us by soaring from our body into the empyrean. Cradle and infancy, school and playground, the fear of boys, and dogs, and ferules, the love of little maids and berries, and many another fact that once filled the whole sky, are gone already; friend and relative, profession and party, town and country, nation and world, must also soar and sing.

Of course, he who has put forth his total strength in fit actions, has the richest return of wisdom. I will not shut myself out of this globe of action, and transplant an oak into a flowerpot, there to hunger and pine; nor trust the revenue of some single faculty, and exhaust one vein of thought, much like those Savoyards, who, getting their livelihood by carving shepherds, shepherdesses, and smoking Dutchmen, for all Europe, went out one day to the mountain to find stock, and discovered that they had whittled up the last of their pine trees. Authors we have, in numbers, who have written out their vein, and who, moved by a commendable prudence, sail for Greece or Palestine, follow the trapper into the prairie, or ramble round Algiers, to replenish their mechantable stock.

If it were only for a vocabulary, the scholar would be covetous of action. Life is our dictionary. Years are well spent in country labors; in town,—in the insight into trades and manufactures; in frank intercourse with many men and women; in science; in art; to the one end of mastering in all their facts a language by which to illustrate and embody our perceptions. I learn immediately from any speaker how much he has already lived, through the poverty or the splendor of his speech. Life lies behind us as the quarry from whence we get tiles and copestones for the masonry of to-day. This is the way to learn grammar. Colleges and books only copy the language which the field and the work-yard made.

But the final value of action, like that of books, and better than books, is, that it is a resource. That great principle of Undulation in nature, that shows itself in the inspiring and expiring of the breath; in desire and satiety; in the ebb and flow of the sea; in day and night; in heat and cold; and, as yet more deeply ingrained in every atom and every fluid, is known to us under the name of Polarity,—these "fits of easy transmission and reflection," as Newton called them, are the law of nature because they are the law of spirit.

The mind now thinks; now acts; and each fit reproduces the other. When the artist has exhausted his materials, when the fancy no longer paints, when thoughts are no longer apprehended and books are a weariness,—he has always the resource *to live.* Character

is higher than intellect. Thinking is the function. Living is the functionary. The stream retreats to its source. A great soul will be strong to live, as well as strong to think. Does he lack organ or medium to impart his truths? He can still fall back on this elemental force of living them. This is a total act. Thinking is a partial act. Let the grandeur of justice shine in his affairs. Let the beauty of affection cheer his lowly roof. Those "far from fame," who dwell and act with him, will feel the force of his constitution in the doings and passages of the day better than it can be measured by any public and designed display. Time shall teach him, that the scholar loses no hour which the man lives. Herein he unfolds the sacred germ of his instinct, screened from influence. What is lost in seemliness is gained in strength. Not out of those, on whom systems of education have exhausted their culture, comes the helpful giant to destroy the old or to build the new, but out of unhandselled savage nature; out of terrible Druids and Berserkirs come at last Alfred and Shakspeare.

I hear therefore with joy whatever is beginning to be said of the dignity and necessity of labor to every citizen. There is virtue yet in the hoe and the spade, for learned as well as for unlearned hands. And labor is everywhere welcome; always we are invited to work; only be this limitation observed, that a man shall not for the sake of wider activity sacrifice any opinion to the popular judgments and modes of action.

I have now spoken of the education of the scholar by nature, by books, and by action. It remains to say somewhat of his duties.

They are such as become Man Thinking. They may all be comprised in self-trust. The office of the scholar is to cheer, to raise, and to guide men by showing them facts amidst appearances. He piles the slow, unhonored, and unpaid task of observation. Flamsteed and Herschel, in their glazed observatories, may catalogue the stars with the praise of all men, and, the results being splendid and useful, honor is sure. But he, in his private observatory, cataloguing obscure and nebulous stars of the human mind, which as yet no man has thought of as such,—watching days and months, sometimes, for a few facts; correcting still his old records;—must relinquish display and immediate fame. In the long period of his preparation, he must betray often an ignorance and shiftlessness in popular arts, incurring the disdain of the able who shoulder him aside. Long he must stammer in his speech; often forego the living for the dead. Worse yet, he must accept,—how often! poverty and solitude. For the ease and pleasure of treading the old road, accepting the fashions, the education, the religion of society, he takes the cross of making his own, and, of course, the self-accusation, the faint heart, the frequent uncertainty and loss of time, which are the nettles and tangling vines in the way of the self-relying and self-directed; and the state of virtual hostility in which he seems to stand to society, and especially to educated society. For all this loss and scorn, what offset? He is to find consolation in exercising the highest functions of human nature. He is one, who raises himself from private considerations, and breathes and lives on public and illustrious thoughts. He is the world's eye. He is the world's heart. He is to resist the vulgar prosperity that retrogrades ever to barbarism, by preserving and communicating heroic sentiments, noble biographies, melodious verse, and the conclusions of history. Whatsoever oracles the human heart, in all emergencies, in all solemn hours, has uttered as its commentary on the world of actions,—these he shall receive and impart. And whatsoever new verdict Reason from her inviolable seat pronounces on the passing men and events of to-day,—this he shall hear and promulgate.

These being his functions, it becomes him to feel all confidence in himself, and to defer never to the popular cry. He and he only knows the world. The world of any moment is the merest appearance. Some great decorum, some fetish of a government, some ephemeral trade, or war, or man, is cried up by half mankind and cried down by the other half, as if all depended on this particu-

lar up or down. The odds are that the whole question is not worth the poorest thought which the scholar has lost in listening to the controversy. Let him not quit his belief that a popgun is a popgun, though the ancient and honorable of the earth affirm it to be the crack of doom. In silence, in steadiness, in severe abstraction, let him hold by himself; add observation to observation, patient of neglect, patient of reproach, and bide his own time,—happy enough, if he can satisfy himself alone, that this day he has seen something truly. Success treads on every right step. For the instinct is sure, that prompts him to tell his brother what he thinks. He then learns, that in going down into the secrets of his own mind, he has descended into the secrets of all minds. He learns that he who has mastered any law in his private thoughts, is master to that extent of all men whose language he speaks, and of all into whose language his own can be translated. The poet, in utter solitude remembering his spontaneous thoughts and recording them, is found to have recorded that, which men in crowded cities find true for them also. The orator distrusts at first the fitness of his frank confessions,—his want of knowledge of the persons he addresses, —until he finds that he is the complement of his hearers;—that they drink his words because he fulfills for them their own nature; the deeper he dives into his privatest, secretest presentiment, to his wonder he finds, this is the most acceptable, most public, and universally true. The people delight in it; the better part of every man feels, This is my music; this is myself.

In self-trust, all the virtues are comprehended. Free should the scholar be,—free and brave. Free even to the definition of freedom, "without any hindrance that does not arise out of his own constitution." Brave; for fear is a thing, which a scholar by his very function puts behind him. Fear always springs from ignorance. It is a shame to him if his tranquillity, amid dangerous times, arise from the presumption that, like children and women, his is a protected class; or if he seek a temporary peace by the diversion of his thoughts from politics or vexed questions, hiding his head like an ostrich in the flowering bushes, peeping into microscopes, and turning rhymes, as a boy whistles to keep his courage up. So is the danger a danger still; so is the fear worse. Manlike let him turn and face it. Let him look into its eye and search its nature, inspect its origin,—see the whelping of this lion,—which lies no great way back; he will then find in himself a perfect comprehension of its nature and extent; he will have made his hands meet on the other side, and can henceforth defy it, and pass on superior. The world is his who can see through its pretension. What deafness, what stone-blind custom, what overgrown error you behold, is there only by sufferance,—by your sufferance. See it to be a lie, and you have already dealt it its mortal blow.

Yes, we are the cowed,—we the trustless. It is a mischievous notion that we are come late into nature; that the world was finished a long time ago. As the world was plastic and fluid in the hands of God, so it is ever to so much of his attributes as we bring to it. To ignorance and sin, it is flint. They adapt themselves to it as they may; but in proportion as a man has any thing in him divine, the firmament flows before him and takes his signet and form. Not he is great who can alter matter, but he who can alter my state of mind. They are the kings of the world who give the color of their present thought to all nature and all art, and persuade men by the cheerful serenity of their carrying the matter, that this thing which they do, is the apple which the ages have desired to pluck, now at last ripe, and inviting nations to the harvest. The great man makes the great thing. Wherever Macdonald sits, there is the head of the table. Linnaeus makes botany the most alluring of studies, and wins it from the farmer and the herbwoman; Davy, chemistry; and Cuvier, fossils. The day is always his who works in it with serenity and great aims. The unstable estimates of men crowd to him whose mind is filled with a truth, as the heaped waves of the Atlantic follow the moon.

For this self-trust, the reason is deeper than can be fathomed,—darker than can be

enlightened. I might not carry with me the feeling of my audience in stating my own belief. But I have already shown the ground of my hope, in adverting to the doctrine that man is one. I believe man has been wronged; he has wronged himself. He has almost lost the light, that can lead him back to his prerogatives. Men are become of no account. Men in history, men in the world of to-day, are bugs, are spawn, and are called "the mass" and "the herd." In a century, in a millennium, one or two men; that is to say,—one or two approximations to the right state of every man. All the rest behold in the hero or the poet their own green and crude being,—ripened; yes, and are content to be less, so *that* may attain to its full stature. What a testimony,—full of grandeur, full of pity, is borne to the demands of his own nature, by the poor clansman, the poor partisan, who rejoices in the glory of his chief. The poor and the low find some amends to their immense moral capacity, for their acquiescence in a political and social inferiority. They are content to be brushed like flies from the path of a great person, so that justice shall be done by him to that common nature which it is the dearest desire of all to see enlarged and glorified. They sun themselves in the great man's light, and feel it to be their own element. They cast the dignity of man from their downtrod selves upon the shoulders of a hero, and will perish to add one drop of blood to make that great heart beat, those giant sinews combat and conquer. He lives for us, and we live in him.

Men, such as they are, very naturally seek money or power; and power because it is as good as money,—the "spoils," so called, "of office." And why not? for they aspire to the highest, and this, in their sleep-walking, they dream is highest. Wake them, and they shall quit the false good, and leap to the true, and leave governments to clerks and desks. This revolution is to be wrought by the gradual domestication of the idea of Culture. The main enterprise of the world for splendor, for extent, is the upbuilding of a man. Here are the materials strown along the ground. The private life of one man shall be a more illustrious monarchy,—more formidable to its enemy, more sweet and serene in its influence to its friend, than any kingdom in history. For a man, rightly viewed, comprehendeth the particular natures of all men. Each philosopher, each bard, each actor has only done for me, as by a delegate, what one day I can do for myself. The books which once we valued more than the apple of the eye, we have quite exhausted. What is that but saying, that we have come up with the point of view which the universal mind took through the eyes of one scribe; we have been that man, and have passed on. First, one; then, another, we drain all cisterns, and waxing greater by all these supplies, we crave a better and more abundant food. The man has never lived that can feed us ever. The human mind cannot be enshrined in a person, who shall set a barrier on any one side to this unbounded, unboundable empire. It is one central fire, which, flaming now out of the lips of Etna, lightens the capes of Sicily; and, now out of the throat of Vesuvius, illuminates the towers and vineyards of Naples. It is one light which beams out of a thousand stars. It is one soul which animates all men.

But I have dwelt perhaps tediously upon this abstraction of the Scholar. I ought not to delay longer to add what I have to say, of nearer reference to the time and to this country.

Historically, there is thought to be a difference in the ideas which predominate over successive epochs, and there are data for marking the genius of the Classic, of the Romantic, and now of the Reflective or Philosophical age. With the views I have intimated of the oneness or the identity of the mind through all individuals, I do not much dwell on these differences. In fact, I believe each individual passes through all three. The boy is a Greek; the youth, romantic; the adult, reflective. I deny not, however, that a revolution in the leading idea may be distinctly enough traced.

Our age is bewailed as the age of Introversion. Must that needs be evil? We, it seems, are critical; we are embarrassed with second thoughts; we cannot enjoy any thing for

hankering to know whereof the pleasure consists; we are lined with eyes; we see with our feet; the time is infected with Hamlet's unhappiness,—

"Sicklied o'er with the pale cast of thought."

It is so bad then? Sight is the last thing to be pitied. Would we be blind? Do we fear lest we should outsee nature and God, and drink truth dry? I look upon the discontent of the literary class as a mere announcement of the fact, that they find themselves not in the state of mind of their fathers, and regret the coming state as untried; as a boy dreads the water before he has learned that he can swim. If there is any period one would desire to be born in,—is it not the age of Revolution; when the old and the new stand side by side, and admit of being compared; when the energies of all men are searched by fear and by hope; when the historic glories of the old, can be compensated by the rich possibilities of the new era? This time, like all times, is a very good one, if we but know what to do with it.

I read with some joy of the auspicious signs of the coming days, as they glimmer already through poetry and art, through philosophy and science, through church and state.

One of these signs is the fact, that the same movement which effected the elevation of what was called the lowest class in the state, assumed in literature a very marked and as benign an aspect. Instead of the sublime and beautiful, the near, the low, the common, was explored and poetized. That, which had been negligently trodden under foot by those who were harnessing and provisioning themselves for long journeys into far countries, is suddenly found to be richer than all foreign parts. The literature of the poor, the feelings of the child, the philosophy of the street, the meaning of household life, are the topics of the time. It is a great stride. It is a sign—is it not? of new vigor when the extremities are made active, when currents of warm life run into the hands and the feet. I ask not for the great, the remote, the romantic; what is doing in Italy or Arabia, what is Greek art, or Provençal minstrelsy; I embrace the common, I explore and sit at the feet of the familiar, the low. Give me insight into today, and you may have the antique and future worlds. What would we really know the meaning of? The meal in the firkin; the milk in the pan; the ballad in the street; the news of the boat; the glance of the eye; the form and the gait of the body;—show me the ultimate reason of these matters; show me the sublime presence of the highest spiritual cause lurking, as always it does lurk, in these suburbs and extremities of nature; let me see every trifle bristling with the polarity that ranges it instantly on an eternal law; and the shop, the plough, and the ledger, referred to the like cause by which light undulates and poets sing;—and the world lies no longer a dull miscellany and lumber-room, but has form and order; there is no trifle; there is no puzzle; but one design unites and animates the farthest pinnacle and the lowest trench.

This idea has inspired the genius of Goldsmith, Burns, Cowper, and, in a newer time, of Goethe, Wordsworth, and Carlyle. This idea they have differently followed and with various success. In contrast with their writing, the style of Pope, of Johnson, of Gibbon, looks cold and pedantic. This writing is blood-warm. Man is surprised to find that things near are not less beautiful and wondrous than things remote. The near explains the far. The drop is a small ocean. A man is related to all nature. This perception of the worth of the vulgar is fruitful in discoveries. Goethe, in this very thing the most modern of the moderns, has shown us, as none ever did, the genius of the ancients.

There is one man of genius, who has done much for this philosophy of life, whose literary value has never yet been rightly estimated;—I mean Emanuel Swedenborg. The most imaginative of men, yet writing with the precision of a mathematician, he endeavored to engraft a purely philosophical Ethics on the popular Christianity of his time. Such an attempt, of course, must have difficulty, which no genius could surmount. But he saw and showed the connection be-

tween nature and the affections of the soul. He pierced the emblematic or spiritual character of the visible, audible, tangible world. Especially did his shade-loving muse hover over and interpret the lower parts of nature; he showed the mysterious bond that allies moral evil to the foul material forms, and has given in epical parables a theory of insanity, of beasts, of unclean and fearful things.

Another sign of our times, also marked by an analogous political movement, is the new importance given to the single person. Every thing that tends to insulate the individual, —to surround him with barriers of natural respect, so that each man shall feel the world is his, and man shall treat with man as a sovereign state with a sovereign state; —tends to true union as well as greatness. "I learned," said the melancholy Pestalozzi, "that no man in God's wide earth is either willing or able to help any other man." Help must come from the bosom alone. The scholar is that man who must take up into himself all the ability of the time, all the contributions of the past, all the hopes of the future. He must be a university of knowledges. If there be one lesson more than another, which should pierce his ear, it is, The world is nothing, the man is all; in yourself is the law of all nature, and you know not yet how a globule of sap ascends; in yourself slumbers the whole of Reason; it is for you to know all; it is for you to dare all. Mr. President and Gentlemen, this confidence in the unsearched might of man belongs, by all motives, by all prophecy, by all preparation, to the American Scholar. We have listened too long to the courtly muses of Europe. The spirit of the American freeman is already suspected to be timid, imitative, tame. Public and private avarice make the air we breathe thick and fat. The scholar is decent, indolent, complaisant. See already the tragic consequence. The mind of this country, taught to aim at low objects, eats upon itself. There is no work for any but the decorous and the complaisant. Young men of the fairest promise, who begin life upon our shores, inflated by the mountain winds, shined upon by all the stars of God, find the earth below not in unison with these, but are hindered from action by the disgust which the principles on which business is managed inspire, and turn drudges, or die of disgust,—some of them suicides. What is the remedy? They did not yet see, and thousands of young men as hopeful now crowding to the barriers for the career, do not yet see, that, if the single man plant himself indomitably on his instincts, and there abide, the huge world will come round to him. Patience,—patience;—with the shades of all the good and great for company; and for solace, the perspective of your own infinite life; and for work, the study and the communication of principles, the making those instincts prevalent, the conversion of the world. Is it not the chief disgrace in the world, not to be an unit; not to be reckoned one character;—not to yield that peculiar fruit which each man was created to bear, but to be reckoned in the gross, in the hundred, or the thousand, of the party, the section, to which we belong; and our opinion predicted geographically, as the north, or the south? Not so, brothers and friends,—please God, ours shall not be so. We will walk on our own feet; we will work with our own hands; we will speak our own minds. The study of letters shall be no longer a name for pity, for doubt, and for sensual indulgence. The dread of man and the love of man shall be a wall of defence and a wreath of joy around all. A nation of men will for the first time exist, because each believes himself inspired by the Divine Soul which also inspires all men.

On the Murder of Lovejoy[1]

WENDELL PHILLIPS

MR. CHAIRMAN: We are met for the free discussion of these resolutions, and the events which gave rise to them. I hope I shall be permitted to express my surprise at the sentiments of the last speaker:—surprise not only at such sentiments from such a man, but at the applause they have elicited in these walls. A comparison has been drawn between the events of the Revolution and the tragedy at Alton. We have heard it asserted in this Hall, that Great Britain had a right to tax the Colonies, and we have heard the mob at Alton, got up to murder Lovejoy, compared to that band of our patriot fathers, who threw the tea overboard! Fellow citizens, is this true? The mob at Alton were met to wrest from a citizen his just rights; to resist the laws. We have been told that our fathers did the same; and the glorious mantle of Revolutionary precedent has been thrown over the mobs of our days. For to make out their title to such defence, it has been asserted that the British Parliament had a right to tax these Colonies. It is manifest that without such an assertion, the gentleman's parallel would have fallen to the ground:—for Lovejoy had stationed himself within constitutional bulwarks. The men who assailed him went against and over the laws. The mob, as the gentleman terms it, which assembled in the Old South, to destroy the tea, were met to resist not the laws, but illegal exactions; not the King's prerogative, but the King's usurpation. To find any other account, you must read our Revolutionary history upside down. Our State archives are loaded with arguments of John Adams, to prove the taxes laid by the British Parliament unconstitutional—beyond their power. It was not till this was made out, that the people of New England rushed to arms. The arguments of the Council Chamber and the House of Representatives preceded and sanctioned the contest. To draw the conduct of our ancestors into a precedent for mobs; for a right to resist laws we ourselves have enacted, is an insult to their memory. The difference between the excitements of those days and our own, which the gentleman, in kindness to the latter, has overlooked, is simply this. The men of that day went for the right. They were the people rising to sustain the laws and constitution of the Province. The rioters of our day go for their own wills, right or wrong. Sir, when I heard the gentleman lay down principles which place the rioters, incendiaries and murderers of Mt. Benedict and Alton, side by side with Otis and Hancock, with Quincy and Adams, I thought those pictured lips [pointing to the portraits in the Hall] would have broken into voice to rebuke the recreant American —the slanderer of the dead. The gentleman said that he should sink into insignificance, if he dared to gainsay the principles of these resolutions. Sir, for the sentiments he has uttered, on soil consecrated by the prayers of Puritans and the blood of Patriots, the earth should have yawned and swallowed him up!

Another ground has been taken to excuse the mob, and throw doubt and discredit on the conduct of Lovejoy and his associates. Allusion has been made to what the lawyers understand very well, the "conflict of laws." We are told that nothing but the Mississippi River rolls between St. Louis and Alton; and the conflict of laws somehow or other, gives the citizens of the former a right to find fault with the defender of the press for publishing his opinions so near their limits. How the laws of the two States could be said to come into conflict in such circumstances, I question whether any lawyer in this audience can explain or understand. No matter whether the line that divides one sovereign

[1] Delivered in Faneuil Hall, Boston, December 8, 1837.

State from another, be an imaginary one, or ocean wide, the moment you cross it, the State you leave is blotted out of existence, so far as you are concerned. The Czar might as well claim to control the deliberations of Faneuil Hall, as the laws of Missouri demand reverence or the shadow of obedience from the inhabitants of Illinois.

I must find some fault with the statement which has been made of the events at Alton. It has been asked why Lovejoy and his friends did not appeal to the executive; trust their defence to the police of the city. It has been hinted that from hasty and ill-judged excitement, the men within the building provoked a quarrel, and that he fell in the course of it, one mob resisting another. Recollect, sir, that they acted with the approbation and sanction of the Mayor. There was no executive to appeal to.—The Mayor acknowledged he could not protect them. They asked him if it was lawful for them to defend themselves? He told them it was, and sanctioned their assembling in arms to do so. They were not then a mob; they were not merely citizens defending their own property, they were in some sense the *posse comitatus*, adopted for occasion into the police of the city, acting under the order of a magistrate. It was civil authority resisting lawless violence. Where then was the imprudence? Is the doctrine to be sustained here, that it is imprudent for men lawfully to defend and protect life, liberty and property?

It has been stated, perhaps inadvertently, that Lovejoy or his comrades fired first. This is denied by parties present there. Guns were first fired by the mob. But suppose the party assailed did fire first. They had a right so to do: not only the right which every citizen has to defend himself, but the higher right which every civil officer has to resist violence. Even if Lovejoy fired the first gun, it would not lessen his claim to our sympathy, or destroy his title to be considered a martyr in the cause of free discussion. The whole question is, did he act within the Constitution and the laws? The men who fell in State street on the 5th of March, 1770, did more than they say Lovejoy did. They were the first assailants. Upon some slight quarrel, they pelted the troops with every missile within reach. Did this bate one jot of the eulogy with which Hancock and Warren hallowed their memory, hailing them as the first martyrs in the cause of civil liberty?

If, sir, I had adopted what are called peace principles, I should lament the circumstances of this case. But if I believe in self-defence in support of constitutional rights, then I must brand as base hypocrisy the conduct of those who assemble year after year on the 4th of July, to fight over the battles of the Revolution, and yet "damn with faint praise," or load with obloquy, the memory of this man, because he shed his blood in defence of life, liberty, property, and the freedom of the press!

The fact is, Lovejoy and his associates were assembled under civil authority—in arms by its sanction—they bore insult and violence patiently. After firearms had been repeatedly used against them, they fired on the mob. So doing they acted legally, in the spirit of our institutions, and after the example of their founders. The patriot can find nothing in the affair to regret but this: that within the limits of our country, civil authority should have been so prostrated as to oblige a citizen to arm in his own defence.

But it is said Lovejoy was presumptuous and imprudent -he "died as the fool dieth." And a right reverend clergyman of the city has told us that no citizen has a right to publish opinions disagreeable to the community! If any mob follows such publication, on him rest its guilt! He must wait, forsooth, till the people come up to it, and agree with him! This libel on liberty goes on to say, that the want of right to speak as we think is an evil inseparable from republican institutions! If this be so, what are they worth? Welcome the despotism of the Sultan, where one knows what he may publish and what he may not, rather than the tyranny of this many-headed monster, the mob, where we know not what we may do or say, till some fellow citizen has tried it, and paid for the lesson with his life. This clerical absurdity chooses as a check for the abuses of the Press, not the law, but the dread of a mob.

By so doing, it deprives not only the individual and the minority of his rights, but the majority also; for the expression of their opinion may sometimes provoke disturbance from the minority. A few men may make a mob as well as many. Consequently the majority have no right, as Christian men, to utter their sentiments, if there is any supposition that it may lead to a mob! Is this the doctrine for our pulpits, for our presses, and for Faneuil Hall?

Imprudent to defend the liberty of the Press! Why? Because the defence was unsuccessful? Does success gild crime into patriotism? And the want of it change heroic self-devotion to imprudence? Was Hampden imprudent when he drew the sword and threw away the scabbard? Yet he was unsuccessful. After a short exile, the race he hated sat again upon the throne.

Imagine yourself present when the first news of Bunker Hill battle reached a New England town. The tale would have run thus—"The Patriots are routed—the troops victorious—Warren lies dead upon the field." With what scorn would that Tory have been received, who should have charged Warren with imprudence! who should have said that he was "out of place" in that battle; that he died as the fool dieth! How would the intimation have been received, that Warren and his associates should have waited a better time? But if success be indeed the only criterion of prudence, *Respice finem*—wait till the end.

Presumptuous to assert the freedom of the press on American ground! Is the assertion of such freedom before the age? So much before it as to leave one no right to make it, because it displeases the community? Who utters this libel on his country? It is this very thing which entitles Lovejoy to greater praise. The disputed right which provoked the Revolution, taxation without representation, is far beneath that for which he died. As much as thought is better than money, so much is the cause in which Lovejoy died, nobler than a mere question of taxes. James Otis thundered in these Halls, when the King did but touch his pocket. What mortal pen could have written down his burning eloquence, had England offered to put a gag upon his lips?

Sir, I reverence the patriots of those stirring times. I reverence the clergymen who did not so far forget their country in their immediate profession, as to deem it a duty to separate themselves from the struggle—the Mayhews and Coopers, who remembered they were citizens before they were ministers.

The question that stirred the revolution touched our civil interests. This concerns us not only as citizens, but as immortal beings. Wrapped up in its fate, saved or lost with it, are not only the voice of the statesman, but the instructions of the pulpit, and the progress of our faith.

The right to speak as they thought was never denied our fathers. It had been fought for and gained on English ground—was brought over by the Puritans—the motive which drew them to the rocky shores—the privilege which endeared these barren hills. The liberty of the press was too holy, too evident to be disputed, when Milton's lips had been closed but a single century. Had the king invaded that, instead of the Custom House, who can imagine the storm which would have shaken these colonies?

I am glad, sir, to see this crowded house. It is good for us to be here. Faneuil Hall has the right, it is her duty to strike the key note for these United States. I am glad for one reason, that remarks such as those to which I have alluded, have been uttered here. The passage of these resolutions in spite of them, will show more clearly, more decisively, the deep indignation with which Boston regards this outrage.

Letter to Alice Stone Blackwell[1]

BARTOLOMEO VANZETTI

February 27, 1924. *Charlestown Prison*

DEAR COMRADE BLACKWELL:

Yours of the 23rd has reached me. You are right. Neither do I expect any good from that letter to the judge. I have never expected, nor do I expect anything from him, other than some ten thousand volts divided in few times; some meters of cheap board and 4 x 7 x 8 feet hole in the ground.

No matter how much sympathy I try to bestow upon him, or with how much understanding I try to judge his actions; I only and alone can see him a self-conceited narrow-minded little tyrant, believing himself to be just, and believing his utterly unjust and unnecessary social office to be a necessity and a good. He is a bigot, and therefore, cruel. At the time of our arrest and trials, his peers were seeing red all around, and he saw red more than his peers.

He was ready to kill us even before the trials, for he deadly hates the subversive, and he believed to have become judge of the State Supreme Court by eliminating us via Law. For he knows that the servants of Capital were always remunerated by the Bosses for a crusifixion of some rebel or lover.

I do not know if his conduct during the trial was determined by his preconceptions, hate and ignorance, or if he consciously murdered us by details of bad faith, double playing, simulation, etc. I know that he did it. I know that even now he does not want to give us another trial though he could not deny it. And this is why he delays so much to give the answer. . . .

And if I am wrong, if according to his own standard, he is fair; if he wishes to be just, ('til now he is very unjust) then he could be hurt by my letter, but also enlightened. And if he would not forgive the crude defence of a man extremely wronged, then, not even a sparrow would I submit to him as arbiter.

An almost centenial struggle against every form of exploitation, oppression and fraud, taught us that "the wolf eats him who makes himself a sheep."

I am not sure, but I believe, that there are no pamphlets in Italian language, which treat with detail the case. This is the second reason of my letter and the 3rd reason is, my wish to say what no one else can say—silence would be cowardness—and treat the case accordingly to my own criterions. This may hurt me, but will help the Cause. Otherwise, if it means a life sentence, I prefer to be burnt away once and for all, and I also know that those in height, upon the back and the heads of the slaves, are against me. . . .

There is no spirit of sacrifice in this deed. I simply realize to be in merciless hands, and do my utmost to say to my enemy that he is wrong. In a way that helps the cause. The great one, not the small. My only hope remains in the solidariety of friends and comrades and of the workers. After having spent $200,000, we are still at the beginning. The work of the lawyers are useless before the law.

It has helped only because they brought the fact to the conscience and consciousness of the People. That is why Nick and I were not yet roasted. Authority, Power, and Privilege would not last a day upon the face of the earth, were it not because those who possess them, and those who prostitute their arms to their defence do suppress, repress, mercilessly and inescapable every efforts of liberations of each and all the rebels.

I abhor useless violence. I would my blood to prevent the sheading of blood, but neither the abyss nor the earth, nor the heavens, have a law which condemns the self-defense. Not every woman has sacrificed to bring forth one more rufian, idiot, or coward to

[1] From *The Letters of Sacco and Vanzetti*. Edited by Marion Denman Frankfurter and Gardner Jackson. Copyright 1928 by The Viking Press, Inc. Reprinted by permission of The Viking Press, Inc.

the world. There are yet some men. And if tragedy is compelled to us, who knows; who knows if to speak now is not my duty?

The champion of life and of the liberty should not yield before the death. The struggle for the liberty, between the oppressor and the oppressed, shall continue beyond the life, beyond the graves. I know what they have done and are doing to me and to thousands of others, rebels and lovers. And I know that they are and will always be ready to do against us. I know the millions of youth that they slandered, the virgins that they have torn in the breast; the millions of wives that they have widowed; the millions of bastards that they let to miasma of the gutter, or grown to the fratricide. I know the old fathers and mothers whom they killed by breaking their hearts; and all the children that they starved and are starving to death; and the hospitals and the crazy-houses filled of their victims, and the little criminals, victims, irresponsible and semi-compelled to crime that they mercilessly executed or entombed alive. They have never had pity for our children, our women, our dear, poor old fathers and mothers—and they never will have it.

The sorrow of their victims torture me in blood and spirit. As for me, I would forgive them, but I could not, for I would be a traitor of the race. Until not a man will be exploited or oppressed by another man, we will never beild the banner of freedom.

Are they not ready to do with other comrades what they are doing to us? Are they not more willing than ever to squeeze out the worker's blood for more gold? Are they not preparing a greater war?

I will ask for revenge—I will tell that I will die gladly by the hands of the hanger after having known to have been vindicated. I mean "eye for an eye, ear for an ear," and even more, since to win it is necessary that 100 enemies fall to each of us.

The only vengence which could placate me is the realization of freedom, the great deliverance which would beneficiate all my friends as well as all my enemies: All. But till that, the struggle goes on, till we are breath to breath with the enemy fighting with short arms, till then, to fight is our duty, our right, our necessity. For, one of the two. Either we must go on and win, or we must ask for an armistice. And who will grant it to us? Since the enemy has no scruples nor pity, to ask pity of him is to encourage him to slander our fellows, to try to grant to him the immunity for his crimes against us; it would be as a matricide.

The more I live, the more I suffer, the more I learn, the more I am inclined to forgive, to be generous, and that the violence as such does not resolve the problem of life. And the more I love and learn that "the right of all to violence does not go together with the liberty, but that it begins when the liberty ends." The slave has the right and duty to arise against his master. My supreme aim, that of the Anarchist is, "the complete elimination of violence from the rapports (relations)."

To be possible, we must have freedom and justice. Now we have the opposite of them, because through errors and consequent aberations, men have risen as tyrants, deceiters and exploiters of other men, believing to gain their personal, familiar and cast welfare by such deed. Through both tyranny and servitude, we have lost our capacity of liberty and we are making life evermore miserable, operating our own ante-distruction.

Since "only the liberty, or the struggle for liberty, may be school of liberty" and since mine is but self and racial defence, why should not I use the truth to defend myself? It is supremely sweet to me—my consciousness of superiority, of righteousness, to know that I can judge and that the future shall bow to me, the doomed, and curse my judges.

Well, I have said many things which I sincerely believe to be so. But there are surely some mistake! Who possesses the absolute, or even the absolute-relative truth? So your point of view may be right, and I also realized that you spoke exclusively for my own good.

Wisdom is not only comprehension, but also many other faculties together; among which discrimination and sense of measure are prominent. I will try to be wise! ! ! ! ! I will think it over and over again.

Address at the Opening of the Atlanta Exposition[1]

BOOKER T. WASHINGTON

MR. PRESIDENT and Gentlemen of the Board of Directors and Citizens:

One-third of the population of the South is of the Negro race. No enterprise seeking the material, civil, or moral welfare of this section can disregard this element of our population and reach the highest success. I but convey to you, Mr. President and Directors, the sentiment of the masses of my race when I say that in no way have the value and manhood of the American Negro been more fittingly and generously recognized than by the managers of this magnificent Exposition at every stage of its progress. It is a recognition that will do more to cement the friendship of the two races than any occurrence since the dawn of our freedom.

Not only this, but the opportunity here afforded will awaken among us a new era of industrial progress. Ignorant and inexperienced, it is not strange that in the first years of our new life we began at the top instead of at the bottom; that a seat in Congress or the State legislature was more sought than real estate or industrial skill; that the political convention or stump speaking had more attractions than starting a dairy farm or truck garden.

A ship lost at sea for many days suddenly sighted a friendly vessel. From the mast of the unfortunate vessel was seen a signal, "Water, water; we die of thirst!" The answer from the friendly vessel at once came back, "Cast down your bucket where you are." A second time the signal, "Water, water; send us water!" ran up from the distressed vessel, and was answered, "Cast down your bucket where you are." And a third and fourth signal for water was answered, "Cast down your bucket where you are." The captain of the distressed vessel, at last heeding the injunction, cast down his bucket, and it came up full of fresh sparkling water from the mouth of the Amazon River. To those of my race who depend on bettering their condition in a foreign land, or who underestimate the importance of cultivating friendly relations with the Southern white man, who is their next-door neighbor, I would say: "Cast down your bucket where you are"--cast it down in making friends in every manly way of the people of all races by whom we are surrounded.

Cast it down in agriculture, mechanics, in commerce, in domestic service, and in the professions. And in this connection it is well to bear in mind that whatever other sins the South may be called to bear, when it comes to business, pure and simple, it is in the South that the Negro is given a man's chance in the commercial world, and in nothing is this Exposition more eloquent than in emphasizing this chance. Our greatest danger is that in the great leap from slavery to freedom we may overlook the fact that the masses of us are to live by the productions of our hands, and fail to keep in mind that we shall prosper in proportion as we learn to dignify and glorify common labor and put brains and skill into the common occupations of life; shall prosper in proportion as we learn to draw the line between the superficial and the substantial, the ornamental gewgaws of life and the useful. No race can prosper till it learns that there is as much dignity in tilling a field as in writing a poem. It is at the bottom of life we must begin, and

[1] Delivered at Atlanta, Georgia, September 18, 1895. From: *Selected Speeches of Booker T. Washington.* Copyright 1932 by Doubleday & Company, Inc.

not at the top. Nor should we permit our grievances to overshadow our opportunities.

To those of the white race who look to the incoming of those of foreign birth and strange tongue and habits for the prosperity of the South, were I permitted I would repeat what I say to my own race, "Cast down your bucket where you are." Cast it down among the eight millions of Negroes whose habits you know, whose fidelity and love you have tested in days when to have proved treacherous meant the ruin of your firesides. Cast down your bucket among these people who have, without strikes and labour wars, tilled your fields, cleared your forests, builded your railroads and cities, and brought forth treasures from the bowels of the earth, and helped make possible this magnificent representation of the progress of the South. Casting down your bucket among my people, helping and encouraging them as you are doing on these grounds, and to education of head, hand, and heart, you will find that they will buy your surplus land, make blossom the waste places in your fields, and run your factories. While doing this, you can be sure in the future, as in the past, that you and your families will be surrounded by the most patient, faithful, law-abiding, and unresentful people that the world has seen. As we have proved our loyalty to you in the past, in nursing your children, watching by the sick-bed of your mothers and fathers, and often following them with tear-dimmed eyes to their graves, so in the future, in our humble way, we shall stand by you with a devotion that no foreigner can approach, ready to lay down our lives, if need be, in defence of yours, interlacing our industrial, commercial, civil, and religious life with yours in a way that shall make the interests of both races one. In all things that are purely social we can be as separate as the fingers, yet one as the hand in all things essential to mutual progress.

There is no defence or security for any of us except in the highest intelligence and development of all. If anywhere there are efforts tending to curtail the fullest growth of the Negro, let these efforts be turned into stimulating, encouraging, and making him the most useful and intelligent citizen. Effort or means so invested will pay a thousand per cent interest. These efforts will be twice blessed—"blessing him that gives and him that takes."

There is no escape through law of man or God from the inevitable:—

> The laws of changeless justice bind
> Oppressor with oppressed;
> And close as sin and suffering joined
> We march to fate abreast.

Nearly sixteen millions of hands will aid you in pulling the load upward, or they will pull against you the load downward. We shall constitute one-third and more of the ignorance and crime of the South, or one-third its intelligence and progress; we shall contribute one-third to the business and industrial prosperity of the South, or we shall prove a veritable body of death, stagnating, depressing, retarding every effort to advance the body politic.

Gentlemen of the Exposition, as we present to you our humble effort at an exhibition of our progress, you must not expect overmuch. Starting thirty years ago with ownership here and there in a few quilts and pumpkins and chickens (gathered from miscellaneous sources), remember the path that has led from these to the inventions and production of agricultural implements, buggies, steam-engines, newspapers, books, statuary, carvings, paintings, the management of drug stores and banks, has not been trodden without contact with thorns and thistles. While we take pride in what we exhibit as a result of our independent efforts, we do not for a moment forget that our part in this exhibition would fall far short of your expectations but for the constant help that has come to our educational life, not only from the Southern States, but especially from Northern philanthropists, who have made their gifts a constant stream of blessing and encouragement.

The wisest among my race understand that the agitation of questions of social equality is the extremest folly, and that progress in the enjoyment of all the privileges

that will come to us must be the result of severe and constant struggle rather than of artificial forcing. No race that has anything to contribute to the markets of the world is long in any degree ostracized. It is important and right that all privileges of the law be ours, but it is vastly more important that we be prepared for the exercise of these privileges. The opportunity to earn a dollar in a factory just now is worth infinitely more than the opportunity to spend a dollar in an opera-house.

In conclusion, may I repeat that nothing in thirty years has given us more hope and encouragement, and drawn us so near to you of the white race, as this opportunity offered by the Exposition; and here bending, as it were, over the altar that represents the struggles of your race and mine, both starting practically empty-handed three decades ago, I pledge that in your effort to work out the great and intricate problem which God has laid at the doors of the South, you shall have at all times the patient, sympathetic help of my race; only let this be constantly in mind, that, while from representations in these buildings of the product of field, of forest, of mine, of factory, letters, and art, much good will come, yet far above and beyond material benefits will be that higher good, that, let us pray God, will come, in a blotting out of sectional differences and racial animosities and suspicions, in a determination to administer absolute justice, in a willing obedience among all classes to the mandates of the law. This, this, coupled with our material prosperity, will bring into our beloved South a new heaven and a new earth.

Letter to Lucy Christie Drage[1]

ALEXANDER WOOLLCOTT

Antibes
June, 1928

DEAR LUCY,

When Julie died, I had a strong impulse to jump on a train and go to you as the only person left in the world to whom I could really talk about her. There seemed to be too much to do. The day she died, Billy [A. W.'s brother] himself was taken to a hospital in Baltimore and hung between life and death for weeks of anxiety. Then I think I invented things to preoccupy me, made a great pother about work to be done, ran round and round in busy little circles, anything rather than sit down and face the fact that there was no Julie any more and never would be again.

I wired you that day that I would write you a letter and here I am at last, in this corner of the Riviera where I have bestowed myself for the next few weeks, sitting down before the portable I have toted across the world, batting out a letter that should be full of the things I would have told you had I really hopped on that train and gone out to see you. I wish now I had done it.

I am glad you did not see her in those agonizing summer months when her sickness first took hold of her, when we were dragging experts to see her and she was trying to walk but couldn't, unable to speak clearly but trying to all the time, shaking so that she could hardly guide a cigarette to her lips. It was cruel business. The experts had some elaborate explanation of the inexplicable phenomenon—a progressive degeneration of the nerve tissue which defeats medicine and eludes surgery. But the ways of the spirit are mysterious and I know that she had just invented a way of getting out of a world that was too intolerably lonely for her without

[1] From *The Letters of Alexander Woollcott*, edited by Beatrice Kaufman and Joseph Hennessey. Copyright 1944 by The Viking Press, Inc. Reprinted by permission of The Viking Press, Inc., New York.

Charles. You could tell that from the peace and satisfaction which settled on her when the invention worked at last, for in the final six weeks at the hospital, there was no pain or distress or trouble. She just lay there at rest in a room that somehow began to look like her, with the yellow roses on the table and the blue silk shawl thrown across the foot of her bed. Day by day the years seemed to fall away from her, cast off like garments she no longer needed. She did not know even me, but she was pleased when it was Paul Robeson's voice on the phonograph and pleased when the nurse would put a gardenia on the pillow beside her. If you bent close, you could hear her say "Sweet, sweet." The lines went out of her face, the gray out of her hair, the pain out of her eyes. Her hair, braided and tied with little blue ribbons, lay tossed upon the pillow and framed so prettily a face that was the one you saw when she first came out to Kansas City nearly forty years ago.

Toward the end, while she was still talking, all her thoughts ran back to those years and the ones between were forgotten. She talked of the day I was born and of the trip west and of Aldine Place, with Rose Field calling up to your window and making all manner of fun of her because she was so excited over the fact that Frank and Mailie [Sauerwen] were coming. One of the last things she said was that she must find out where Rose Field was living and go to him and offer to keep house for him. One of her last commissions to me was to write you the birthday letter for which she could no longer hold a pen.

She told me all about the day in January when I was born—how, after breakfast, Mother told her not to bother to clear away the things but to go up to the old house and ask Grandma to send one of the teamsters to fetch the doctor. It was snowing and Old Dr. Kimball came the seven miles in his cutter. The other youngsters on the place were not told what was up and went to their lessons in Mailie's room as usual. While they were bent over their books, Mailie slipped out and found her father taking a surreptitious drink in honor of so agitating an occasion. She came back with the news and imparted it cryptically by scribbling a line on a piece of paper and smuggling it unseen into Julie's hand. It was a line from *Bleak House* which they were all reading then. It ran something like this: "A young gentleman has arrived whose name is Mr. Guppy." So they always called me Mr. Guppy. I made a stab at it myself but got no nearer than Guffy. Mailie called me Guffy always. The advent of the newcomer was regarded as a family calamity. Aunt Julie told me once that she spent that day crying in her room as the least she could do.

It was of those days Julie talked toward the last. It is then I wish you could have come. I wish you could have seen her when the sentries we all post to warn us that the world is looking could no longer do their duty. I am sick at the thought of what swinishness and poltroonery and malice the spectators would find if ever *my* guards were dismissed and I could no longer edit myself for my neighbors' inspection. But the Julie that was turned toward you and toward me was the same all the way through—a gentle and gracious and gallant person in the very core of her. There was nothing base in her.

There are just a few of us left to whom it matters. In September Dr. Humphreys died. You remember I was named after him. He was a person of circumstance and Trinity was so crowded for his funeral that I had to stand in the back of the church. In the shadow of the pillar there I watched the procession following the coffin out into the afternoon sunlight—Aunt Eva, bent and old but able to make the journey, and behind her young Eva and her husband and a swarm of grandchildren. And I knew that there were great-grandchildren stowed away in sundry nurseries. And I knew, too, that I could stand in the shadow of that pillar for a hundred years without seeing the end of the procession, without seeing the end of the chapter written by that full and fruitful life. It is so different when a childless woman dies. Julie's chapter is ended. She was perfume, scattered now on the ground. And there is just a small company

of us—you, dear Lucy, and a few others, for whom the fragrance of her lingers in the air.

The Phalanx is ghostly now. There are strangers in the little cottage, so that what Aunt Anne used to call the Julie light can once more be seen through the trees. But the big house is mostly dark. When I used to come home at Christmas time from school, I could see it from a great way off through the bare branches of the trees, warm lamplight shining from each of the twelve French windows that looked out across the lawn. Now only two or three windows are lighted.

The last to go was Uncle Will. He had been born there and did his first toddling in that pretty ravine of which he painted the beech trees all his days. Even when he had to go into exile as an old man and was supposed to be painting landscapes in Florida and California, it was the beech trees he saw with the eyes of his heart and the beech trees that kept showing up in those pictures of his. Aunt Anne took his ashes down into the ravine and buried them at the roots of one of those trees. Then she just carved his initials in the bark of the trunk. That was only a month ago.

So one by one the lights go out. I have had to write you about them. It is because Julie loved you with a surpassing loyalty and tenderness. The miles and years between made no difference to her at all—none at all. I think you knew that there was always that lamp in her window for you, always that loving kindness in her heart.

Something stops me from trying to say anything of the impoverishment I feel. What a world this would be—what a morning light would shine across it—if all people were like her. I think of that and of many things and I send you her love and mine. I wish I could stand beside you at some window today and look out into the twilight and say nothing.

Aleck

Mary White [1]

WILLIAM ALLEN WHITE

May 17, 1921.

THE ASSOCIATED PRESS reports carrying the news of Mary White's death declared that it came as the result of a fall from a horse. How she would have hooted at that! She never fell from a horse in her life. Horses have fallen on her and with her—"I'm always trying to hold 'em in my lap," she used to say. But she was proud of few things, and one of them was that she could ride anything that had four legs and hair. Her death resulted not from a fall but from a blow on the head which fractured her skull, and the blow came from the limb of an overhanging tree on the parking.

The last hour of her life was typical of its happiness. She came home from a day's work at school, topped off by a hard grind with the copy of the High School Annual, and felt that a ride would refresh her. She climbed into her khakis, chattering to her mother about the work she was doing, and hurried to get her horse and be out on the dirt roads for the country air and the radiant green fields of the spring. As she rode through the town on an easy gallop she kept waving at passers-by. She knew every one in town. For a decade the little figure in the long pigtail and the red hair ribbon has been familiar on the streets of Emporia, and she got in the way of speaking to those who nodded at her. She passed the Kerrs, walking the horse, in front of the Normal Library, and waved at them; passed another friend a few hundred feet farther on, and waved at

[1] From William Allen White, *The Editor and his People*. Copyright 1924 by The Macmillan Company and used with their permission. Originally published in The Emporia Gazette.

her. The horse was walking, and as she turned into North Merchant Street she took off her cowboy hat, and the horse swung into a lope. She passed the Tripletts and waved her cowboy hat at them, still moving gayly north on Merchant Street. A *Gazette* carrier passed—a high-school boy friend—and she waved at him, but with her bridle hand; the horse veered quickly, plunged into the parking where the low-hanging limb faced her, and while she still looked back waving, the blow came. But she did not fall from the horse; she slipped off, dazed a bit, staggered, and fell in a faint. She never quite recovered consciousness.

But she did not fall from the horse, neither was she riding fast. A year or so ago she used to go like the wind. But that habit was broken, and she used the horse to get into the open, to get fresh, hard exercise, and to work off a certain surplus energy that welled up in her and needed a physical outlet. That need had been in her heart for years. It was back of the impulse that kept the dauntless little brown-clad figure on the streets and country roads of this community and built into a strong, muscular body what had been a frail and sickly frame during the first years of her life. But the riding gave her more than a body. It released a gay and hardy soul. She was the happiest thing in the world. And she was happy because she was enlarging her horizon. She came to know all sorts and conditions of men: Charley O'Brien, the traffic cop, was one of her best friends. W. L. Holtz, the Latin teacher, was another. Tom O'Connor, farmer-politician, and Rev. J. H. J. Rice, preacher and police judge, and Frank Beach, music master, were her special friends, and all the girls, black and white, above the track and below the track, in Pepville and Stringtown, were among her acquaintances. And she brought home riotous stories of her adventures. She loved to rollick; persiflage was her natural expression at home. Her humor was a continual bubble of joy. She seemed to think in hyperbole and metaphor. She was mischievous without malice, as full of faults as an old shoe. No angel was Mary White, but an easy girl to live with, for she never nursed a grouch five minutes in her life.

With all her eagerness for the out-of-doors, she loved books. On her table when she left her room were a book by Conrad, one by Galsworthy, *Creative Chemistry,* by E. E. Slosson, and a Kipling book. She read Mark Twain, Dickens, and Kipling before she was ten—all of their writings. Wells and Arnold Bennett particularly amused and diverted her. She was entered as a student in Wellesley for 1922; was assistant editor of the High School Annual this year, and in line for election to the editorship next year. She was a member of the executive committee of the High School Y. W. C. A.

Within the last two years she had begun to be moved by an ambition to draw. She began as most children do by scribbling in her schoolbooks, funny pictures. She bought cartoon magazines and took a course—rather casually, naturally, for she was, after all, a child with no strong purposes—and this year she tasted the first fruits of success by having her pictures accepted by the High School Annual. But the thrill of delight she got when Mr. Ecord, of the Normal Annual, asked her to do the cartooning for that book this spring was too beautiful for words. She fell to her work with all her enthusiastic heart. Her drawings were accepted, and her pride—always repressed by a lively sense of the ridiculous figure she was cutting—was a really gorgeous thing to see. No successful artist ever drank a deeper draft of satisfaction than she took from the little fame her work was getting among her schoolfellows. In her glory, she almost forgot her horse—but never her car.

For she used the car as a jitney bus. It was her social life. She never had a "party" in all her nearly seventeen years—wouldn't have one; but she never drove a block in her life that she didn't begin to fill the car with pick-ups! Everybody rode with Mary White—white and black, old and young, rich and poor, men and women. She liked nothing better than to fill the car with long-legged high-school boys and an occasional girl, and parade the town. She never had

a "date," nor went to a dance, except once with her brother, Bill, and the "boy proposition" didn't interest her—yet. But young people—great spring-breaking, varnish-cracking, fender-bending, door-sagging carloads of "kids" gave her great pleasure. Her zests were keen. But the most fun she ever had in her life was acting as chairman of the committee that got up the big turkey dinner for the poor folks at the county home: scores of pies, gallons of slaw, jam cakes, preserves, oranges, and a wilderness of turkey were loaded into the car and taken to the county home. And, being of a practical turn of mind, she risked her own Christmas dinner to see that the poor folks actually got it all. Not that she was a cynic; she just disliked to tempt folks. While there she found a blind colored uncle, very old, who could do nothing but make rag rugs, and she rustled up from her school friends rags enough to keep him busy for a season. The last engagement she tried to make was to take the guests at the county home out for a car ride. And the last endeavor of her life was to try to get a rest room for colored girls in the High School. She found one, girl reading in the toilet because there was no better place for a colored girl to loaf, and it inflamed her sense of injustice, and she became a nagging harpy to those who she thought could remedy the evil. The poor she always had with her, and was glad of it. She hungered and thirsted for righteousness; and was the most impious creature in the world. She joined the Congregational Church without consulting her parents; not particularly for her soul's good. She never had a thrill of piety in her life, and would have hooted at a "testimony." But even as a little child she felt the Church was an agency for helping people to more of life's abundance, and she wanted to help. She never wanted help for herself. Clothes meant little to her. It was a fight to get a new rig on her; but eventually a harder fight to get it off. She never wore a jewel and had no ring but her high-school class ring, and never asked for anything but a wrist watch. She refused to have her hair up; though she was nearly seventeen. "Mother," she protested, "you don't know how much I get by with, in my braided pigtails, that I could not with my hair up." Above every other passion of her life was her passion not to grow up, to be a child. The tomboy in her, which was big, seemed loathe to be put away forever in skirts. She was a Peter Pan, who refused to grow up.

Her funeral yesterday at the Congregational Church was as she would have wished it; no singing, no flowers except the big bunch of red roses from her brother Bill's Harvard classmen—Heavens, how proud that would have made her! and the red roses from the *Gazette* force, in vases at her head and feet. A short prayer; Paul's beautiful essay on "Love" from the Thirteenth Chapter of First Corinthians; some remarks about her democratic spirit by her friend, John H. J. Rice, pastor and police judge, which she would have deprecated if she could; a prayer sent down for her by her friend, Carl Nau; and opening the service by the slow, poignant movement from Beethoven's Moonlight Sonata, which she loved; and closing the service a cutting from the joyously melancholy first movement of Tschaikowski's Pathetic Symphony, which she liked to hear, in certain moods, on the phonograph; then the Lord's Prayer by her friends in the High School.

That was all.

For her pallbearers only her friends were chosen: her Latin teacher—W. L. Holtz; her high-school principal, Rice Brown; her doctor, Frank Foncannon; her friend, W. W. Finney; her pal at the *Gazette* office, Walter Hughes; and her brother Bill. It would have made her smile to know that her friend, Charley O'Brien, the traffic cop, had been transferred from Sixth and Commercial to the corner near the church to direct her friends who came to bid her good-by.

A rift in the clouds in a gray day threw a shaft of sunlight upon her coffin as her nervous, energetic little body sank to its last sleep. But the soul of her, the glowing, gorgeous, fervent soul of her, surely was flaming in eager joy upon some other dawn.

First Inaugural Address[1]

FRANKLIN D. ROOSEVELT

I AM certain that my fellow Americans expect that on my induction into the Presidency I will address them with a candor and a decision which the present situation of our Nation impels. This is preeminently the time to speak the truth, the whole truth, frankly and boldly. Nor need we shrink from honestly facing conditions in our country today. This great Nation will endure as it has endured, will revive and will prosper. So, first of all, let me assert my firm belief that the only thing we have to fear is fear itself —nameless, unreasoning, unjustified terror which paralyzes needed efforts to convert retreat into advance. In every dark hour of our national life a leadership of frankness and vigor has met with that understanding and support of the people themselves which is essential to victory. I am convinced that you will again give that support to leadership in these critical days.

In such a spirit on my part and on yours we face our common difficulties. They concern, thank God, only material things. Values have shrunken to fantastic levels; taxes have risen; our ability to pay has fallen; government of all kinds is faced by serious curtailment of income; the means of exchange are frozen in the currents of trade; the withered leaves of industrial enterprise lie on every side; farmers find no markets for their produce; the savings of many years in thousands of families are gone.

More important, a host of unemployed citizens face the grim problem of existence, and an equally great number toil with little return. Only a foolish optimist can deny the dark realities of the moment.

Yet our distress comes from no failure of substance. We are stricken by no plague of locusts. Compared with the perils which our forefathers conquered because they believed and were not afraid, we have still much to be thankful for. Nature still offers her bounty and human efforts have multiplied it. Plenty is at our doorstep, but a generous use of it languishes in the very sight of the supply. Primarily this is because rulers of the exchange of mankind's goods have failed through their own stubbornness and their own incompetence, have admitted their failure, and have abdicated. Practices of the unscrupulous money changers stand indicted in the court of public opinion, rejected by the hearts and minds of men.

True they have tried, but their efforts have been cast in the pattern of an outworn tradition. Faced by failure of credit they have proposed only the lending of more money. Stripped of the lure of profit by which to induce our people to follow their false leadership, they have resorted to exhortations, pleading tearfully for restored confidence. They know only the rules of a generation of self-seekers. They have no vision, and when there is no vision the people perish.

The money changers have fled from their high seats in the temple of our civilization. We may now restore that temple to the ancient truths. The measure of the restoration lies in the extent to which we apply social values more noble than mere monetary profit.

Happiness lies not in the mere possession of money; it lies in the joy of achievement, in the thrill of creative effort. The joy and moral stimulation of work no longer must be forgotten in the mad chase of evanescent profits. These dark days will be worth all they cost us if they teach us that our true destiny is not to be ministered unto but to minister to ourselves and to our fellow men.

Recognition of the falsity of material wealth as the standard of success goes hand in hand with the abandonment of the false belief that public office and high political

[1] Delivered March 4, 1933.

position are to be valued only by the standards of pride of place and personal profit; and there must be an end to a conduct in banking and in business which too often has given to a sacred trust the likeness of callous and selfish wrongdoing. Small wonder that confidence languishes, for it thrives only on honesty, on honor, on the sacredness of obligations, on faithful protection, on unselfish performance; without them it cannot live.

Restoration calls, however, not for changes in ethics alone. This Nation asks for action, and action now.

Our greatest primary task is to put people to work. This is no unsolvable problem if we face it wisely and courageously. It can be accomplished in part by direct recruiting by the government itself, treating the task as we would treat the emergency of a war, but at the same time, through this employment, accomplishing greatly needed projects to stimulate and reorganize the use of our natural resources.

Hand in hand with this we must frankly recognize the overbalance of population in our industrial centers and, by engaging on a national scale in a redistribution, endeavor to provide a better use of the land for those best fitted for the land. The task can be helped by definite efforts to raise the values of agricultural products and with this the power to purchase the output of our cities. It can be helped by preventing realistically the tragedy of the growing loss through foreclosure of our small homes and our farms. It can be helped by insistence that the Federal, State, and local governments act forthwith on the demand that their cost be drastically reduced. It can be helped by the unifying of relief activities which today are often scattered, uneconomical, and unequal. It can be helped by national planning for and supervision of all forms of transportation and of communications and other utilities which have a definitely public character. There are many ways in which it can be helped, but it can never be helped merely by talking about it. We must act and act quickly.

Finally, in our progress toward a resumption of work we require two safeguards against a return of the evils of the old order: there must be a strict supervision of all banking and credits and investments, so that there will be an end to speculation with other people's money; and there must be provision for an adequate but sound currency.

These are the lines of attack. I shall presently urge upon a new Congress, in special session, detailed measures for their fulfillment, and I shall seek the immediate assistance of the several States.

Through this program of action we address ourselves to putting our own national house in order and making income balance outgo. Our international trade relations, though vastly important, are in point of time and necessity secondary to the establishment of a sound national economy. I favor as a practical policy the putting of first things first. I shall spare no effort to restore world trade by international economic readjustment, but the emergency at home cannot wait on that accomplishment.

The basic thought that guides these specific means of national recovery is not narrowly nationalistic. It is the insistence, as a first consideration, upon the interdependence of the various elements in and parts of the United States—a recognition of the old and permanently important manifestation of the American spirit of the pioneer. It is the way to recovery. It is the immediate way. It is the strongest assurance that the recovery will endure.

In the field of world policy I would dedicate this Nation to the policy of the good neighbor—the neighbor who resolutely respects himself and, because he does so, respects the rights of others—the neighbor who respects his obligations and respects the sanctity of his agreements in and with a world of neighbors.

If I read the temper of our people correctly, we now realize as we have never realized before our interdependence on each other; that we cannot merely take but we must give as well; that if we are to go forward, we must move as a trained and loyal army willing to sacrifice for the good of a common discipline, because without such discipline no progress is made, no leadership becomes effective. We are, I know, ready

and willing to submit our lives and property to such discipline, because it makes possible a leadership which aims at a larger good. This I propose to offer, pledging that the larger purposes will bind upon us all as a sacred obligation with a unity of duty hitherto evoked only in time of armed strife.

With this pledge taken, I assume unhesitatingly the leadership of this great army of our people dedicated to a disciplined attack upon our common problems.

Action in this image and to this end is feasible under the form of government which we have inherited from our ancestors. Our Constitution is so simple and practical that it is possible always to meet extraordinary needs by changes in emphasis and arrangement without loss of essential form. That is why our constitutional system has proved itself the most superbly enduring political mechanism the modern world has produced. It has met every stress of vast expansion of territory, of foreign wars, of bitter internal strife, of world relations.

It is to be hoped that the normal balance of Executive and legislative authority may be wholly adequate to meet the unprecedented task before us. But it may be that an unprecedented demand and need for undelayed action may call for temporary departure from that normal balance of public procedure.

I am prepared under my constitutional duty to recommend the measures that a stricken Nation in the midst of a stricken world may require. These measures, or such other measures as the Congress may build out of its experience and wisdom, I shall seek, within my constitutional authority, to bring to speedy adoption.

But in the event that the Congress shall fail to take one of these two courses, and in the event that the national emergency is still critical, I shall not evade the clear course of duty that will then confront me. I shall ask the Congress for the one remaining instrument to meet the crisis—broad Executive power to wage a war against the emergency, as great as the power that would be given to me if we were in fact invaded by a foreign foe.

For the trust reposed in me I will return the courage and the devotion that befit the time. I can do no less.

We face the arduous days that lie before us in the warm courage of national unity; with the clear consciousness of seeking old and precious moral values; with the clear satisfaction that comes from the stern performance of duty by old and young alike. We aim at the assurance of a rounded and permanent national life.

We do not distrust the future of essential democracy. The people of the United States have not failed. In their need they have registered a mandate that they want direct, vigorous action. They have asked for discipline and direction under leadership. They have made me the present instrument of their wishes. In the spirit of the gift, I take it.

In this dedication of a Nation we humbly ask the blessing of God. May He protect each and every one of us. May He guide me in the days to come.

Thanksgiving Proclamation[1]

GOVERNOR WILBUR L. CROSS

AS THE COLORS of Autumn stream down the wind, scarlet in sumach and maple, spun gold in the birches, a splendor of smoldering fire in the oaks along the hill, and the last leaves flutter away, and dusk falls briefly about the worker bringing in from the field a late load of its fruit, and Arcturus is lost to sight and Orion swings upward that great sun on his shoulder, we are stirred once

[1] Thanksgiving Day, 1938.

more to ponder the Infinite Goodness that has set apart for us, in all this moving mystery of creation, a time of living and a home. In such a spirit I appoint Thursday, the twenty-fourth of November, a day of Public Thanksgiving. In such a spirit I call upon the people to acknowledge heartily, in friendly gathering and house of prayer, the increase of the season nearing now its close: the harvest of earth, the yield of patient mind and faithful hand, that have kept us fed and clothed and have made for us a shelter even against the storm. It is right that we whose arc of sky has been darkened by no war hawk, who have been forced by no man to stand and speak when to speak was to choose between death and life, should give thanks also for the further mercies we have enjoyed, beyond desert or any estimation, of Justice, Freedom, Loving-kindness, Peace—resolving, as we prize them, to let no occasion go without some prompting or some effort worthy in a way however humble of those proudest among man's ideals which burn, though it may be like candles fitfully in our gusty world, with a light so clear we name its source divine.

8

Making History Alive

"The history that lies inert in unread books does no work in the world. The history that does work in the world, the history that influences the course of history, is living history, that pattern of remembered events, whether true or false, that enlarges and enriches the collective specious present, the specious present of Mr. Everyman." This was said by Carl Becker before the American Historical Society in his presidential address of 1931. The whole of this address is here reprinted, and should be read before any of the other selections; in fact, it has been placed here for that purpose.

As a second step, one should read to see how some old family letters have worked on the imagination of John Holmes to start a "pattern of remembered events" generated by what all historians prize and need—documents. But what Mr. Holmes is doing will not be best understood, might even be scorned by "historians," until Mr. Becker is read. Turn then to one of the great primary sources of English history, the diary of Samuel Pepys, for the vivid details of the Great Fire. Rushed as it was into the diary, the account is still not the events themselves but a pattern of remembered events to be matched in our time only by the livest of journalism. We might compare it to accounts of flood days along the Ohio and the Mississippi, or of hurricanes on the Gulf Coast or in New England.

Then, but then only, turn to two more formal historians who bring to life two of the great events in history—Parkman on the fight before Quebec and Froude in that tremendous story of the execution of Mary Queen of Scots. Come thus to the four contributions to American history by Forbes and Binns and Coffin and Howard, and finally, to the story of the Great Run at the

opening of the Cherokee Strip. Here is a story that grew because the boy Marquis relentlessly questioned his father and his mother and the hired man —the man James has edited slightly because of subsequent information, but only slightly.

After all this, the reader may well apply the words "you are not forgotten" not only to those people imagined by John Holmes, but also to Marquis James's father, the executioner in Froude, the snow of that day in Boston, the sound of the little brook at night below the Plains of Abraham, the dust and hammering of the big launching at Pennellville, burying wine and Parmesan cheese in 1666, rain and the house with no roof that was the city of Seattle in 1851. In the latter part of his address Becker thus paraphrases Shakespeare: "to-morrow and to-morrow and to-morrow creeps in this petty pace, and all our yesterdays diminish and grow dim." But this can never happen while such historians as these write as they have done.

It will be asked whether they are really historians if they write this way, and how they obtained all the data they have here interwoven. They have chosen to run the risk of such attack, but no one of them can rightfully be accused of mere romancing, or of failing to study known facts. One is sure these stories will be read, if only readers discover them, and one can safely say that Carl Becker and many other historians would approve of what they have done. After reading accounts such as these it would be hard to think, say, of the Boston Massacre in any way other than that made so alive by Esther Forbes, herself one of the most hardworking and patient of researchers; or of the Run except as lived through the words of James; or of Mary's execution without its melodrama before the huge fire in the great hall, the double descent of the axe, and the sudden irony of Mary's failure after such extensive preparations. Who shall do better stories of these events?

For these writers have written, it seems, out of a felt need to give the past some flesh-and-blood intimacy. They have all been indeed much like young Marquis James. Even Ernest Elmo Calkins, writing a fine example of the historical feature article, confesses at the end to a task uncompleted but indicates he has found the last of the nineteenth century more alive in its "emotional" history than ever before. The collections of old hymns have come to mean something to him as they never had before. More research and more imaginative contemplation would have given greater satisfaction, and some time the energy for both might develop, in him or in another writer.

Behind the hymns, behind the dates and documents, people live, if one can only "find" them. In greater or less measure they have been found in their authors' own image, much as have the characters in fiction. Thus what happened has been intensely lived in terms of what moved these people and how they must have felt. He who wishes may test these writings for the facts, and he will find them in the main to be "true." They are true as well in the larger sense. This is the kind of history that "does work in the world."

Every Man His Own Historian[1]

CARL L. BECKER

ONCE UPON A TIME, long long ago, I learned how to reduce a fraction to its lowest terms. Whether I could still perform that operation is uncertain; but the discipline involved in early training had its uses, since it taught me that in order to understand the essential nature of anything it is well to strip it of all superficial and irrelevant accretions—in short, to reduce it to its lowest terms. That operation I now venture, with some apprehension and all due apologies, to perform on the subject of history.

I ought first of all to explain that when I use the term history I mean knowledge of history. No doubt throughout all past time there actually occurred a series of events which, whether we know what it was or not, constitutes history in some ultimate sense. Nevertheless, much the greater part of these events we can know nothing about, not even that they occurred; many of them we can know only imperfectly; and even the few events that we think we know for sure we can never be absolutely certain of, since we can never revive them, never observe or test them directly. The event itself once occurred, but as an actual event it has disappeared; so that in dealing with it the only objective reality we can observe or test is some material trace which the event has left—usually a written document. With these traces of vanished events, these documents, we must be content since they are all we have; from them we infer what the event was, we affirm that it is a fact that the event was so and so. We do not say "Lincoln is assassinated"; we say "it is a fact that Lincoln was assassinated." The event *was*, but is no longer; it is only the affirmed fact about the event that *is*, that persists, and will persist until we discover that our affirmation is wrong or inadequate. Let us then admit that there are two histories: the actual series of events that once occurred; and the ideal series that we affirm and hold in memory. The first is absolute and unchanged—it was what it was whatever we do or say about it; the second is relative, always changing in response to the increase or refinement of knowledge. The two series correspond more or less; it is our aim to make the correspondence as exact as possible; but the actual series of events exists for us only in terms of the ideal series which we affirm and hold in memory. This is why I am forced to identify history with knowledge of history. For all practical purposes history is, for us and for the time being, what we know it to be.

It is history in this sense that I wish to reduce to its lowest terms. In order to do that I need a very simple definition. I once read that "History is the knowledge of events that have occurred in the past." That is a simple definition, but not simple enough. It contains three words that require examination. The first is knowledge. Knowledge is a formidable word. I always think of knowledge as something that is stored up in the *Encyclopaedia Britannica* or the *Summa Theologica*; something difficult to acquire, something at all events that I have not. Resenting a definition that denies me the title of historian, I therefore ask what is most essential to knowledge. Well, memory, I should think (and I mean memory in the broad sense, the memory of events inferred as well as the memory of events observed); other things are necessary too, but memory is fundamental: without memory no knowledge. So our definition becomes, "History is the memory of events that have occurred in the past." But events—the word carries an implication of something grand, like the taking of the Bastille or the Spanish-American War. An occurrence need not be spectac-

[1] Reprinted from *The American Historical Review*, 1932, by permission.

ular to be an event. If I drive a motor car down the crooked streets of Ithaca, that is an event—something done; if the traffic cop bawls me out, that is an event—something said; if I have evil thoughts of him for so doing, that is an event—something thought. In truth anything done, said, or thought is an event, important or not as may turn out. But since we do not ordinarily speak without thinking, at least in some rudimentary way, and since the psychologists tell us that we cannot think without speaking, or at least not without having anticipatory vibrations in the larynx, we may well combine thought events and speech events under one term; and so our definition becomes, "History is the memory of things said and done in the past." But the past—the word is both misleading and unnecessary: misleading, because the past, used in connection with history, seems to imply the distant past, as if history ceased before we were born; unnecessary, because after all everything said or done is already in the past as soon as it is said or done. Therefore I will omit that word, and our definition becomes, "History is the memory of things said and done." This is a definition that reduces history to its lowest terms, and yet includes everything that is essential to understanding what it really is.

If the essence of history is the memory of things said and done, then it is obvious that every normal person, Mr. Everyman, knows some history. Of course we do what we can to conceal this invidious truth. Assuming a professional manner, we say that so and so knows no history, when we mean no more than that he failed to pass the examinations set for a higher degree; and simple-minded persons, undergraduates and others, taken in by academic classifications of knowledge, think they know no history because they have never taken a course in history in college, or have never read Gibbon's *Decline and Fall of the Roman Empire*. No doubt the academic convention has its uses, but it is one of the superficial accretions that must be stripped off if we would understand history reduced to its lowest terms. Mr. Everyman, as well as you and I, remembers things said and done, and must do so at every waking moment. Suppose Mr. Everyman to have awakened this morning unable to remember anything said or done. He would be a lost soul indeed. This has happened, this sudden loss of all historical knowledge. But normally it does not happen. Normally the memory of Mr. Everyman, when he awakens in the morning, reaches out into the country of the past and of distant places and instantaneously recreates his little world of endeavor, pulls together as it were things said and done in his yesterdays, and coördinates them with his present perceptions and with things to be said and done in his tomorrows. Without this historical knowledge, this memory of things said and done, his today would be aimless and his to-morrow without significance.

Since we are concerned with history in its lowest terms, we will suppose that Mr. Everyman is not a professor of history, but just an ordinary citizen without excess knowledge. Not having a lecture to prepare, his memory of things said and done, when he awakened this morning, presumably did not drag into consciousness any events connected with the Liman von Sanders mission or the Pseudo-Isidorian Decretals; it presumably dragged into consciousness an image of things said and done yesterday in the office, the highly significant fact that General Motors has dropped three points, a conference arranged for ten o'clock in the morning, a promise to play nine holes at four-thirty in the afternoon, and other historical events of similar import. Mr. Everyman knows more history than this, but at the moment of awakening this is sufficient. memory of things said and done, history functioning, at seven-thirty in the morning, in its very lowest terms, has effectively oriented Mr. Everyman in his little world of endeavor.

Yet not quite effectively after all perhaps; for unaided memory is notoriously fickle; and it may happen that Mr. Everyman, as he drinks his coffee, is uneasily aware of something said or done that he fails now to recall. A common enough occurrence, as we all know to our sorrow—this remembering, not the historical event, but only that there was an event which we ought to remember

but can not. This is Mr. Everyman's difficulty, a bit of history lies dead and inert in the sources, unable to do any work for Mr. Everyman because his memory refuses to bring it alive in consciousness. What then does Mr. Everyman do? He does what any historian would do: he does a bit of historical research in the sources. From his little Private Record Office (I mean his vest pocket) he takes a book in MS., volume XXXV, it may be, and turns to page 23, and there he reads: "December 29, pay Smith's coal bill, 20 tons, $1017.20." Instantaneously a series of historical events comes to life in Mr. Everyman's mind. He has an image of himself ordering twenty tons of coal from Smith last summer, of Smith's wagons driving up to his house, and of the precious coal sliding dustily through the cellar window. Historical events, these are, not so important as the forging of the Isidorian Decretals, but still important to Mr. Everyman: historical events which he was not present to observe, but which, by an artificial extension of memory, he can form a clear picture of, because he has done a little original research in the manuscripts preserved in his Private Record Office.

The picture Mr. Everyman forms of Smith's wagons delivering the coal at his house is a picture of things said and done in the past. But it does not stand alone, it is not a pure antiquarian image to be enjoyed for its own sake; on the contrary, it is associated with a picture of things to be said and done in the future; so that throughout the day Mr. Everyman intermittenly holds in mind, together with a picture of Smith's coal wagons, a picture of himself going at four o'clock in the afternoon to Smith's office in order to pay his bill. At four o'clock Mr. Everyman is accordingly at Smith's office. "I wish to pay that coal bill," he says. Smith looks dubious and disappointed, takes down a ledger (or a filing case), does a bit of original research in his Private Record Office, and announces: "You don't owe me any money, Mr. Everyman. You ordered the coal here all right, but I didn't have the kind you wanted, and so turned the order over to Brown. It was Brown delivered your coal: he's the man you owe." Whereupon Mr. Everyman goes to Brown's office; and Brown takes down a ledger, does a bit of original research in his Private Record Office, which happily confirms the researches of Smith; and Mr. Everyman pays his bill, and in the evening, after returning from the Country Club, makes a further search in another collection of documents, where, sure enough, he finds a bill from Brown, properly drawn, for twenty tons of stove coal, $1017.20. The research is now completed. Since his mind rests satisfied, Mr. Everyman has found the explanation of the series of events that concerned him.

Mr. Everyman would be astonished to learn that he is an historian, yet it is obvious, isn't it, that he has performed all the essential operations involved in historical research. Needing or wanting to do something (which happened to be, not to deliver a lecture or write a book, but to pay a bill; and this is what misleads him and us as to what he is really doing), the first step was to recall things said and done. Unaided memory proving inadequate, a further step was essential—the examination of certain documents in order to discover the necessary but as yet unknown facts. Unhappily the documents were found to give conflicting reports, so that a critical comparison of the texts had to be instituted in order to eliminate error. All this having been satisfactorily accomplished, Mr. Everyman is ready for the final operation—the formation in his mind, by an artificial extension of memory, of a picture, a definitive picture let us hope, of a selected series of historical events—of himself ordering coal from Smith, of Smith turning the order over to Brown, and of Brown delivering the coal at his house. In the light of this picture Mr. Everyman could, and did, pay his bill. If Mr. Everyman had undertaken these researches in order to write a book instead of to pay a bill, no one would think of denying that he was an historian.

I have tried to reduce history to its lowest terms, first by defining it as the memory of things said and done, second by showing concretely how the memory of things said and done is essential to the performance of

the simplest acts of daily life. I wish now to note the more general implications of Mr. Everyman's activities. In the realm of affairs Mr. Everyman has been paying his coal bill; in the realm of consciousness he has been doing that fundamental thing which enables man alone to have, properly speaking, a history: he has been reënforcing and enriching his immediate perceptions to the end that he may live in a world of semblance more spacious and satisfying than is to be found within the narrow confines of the fleeting present moment.

We are apt to think of the past as dead, the future as nonexistent, the present alone as real; and prematurely wise or disillusioned counselors have urged us to burn always with "a hard, gemlike flame" in order to give "the highest quality to the moments as they pass, and simply for those moments' sake." This no doubt is what the glow-worm does; but I think that man, who alone is properly aware that the present moment passes, can for that very reason make no good use of the present moment simply for its own sake. Strictly speaking, the present doesn't exist for us, or is at best no more than an infinitesimal point in time, gone before we can note it as present. Nevertheless, we must have a present; and so we create one by robbing the past, by holding on to the most recent events and pretending that they all belong to our immediate perceptions. If, for example, I raise my arm, the total event is a series of occurrences of which the first are past before the last have taken place; and yet you perceive it as a single movement executed in one present instant. This telescoping of successive events into a single instant philosophers call the "specious present." Doubtless they would assign rather narrow limits to the specious present; but I will willfully make a free use of it, and say that we can extend the specious present as much as we like. In common speech we do so: we speak of the "present hour," the "present year," the "present generation." Perhaps all living creatures have a specious present; but man has this superiority, as Pascal says, that he is aware of himself and the universe, can as it were hold himself at arm's length and with some measure of objectivity watch himself and his fellows functioning in the world during a brief span of allotted years. Of all the creatures, man alone has a specious present that may be deliberately and purposefully enlarged and diversified and enriched.

The extent to which the specious present may thus be enlarged and enriched will depend upon knowledge, the artificial extension of memory, the memory of things said and done in the past and distant places. But not upon knowledge alone; rather upon knowledge directed by purpose. The specious present is an unstable pattern of thought, incessantly changing in response to our immediate perceptions and the purposes that arise therefrom. At any given moment each one of us (professional historian no less than Mr. Everyman) weaves into this unstable pattern such actual or artificial memories as may be necessary to orient us in our little world of endeavor. But to be oriented in our little world of endeavor we must be prepared for what is coming to us (the payment of a coal bill, the delivery of a presidential address, the establishment of a League of Nations, or whatever); and to be prepared for what is coming to us it is necessary, not only to recall certain past events, but to anticipate (note I do not say predict) the future. Thus from the specious present, which always includes more or less of the past, the future refuses to be excluded; and the more of the past we drag into the specious present, the more an hypothetical, patterned future is likely to crowd into it also. Which comes first, which is cause and which effect, whether our memories construct a pattern of past events at the behest of our desires and hopes, or whether our desires and hopes spring from a pattern of past events imposed upon us by experience and knowledge, I shall not attempt to say. What I suspect is that memory of past and anticipation of future events work together, go hand in hand as it were in a friendly way, without disputing over priority and leadership.

At all events they go together, so that in a very real sense it is impossible to divorce history from life: Mr. Everyman cannot do

what he needs or desires to do without recalling past events; he cannot recall past events without in some subtle fashion relating them to needs or desires to do. This is the natural function of history, of history reduced to its lowest terms, of history conceived as the memory of things said and done: memory of things said and done (whether in our immediate yesterdays or in the long past of mankind), running hand in hand with the anticipation of things to be said and done, enables us, each to the extent of his knowledge and imagination, to be intelligent, to push back the narrow confines of the fleeting present moment so that what we are doing may be judged in the light of what we have done and what we hope to do. In this sense all *living* history, as Croce says, is contemporaneous: is so far as we think the past (and otherwise the past, however fully related in documents, is nothing to us) it becomes an integral and living part of our present world of semblance.

It must then be obvious that living history, the ideal series of events that we affirm and hold in memory, since it is so intimately associated with what we are doing and with what we hope to do, cannot be precisely the same for all at any given time, or the same for one generation as for another. History in this sense cannot be reduced to a verifiable set of statistics or formulated in terms of universally valid mathematical formulas. It is rather an imaginative creation, a personal possession which each one of us, Mr. Everyman, fashions out of his individual experience, adapts to his practical or emotional needs, and adorns as well as may be to suit his esthetic tastes. In thus creating his own history, there are, nevertheless, limits which Mr. Everyman may not overstep without incurring penalties. The limits are set by his fellows. If Mr. Everyman lived quite alone in an unconditioned world, he would be free to affirm and hold in memory any ideal series of events that struck his fancy, and thus create a world of semblance quite in accord with the heart's desire. Unfortunately, Mr. Everyman has to live in a world of Browns and Smiths; a sad experience, which has taught him the expediency of recalling certain events with much exactness. In all the immediately practical affairs of life Mr. Everyman is a good historian, as expert, in conducting the researches necessary for paying his coal bill, as need be. His expertness comes partly from long practice, but chiefly from the circumstance that his researches are prescribed and guided by very definite and practical objects which concern him intimately. The problem of what documents to consult, what facts to select, troubles Mr. Everyman not at all. Since he is not writing a book on "Some Aspects of the Coal Industry Objectively Considered," it does not occur to him to collect all the facts and let them speak for themselves. Wishing merely to pay his coal bill, he selects only such facts as may be relevant; and not wishing to pay it twice, he is sufficiently aware, without ever having read Bernheim's *Lehrbuch*, that the relevant facts must be clearly established by the testimony of independent witnesses not self-deceived. He does not know, or need to know, that his personal interest in the performance is a disturbing bias which will prevent him from learning the whole truth or arriving at ultimate causes. Mr. Everyman does not wish to learn the whole truth or to arrive at ultimate causes. He wishes to pay his coal bill. That is to say, he wishes to adjust himself to a practical situation, and on that low pragmatic level he is a good historian precisely because he is not disinterested: he will solve his problems, if he does solve them, by virtue of his intelligence and not by virtue of his indifference.

Nevertheless, Mr. Everyman does not live by bread alone; and on all proper occasions his memory of things said and done, easily enlarging his spacious present beyond the narrow circle of daily affairs, will, must inevitably, in mere compensation for the intolerable dullness and vexation of the fleeting present moment, fashion for him a more spacious world than that of the immediately practical. He can readily recall the days of his youth, the places he has lived in, the ventures he has made, the adventures he has had—all the crowded events of a lifetime; and beyond and around this central

pattern of personally experienced events, there will be embroidered a more dimly seen pattern of artificial memories, memories of things reputed to have been said and done in past times which he has not known, in distant places which he has not seen. This outer pattern of remembered events that encloses and completes the central pattern of his personal experience, Mr. Everyman has woven, he could not tell you how, out of the most diverse threads of information, picked up in the most casual way, from the most unrelated sources—from things learned at home and in school, from knowledge gained in business or profession, from newspapers glanced at, from books (yes, even history books) read or heard of, from remembered scraps of newsreels or educational films of *ex cathedra* utterances of presidents. and kings, from fifteen-minute discourses on the history of civilization broadcast by the courtesy (it may be) of Pepsodent, the Bulova Watch Company, or the Shepard Stores in Boston. Daily and hourly, from a thousand unnoted sources, there is lodged in Mr. Everyman's mind a mass of unrelated and related information and misinformation, of impressions and images, out of which he somehow manages, undeliberately for the most part, to fashion a history, a patterned picture of remembered things said and done in past times and distant places. It is not possible, it is not essential, that this picture should be complete or completely true: it is essential that it should be useful to Mr. Everyman; and that it may be useful to him he will hold in memory, of all the things he might hold in memory, those things only which can be related with some reasonable degree of relevance and harmony to his idea of himself and of what he is doing in the world and what he hopes to do.

In constructing this more remote and far-flung pattern of remembered things, Mr. Everyman works with something of the freedom of a creative artist; the history which he imaginatively recreates as an artificial extension of his personal experience will inevitably be an engaging blend of fact and fancy, a mythical adaptation of that which actually happened. In part it will be true, in part false; as a whole perhaps neither true nor false, but only the most convenient form of error. Not that Mr. Everyman wishes or intends to deceive himself or others. Mr. Everyman has a wholesome respect for cold, hard facts, never suspecting how malleable they are, how easy it is to coax and cajole them; but he necessarily takes the facts as they come to him, and is enamored of those that seem best suited to his interests or promise most in the way of emotional satisfaction. The exact truth of remembered events he has in any case no time, and no need, to curiously question or meticulously verify. No doubt he can, if he be an American, call up an image of the signing of the Declaration of Independence in 1776 as readily as he can call up an image of Smith's coal wagons creaking up the hill last summer. He suspects the one image no more than the other; but the signing of the Declaration, touching not his practical interests, calls for no careful historical research on his part. He may perhaps, without knowing why, affirm and hold in memory that the Declaration was signed by the members of the Continental Congress on the fourth of July. It is a vivid and sufficient image which Mr. Everyman may hold to the end of his days without incurring penalties. Neither Brown nor Smith has any interest in setting him right; nor will any court ever send him a summons for failing to recall that the Declaration, "being engrossed and compared at the table, was signed by the members" on the second of August. As an actual event, the signing of the Declaration was what it was; as a remembered event it will be, for Mr. Everyman, what Mr. Everyman contrives to make it: will have for him significance and magic, much or little or none at all, as it fits well or ill into his little world of interests and aspirations and emotional comforts.

What then of us, historians by profession? What have we to do with Mr. Everyman, or he with us? More, I venture to believe, than we are apt to think. For each of us is Mr. Everyman too. Each of us is subject to the limitations of time and place; and for each of us, no less than for the Browns and Smiths of the world, the pattern of remembered

things said and done will be woven, safeguard the process how we may, at the behest of circumstance and purpose.

True it is that although each of us is Mr. Everyman, each is something more than his own historian. Mr. Everyman, being but an informal historian, is under no bond to remember what is irrelevant to his personal affairs. But we are historians by profession. Our profession, less intimately bound up with the practical activities, is to be directly concerned with the ideal series of events that is only of casual or occasional import to others; it is our business in life to be ever preoccupied with that far-flung pattern of artificial memories that encloses and completes the central pattern of individual experience. We are Mr. Everybody's historian as well as our own, since our histories serve the double purpose, which written histories have always served, of keeping alive the recollection of memorable men and events. We are thus of that ancient and honorable company of wise men of the tribe, of bards and story-tellers and minstrels, of soothsayers and priests, to whom in successive ages has been entrusted the keeping of the useful myths. Let not the harmless, necessary word "myth" put us out of countenance. In the history of history a myth is a once valid but now discarded version of the human story, as our now valid versions will in due course be relegated to the category of discarded myths. With our predecessors, the bards and story-tellers and priests, we have therefore this in common: that it is our function, as it was theirs, not to create, but to preserve and perpetuate the social tradition; to harmonize, as well as ignorance and prejudice permit, the actual and the remembered series of events; to enlarge and enrich the specious present common to us all to the end that "society" (the tribe, the nation, or all mankind) may judge of what it is doing in the light of what it has done and what it hopes to do.

History as the artificial extension of the social memory (and I willingly concede that there are other appropriate ways of apprehending human experience) is an art of long standing, necessarily so since it springs instinctively from the impulse to enlarge the range of immediate experience, and however camouflaged by the disfiguring jargon of science, it is still in essence what it has always been. History in this sense is story, in aim always a true story; a story that employs all the devices of literary art (statement and generalization, narration and description, comparison and comment and analogy) to present the succession of events in the life of man, and from the succession of events in the life of man, and from the succession of events thus presented to derive a satisfactory meaning. The history written by historians, like the history informally fashioned by Mr. Everyman, is thus a convenient blend of truth and fancy, of what we commonly distinguish as "fact" and "interpretation." In primitive times, when tradition is orally transmitted, bards and story-tellers frankly embroider or improvise the facts to heighten the dramatic import of the story. With the use of written records, history, gradually differentiated from fiction, is understood as the story of events that actually occurred; and with the increase and refinement of knowledge the historian recognizes that his first duty is to be sure of his facts, let their meaning be what it may. Nevertheless, in every age history is taken to be a story of actual events from which a significant meaning may be derived; and in every age the illusion is that the present version is valid because the related facts are true, whereas former versions are invalid because based upon inaccurate or inadequate facts.

Never was this conviction more impressively displayed than in our own time—that age of erudition in which we live, or from which we are perhaps just emerging. Finding the course of history littered with the *débris* of exploded philosophies, the historians of the last century, unwilling to be forever duped, turned away (as they fondly hoped) from "interpretation" to the rigorous examination of the factual event, just as it occurred. Perfecting the technique of investigation, they laboriously collected and edited the sources of information, and with incredible persistence and ingenuity ran illu-

sive error to earth, letting the significance of the Middle Ages wait until it was certainly known "whether Charles the Fat was at Ingelheim or Lustnau on July 1, 887," shedding their "life-blood," in many a hard fought battle, "for the sublime truths of Sac and Soc." I have no quarrel with this so great concern with hoti's business. One of the first duties of man is not to be duped, to be aware of his world; and to derive the significance of human experience from events that never occurred is surely an enterprise of doubtful value. To establish the facts is always in order, and is indeed the first duty of the historian; but to suppose that the facts, once established in all their fullness, will "speak for themselves" is an illusion. It was perhaps peculiarly the illusion of those historians of the last century who found some special magic in the word "scientific." The scientific historian, it seems, was one who set forth the facts without injecting any extraneous meaning into them. He was the objective man whom Nietzsche described—"a mirror: accustomed to prostration before something that wants to be known, . . . he waits until something comes, and then expands himself sensitively, so that even the light footsteps and gliding past of spiritual things may not be lost in his surface and film." "It is not I who speak, but history which speaks through me," was Fustel's reproof to applauding students. "If a certain philosophy emerges from this scientific history, it must be permitted to emerge naturally, of its own accord, all but independently of the will of the historian." Thus the scientific historian deliberately renounced philosophy only to submit to it without being aware. His philosophy was just this, that by not taking thought a cubit would be added to his stature. With no other preconception than the will to know, the historian would reflect in his surface and film the "order of events throughout past times in all places"; so that, in the fullness of time, when innumerable patient expert scholars, by "exhausting the sources," should have reflected without refracting the truth of all the facts, the definitive and impregnable meaning of human experience would emerge of its own accord to enlighten and emancipate mankind. Hoping to find something without looking for it, expecting to obtain final answers to life's riddle by resolutely refusing to ask questions—it was surely the most romantic species of realism yet invented, the oddest attempt ever made to get something for nothing!

That mood is passing. The fullness of time is not yet, overmuch learning proves a weariness to the flesh, and a younger generation that knows not Von Ranke is eager to believe that Fustel's counsel, if one of perfection, is equally one of futility. Even the most disinterested historian has at least one preconception, which is the fixed idea that he has none. The facts of history are already set forth, implicitly, in the sources; and the historian who could restate without reshaping them would, by submerging and suffocating the mind in diffuse existence, accomplish the superfluous task of depriving human experience of all significance. Left to themselves, the facts do not speak; left to themselves they do not exist, not really, since for all practical purposes there is no fact until someone affirms it. The least the historian can do with any historical fact is to select and affirm it. To select and affirm even the simplest complex of facts is to give them a certain place in a certain pattern of ideas, and this alone is sufficient to give them a special meaning. However "hard" or "cold" they may be, historical facts are after all not material substances which, like bricks or scantlings, possess definite shape and clear, persistent outline. To set forth historical facts is not comparable to dumping a barrow of bricks. A brick retains its form and pressure wherever placed; but the form and substance of historical facts, having a negotiable existence only in literary discourse, vary with the words employed to convey them. Since history is not part of the external material world, but an imaginative reconstruction of vanished events, its form and substance are inseparable: in the realm of literary discourse substance, being an idea, *is* form; and form, conveying the idea, *is* substance. It is thus not the undiscriminated fact, but the perceiving mind of the historian that speaks:

the special meaning which the facts are made to convey emerges from the substance-form which the historian employs to re-create imaginatively a series of events not present to perception.

In constructing this substance-form of vanished events, the historian, like Mr. Everyman, like the bards and story-tellers of an earlier time, will be conditioned by the specious present in which alone he can be aware of his world. Being neither omniscient nor omnipresent, the historian is not the same person always and everywhere; and for him, as for Mr. Everyman, the form and significance of remembered events, like the extension and velocity of physical objects, will vary with the time and place of the observer. After fifty years we can clearly see that it was not history which spoke through Fustel, but Fustel who spoke through history. We see less clearly perhaps that the voice of Fustel was the voice, amplified and freed from static as one may say, of Mr. Everyman; what the admiring students applauded on that famous occasion was neither history nor Fustel, but a deftly colored pattern of selected events which Fustel fashioned, all the more skillfully for not being aware of doing so, in the service of Mr. Everyman's emotional needs—the emotional satisfaction, so essential to Frenchmen at that time, of perceiving that French institutions were not of German origin. And so it must always be. Played upon by all the diverse, unnoted influences of his own time, the historian will elicit history out of documents by the same principle, however more consciously and expertly applied, that Mr. Everyman employs to breed legends out of remembered episodes and oral tradition.

Berate him as we will for not reading our books, Mr. Everyman is stronger than we are, and sooner or later we must adapt our knowledge to his necessities. Otherwise he will leave us to our own devices, leave us it may be to cultivate a species of dry professional arrogance growing out of the thin soil of antiquarian research. Such research, valuable not in itself but for some ulterior purpose, will be of little import except in so far as it is transmuted into common knowledge. The history that lies inert in unread books does no work in the world. The history that does work in the world, the history that influences the course of history, is living history, that pattern of remembered events, whether true or false, that enlarges and enriches the collective specious present, the specious present of Mr. Everyman. It is for this reason that the history of history is a record of the "new history" that in every ages rises to confound and supplant the old. It should be a relief to us to renounce omniscience, to recognize that every generation, our own included, will, must inevitably, understand the past and anticipate the future in the light of its own restricted experience, must inevitably play on the dead whatever tricks it finds necessary for its own peace of mind. The appropriate trick for any age is not a malicious invention designed to take anyone in, but an unconscious and necessary effort on the part of "society" to understand what it is doing in the light of what it has done and what it hopes to do. We, historians by profession, share in this necessary effort. But we do not impose our version of the human story on Mr. Everyman; in the end it is rather Mr. Everyman who imposes his version on us—compelling us, in an age of political revolution, to see that history is past politics, in an age of social stress and conflict to search for the economic interpretation. If we remain too long recalcitrant Mr. Everyman will ignore us, shelving our recondite works behind glass doors rarely opened. Our proper function is not to repeat the past but to make use of it, to correct and rationalize for common use Mr. Everyman's mythological adaptation of what actually happened. We are surely under bond to be as honest and as intelligent as human frailty permits; but the secret of our success in the long run is in conforming to the temper of Mr. Everyman, which we seem to guide only because we are so sure, eventually, to follow it.

Neither the value nor the dignity of history need suffer by regarding it as a foreshortened and incomplete representation of the reality that once was, an unstable pattern of remembered things redesigned and newly col-

ored to suit the convenience of those who make use of it. Nor need our labors be the less highly prized because our task is limited, our contributions of incidental and temporary significance. History is an indispensable even though not the highest form of intellectual endeavor, since it makes, as Santayana says, a gift of "great interests . . . to the heart. A barbarian is not less subject to the past than is the civic man who knows what the past is and means to be loyal to it; but the barbarian, for want of a transpersonal memory, crawls among superstitions which he cannot understand or revoke and among people whom he may hate or love, but whom he can never think of raising to a higher plane, to the level of a purer happiness. The whole dignity of human endeavor is thus bound up with historic issues, and as conscience needs to be controlled by experience if it is to become rational, so personal experience itself needs to be enlarged ideally if the failures and successes it reports are to touch impersonal interests."

I do not present this view of history as one that is stable and must prevail. Whatever validity it may claim, it is certain, on its own premises, to be supplanted; for its premises, imposed upon us by the climate of opinion in which we live and think, predispose us to regard all things, and all principles of things, as no more than "inconstant modes or fashions," as but the "concurrence, renewed from moment to moment, of forces parting sooner or later on their way." It is the limitation of the genetic approach to human experience that it must be content to transform problems since it can never solve them. However accurately we may determine the "facts" of history, the facts themselves and our interpretations of them, and our interpretation of our own interpretations, will be seen in a different perspective or a less vivid light as mankind moves into the unknown future. Regarded historically, as a process of becoming, man and his world can obviously be understood only tentatively, since it is by definition something still in the making, something as yet unfinished. Unfortunately for the "permanent contribution" and the universally valid philosophy, time passes; time, the enemy of man as the Greeks thought; tomorrow and tomorrow and tomorrow creeps in this petty pace, and all our yesterdays diminish and grow dim: so that, in the lengthening perspective of the centuries, even the most striking events (The Declaration of Independence, the French Revolution, the Great War itself; like the Diet of Worms before them, like the signing of the Magna Carta and the coronation of Charlemagne and the crossing of the Rubicon and the battle of Marathon) must inevitably, for posterity, fade away into pale replicas of the original picture, for each succeeding generation losing, as they recede into a more distant past, some significance that once was noted in them, some quality of enchantment that once was theirs.

You Are Not Forgotten[1]

JOHN HOLMES

To Mr. Joseph Harris
Hanover Township
Burlington County, And
State of New Jersey, Near Penny Hill

January the 14, 1809

DEAR CHILDREN,

I take this opportunity to let you know that we are all well hoping these few Lines may find you in the same I want Jobe to send me some muzling for Caps and a handkerchief checklining for an apron and thread to make them for it is not to be had here and a paper

[1] From *The Yale Review*, Spring, 1937. Copyright 1937 by the Yale University Press, and reprinted with their permission.

of pins you may send them by Isaac Estellow for we hear that he is coming out in the Spring we received your letter November 21 and was glad to hear from you all I want to know wether Jobe ever talks of coming to see us or no I want you to write to us the first opportunity we have killed four hogs and they weighed 830 pounds in December we had 16 snows in January 12 no more at preasant only our kind Love to you all.

These from

William and Lettice Rainier

To Joseph and Mary Harris

January, 1937

Dear Friends,

I take this opportunity to answer your letter of a January much more than a hundred years ago, a letter you wrote, not to me, but to Joseph and Mary, in another part of the country. I do not know how long it was until they found a traveller to take a letter to you, or if they waited till spring. I only know that Mary was your daughter, gone a long way from home, and married. Though you could know less of me than I know of you now, there was something in your words that made other strangers wish to keep the letter longer than you would have believed, until at last, and by accident, it fell into my hands. I know that both of you were old when it was written, and that I who read it am young, less than half your age. I know that somehow, with that fitful warmth some men still feel, you felt the life there is in words when you spread a sheet of white, ruled paper on a farmhouse table, drew the lamp near, and dipped your pen in ink. And I know that your words lie here now on my table, and as I read them over and over, they still come into my mind with a mystery and shock and pain that is, nevertheless, as sound and sweet as your kind love to all was when it was new.

Your words have not faded into the silence where most words go. That is what I want to say across the many years. Letters are an extraordinarily silent communication between people. We do not speak as we write them, or when we read them and lay them down, or when we write again to answer them. The words themselves on the paper are notes in a music meant to be lifted into sound once, and no more. But your words still speak from the page, as good letters may; they say, "Answer me." They call all the way from you to me to say, "Send me a part of yourself—tell me how life is with you—make me know that you are real—think of me and say that you think of me." That is why I am writing.

Questions may not be asked of you now. I understand that. But if they could be, I would ask if Isaac came your way in the spring, bringing with him the muslin for caps and handkerchiefs, and thread to make them, and a paper of pins. Did you make the caps, Lettice, and were they for yourself, or for your grandchildren, or for presents? Did Jobe, if he was able to come to see you, write first that he was coming, and were you busy and happy and excited then, getting ready for him by cooking and baking in the old kitchen? Did Joe—grandson, son, or son-in-law—tell you those small tales of the daily life of his home, and of your children's children, that never get into letters, never enough of them? What did he tell you? What did William ask him about his ways of work, and prices, and crops, and news of the country and countryside? And was life, with Jobe's telling, almost as bright in your house for a while as when all your children were young at home, the whole family under one roof, as parents always dream may come true once more somehow? But I may not ask you questions. I might better content myself with ironical agreement that 16 snows in one month, and in the next 12, is snows enough. You lived in a time when there was enough, even of weather.

I am glad that you told me you were well in that month, in that year. Of course, it was from your own children you wished assurance that they were well. I am as sure as anyone can be that you had word from them soon, and that they were all well. But I must write as if your letter had been sent to me, as after all these years it has come to me.

Your letter found me as you were. In a time you could not understand, and would

not like, separated by years infinitely longer than the miles that separate your home and mine, I am well and happy. I have found my work and the strength to do it and the knowledge that is needed. In these things alone I am richer than you would know; it is a great deal now simply to be needed. I have a family, and good friends in my house. As far as I have been able, although you would not understand that, either, I have made my house with my own hands and mind and love. It is so now that one is thankful for simple things like these, because they may no longer be taken for granted.

Life with me, further than this, goes so very differently that I do not know how to begin to tell you about it. We live as we have always lived—near a large city. When we were children, we played our games with toys that were all bought for us, not made, and we played them most of the time indoors. My father made me a toy-box in the shape of a fat and ample barn, one side of which let down, and the roof was hinged. You would think it a queer thing to have a toy in the shape of a barn. We plant now for flowers, and for exercise of the body and peace for the mind, not as you did to provide food. Animals we scarcely know, except for dogs in the house, and horses on those occasions when we ride them for pleasure, not to travel or for work. I have never seen a hog killed. We travel rapidly in machines that move themselves. Our nights are lighted by a miracle we take for granted. Most of the people I know have, as a matter of course, seen parts of this country and the world you scarcely knew existed.

Nothing, it seems to me, is the same, except the snow and the summer, and distance and the need for communication. To go on counting these new things is useless because they are not important except in their difference. Such a gulf of difference separates us, though, that almost nothing will reach across it. Nothing but words are in your letter, and because they are there, I am able to tell you that life still goes that way with us, though sometimes we forget ourselves that it is the same. There are still voices silent to us after many years, and there are new ways of being apart, new areas of pain between man and man.

When you were old, and the children away, and the months long between their letters, and the years between their visits, you might have been sad. But the words in your heart were not silenced, nor the plain, sound strength of age diminished, for these have lasted on your letter-sheet to this day. And though my name is strange to you, I have, nevertheless, some part of that kind love you sent to all.
This to William and Lettice

To Mr. Joseph Harris
Near Penny Hill
West New Jersey
Burlington County
Hanover Township

April 22, 1810

Dear Children,

I take this opportunity to let you know that we are all in good helth at preasant hoping these few lines may find you injoying the same Blessing we had a very favourable winter we had but Little Snow this Spring we made 400weight of shugar & one barrel of vinegar I received the things sent by Isaac Estlow and was very glad of them in three weeks after they left your house they came to see us they had been in some days last fall we had 877weight of pork we have got two new milk cows we have plenty to eat and to wear I wish some of you could come to see us I want Jobe to come to see us I made last year 108 yard of cloath we have more wool and flax than we can spin I want you to write to us the first opertunity for I want to hear from you I want to know where William and Charlotte Pope lives so no more at preasant only our kind Love to you all these from your mother.

Samuel Warrin is going to move to the Jerseys near Haddonfield. He has got tired of living among the yankeys he is as keen to come back as he was to come here he is going to live with his son William Warrin their are some very cleaver people here but they are scarce I want to see you

all once more but the Lord only knows weather I shall or not.

These from

William Rainier & Lettice

To Joseph Harris & Mary Harris

January, 1937

Dear Friends,

You wrote again in the spring of the next year, and again I write to you, one of whose children I am on earth. Thinking of you now, and sending back this answer to your hope, I cannot make you understand, and I scarcely understand it myself, that I am so far distant as that. I am one of your children only in the sense that I am an inheritor with many others of your life long ago.

What you had to give us has come to me changed with the touch of hands I know nothing about. I can guess a little because of the differences, but I may be wrong; and I wonder most of all at what I shall do with your gift. You had a way of life that kept close to the realities; sometimes I think that we parcel life out in half-pound packages. How is sugar made? How is vinegar made? How is cloth spun? During the winter, you write me, you had plenty to eat and wear, and I am glad that it was so. You had more flax and wool than you could spin. What would you say if you were told that you had this plenty in your house and barn merely because you lived when the times were good? I think you would have been surprised if it were true.

The times, in that phrase we both know, have of course been slower, quieter, or simpler than they are now in my life, and by turns good, and bad. But when you knew they were better than they had been, or worse than you liked, you knew it depended on weather and work. Sometimes with us, for reasons we do not wholly understand, it does not. What did you do with the wool and flax that was left over after you had spun all you needed? Was there an answer then to that question? There is no good answer to that sort of question now. Here and now, I, too, have had plenty to eat and to wear. But it has not been so with all people. You knew, of course, that when you had plenty, there were others somewhere who had not, others who perhaps had nothing. Did you give them the flax and wool you couldn't use? I know you didn't destroy it. In my time those who have not plenty are so many, and their need so desperate, that your hearts would break with the knowledge and the sight of it. Yet we have, as you had, more flax and wool than we can spin —more of those things all men used to live. In our times we know what it is to offer to the children, as you must have to yours, though they were grown up and married and able to work, some of what we have, even when it is not plentiful, because we must. I have bought meals for men, and given clothes, and sent money to those who will use it for need; and this in every year. But it is like sweeping the sea back with a broom. And it is not because of hard winters always, or the failure of crops, or because men will not work, that there is need.

Samuel was indeed restless, wasn't he? I see him clearly, divided between amusement and sympathy at the sight. Poor Samuel, who got tired of the Jerseys, and then got tired of your country, and must go back and get tired of the Jerseys again. And just as keen for one thing as the other. And old enough to know better, too, if he had a son he could go to live with. I wish more than ever that I were going to have more letters from you, because I should like to know more about him, and what happened to him afterward. Was he one of the clever people, and were they still scarcer when he left? But the Samuels we have always with us, or leaving us, taking themselves with them. He has grown old being restless and keen for the move, but perhaps not unhappy. Not everyone can stay in one place and harvest a surplus of wool and flax and grain and pork; it was not his happiness to do that. Men like that had rather plant than reap.

There may have been a reason for old Samuel's cleverness, and restlessness, and keenness. Samuel sounds to me like a man who had unsuspected depths; he might have

been an artist. Suppose he were an artist, though without an art, and suppose his wilfulness was the outward sign of his seeking for it. Or suppose Samuel was a fool; artists often do seem fools. But if he was not merely the unreasonable fellow you suggest, then he might have been a symptom. Samuel might have been an early uneasy stirring in the American mind of stories and plays and paintings yet to come. He would be the last one to know, perhaps, just what was the trouble with him, except that he got tired of the hills, and then tired of the shore, and did not want to be a farmyard tree with his roots always in the same soil.

If all that was untrue, and I read too much into your letter, I am much surer of another thing you do not say, and that is that you were kind to him, appreciated him, and missed him. I have been talking only to amuse myself. Let us merely agree that Samuel must have been a perplexing arrival at William's house; and may I say as I close that the Samuels, young and old, of my time, are no less difficult, and kindness such as yours surely was to him no less rare?

To William and Lettice

Mr. Joseph Harris
Burlington
Hanover Township
West New Jersey
Egypt P.O.

April 3, 1833

I now take my pen in hand to write to you I don't know whether you are ded or alive for we think you have forgot us for we have not heard from you this seven years but we hope these Lines may find you all in good helth as we are at present but we are getting very old and have many complaint about us for I am in my eighty sence last August the 19 and Lettice was Seventy eight last february 22 William lives where he did when you was out here Job lives not fur of and Thomas lives near whear he did when you was out here Thomas has lost his second wife and Beulah keeps house for him at present for she has lost her husband and has got one child a boy and generaly speaking they and all their famelis are in good helth at present our crops failed us very much last season we have very littel more than half a crop and Sum not more than a quarter crop wheat Seven Shillings and six pence per bushel rye six shillings indian corne about four and six oats about two shillings and nine pence butter one shilling and three pence pur pound cheese six pence pur pound poark last fall was three dollars and a half pur hundred we have had a midlin cold winter of and on Sum Days warmer and Sum Days colder but very littel Snow till the first of March and then we had severil Days of good Sledding . . . and so no more at present only our affectionate Love to you all.

These from
William and Lettice Rainier

Dear Children, I am yet in the Land of the Living but in very poor helth at present Job lives one mile & half from us he has got a piece of land they have six children William lives where he did when you was here only he has built him a new house & barn William has three children alive they have lost four Thomas has lost his second wife he has three children and Beaulah has lost her husband she has moved back again and is now keeping hous for Thomas she has one little boy five year old So no more at present my kind love to you all. This from your mother. Write to us soon.

To Joseph and Mary Harris

January, 1937

Dear Friends,

We have not forgotten you. I wish I could think that the silence of those seven years, now many times multiplied, could be ended by my thoughts and words, but I do not know that it is so. Your third letter, written so much later, has also come to me, and I am answering it like the others. To learn that Joseph and Mary at last had made the long journey to visit you took away only a part of the sorrow I felt when I read your first sentences. Seven years of silence. I could hardly believe it, yet I know how it can happen. How many times I have written to my friend across the ocean that he has lived

in my thought, and yet months and years pass before I assure him of that again. I think now more and more often of William and Lettice, but it has become less easy to find time or occasion to write, until now. It must have been that way with Mary and Joseph. Now I have your letter, and wish that I had written every day to say again that you are not forgotten; that we are not dead but alive; that we are in good health. This is of necessity a belated greeting, and does small enough honor to your years, which have been full, and not in vain.

Since you wrote, something has happened even to time. The space between twelve and one on a clock's face seems not to be any less, but in our minds it is less. In our ways of living we strive to fill an hour with more and more, and we do it at the heavy cost of saying to some friend in some hour of each day, "We have not forgotten you." We have lost time, and we have forgotten how to write letters. Until your voice came to me, still strong and strangely moving, I had not been so sharply aware of this loss. I might have been one who said, "But tomorrow I will write to William and Lettice, and tell them I have not forgotten them." Tomorrow came and I did not write to you. I said to myself then, "After I have done thus and so, and it is finished so I can tell them the whole story of it, I will sit down and write to them." But that time came, and I did not write about it. Later I remembered my promise to myself, and to you, and I said, "It has been so long now since I have written that I scarcely know where to begin, and my news is old; nevertheless, I ought to let them know that I think of them, and with affection." But somehow I did not write to you even then, and as time went on I became ashamed of myself, and the thought of a letter more painful. And so it was seven years, and since then it has been more, and only now is the letter being written that a friend should have written long ago. Now I say to myself, "If only I had known how they would feel, not hearing whether I was dead or alive, or loved them still or not, or had forgotten them. What could I have been busy with all those years that was of the slightest importance compared with a letter a friend needed, and had asked for? I have worked, and enjoyed myself—but I cannot remember at what. I have put clothes on and off and worn them out; talked with hundreds whose names mean nothing now; hurried, worried, been happy, angry, dismayed, amused—and all over what I do not know. It is all dim in my mind, and time has slipped away, and I have not written to my friends. "Why," I ask myself finally, in real surprise and grief, "why have I never written a letter to them, something that needed no more than a few moments of all the moments I have spent living? Why have I never done it?"

That is the way I felt when your last letter came into my hands.

I could hear the sound of your voice speaking, and feel the ache and bewilderment in your mind, and the still question shaped there. I am writing to tell you that it is remembered that your winter then was harsh and mild by turns, with very little snow until March, and then there was a week of good sledding. By daylight in a cutter down to the village, the horse stamping the packed snow and breathing small clouds into the clear cold air when you threw off the robes and got down and talked with the men. By moonlight along roads that wound past drifted walls and under great laden trees, the white fields shining, and the horse running steadily and easily in the runner track. Or crowded close with twenty or thirty others, young and old, in a great sleigh, again by night, the four horses running with a brave music of harness and hooves; the laughter, the songs, the hands meeting under the robes; the floor packed with straw, the road running backward and out of sight; the distant windows lighted in houses you had known all your long lives, and at last the supper in some neighbor's warm kitchen, and the bright cheeks and glistening eyes there, and many voices.

I am writing to tell you that it is remembered you did this when you were old, as you had done it all the winters of your life. You had in mind the failure of crops and the half-empty barns, the prices charged for

wheat and rye and Indian corn, and the cost of what you could not raise. You had behind your quick old eyes the pictures of the daughters-in-law and the children who had gone, who had made a break in the ring of farms around your countryside, a son to the east, a son to the northwest, a son towards the south, and the grain growing or the grain dying alike in all their acres. You had seen other families fall sick, and their children die, the headstones saying "Aged Three Years and Two Months," or five years, or six years, that would be all they were to know of the life you had so much of. But you were still in the land of the living, and getting older; William was in his eightieth year, and Lettice seventy-eight the February before. And the children had not written for seven years, but you said "Write to us soon," being anxious for the family farthest away, and more than ever eager for life and the news of life.

What can I tell you? The things words stand for have all changed now, and the words with them, a little at a time, until it is only the fact that I answer you that has any meaning. And it is too easy for me to seem sad about this change, and write as if I were full of sorrow for all that is past, and all that may not be said now. But I am not sad. In my way, which was not yours, I find life full, both of happiness and perplexity, failure and success, and would, if I could, have it last as long as yours. I should be glad to be able near the end to set some words on paper so forthright and sound, so close to the things they mean, that men afterward could not throw them out with the rubbish. "We think you have forgot us," you said, and you thought, "If they forget us, who will remember us?" William and Lettice, I remember you. I remember all that I know of your lives, and the lives of your children, and the deaths of your friends, the planting of your crops, your handwriting slanted and firm, your health and strength at eighty and seventy-eight, your late winters with good sledding, and the springs with the hills turning green, your generosity, and tenderness, and the warmth of the kind love you sent to all. I write this letter only to say that I remember.

This to William and Lettice Rainier.

Wonderful Words of Life[1]

EARNEST ELMO CALKINS

A YEAR AGO the Methodists released their new hymnbook, last revised in 1906, and styles in hymnology have undergone some changes. Those two exponents of the hell-and-blood school of vocal theology, the brothers Wesley, have had their representation cut, Charles 121 to 54 hymns, and John from 50 to 17. Strange demands are made by sections of the church in various parts of the country; the Methodist Church South is said to have asked for a binding that cockroaches would not eat. The sales of the work will be promoted by the Methodist Book Concern, the astute business side of the church. It is optimistically estimated that the book will have twelve million users—if not purchasers.

The Presbyterian hymnal put out in 1933 was the result of seven years of careful, prayerful work. Out of a visible supply of 400,000 hymns, 5000 were examined to select 516 for the current opus. Regular church hymnbooks are revised and brought up to date as often as the traffic will stand, about once in twenty-five years.

But an even more significant trend is the gradual disappearance, from these and other modern collections, of the so-called "gospel

[1] Reprinted from *The Atlantic Monthly*, Vol. CLIX, Feb., 1937, by the kind permission of the author and *The Atlantic Monthly*.

hymns," once sung by millions, and known by heart today by thousands old enough to have attended Sunday School in their heyday. They are preserved from oblivion by radio pluggers who conduct hymn sings over the air in approved revival fashion, and by barroom vocalists who, when the right degree of sentimentality has been reached, break out into gospel hymns sung from painful memory. Soused contestants vie in recalling and singing the greatest number of verses from the greatest number of hymns, and there are virtuosos who can go on for hours without repeating.

In the 1870's there appeared a hymnbook which broke sharply with the old church tradition of lugubrious lyrics and added fervor to the devotions of groups of young people in Sunday Schools, Y.M.C.A.'s, Epworth Leagues, Christian Endeavors, and Bands of Hope. *Gospel Hymns and Sacred Songs*, by P. P. Bliss and Ira D. Sankey (appropriately published by the John Church Company), was the title of this dynamic work, which dented the American mind at least as deeply as McGuffey's moral textbooks. The first number appeared in 1875, and by 1891 six successive collections had been published, circulated, and sung.

The devastating effect of these compilations on the American mind in the Garfield and Arthur eras has never received the consideration from social philosophers it so richly merits. By dint of repetition at the most impressionable years these words and tunes were indelibly stamped on the memory of youth, and to some of us they were all of poetry and music we imbibed, and no life has been long enough to forget them. They cling to the memory like cockleburs. Some of us find them as persistent as Mark Twain found "Punch, Brother, Punch," but not so entertaining.

Churches in those days had their own exclusive sectarian hymnbooks, large black volumes with red edges, which, even if they did not explicitly promote their dogmas, contained nothing contrary to them. Certain old and famous hymns and tunes were common to all church books, the Doxology, "Old Hundred," "Lead, Kindly Light," and "Rock of Ages," which even a Baptist or Methodist could sing without violence to his conscience; but mainly they were assembled along the lines of Congregational hymns for Congregationalists, Presbyterian airs for Presbyterians, and you couldn't give out a hymn in a crowd of mixed Christians and be sure of a whole-hearted response.

These books were used upstairs in the church, but downstairs in the Sunday School room a more liberal spirit was astir. Sunday School lessons had become international, thanks to Peloubet's *Select Notes*, and his work was the standard textbook, relieving volunteer teachers of the responsibility of deciding how much of the Bible was fit to be taught to adolescent minds. It was Peloubet who set the little Baptists and Congregationalists all over Christendom reciting the same lesson and the same golden text on the same Sunday.

Need was felt for a musical common denominator on which all could raise their voices without conflicting with those technical points which make Congregationalists and Presbyterians so alike and so different. It was this hiatus which Messrs. Bliss and Sankey so ably filled with gospel hymns.

Dwight L. Moody was sweeping the English-speaking world with high-pressure evangelism directed against gospel resistance. He understood the value of music, or at least singing, in working up that emotional pitch so necessary to what is technically known as conversion. His illustrious predecessor, Charles G. Finney, originator of revival technic (the famous Mr. Finney, who had the turnip), got along without much music. He had dramatic gifts at least as effective for harrowing up the feelings. But Moody believed the adage that he who wrote a nation's songs could defy decisions of the supreme court, and gospel hymns became the nation's songs. The orthodox church books were of no use to him. They were mainly liturgical, arranged for the worship of God by safe and satisfied Christians, with nothing on their minds but their Sunday dinners. What he needed was "gospel" hymns to worry and disturb and get action; livelier music than the slow-paced church hymnals afforded;

something the multitude could join in on and raise the roof.

He found Sankey and got them.

II

Ira David Sankey was known as the "singing evangelist." He was tall, stout, imposing, rather unctuous, and wore English mutton-chop whiskers. His was not a great voice in the musical sense, but he knew how to put fervor into it. A goodly proportion of the thousands of souls brought into the fold by the famous firm of Moody and Sankey during their twenty-five years of work together should be credited to Sankey's not too good singing of second-rate songs.

His colleague, Philip Paul Bliss, wrote some of the most popular hymns. Everyone in the 1880's not wholly beyond redemption knew "Dare to Be a Daniel," "Almost Persuaded," "Hold the Fort," "Pull for the Shore, Sailor," "Let the Lower Lights Be Burning," "Whosoever Will," and "Wonderful Words of Life." These were the most popular, but also the most ephemeral. Hymnbooks widely used to-day have no place for Bliss, though Sankey is still represented by the air he wrote for "I'm Praying for You" to words by S. O'Maley Cluff. Bliss was killed in the Ashtabula railroad disaster. His tomb bears the simple inscription, "Author of 'Hold the Fort.'" Both "Hold the Fort" and "Dare to Be a Daniel" were prohibited by the Sultan of Turkey.

A popular tear-starter by Bliss, often sung to the very young in the 1880's to prepare them to meet their end in the right spirit, ranks with "Where Is My Wandering Boy Tonight?" It began thus:—

"I should like to die," said Willie, "if my papa could die too,
But he says he isn't ready 'cause he has so much to do;
But my little sister Nellie says that I must surely die,
And mama—and then she stopped because she saw it made me cry."

Bliss and Sankey were not, as you might suspect, a sort of evangelical Gilbert and Sullivan, one writing the words, the other the music. (Sullivan, by the way, wrote hymns. "Onward, Christian Soldiers," to words by S. Baring-Gould, with its stirring march tune, is by the author of "Three Little Maids from School.") *Gospel Hymns* was a compilation, though both editors contributed. Bliss wrote both hymns and tunes, but Sankey composed music only, usually impromptu. His method was to collect fugitive pieces from the poet's corner of newspapers, with an eye to devotional content rather than literary merit, and write his own tune or assign the job to one of his journeyman hymn writers. He had a scrapbook full of such random verse, the quality of which may be inferred from its source.

Traveling to Edinburgh to conduct a meeting, he cut from a Glasgow newspaper some lines by Elizabeth Clephane entitled "The Ninety and Nine" and read them to Moody, who paid no attention. That night when Moody asked if he had a song appropriate to the occasion, Sankey pulled out the cutting, set it on the organ rack, and sang it offhand. "Where did you get that?" asked Moody. "That's the piece you wouldn't listen to this morning." It was one of Sankey's favorites and had a tremendous vogue, but it contains some awkward, almost unsingable lines:—

"Lord, thou hast here thy ninety and nine:
Are they not enough for thee?"
But the shepherd made answer, "This of mine
Has wandered away from me;
And although the road be rough and steep
I go to the desert to find my sheep."

P. T. Barnum, at one of the gospel meetings gently resisting the well-meant efforts to gather him in, said to Sankey, "You go on singing 'The Ninety and Nine,' and when you get that last sheep in the fold we shall all be saved." Barnum, it seems, was a Universalist.

Most hymns made religious history, or were the result of it. "Here I am, Take Me," was sung in the Senate when Lincoln was present; much impressed, he called for an encore. In London a singing actress, sud-

denly converted, came down to the lights for her regular number, stopped the show, and paralyzed the waiting orchestra by singing "Depths of Mercy, Can It Be." She left the stage and became a minister's wife.

Some of the hymns were inspired by what might be called current events—flood, fire, battle, shipwreck.

Let the lower lights be burning,
Send the gleam across the wave;
Some poor struggling, shipwrecked seaman
You may rescue, you may save,

drew a moral lesson from a ship wrecked in Cleveland Harbor when her master lost his bearings because the harbor lights were missing. Sherman, going to the rescue of Corse, defending stores and supplies in a small fort in Allatoona Pass, wig-wagged "Hold the fort; I am coming. Sherman." Corse held it, though with great loss, and was finally relieved. Hence Bliss's most famous hymn:—

"Hold the fort for I am coming,"
Jesus signals still.
Wave the answer back to heaven:
"By thy grace we will."

Gospel Hymns were the successors to the old camp-meeting spirituals—not so crude, but with the same jump and go. The tunes were characterized by contagious melody, dance rhythms, climactic catchwords, the qualities that make popular secular songs whistleable.

On the cross He sealed my pardon (sealed
my pardon, sealed my pardon),
Paid the debt, and made me free (and
m-a-ade me free-e-e). . . .

Crown Him, crown Him, angels, crown Him;
Crown the Savior King of kings. . . .

Hallelujah, thine the glory!
Hallelujah, amen!
Hallelujah, thine the glory,
Revive us again. . . .

Bliss was particularly good at catch melody, joyousness, and the martial note:—

Whosoever heareth, shout, *shout* the sound;
Send the blessed tidings all the world around.
Whosoever *will* MAY COME.

Beautiful words,
Wonderful words,
Wonderful words of life! . . .

Besides the shouting genus, there were narratives in ballad style, telling a story, always a popular form ("I love to tell the story"), such as:—

"Master, the tempest is raging;
The billows are tossing high;
The sky is o'ershadowed with blackness,
No shelter nor help is nigh.
Carest thou not that we perish?
How canst thou lie asleep,
When each moment so madly is threatening
A grave in the angry deep?"

"The winds and the waves shall obey my will,
Peace, be still; peace, be still.
Whether the wrath of the storm-tossed sea,
Or demons, or men, or whatever it be,
No water can swallow the ship where lies
The master of ocean and earth and skies—
They all shall sweetly obey my will,
Peace be still, Peace—peace—be—still."

The songs made up in piety and enthusiasm for what they lacked as poetry. A syllable too much or too little was easily slurred in mass singing. Little effort was made toward rhyme or metre; the same rhymes were used over and over. "Blood" was made to rhyme with "God," "o'er me" with "glory," "seen" with "sin," "riven" with "heaven," and not a soul was kept from salvation thereby. One we never could refrain from giving its proper rhyme:—

O word of words, the sweetest;
O words in which there lie
All promise, all fulfillment,
And end of myster-*eye*.

The blood atonements of the Old Testament imagery were not played up as much as of yore.

Sweeping through the gates to the new
Jerusalem;
Washed in the blood of the lamb,

and that barroom favorite,

There is a fountain filled with blood
Drawn from Immanuel's veins,
And sinners plunged beneath that flood
Lose all their guilty stains,

—written, by the way, by William Cowper, —did not evoke pleasant associations for the squeamish. The gospel-hymn idea was to get away from hell and blood and put more snap into the worship of God. Emphasis was on the joys of the blest rather than the tortures of the damned. Compare this gem from the good Dr. Watts,—

Loud Hallelujahs to the Lord
From distant worlds where creatures dwell!
Let heaven begin the solemn word
And sound it dreadful down to hell,

with the immensely popular "Beulah Land":—

I've reached the land of corn and wine,
And all its riches freely mine;
Here shines undimmed one blissful day,
For all my night has passed away.

The proselyting motif was not forgotten. There was a good deal of pursuing the erring, rescuing the perishing, and working up of emotional excitement:—

Alas, and did my Savior bleed,
And did my Sovereign die?
Would he devote that sacred head
For such a worm as I?

When Bliss was killed, Sankey was joined by Charles Coles Stebbins and James McGranahan, both proved hymn writers, in the compilation of gospel hymns, and the good work went on.

There were two names enshrined in the hearts of all Christian Endeavorers and Epworth Leaguers of those times, two bluestockings whose output was chiefly hymns, Frances Ridley Havergal and Fanny Crosby. Miss Havergal began writing at a tender age and produced reams of hymns, the best-known being,—

I gave, I gave my life for thee;
What hast thou given for me?

Fanny Crosby, the "blind poetess," was equally precocious and prolific. She wrote her first hymn at the age of six, lived to be ninety-eight, and wrote six thousand hymns, "mostly oyster shells," as one critic remarked, "but with now and then a pearl." She is best known, perhaps, by "There's Music in the Air," but of her hymns "Safe in the Arms of Jesus" is probably a pearl; at least it is retained in most collections. The Methodist Church once celebrated "Fanny Crosby Day."

Among writers otherwise known to fame who have written hymns which "made" these famous collections are Phoebe Cary ("One Sweetly Solemn Thought") and Harriet Beecher Stowe ("Knocking, Knocking, Who Is There?")

III

Dwight L. Moody put gospel hymns over. They took England and Scotland by storm. Oxford, Cambridge and Eton were converted. Gladstone and Lord Kinnaird attended meetings, and Queen Victoria, the Princess of Wales, and members of the royal family heard the songs from their private box at Her Majesty's Theatre. England was wholly sold on them. When music-hall entertainers tried to burlesque them, the audience broke out in song. At a circus in Dublin one clown asked another:—

"I am rather Moody; how you feeling?"

"I feel Sankeymonious."

The sally was greeted with boos and hisses; the whole audience rose and sang "Hold the Fort" by way of rebuke.

Gospel hymns spread like wildfire over the Western prairies. They were ice breakers for frozen prayer meetings, used for all religious meetings from Band of Hope to Chautauqua convocations, from Baptist Young People's Unions to Gideon's Bands ("O, do you belong to Gideon's Band?"),

by all denominations except Episcopalians and Catholics, who have a classic heritage of far greater music. The time was ripe for them. There was little to distract the young from the worship of God; religion did not have to compete with radio, movie, and motorcar. Revivals were scenes of emotional excitement for sex-starved females who expended their energies in converting their men friends. The books were in every home on the back of the Estey organ or the Mathushek square piano, and social gatherings wound up with a good sing. Well might it be asked, as one of the hymns searchingly did, "What, oh, what shall the harvest be?"

Sales exceeded those of any current publication; the profits were large. No figures are available, but in the life of Moody by his son it is mentioned that the royalties for the first ten years were $357,388.64, an amount so meticulous as to be convincing. At thirty-five cents a copy, with 10 per cent royalty, it would mean over ten million copies. And the sales after 1885 must have been greater.

Neither Moody nor Sankey touched the money. A trust was set up for the fund; William E. Dodge was one of the trustees, and the profits were devoted to pious works, but largely to support preparatory schools at Northfield, Massachusetts, Moody's home town; and, despite the tautness of religious lines, they are excellent schools.

Gospel hymns have passed. The six collections are still published, in one volume with duplicates eliminated, but it is merely a curio. The Hope Publishing Company of Chicago is said to hold the copyrights of the old headliners,—Bliss, Sankey, Stebbins, McGranahan, Fanny Crosby, and other shining lights,—and to do a tidy business in "permissions." Arthur Billings Hunt, who conducts a Sunday-evening hymn sing over the radio, is a customer for "permissions," and finds Fanny Crosby a good "buy" for his public. He writes hymns of his own and sends them out to inquirers on leaflets at five cents a copy. The Gospel Singers over NBC network have compiled a hymnbook which has in one year exhausted three editions, running from ten to fifteen thousand copies each. It was brought out by Homer Alvan Rodeheaver, who was Billy Sunday's Man Friday, as Sankey was Moody's.

There were other collections during those fruitful years between 1870 and 1890 when gospel hymns rolled over the prairies, but none which went over with such a bang as Sankey's collections. Their popularity is easily explained. Religion was due for another lightening of its gloomy burden which rested so heavily on the spirits of youth, to keep the next generation from kicking over the traces. The process had been going on since the Pilgrims landed on that stern and rock-bound coast and began to promulgate their stern and rock-bound tenets. Just as Lyman Beecher in the thirties mitigated the tortures of infants damned under Jonathan Edwards's intolerable theory of original sin, so Moody and Sankey played down the insistence of hell and blood which had made Finney and his "Holy Band" holy terrors to scared young sinners in the forties, and played up the blessings of the saved:—

> There's a land that is fairer than day,
> And by faith we can see it afar . . .

or

> Not half of that city's bright glory
> To mortals has ever been told.

The new hymns represented relief from the grimmer religion of the previous generation, and to youth meant escape. Whether this was sound theology or not, it was good psychology, and saved the day for another generation. So gay were some of the tunes which Sankey roared out in his barytone voice that Moody had misgivings, and once requested Sankey not to sing "Bringing in the Sheaves" again, as some of the ministers feared it would set the young people to dancing.

The hymns were a real resource to rural towns, so barren of amusement; reluctant and hardened youths were compelled to attend prayer meetings and Sunday School or eschew social life, for social life meant girls, and girls meant facing the music of

Sankey, Bliss, McGranahan, and Stebbins, and thus we all learned them, willy-nilly. They were bound to spread, for they possessed the seeds of popularity and were constructed on an approved model, that of popular secular songs. They had not only the catchy music but the sentimental wording of such ditties as "Twenty Years Ago," "Old Black Joe," and "I Don't Want to Play in Your Yard."

Popular music as an exponent of national emotions and tendencies has never received the respectful study it merits. Plato says in the *Republic* (though I got it from Mark Sullivan's *Old Times*), "Styles of music are never disturbed without affecting the most important political institutions." Some day some social philosopher will explore the gospel-hymn era for its deeper implications. Meanwhile those who still know the hymns by heart are dying off, and the modern glorified cocktail bar does not lend itself to barroom sentimental vocalization.

Thus it is strange, considering the impression they made on the American mind for two decades, that those six hymnbooks in sober gray boards with black muslin backs, each accompanied by a smaller edition in paper wrappers with words only,—for those who could carry the tune, or perhaps couldn't sing anyway,—have escaped the eagle eyes of collectors of Americana, which have ferreted out Currier and Ives prints, Will Carleton's *Farm Ballads,* and the immortal works of Mr. Beadle and Nick Carter. They all belong to the same phase of our emotional history. But I have never seen them listed, not even in the catalogues of that one-hundred-per cent Americana specialist, Heartman of Metuchen.

The Great Fire of London [1]

SAMUEL PEPYS

September 2nd. (Lord's Day.) Some of our mayds sitting up late last night to get things ready against our feast to-day, Jane called us up about three in the morning to tell us of a great fire they saw in the City. So I rose and slipped on my night-gowne and went to her window, and thought it to be on the back-side of Marke-lane at the farthest; but, being unused to such fires as followed, I thought it far enough off; and so went to bed again and to sleep. About seven rose again to dress myself, and there looked out at the window and saw the fire not so much as it was, and further off. So to my closett to set things to rights after yesterday's cleaning. By and by Jane comes and tells me that she hears that above 300 houses have burned down to-night by the fire we saw, and that it is now burning down all Fish-street, by London Bridge. So I made myself ready presently and walked to the Tower, and there got up upon one of the high places, Sir J. Robinson's little son going up with me; and there I did see the houses at that end of the bridge all on fire, and an infinite great fire on this and the other side the end of the bridge. So with my heart full of trouble, I down to the water-side, and there got a boat and through bridge, and there saw a lamentable fire. Poor Michell's house, as far as the Old Swan, already burned that way, and the fire running further. Everybody endeavouring to remove their goods, and flinging into the river or bringing them into lighters that lay off; poor people staying in their houses as long as till the very fire touched them, and then running into boats, or clambering from one pair of stairs by the water-side to another. And among other things the poor pigeons, I perceive, were loth to leave their houses, but hovered about the windows and balconys till they were, some of them burned, their wings, and fell down. Having staid, and in an hour's time seen the fire

[1] From the *Diary* of Samuel Pepys.

rage every way, and nobody, to my sight, endeavouring to quench it, but to remove their goods and leave all to the fire; and having seen it get as far as the Steele-yard, and the wind mighty high and driving it into the City, and every thing after so long a drought proving combustible, even the very stones of churches, I to White Hall and there up to the King's closett in the Chappell, where people come about me and I did give them an account dismayed them all, and word was carried in to the King. So I was called for and did tell the King and Duke of Yorke what I saw, and that unless his Majesty did command houses to be pulled down nothing could stop the fire. They seemed much troubled, and the King commanded me to go to my Lord Mayor from him and command him to spare no houses, but to pull down before the fire every way. The Duke of York bid me tell him that if he would have any more soldiers he shall. Here meeting with Captain Cocke, I in his coach which he lent me, and Creed with me to Paul's, and there walked along Watling-street as well as I could, every creature coming away loaden with goods to save, and here and there sicke people carried away in beds. Extraordinary good goods carried in carts and on backs. At last met my Lord Mayor in Canning-street like a man spent, with a handkercher about his neck. To the King's message he cried, like a fainting woman, "Lord! what can I do? I am spent: people will not obey me. I have been pulling down houses, but the fire overtakes us faster than we can do it." That he needed no more soldiers; and that, for himself, he must go and refresh himself, having been up all night. So he left me, and I him, and walked home, seeing people all almost distracted; and no manner of means used to quench the fire. The houses, too, so very thick thereabouts, and full of matter for burning, as pitch and tarr, in Thames-street; and warehouses of oyle, and wines, and brandy and other things. I saw Mr. Isaake Houblon, the handsome man, prettily dressed and dirty, at his door at Dowgate receiving some of his brothers' things, whose houses were on fire; and, as he says have been removed twice already, and he doubts (as it soon proved) that they must be a little time removed from his house also, which was a sad consideration. And to see the churches all filling with goods by people who themselves should have been quietly there at this time. By this time it was about twelve o'clock; and so home, and soon as dined, away and walked through the City, the street full of nothing but people and horses and carts loaden with goods. They now removing out of Canning-streete (which received goods in the morning) into Lumbard-streete, and further. Met with the King and Duke of York in their barge, and with them to Queenhithe, and there called Sir Richard Browne to them. Their order was only to pull down houses apace; and so below bridge at the water-side, but little was or could be done, the fire coming upon them so fast. River full of lighters and boats taking in goods, and good goods swimming in the water, and only I observed that hardly one lighter or boat in three that had the goods of a house in, but there was a pair of Virginalls in it.

Having seen as much as I could now, I away to White Hall by appointment, and there walked to my boat; and there upon the water again, and to the fire up and down, it still encreasing, and the wind great. So near the fire as we could for smoke; and all over the Thames, with one's face in the wind, you were almost burned with a shower of fire-drops. This is very true; so as houses were burned by these drops and flakes of fire, three or four, nay, five or six houses, one from another. When we could endure no more upon the water, we to a little ale-house on the Bankside, over against the Three Cranes, and there staid till it was dark almost, and saw the fire grow; and, as it grew darker, appeared more and more, and in corners and upon steeples, and between churches and houses as far as we could see up the hill of the City, in a most horrid malicious bloody flame, not like the fine flame of an ordinary fire. We staid still, it being darkish, we saw the fire as only one entire arch of fire from this to the other side of the bridge, and in a bow up the hill for an arch of above a mile long: it made

me weep to see it. The churches, houses and all on fire and flaming at once; and a horrid noise the flames made, and the cracking of houses at their ruine. So home with a sad heart, and there find poor Tom Hater come with some few of his goods saved out of his house, which is burned. I invited him to lie at my house and did receive his goods, but was deceived in his lying there, the newes coming every moment of the growth of the fire; so as we were forced to begin to pack up our owne goods and prepare for their removal; and did by moonshine (it being brave dry and moonshine and warm weather) carry much of my goods into the garden, and Mr. Hater and I did remove my money and iron chests into my cellar, as thinking that the safest place. And got my bags of gold into my office ready to carry away, and my chief papers of accounts also there, and my tallys into a box by themselves. So great was our fear, as Sir W. Batten hath carts come out of the country to fetch away his goods this night. We did put Mr. Hater, poor man, to bed a little; but he got but very little rest, so much noise being in my house taking down of goods.

3rd. About four o'clock in the morning my Lady Batten sent me a cart to carry away all my money and plate and best things to Sir W. Rider's at Bednall-greene: which I did, riding myself in my night-gowne in the cart, and, Lord! to see how the streets and the highways are crowded with people running and riding, and getting of carts at any rate to fetch away things. I find Sir W. Rider tired with being called up all night and receiving things from several friends. His house full of goods, and much of Sir W. Batten's and Sir W. Pen's. I am eased at my heart to have my treasure so well secured. Then home, with much ado to find a way, nor any sleep all this night to me nor my poor wife, but then, and all this day, she and I and all my people labouring to get away the rest of our things. The Duke of Yorke come this day by the office and spoke to us, and did ride with his guard up and down the City to keep all quiet (he being now Generall, and having the care of all). This day, Mercer being not at home but against her mistress's order gone to her mother's, and my wife going thither to speak with W. Hewer met her there, and was angry; and her mother saying that she was not a 'prentice girl, to ask leave every time she goes abroad, my wife with good reason was angry, and when she came home bid her be gone again. And so she went away, which troubled me; but yet less than it would, because of the condition we are in fear of coming into in a little time of being less able to keepe one in her quality. At night lay down a little upon a quilt of W. Hewer's in the office, all my owne things being packed up or gone; and after me my poor wife did the like, we having fed upon the remains of yesterday's dinner, having no fire nor dishes, nor any opportunity of dressing any thing.

4th. Up by break of day to get away the remainder of my things. Sir W. Batten not knowing how to remove his wine did dig a pit in the garden and laid it in there; and I took the opportunity of laying all the papers of my office that I could not otherwise dispose of. And in the evening Sir W. Pen and I did dig another and put our wine in it, and I my Parmazan cheese as well as my wine and some other things. This afternoon, sitting melancholy with Sir W. Pen in our garden, and thinking of the certain burning of this office without extraordinary means, I did propose for the sending up of all our workmen from Woolwich and Deptford yards (none whereof yet appeared), and to write to Sir W. Coventry to have the Duke of Yorke's permission to pull down houses rather than lose this office, which would much hinder the King's business. So Sir W. Pen he went down this night, in order to the sending them up to-morrow morning; and I wrote to Sir W. Coventry about the business, but received no answer. This night Mrs. Turner (who, poor woman, was removing her goods all this day, good goods into the garden, and knows not how to dispose of them) and her husband supped with my wife and I at night in the office, upon a shoulder of mutton from the cook's, without any napkin or any thing, in a sad man-

ner, but were merry. Only now and then walking into the garden, and saw how horridly the sky looks, all on a fire in the night, was enough to put us out of our wits; and indeed it was extremely dreadful, for it looks just as if it was at us, and the whole heaven on fire. I after supper walked in the darke down to Tower-streete, and there saw it all on fire. Now begins the practice of blowingup of houses in Tower-streete, those next to Tower, which at first did frighten people more than any thing. W. Hewer this day went to see how his mother did, and comes late home, telling us how he hath been forced to remove her to Islington, her house in Pye-corner being burned; so that the fire is got so far that way, and all the Old Bayly, and was running down to Fleete-streete; and Paul's is burned, and all Cheapside. I wrote to my father this night, but the posthouse being burned, the letter could not go.

5th. I lay down in the office again upon W. Hewer's quilt, being mighty weary and sore in my feet with going till I was hardly able to stand. About two in the morning my wife calls me up and tells me of new cryes of fire, it being come to Barkeing Church, which is the bottom of our lane. I up, and finding it so resolved presently to take her away, and did, and took my gold, which was about £2,350, W. Hewer and Jane down by Proundy's boat to Woolwich; but, Lord! what a sad sight it was by moone-light to see the whole City almost on fire, that you might see it plain at Woolwich as if you were by it. There when I come I find the gates shut, but no guard kept at all, which troubled me because of discourse now begun that there is plot in it and that the French had done it. I got the gates open, and to Mr. Sheldon's, where I locked up my gold and charged my wife and W. Hewer never to leave the room without one of them in it, night or day. So back again, by the way seeing my goods well in the lighters at Deptford and watched well by people. Home, and whereas I expected to have seen our house on fire, it being now about seven o'clock, it was not. But to the fyre, and there find greater hopes than I expected; for my confidence of finding our Office on fire was such that I durst not ask any body how it was with us till I come, and saw it not burned. But going to the fire I find, by the blowing up of houses and the great helpe given by the workmen out of the King's yards sent up by Sir W. Pen, there is a good stop given to it, as well to Marke-lane end as ours; it having only burned the dyall of Barking Church and part of the porch, and was there quenched. I up to the top of Barking steeple and there saw the saddest sight of desolation that I ever saw; every where great fires, oyle-cellars and brimstone and other things burning. I became afeard to stay there long, and therefore down again as fast as I could, the fire being spread as far as I could see it; and to Sir W. Pen's, and there eat a piece of cold meat, having eaten nothing since Sunday, but the remains of Sunday's dinner. And having removed all my things and received good hopes that the fire at our end is stopped, I walked into the town, and find Fanchurch-streete, Gracious-streete, and Lumbard-streete all in dust. The Exchange a sad sight, nothing standing there of all the statues or pillars but Sir Thomas Gresham's picture in the corner. Walked into Moore-fields (our feet ready to burn, walking through the towne among the hot coles), and find that full of people, and poor wretches carrying their goods there, and every body keeping his goods together by themselves (and a great blessing it is to them that it is fair weather for them to keep abroad night and day). Drank there, and paid twopence for a plain penny loaf; thence homeward, having passed through Cheapside and Newgate Market, all burned, and seen Anthony Joyce's house in fire. I also did see a poor cat taken out of a hole in the chimney joyning to the wall of the Exchange, with the hair all burned off the body and yet alive. So home at night, and find there good hopes of saving our office, but great endeavours of watching all night, and having men ready; and so we lodged them in the office and had drink and bread and cheese for them. And I lay down and slept a good night about midnight.

6th. Up about five o'clock, and there met Mr. Gawden at the gate of the office to call our men to Bishop's-gate, where no fire had yet been near, and there is now one broke out. I went with the men, and we did put it out in a little time; so that that was well again. It was pretty to see how hard the women did work in the cannells, sweeping of water; but then they would scold for drink, and be as drunk as devils. I saw good butts of sugar broke open in the street, and people go and take handsfull out and put into beer and drink it. And now all being pretty well I took boat and over to Southwarke, and took boat on the other side the bridge and so to Westminster thinking to shift myself, being all in dirt from top to bottom; but could not there find any place to buy a shirt or pair of gloves, Westminster Hall being full of people's goods, those in Westminster having removed all their goods; but to the Swan, and there was trimmed, and then to White Hall, but saw nobody, and so home. A sad sight to see how the River looks, no houses nor church near it, to the Temple, where it stopped. To Sir R. Ford's and there dined on an earthen platter; a fried breast of mutton; a great many of us, but very merry, and indeed as good a meal, though as ugly a one, as I ever had in my life. Thence down to Deptford, and there with great satisfaction landed all my goods at Sir G. Carteret's safe, and nothing missed I could see, or hurt. This being done to my great content, I home and to Sir W. Batten's, and there supped well and mighty merry, and our fears over. From them to the office, and there slept with the office full of labourers, who talked and slept and walked all night long there. But strange it was to see Cloathworkers' Hall on fire these three days and nights in one body of flame, it being the cellar full of oyle.

7th. Up by five o'clock, and blessed be God! find all well; and by water to Paul's Wharfe. Walked thence and saw all the towne burned, and a miserable sight of Paul's church, with all the roofs fallen, and the body of the quire fallen into St. Fayth's; Paul's school also, Ludgate, and Fleet-streete, my father's house and the church and a good part of the Temple the like. So to Creed's lodging near the New Exchange, and there find him laid down upon a bed, the house all unfurnished, there being fears of the fire's coming to them. There borrowed a shirt of him and washed. To Sir W. Coventry at St. James's, who lay without curtains, having removed all his goods, as the King at White Hall and every body had done and was doing. He hopes we shall have no publique distractions upon this fire, which is what every body fears, because of the talke of the French having a hand in it. And it is a proper time for discontents, but all men's minds are full of care to protect themselves and save their goods. The militia is in arms every where. Our fleetes, he tells me, have been in sight one of another, and most unhappily by fowle weather were parted, to our great losse. So home and did give orders for my house to be made clean.

This day our Merchants first met at Gresham College, which, by proclamation, is to be their Exchange. Strange to hear what is bid for houses all up and down here, a friend of Sir W. Rider's having £150 for what he used to let for £40 per annum. Much dispute where the Custome-house shall be; thereby the growth of the City again to be foreseen. I home late to Sir W. Pen's, who did give me a bed, but without curtains or hangings, all being down. So here I went the first time into a naked bed, only my drawers on, and did sleep pretty well; but still both sleeping and waking had a fear of fire in my heart, that I took little rest. People do all the world over cry out of the simplicity of my Lord Mayor in generall; and more particularly in this business of the fire, laying it all upon him. A proclamation is come for markets to be kept at Leadenhall and Mile-end-greene and several other places about the towne, and Tower-hill; and all churches to be set open to receive poor people.

The Execution of Queen Mary[1]

JAMES ANTHONY FROUDE

BRIEFLY, SOLEMNLY, and sternly they delivered their awful message. They informed her that they had received a commission under the great seal to see her executed, and she was told that she must prepare to suffer on the following morning.

She was dreadfully agitated. For a moment she refused to believe them. Then, as the truth forced itself upon her, tossing her head in disdain and struggling to control herself, she called her physician and began to speak to him of money that was owed to her in France. At last it seems that she broke down altogether, and they left her with a fear either that she would destroy herself in the night, or that she would refuse to come to the scaffold, and that it might be necessary to drag her there by violence.

The end had come. She had long professed to expect it, but the clearest expectation is not certainty. The scene for which she had affected to prepare she was to encounter in its dread reality, and all her busy schemes, her dreams of vengeance, her visions of a revolution, with herself ascending out of the convulsion and seating herself on her rival's throne—all were gone. She had played deep, and the dice had gone against her.

Yet in death, if she encountered it bravely, victory was still possible. Could she but sustain to the last the character of a calumniated suppliant accepting heroically for God's sake and her creed's the concluding stroke of a long series of wrongs, she might stir a tempest of indignation which, if it could not save herself, might at least overwhelm her enemy. Persisting, as she persisted to the last, in denying all knowledge of Babington, it would be affectation to credit her with a genuine feeling of religion; but the imperfection of her motive exalts the greatness of her fortitude. To an impassioned believer death is comparatively easy.

Her chaplain was lodged in a separate part of the castle. The Commissioners, who were as anxious that her execution should wear its real character as she was herself determined to convert it into a martyrdom, refused, perhaps unwisely, to allow him access to her, and offered her again the assistance of an Anglican Dean. They gave her an advantage over them which she did not fail to use. She would not let the Dean come near her. She sent a note to the chaplain telling him that she had meant to receive the sacrament, but as it might not be she must content herself with a general confession. She bade him watch through the night and pray for her. In the morning when she was brought out she might perhaps see him, and receive his blessing on her knees. She supped cheerfully, giving her last meal with her attendants a character of sacred parting; afterwards she drew aside her apothecary, M. Gorion, and asked him if she might depend upon his fidelity: when he satisfied her that she might trust him, she said she had a letter and two diamonds which she wished to send to Mendoza. He undertook to melt some drug and conceal them in it where they would never be looked for, and promised to deliver them faithfully. One of the jewels was for Mendoza himself; the other and the largest was for Philip. It was to be a sign that she was dying for the truth, and was meant also to bespeak his care for her friends and servants. Every one of them so far as she was able, without forgetting a name, she commended to his liberality. Arundel, Paget, Morgan, the Archbishop of Glasgow, Westmoreland, Throgmorton, the Bishop of Ross, her two secretaries, the ladies who had shared the trials of her imprisonment, she remembered them all, and specified the sums which she desired Philip to bestow on them. And as Mary Stuart then and throughout her life

[1] From *History of England*, Vol. XII.

never lacked gratitude to those who had been true to her, so then as always she remembered her enemies. There was no cant about her, no unreal talk of forgiveness of injuries. She bade Gorion tell Philip it was her last prayer that he should persevere, notwithstanding her death, in the invasion of England. It was God's quarrel, she said, and worthy of his greatness: and as soon as he had conquered it, she desired him not to forget how she had been treated by Cecil, and Leicester, and Walsingham; by Lord Huntingdon, who had ill-used her fifteen years before at Tutbury; by Sir Amyas Paulet, and Secretary Wade.

Her last night was a busy one. As she said herself, there was much to be done and the time was short. A few lines to the King of France were dated two hours after midnight. They were to insist for the last time that she was innocent of conspiracy, that she was dying for religion, and for having asserted her right to the crown; and to beg that out of the sum which he owed her, her servants' wages might be paid, and masses provided for her soul. After this she slept for three or four hours, and then rose and with the most elaborate care prepared to encounter the end.

At eight in the morning the Provost-marshal knocked at the outer door which communicated with her suite of apartments. It was locked and no one answered, and he went back in some trepidation lest the fears might prove true which had been entertained the preceding evening. On his returning with the Sheriff, however, a few minutes later, the door was open, and they were confronted with the tall majestic figure of Mary Stuart standing before them in splendour. The plain gray dress had been exchanged for a robe of black satin; her jacket was of black satin also, looped and slashed and trimmed with velvet. Her false hair was arranged studiously with a coif, and over her head and falling drawn over her back was a white veil of delicate lawn. A crucifix of gold hung from her neck. In her hand she held a crucifix of ivory, and a number of jewelled Paternosters was attached to her girdle. Led by two of Paulet's gentlemen, the Sheriff walking before her, she passed to the chamber of presence in which she had been tried, where Shrewsbury, Kent, Paulet, Drury, and others were waiting to receive her. Andrew Melville, Sir Robert's brother, who had been master of her household, was kneeling in tears. "Melville," she said, "you should rather rejoice than weep that the end of my troubles is come. Tell my friends I die a true Catholic. Commend me to my son. Tell him I have done nothing to prejudice his kingdom of Scotland, and so, good Melville, farewell." She kissed him, and turning asked for her chaplain Du Preau. He was not present. There had been a fear of some religious melodrama which it was thought well to avoid. Her ladies, who had attempted to follow her, had been kept back also. She could not afford to leave the account of her death to be reported by enemies and Puritans, and she required assistance for the scene which she meditated. Missing them, she asked the reason of their absence, and said she wished them to see her die. Kent said he feared they might scream or faint, or attempt perhaps to dip their handkerchiefs in her blood. She undertook that they should be quiet and obedient. "The Queen," she said, "would never deny her so slight a request;" and when Kent still hesitated, she added with tears, "You know I am cousin to your Queen, of the blood of Henry the Seventh, a married Queen of France, and anointed Queen of Scotland."

It was impossible to refuse. She was allowed to take six of her own people with her, and select them herself. She chose her physician Burgoyne, Andrew Melville, the apothecary Gorion, and her surgeon, with two ladies, Elizabeth Kennedy and Curle's young wife Barbara Mowbray, whose child she had baptized.

"Allons donc," she then said—"Let us go," and passing out attended by the Earls, and leaning on the arm of an officer of the guard, she descended the great staircase to the hall. The news had spread far through the country. Thousands of people were collected outside the walls. About three hundred

knights and gentlemen of the county had been admitted to witness the execution. The tables and forms had been removed, and a great wood fire was blazing in the chimney. At the upper end of the hall, above the fireplace, but near it, stood the scaffold, twelve feet square and two feet and a half high. It was covered with black cloth; a low rail ran round it covered with black cloth also, and the Sheriff's guard of halberdiers were ranged on the floor below on the four sides to keep off the crowd. On the scaffold was the block, black like the rest; a square black cushion was placed behind it, and behind the cushion a black chair; on the right were two other chairs for the Earls. The axe leant against the rail, and two masked figures stood like mutes on either side at the back. The Queen of Scots as she swept in seemed as if coming to take a part in some solemn pageant. Not a muscle of her face could be seen to quiver; she ascended the scaffold with absolute composure, looking round her smiling, and sate down. Shrewsbury and Kent followed and took their places, the Sheriff stood at her left hand, and Beale then mounted a platform and read the warrant aloud.

In all the assembly Mary Stuart appeared the person least interested in the words which were consigning her to death.

"Madam," said Lord Shrewsbury to her, when the reading was ended, "you hear what we are commanded to do."

"You will do your duty," she answered, and rose as if to kneel and pray.

The Dean of Peterborough, Dr. Fletcher, approached the rail. "Madam," he began, with a low obeisance, "the Queen's most excellent Majesty"; "Madam, the Queen's most excellent Majesty"—thrice he commenced his sentence, wanting words to pursue it. When he repeated the words a fourth time, she cut him short.

"Mr. Dean," she said, "I am a Catholic, and must die a Catholic. It is useless to attempt to move me, and your prayers will avail me but little."

"Change your opinion, Madam," he cried, his tongue being loosed at last; "repent of your sins, settle your faith in Christ, by him to be saved."

"Trouble not yourself further, Mr. Dean," she answered; "I am settled in my own faith, for which I mean to shed my blood."

"I am sorry, Madam," said Shrewsbury, "to see you so addicted to Popery."

"That image of Christ you hold there," said Kent, "will not profit you if he be not engraved in your heart."

She did not reply, and turning her back on Fletcher, knelt for her own devotions.

He had been evidently instructed to impair the Catholic complexion of the scene, and the Queen of Scots was determined that he should not succeed. When she knelt he commenced an extempore prayer in which the assembly joined. As his voice sounded out in the hall she raised her own, reciting with powerful deep-chested tones the penitential Psalms in Latin, introducing English sentences at intervals, that the audience might know what she was saying, and praying with especial distinctness for her Holy Father the Pope.

From time to time, with conspicuous vehemence, she struck the crucifix against her bosom, and then, as the Dean gave up the struggle, leaving her Latin, she prayed in English wholly, still clear and loud. She prayed for the Church which she had been ready to betray, for her son, whom she had disinherited, for the Queen whom she had endeavoured to murder. She prayed God to avert his wrath from England, that England which she had sent a last message to Philip to beseech him to invade. She forgave her enemies, whom she had invited Philip not to forget, and then, praying to the saints to intercede for her with Christ, and kissing the crucifix and crossing her own breast, "Even as thy arms, O Jesus," she cried, "were spread upon the cross, so receive me into thy mercy and forgive my sins."

With these words she rose; the black mutes stepped forward, and in the usual form begged her forgiveness.

"I forgive you," she said, "for now I hope you shall end all my troubles." They offered their help in arranging her dress. "Truly, my lords," she said with a smile to the Earls, "I never had such grooms waiting on me before." Her ladies were allowed to come

up upon the scaffold to assist her; for the work to be done was considerable, and had been prepared with no common thought.

She laid her crucifix on her chair. The chief executioner took it as a perquisite, but was ordered instantly to lay it down. The lawn veil was lifted carefully off, not to disturb the hair, and was hung upon the rail. The black robe was next removed. Below it was a petticoat of crimson velvet. The black jacket followed, and under the jacket was a body of crimson satin. One of her ladies handed her a pair of crimson sleeves, with which she hastily covered her arms; and thus she stood on the black scaffold with the black figures all around her, blood-red from head to foot.

Her reasons for adopting so extraordinary a costume must be left to conjecture. It is only certain that it must have been carefully studied, and that the pictorial effect must have been appalling.

The women, whose firmness had hitherto borne the trial, began now to give way, spasmodic sobs bursting from them which they could not check. "Ne criez vous," she said, "j'ay promis pour vous." Struggling bravely, they crossed their breasts again and again, she crossing them in turn and bidding them pray for her. Then she knelt on the cushion. Barbara Mowbray bound her eyes with a handkerchief. "Adieu," she said, smiling for the last time and waving her hand to them, "Adieu, au revoir." They stepped back from off the scaffold and left her alone. On her knees she repeated the Psalm, In te, Domine, confido, "In thee, O Lord, have I put my trust." Her shoulders being exposed, two scars became visible, one on either side, and the Earls being now a little behind her, Kent pointed to them with his white wand and looked inquiringly at his companion. Shrewsbury whispered that they were the remains of two abscesses from which she had suffered while living with him at Sheffield.

When the psalm was finished she felt for the block, and laying down her head muttered: "In manus, Domine tuas, commendo animam meam." The hard wood seemed to hurt her, for she placed her hands under her neck. The executioners gently removed them, lest they should deaden the blow, and then one of them holding her slightly, the other raised the axe and struck. The scene had been too trying even for the practised headsman of the Tower. His arm wandered. The blow fell on the knot of the handkerchief, and scarcely broke the skin. She neither spoke nor moved. He struck again, this time effectively. The head hung by a shred of skin, which he divided without withdrawing the axe; and at once a metamorphosis was witnessed, strange as was ever wrought by wand of fabled enchanter. The coif fell off and the false plaits. The laboured illusion vanished. The lady who had knelt before the block was in the maturity of grace and loveliness. The executioner, when he raised the head, as usual, to shew it to the crowd, exposed the withered features of a grizzled, wrinkled old woman.

The Heights of Abraham[1]

FRANCIS PARKMAN

MEANWHILE A deep cloud fell on the English. Since the siege began, Wolfe had passed with ceaseless energy from camp to camp, animating the troops, observing everything, and directing everything; but now the pale face and tall lean form were seen no more, and the rumor spread that the general was dangerously ill. He had in fact been seized by an access of the disease that had tortured him for some time past; and fever had followed. His quarters were at a French farmhouse in the camp at Montmorenci; and

[1] From *Montcalm and Wolfe*, 1884.

here, as he lay in an upper chamber, helpless in bed, his singular and most unmilitary features haggard with disease and drawn with pain, no man could less have looked the hero. But as the needle, though quivering, points always to the pole, so, through torment and languor and the heats of fever, the mind of Wolfe dwelt on the capture of Quebec. His illness, which began before the twentieth of August, had so far subsided on the twenty-fifth that Knox wrote in his Diary of that day: "His Excellency General Wolfe is on the recovery, to the inconceivable joy of the whole army." On the twenty-ninth he was able to write or dictate a letter to the three brigadiers, Monckton, Townshend, and Murray: "That the public service may not suffer by the General's indisposition, he begs the brigadiers will meet and consult together for the public utility and advantage, and consider of the best method to attack the enemy." The letter then proposes three plans, all bold to audacity. The first was to send a part of the army to ford the Montmorenci eight or nine miles above its mouth, march through the forest, and fall on the rear of the French at Beauport, while the rest landed and attacked them in front. The second was to cross the ford at the mouth of the Montmorenci and march along the strand, under the French intrenchments, till a place could be found where the troops might climb the heights. The third was to make a general attack from boats at the Beauport flats. Wolfe had before entertained two other plans, one of which was to scale the heights at St. Michel, about a league above Quebec; but this he had abandoned on learning that the French were there in force to receive him. The other was to storm the Lower Town; but this also he had abandoned, because the Upper Town, which commanded it, would still remain inaccessible.

The brigadiers met in consultation, rejected the three plans proposed in the letter, and advised that an attempt should be made to gain a footing on the north shore above the town, place the army between Montcalm and his base of supply, and so force him to fight or surrender. The scheme was similar to that of the heights of St. Michel. It seemed desperate, but so did all the rest; and if by chance it should succeed, the gain was far greater than could follow any success below the town. Wolfe embraced it at once.

Not that he saw much hope in it. He knew that every chance was against him. Disappointment in the past and gloom in the future, the pain and exhaustion of disease, toils, and anxieties "too great," in the words of Burke, "to be supported by a delicate constitution, and a body unequal to the vigorous and enterprising soul that it lodged," threw him at times into deep dejection. By those intimate with him he was heard to say that he would not go back defeated, "to be exposed to the censure and reproach of an ignorant populace." In other moods he felt that he ought not to sacrifice what was left of his diminished army in vain conflict with hopeless obstacles. But his final resolve once taken, he would not swerve from it. His fear was that he might not be able to lead his troops in person. "I know perfectly well you cannot cure me," he said to his physician; "but pray make me up so that I may be without pain for a few days, and able to do my duty: that is all I want."

In a despatch which Wolfe had written to Pitt, Admiral Saunders conceived that he had ascribed to the fleet more than its just share in the disaster at Montmorenci; and he sent him a letter on the subject. Major Barré kept it from the invalid till the fever had abated. Wolfe then wrote a long answer, which reveals his mixed dejection and resolve. He affirms the justice of what Saunders had said, but adds: "I shall leave out that part of my letter to Mr. Pitt which you object to. I am sensible to my own errors in the course of the campaign, see clearly wherein I have been deficient, and think a little more or less blame to a man that must necessarily be ruined, of little or no consequence. I take the blame of that unlucky day entirely upon my own shoulders, and I expect to suffer for it." Then, speaking of the new project of an attack above Quebec, he says despondingly: "My ill state of health prevents me from executing my own plan; it is of too desperate a nature to order others

to execute." He proceeds, however, to give directions for it. "It will be necessary to run as many small craft as possible above the town, with provisions for six weeks, for about five thousand, which is all I intend to take. My letters, I hope, will be ready to-morrow, and I hope I shall have strength to lead these men to wherever we can find the enemy."

On the next day, the last of August, he was able for the first time to leave the house. It was on this same day that he wrote his last letter to his mother: "My writing to you will convince you that no personal evils worse than defeats and disappointments have fallen upon me. The enemy puts nothing to risk, and I can't in conscience put the whole army to risk. My antagonist has wisely shut himself up in inaccessible intrenchments, so that I can't get at him without spilling a torrent of blood, and that perhaps to little purpose. The Marquis de Montcalm is at the head of a great number of bad soldiers, and I am at the head of a small number of good ones, that wish for nothing so much as to fight him; but the wary old fellow avoids an action, doubtful of the behavior of his army. People must be of the profession to understand the disadvantages and difficulties we labor under, arising from the uncommon natural strength of the country."

On the second of September a vessel was sent to England with his last despatch to Pitt. It begins thus: "The obstacles we have met with in the operations of the campaign are much greater than we had reason to expect or could foresee; not so much from the number of the enemy (though superior to us) as from the natural strength of the country, which the Marquis of Montcalm seems wisely to depend upon. When I learned that succors of all kinds had been thrown into Quebec; that five battalions of regular troops, completed from the best inhabitants of the country, some of the troops of the colony, and every Canadian that was able to bear arms, besides several nations of savages, had taken the field in a very advantageous situation,— I could not flatter myself that I should be able to reduce the place. I sought, however, an occasion to attack their army, knowing well that with these troops I was able to fight, and hoping that a victory might disperse them." Then, after recounting the events of the campaign with admirable clearness, he continues: "I found myself so ill, and am still so weak, that I begged the general officers to consult together for the general utility. They are all of opinion that, as more ships and provisions are now got above the town, they should try, by conveying up a corps of four or five thousand men (which is nearly the whole strength of the army after the Points of Levi and Orleans are left in a proper state of defence), to draw the enemy from their present situation and bring them to an action. I have acquiesced in the proposal, and we are preparing to put it into execution." The letter ends thus: "By the list of disabled officers, many of whom are of rank, you may perceive that the army is much weakened. By the nature of the river, the most formidable part of this armament is deprived of the power of acting; yet we have almost the whole force of Canada to oppose. In this situation there is such a choice of difficulties that I own myself at a loss how to determine. The affairs of Great Britain, I know, require the most vigorous measures; but the courage of a handful of brave troops should be exerted only when there is some hope of a favorable event; however, you may be assured that the small part of the campaign which remains shall be employed, as far as I am able, for the honor of His Majesty, and the interest of the nation, in which I am sure of being well seconded by the Admiral and by the generals; happy if our efforts here can contribute to the success of His Majesty's arms in any other parts of America."

Some days later, he wrote to the Earl of Holdernesse: "The Marquis of Montcalm has a numerous body of armed men (I cannot call it an army), and the strongest country perhaps in the world. Our fleet blocks up the river above and below the town, but can give no manner of aid in an attack upon the Canadian army. We are now here with about thirty-six hundred men, waiting to attack them when and wherever they can best be got at. I am so far recovered as to do business; but my constitution is entirely

ruined, without the consolation of doing any considerable service to the state, and without any prospect of it." He had just learned, through the letter brought from Amherst by Ensign Hutchins, that he could expect no help from that quarter.

Perhaps he was as near despair as his undaunted nature was capable of being. In his present state of body and mind he was a hero without the light and cheer of heroism. He flattered himself with no illusions, but saw the worst and faced it all. He seems to have been entirely without excitement. The languor of disease, the desperation of the chances, and the greatness of the stake may have wrought to tranquillize him. His energy was doubly tasked: to bear up his own sinking frame, and to achieve an almost hopeless feat of arms.

Audacious as it was, his plan cannot be called rash if we may accept the statement of two well-informed writers on the French side. They say that on the tenth of September the English naval commanders held a council on board the flagship, in which it was resolved that the lateness of the season required the fleet to leave Quebec without delay. They say further that Wolfe then went to the admiral, told him that he had found a place where the heights could be scaled, that he would send up a hundred and fifty picked men to feel the way, and that if they gained a lodgment at the top, the other troops should follow; if, on the other hand, the French were there in force to oppose them, he would not sacrifice the army in a hopeless attempt, but embark them for home, consoled by the thought that all had been done that man could do. On this, concludes the story, the admiral and his officers consented to wait the result.

As Wolfe had informed Pitt, his army was greatly weakened. Since the end of June his loss in killed and wounded was more than eight hundred and fifty, including two colonels, two majors, nineteen captains, and thirty-four subalterns; and to these were to be added a greater number of disabled by disease.

The squadron of Admiral Holmes above Quebec had now increased to twenty-two vessels, great and small. One of the last that went up was a diminutive schooner, armed with a few swivels, and jocosely named the "Terror of France." She sailed by the town in broad daylight, the French, incensed at her impudence, blazing at her from all their batteries; but she passed unharmed, anchored by the Admiral's ship, and saluted him triumphantly with her swivels.

Wolfe's first move toward executing his plan was the critical one of evacuating the camp at Montmorenci. This was accomplished on the third of September. Montcalm sent a strong force to fall on the rear of the retiring English. Monckton saw the movement from Point Levi, embarked two battalions in the boats of the fleet, and made a feint of landing at Beauport. Montcalm recalled his troops to repulse the threatened attack; and the English withdrew from Montmorenci unmolested, some to the Point of Orleans, others to Point Levi. On the night of the fourth a fleet of flatboats passed above the town with the baggage and stores. On the fifth, Murray, with four battalions, marched up the river Etechemin, and forded it under a hot fire from the French batteries at Sillery. Monckton and Townshend followed with three more battalions, and the united force, of about thirty-six hundred men, was embarked on board the ships of Holmes, where Wolfe joined them on the same evening.

These movements of the English filled the French commanders with mingled perplexity, anxiety, and hope. A deserter told them that Admiral Saunders was impatient to be gone. Vaudreuil grew confident. "The breaking up of the camp at Montmorenci," he says, "and the abandonment of the intrenchments there, the reimbarkation on board the vessels above Quebec of the troops who had encamped on the south bank, the movements of these vessels, the removal of the heaviest pieces of artillery from the batteries of Point Levi,—these and the lateness of the season all combined to announce the speedy departure of the fleet, several vessels of which had even sailed down the river already. The prisoners and the deserters who daily came in told us that this was the common report

in their army." He wrote to Bourlamaque on the first of September: "Everything proves that the grand design of the English has failed."

Yet he was ceaselessly watchful. So was Montcalm; and he, too, on the night of the second, snatched a moment to write to Bourlamaque from his headquarters in the stone house, by the river of Beauport: "The night is dark; it rains; our troops are in their tents, with clothes on, ready for an alarm; I in my boots; my horses saddled. In fact, this is my usual way. I wish you were here; for I cannot be everywhere, though I multiply myself, and have not taken off my clothes since the twenty-third of June." On the eleventh of September he wrote his last letter to Bourlamaque, and probably the last that his pen ever traced. "I am overwhelmed with work, and should often lose temper, like you, if I did not remember that I am paid by Europe for not losing it. Nothing new since my last. I give the enemy another month, or something less, to stay here." The more sanguine Vaudreuil would hardly give them a week.

Meanwhile, no precaution was spared. The force under Bougainville above Quebec was raised to three thousand men. He was ordered to watch the shore as far as Jacques-Cartier, and follow with his main body every movement of Holmes's squadron. There was little fear of the heights near the town; they were thought inaccessible. Even Montcalm believed them safe, and had expressed himself to that effect some time before. "We need not suppose," he wrote to Vaudreuil, "that the enemy have wings"; and again, speaking of the very place where Wolfe afterwards landed, "I swear to you that a hundred men posted there would stop their whole army." He was right. A hundred watchful and determined men could have held the position long enough for reinforcements to come up.

The hundred men were there. Captain de Vergor, of the colony troops, commanded them, and reinforcements were within his call; for the battalion of Guienne had been ordered to encamp close at hand on the Plains of Abraham. Vergor's post, called Anse du Foulon, was a mile and a half from Quebec. A little beyond it, by the brink of the cliffs, was another post, called Samos, held by seventy men with four cannon; and, beyond this again, the heights of Sillery were guarded by a hundred and thirty men, also with cannon. These were outposts of Bougainville, whose headquarters were at Cap-Rouge, six miles above Sillery, and whose troops were in continual movement along the intervening shore. Thus all was vigilance; for while the French were strong in the hope of speedy delivery, they felt that there was no safety till the tents of the invader had vanished from their shores and his ships from their river. "What we knew," says one of them, "of the character of M. Wolfe, that impetuous, bold, and intrepid warrior, prepared us for a last attack before he left us."

Wolfe had been very ill on the evening of the fourth. The troops knew it, and their spirits sank; but, after a night of torment, he grew better, and was soon among them again, rekindling their ardor, and imparting a cheer that he could not share. For himself he had no pity; but when he heard of the illness of two officers in one of the ships, he sent them a message of warm sympathy, advised them to return to Point Levi, and offered them his own barge and an escort. They thanked him, but replied that, come what might, they would see the enterprise to an end. Another officer remarked in his hearing that one of the invalids had a very delicate constitution. "Don't tell me of constitution," said Wolfe; "he has good spirit, and good spirit will carry a man through everything." An immense moral force bore up his own frail body and forced it to its work.

Major Robert Stobo, who, five years before, had been given as a hostage to the French at the capture of Fort Necessity, arrived about this time in a vessel from Halifax. He had long been a prisoner at Quebec, not always in close custody, and had used his opportunities to acquaint himself with the neighborhood. In the spring of this year he and an officer of rangers named Stevens had made their escape with extraordinary

skill and daring; and he now returned to give his countrymen the benefit of his local knowledge. His biographer says that it was he who directed Wolfe in the choice of a landing-place. Be this as it may, Wolfe in person examined the river and the shores as far as Point-aux-Trembles; till at length, landing on the south side a little above Quebec, and looking across the water with a telescope, he descried a path that ran with a long slope up the face of the woody precipice, and saw at the top a cluster of tents. They were those of Vergor's guard at the Anse du Foulon, now called Wolfe's Cove. As he could see but ten or twelve of them, he thought that the guard could not be numerous, and might be overpowered. His hope would have been stronger if he had known that Vergor had once been tried for misconduct and cowardice in the surrender of Beauséjour, and saved from merited disgrace by the friendship of Bigot and the protection of Vaudreuil.

The morning of the seventh was fair and warm, and the vessels of Holmes, their crowded decks gay with scarlet uniforms, sailed up the river to Cap-Rouge. A lively scene awaited them; for here were the headquarters of Bougainville, and here lay his principal force, while the rest watched the banks above and below. The cove into which the little river runs was guarded by floating batteries; the surrounding shore was defended by breastworks; and a large body of regulars, militia, and mounted Canadians in blue uniforms moved to and fro, with restless activity, on the hills behind. When the vessels came to anchor, the horsemen dismounted and formed in line with the infantry; then, with loud shouts, the whole rushed down the heights to man their works at the shore. That true Briton, Captain Knox, looked on with a critical eye from the gangway of his ship, and wrote that night in his Diary that they had made a ridiculous noise. "How different!" he exclaims, "how nobly awful and expressive of true valor is the customary silence of the British troops!"

In the afternoon the ships opened fire, while the troops entered the boats and rowed up and down as if looking for a landing-place. It was but a feint of Wolfe to deceive Bougainville as to his real design. A heavy easterly rain set in on the next morning, and lasted two days without respite. All operations were suspended, and the men suffered greatly in the crowded transports. Half of them were therefore landed on the south shore, where they made their quarters in the village of St. Nicolas, refreshed themselves, and dried their wet clothing, knapsacks, and blankets.

For several successive days the squadron of Holmes was allowed to drift up the river with the flood tide and down with the ebb, thus passing and repassing incessantly between the neighborhood of Quebec on one hand, and a point high above Cap-Rouge on the other; while Bougainville, perplexed, and always expecting an attack, followed the ships to and fro along the shore, by day and by night, till his men were exhausted with ceaseless forced marches.

At last the time for action came. On Wednesday, the twelfth, the troops at St. Nicolas were embarked again, and all were told to hold themselves in readiness. Wolfe, from the flagship "Sutherland," issued his last general orders. "The enemy's force is now divided, great scarcity of provisions in their camp, and universal discontent among the Canadians. Our troops below are in readiness to join us; all the light artillery and tools are embarked the Point of Levi; and the troops will land where the French seem least to expect it. The first body that gets on shore is to march directly to the enemy and drive them from any little post they may occupy; the officers must be careful that the succeeding bodies do not by any mistake fire on those who go before them. The battalions must form on the upper ground with expedition, and be ready to charge whatever presents itself. When the artillery and troops are landed, a corps will be left to secure the landing-place, while the rest march on and endeavor to bring the Canadians and French to a battle. The officers and men will remember what their country expects from them, and what a determined body of soldiers inured to war is capable of doing against five weak French battalions mingled with a disorderly peasantry."

The spirit of the army answered to that of its chief. The troops loved and admired their general, trusted their officers, and were ready for any attempt, "Nay, how could it be otherwise," quaintly asks honest Sergeant John Johnson, of the fifty-eighth regiment, "being at the heels of gentlemen whose whole thirst, equal with their general, was for glory? We had seen them tried, and always found them sterling. We knew that they would stand by us to the last extremity."

Wolfe had thirty-six hundred men and officers with him on board the vessels of Holmes; and he now sent orders to Colonel Burton at Point Levi to bring to his aid all who could be spared from that place and the Point of Orleans. They were to march along the south bank, after nightfall, and wait further orders at a designated spot convenient for embarkation. Their number was about twelve hundred, so that the entire force destined for the enterprise was at the utmost forty-eight hundred. With these, Wolfe meant to climb the heights of Abraham in the teeth of an enemy who, though much reduced, were still twice as numerous as their assailants.

Admiral Saunders lay with the main fleet in the Basin of Quebec. This excellent officer, whatever may have been his views as to the necessity of a speedy departure, aided Wolfe to the last with unfailing energy and zeal. It was agreed between them that while the General made the real attack, the Admiral should engage Montcalm's attention by a pretended one. As night approached, the fleet ranged itself along the Beauport shore; the boats were lowered and filled with sailors, marines, and the few troops that had been left behind; while ship signalled to ship, cannon flashed and thundered, and shot ploughed the beach, as if to clear a way for assailants to land. In the gloom of the evening the effect was imposing. Montcalm, who thought that the movements of the English above the town were only a feint, that their main force was still below it, and that their real attack would be made there, was completely deceived, and massed the troops in front of Beauport to repel the expected landing. But while in the fleet of Saunders all was uproar and ostentatious menace, the danger was ten miles away, where the squadron of Holmes lay tranquil and silent at its anchorage off Cap-Rouge.

It was less tranquil than it seemed. All on board knew that a blow might be struck that night, though only a few high officers knew where. Colonel Howe, of the light infantry, called for volunteers to lead the unknown and desperate venture, promising, in the words of one of them, "that if any of us survived we might depend on being recommended to the general." As many as were wanted—twenty-four in all—soon came forward. Thirty large bateaux and some boats belonging to the squadron lay moored alongside the vessels; and late in the evening the troops were ordered into them, the twenty-four volunteers taking their place in the foremost. They held in all about seventeen hundred men. The rest remained on board.

Bougainville could discern the movement, and misjudged it, thinking that he himself was to be attacked. The tide was still flowing; and, the better to deceive him, the vessels and boats were allowed to drift upward with it for a little distance, as if to land above Cap-Rouge.

The day had been fortunate for Wolfe. Two deserters came from the camp of Bougainville with intelligence that, at ebb tide on the next night, he was to send down a convoy of provisions to Montcalm. The necessities of the camp at Beauport, and the difficulties of transportation by land, had before compelled the French to resort to this perilous means of conveying supplies; and their boats, drifting in darkness under the shadows of the northern shore, had commonly passed in safety. Wolfe saw at once that, if his own boats went down in advance of the convoy, he could turn the intelligence of the deserters to good account.

He was still on board the "Sutherland." Every preparation was made, and every order given; it only remained to wait the turning of the tide. Seated with him in the cabin was the commander of the sloop-of-war "Porcupine," his former schoolfellow, John Jervis, afterwards Earl St. Vincent. Wolfe told him that he expected to die in the battle

of the next day; and taking from his bosom a miniature of Miss Lowther, his betrothed, he gave it to him with a request that he would return it to her if the presentiment should prove true.

Towards two o'clock the tide began to ebb, and a fresh wind blew down the river. Two lanterns were raised into the maintop shrouds of the "Sutherland." It was the appointed signal; the boats cast off and fell down with the current, those of the light infantry leading the way. The vessels with the rest of the troops had orders to follow a little later.

To look for a moment at the chances on which this bold adventure hung. First, the deserters told Wolfe that provision-boats were ordered to go down to Quebec that night; secondly, Bougainville countermanded them; thirdly, the sentries posted along the heights were told of the order, but not of the countermand; fourthly, Vergor at the Anse du Foulon had permitted most of his men, chiefly Canadians from Lorette, to go home for a time and work at their harvesting, on condition, it is said, that they should afterwards work in a neighboring field of his own; fifthly, he kept careless watch, and went quietly to bed; sixthly, the battalion of Guienne, ordered to take post on the Plains of Abraham, had, for reasons unexplained, remained encamped by the St. Charles; and lastly, when Bougainville saw Holmes's vessels drift down the stream, he did not tax his weary troops to follow them, thinking that they would return as usual with the flood tide. But for these conspiring circumstances New France might have lived a little longer, and the fruitless heroism of Wolfe would have passed, with countless other heroisms, into oblivion.

For full two hours the procession of boats, borne on the current, steered silently down the St. Lawrence. The stars were visible, but the night was moonless and sufficiently dark. The general was in one of the foremost boats, and near him was a young midshipman, John Robison, afterwards professor of natural philosophy in the University of Edinburgh. He used to tell in his later life how Wolfe, with a low voice, repeated Gray's "Elegy in a Country Churchyard" to the officers about him. Probably it was to relieve the intense strain of his thoughts. Among the rest was the verse which his own fate was soon to illustrate,—

The paths of glory lead but to the grave.

"Gentlemen," he said, as his recital ended, "I would rather have written those lines than take Quebec." None were there to tell him that the hero is greater than the poet.

As they neared their destination, the tide bore them in towards the shore, and the mighty wall of rock and forest towered in darkness of their left. The dead stillness was suddenly broken by the sharp *Qui vive!* of a French sentry, invisible in the thick gloom. *France!* answered a Highland officer of Fraser's regiment from one of the boats of the light infantry. He had served in Holland, and spoke French fluently.

A quel régiment?

De la Reine,[2] replied the Highlander. He knew that a part of that corps was with Bougainville. The sentry, expecting the convoy of provisions, was satisfied, and did not ask for the password.

Soon after, the foremost boats were passing the heights of Samos, when another sentry challenged them, and they could see him through the darkness running down to the edge of the water, within range of a pistol-shot. In answer to his questions, the same officer replied, in French: "Provision-boats. Don't make a noise; the English will hear us." In fact, the sloop-of-war "Hunter" was anchored in the stream not far off. This time, again, the sentry let them pass. In a few moments they rounded the headland above the Anse du Foulon. There was no sentry there. The strong current swept the boats of the light infantry a little below the intended landing-place. They disembarked on a narrow strand at the foot of heights as steep as a hill covered with trees can be. The twenty-four volunteers led the way, climbing with what silence they might, closely followed by a much larger body.

[2] "To what regiment [do you belong]?" "The Queen's."

When they reached the top they saw in the dim light a cluster of tents at a short distance, and immediately made a dash at them. Vergor leaped from bed and tried to run off, but was shot in the heel and captured. His men, taken by surprise, made little resistance. One or two were caught, and the rest fled.

The main body of troops waited in their boats by the edge of the strand. The heights near by were cleft by a great ravine choked with forest trees; and in its depths ran a little brook called Ruisseau St.-Denis, which, swollen by the late rains, fell plashing in the stillness over a rock. Other than this no sound could reach the strained ear of Wolfe but the gurgle of the tide and the cautious climbing of his advance-parties as they mounted the steeps at some little distance from where he sat listening. At length from the top came a sound of musket-shots, followed by loud huzzas, and he knew that his men were masters of the position. The word was given; the troops leaped from the boats and scaled the heights, some here, some there, clutching at trees and bushes, their muskets slung at their backs. Tradition still points out the place, near the mouth of the ravine, where the foremost reached the top. Wolfe said to an officer near him: "You can try it, but I don't think you'll get up." He himself, however, found strength to drag himself up with the rest. The narrow slanting path on the face of the heights had been made impassable by trenches and abattis; but all obstructions were soon cleared away, and then the ascent was easy. In the gray of the morning the long file of red-coated soldiers moved quickly upward, and formed in order on the plateau above.

Before many of them had reached the top, cannon were heard close on the left. It was the battery at Samos firing on the boats in the rear and the vessels descending from Cap-Rouge. A party was sent to silence it; this was soon effected, and the more distant battery at Sillery was next attacked and taken. As fast as the boats were emptied they returned for the troops left on board the vessels and for those waiting on the southern shore under Colonel Burton.

The day broke in clouds and threatening rain. Wolfe's battalions were drawn up along the crest of the heights. No enemy was in sight, though a body of Canadians had sallied from the town and moved along the strand towards the landing-place, whence they were quickly driven back. He had achieved the most critical part of his enterprise; yet the success that he coveted placed him in imminent danger. On one side was the garrison of Quebec and the army of Beauport, and Bougainville was on the other. Wolfe's alternative was victory or ruin; for if he should be overwhelmed by a combined attack, retreat would be hopeless. His feelings no man can know; but it would be safe to say that hesitation or doubt had no part in them.

He went to reconnoitre the ground, and soon came to the Plains of Abraham, so called from Abraham Martin, a pilot known as Maître Abraham, who had owned a piece of land here in the early times of the colony. The Plains were a tract of grass, tolerably level in most parts, patched here and there with cornfields, studded with clumps of bushes, and forming a part of the high plateau at the eastern end of which Quebec stood. On the south it was bounded by the declivities along the St. Lawrence; on the north, by those along the St. Charles, or rather along the meadows through which that lazy stream crawled like a writhing snake. At the place that Wolfe chose for his battle-field the plateau was less than a mile wide.

Thither the troops advanced, marched by files till they reached the ground, and then wheeled to form their line of battle, which stretched across the plateau and faced the city. It consisted of six battalions and the detached grenadiers from Louisbourg, all drawn up in ranks three deep. Its right wing was near the brink of the heights along the St. Lawrence; but the left could not reach those along the St. Charles. On this side a wide space was perforce left open, and there was danger of being outflanked. To prevent this, Brigadier Townshend was stationed here with two battalions, drawn up at right angles with the rest, and fronting the St. Charles. The battalion of Webb's regiment, under Colonel Burton, formed the reserve;

the third battalion of Royal Americans was left to guard the landing; and Howe's light infantry occupied a wood far in the rear. Wolfe, with Monckton and Murray, commanded the front line, on which the heavy fighting was to fall, and which, when all the troops had arrived, numbered less than thirty-five hundred men.

Quebec was not a mile distant, but they could not see it; for a ridge of broken ground intervened, called Buttes-à-Neveu, about six hundred paces off. The first division of troops had scarcely come up when, about six o'clock, this ridge was suddenly thronged with white uniforms. It was the battalion of Guienne, arrived at the eleventh hour from its camp by the St. Charles. Some time after there was hot firing in the rear. It came from a detachment of Bougainville's command attacking a house where some of the light infantry were posted. The assailants were repulsed, and the firing ceased. Light showers fell at intervals, besprinkling the troops as they stood patiently waiting the event.

Montcalm had passed a troubled night. Through all the evening the cannon bellowed from the ships of Saunders, and the boats of the fleet hovered in the dusk off the Beauport shore, threatening every moment to land. Troops lined the intrenchments till day, while the general walked the field that adjoined his headquarters till one in the morning, accompanied by the Chevalier Johnstone and Colonel Poulariez. Johnstone says that he was in great agitation, and took no rest all night. At daybreak he heard the sound of cannon above the town. It was the battery of Samos firing on the English ships. He had sent an officer to the quarters of Vaudreuil, which were much nearer Quebec, with orders to bring him word at once should anything unusual happen. But no word came, and about six o'clock he mounted and rode thither with Johnstone. As they advanced, the country behind the town opened more and more upon their sight; till at length, when opposite Vaudreuil's house, they saw across the St. Charles, some two miles away, the red ranks of British soldiers on the heights beyond.

"This is a serious business," Montcalm said; and sent off Johnstone at full gallop to bring up the troops from the centre and left of the camp. Those of the right were in motion already, doubtless by the governor's order. Vaudreuil came out of the house. Montcalm stopped for a few words with him; then set spurs to his horse, and rode over the bridge of St. Charles to the scene of danger. He rode with a fixed look, uttering not a word.

The army followed in such order as it might, crossed the bridge in hot haste, passed under the northern rampart of Quebec, entered at the Palace Gate, and pressed on in headlong march along the quaint narrow streets of the warlike town: troops of Indians in scalp-locks and war-paint, a savage glitter in their deep-set eyes; bands of Canadians whose all was at stake,—faith, country, and home; the colony regulars; the battalions of Old France, a torrent of white uniforms and gleaming bayonets, La Sarre, Languedoc, Roussillon, Béarn,—victors of Oswego, William Henry, and Ticonderoga. So they swept on, poured out upon the plain, some by the gate of St. Louis, and some by that of St. John, and hurried, breathless, to where the banners of Guienne still fluttered on the ridge.

Montcalm was amazed at what he saw. He had expected a detachment, and he found an army. Full in sight before him stretched the lines of Wolfe: the close ranks of the English infantry, a silent wall of red, and the wild array of the Highlanders, with their waving tartans, and bagpipes screaming defiance. Vaudreuil had not come; but not the less was felt the evil of a divided authority and the jealousy of the rival chiefs. Montcalm waited long for the forces he had ordered to join him from the left wing of the army. He waited in vain. It is said that the governor had detained them, lest the English should attack the Beauport shore. Even if they did so, and succeeded, the French might defy them, could they but put Wolfe to rout on the Plains of Abraham. Neither did the garrison of Quebec come to the aid of Montcalm. He sent to Ramesay, its commander, for twenty-five field-pieces which were on the Palace battery. Ramesay would give him

only three, saying that he wanted them for his own defence. There were orders and counter-orders; misunderstanding, haste, delay, perplexity.

Montcalm and his chief officers held a council of war. It is said that he and they alike were for immediate attack. His enemies declare that he was afraid lest Vaudreuil should arrive and take command; but the governor was not a man to assume responsibility at such a crisis. Others say that his impetuosity overcame his better judgment; and of this charge it is hard to acquit him. Bougainville was but a few miles distant, and some of his troops were much nearer; a messenger sent by way of Old Lorette could have reached him in an hour and a half at most, and a combined attack in front and rear might have been concerted with him. If, moreover, Montcalm could have come to an understanding with Vaudreuil, his own force might have been strengthened by two or three thousand additional men from the town and the camp of Beauport; but he felt that there was no time to lose, for he imagined that Wolfe would soon be reinforced, which was impossible, and he believed that the English were fortifying themselves, which was no less an error. He has been blamed not only for fighting too soon, but for fighting at all. In this he could not choose. Fight he must, for Wolfe was now in a position to cut off all his supplies. His men were full of ardor, and he resolved to attack before their ardor cooled. He spoke a few words to them in his keen, vehement way. "I remember very well how he looked," one of the Canadians, then a boy of eighteen, used to say in his old age; "he rode a black or dark bay horse along the front of our lines, brandishing his sword, as if to excite us to do our duty. He wore a coat with wide sleeves, which fell back as he raised his arm, and showed the white linen of the wristband."

The English waited the result with a composure which, if not quite real, was at least well feigned. The three field-pieces sent by Ramesay plied them with canister-shot, and fifteen hundred Canadians and Indians fusilladed them in front and flank. Over all the plain, from behind bushes and knolls and the edge of cornfields, puffs of smoke sprang incessantly from the guns of these hidden marksmen. Skirmishes were thrown out before the lines to hold them in check, and the soldiers were ordered to lie on the grass to avoid the shot. The firing was liveliest on the English left, where bands of sharpshooters got under the edge of the declivity, among thickets, and behind scattered houses, whence they killed and wounded a considerable number of Townshend's men. The light infantry were called up from the rear. The houses were taken and retaken, and one or more of them was burned.

Wolfe was everywhere. How cool he was, and why his followers loved him, is shown by an incident that happened in the course of the morning. One of his captains was shot through the lungs; and on recovering consciousness he saw the general standing at his side. Wolfe pressed his hand, told him not to despair, praised his services, promised him early promotion, and sent an aide-de-camp to Monckton to beg that officer to keep the promise if he himself should fall.

It was towards ten o'clock when, from the high ground on the right of the line, Wolfe saw that the crisis was near. The French on the ridge had formed themselves into three bodies, regulars in the centre, regulars and Canadians on right and left. Two field-pieces, which had been dragged up the heights at Anse du Foulon, fired on them with grape-shot, and the troops, rising from the ground, prepared to receive them. In a few moments more they were in motion. They came on rapidly, uttering loud shouts, and firing as soon as they were within range. Their ranks, ill ordered at the best, were further confused by a number of Canadians who had been mixed among the regulars, and who, after hastily firing, threw themselves on the ground to reload. The British advanced a few rods; then halted and stood still. When the French were within forty paces the word of command rang out, and a crash of musketry answered all along the line. The volley was delivered with remarkable precision. In the battalions of the centre, which had suffered least from the enemy's bullets, the simultan-

eous explosion was afterwards said by the French officers to have sounded like a cannon-shot. Another volley followed, and then a furious clattering fire that lasted but a minute or two. When the smoke rose, a miserable sight was revealed: the ground cumbered with dead and wounded, the advancing masses stopped short and turned into a frantic mob, shouting, cursing, gesticulating. The order was given to charge. Then over the field rose the British cheer, mixed with the fierce yell of the Highland slogan. Some of the corps pushed forward with the bayonet; some advanced firing. The clansmen drew their broadswords and dashed on, keen and swift as bloodhounds. At the English right, though the attacking column was broken to pieces, a fire was still kept up, chiefly, it seems, by sharpshooters from the bushes and cornfields, where they had lain for an hour or more. Here Wolfe himself led the charge, at the head of the Louisbourg grenadiers. A shot shattered his wrist. He wrapped his handkerchief about it and kept on. Another shot struck him, and he still advanced, when a third lodged in his breast. He staggered, and sat on the ground. Lieutenant Brown, of the grenadiers, one Henderson, a volunteer in the same company, and a private soldier, aided by an officer of artillery who ran to join them, carried him in their arms to the rear. He begged them to lay him down. They did so, and asked if he would have a surgeon. "There's no need," he answered; "it's all over with me." A moment after, one of them cried out: "They run; see how they run!" "Who run?" Wolfe demanded, like a man roused from sleep. "The enemy, sir. Egad, they give way everywhere!" "Go, one of you, to Colonel Burton," returned the dying man; "tell him to march Webb's regiment down to Charles River, to cut off their retreat from the bridge." Then, turning on his side, he murmured, "Now, God be praised, I will die in peace!" and in a few moments his gallant soul had fled.

Montcalm, still on horseback, was borne with the tide of fugitives towards the town. As he approached the walls a shot passed through his body. He kept his seat; two soldiers supported him, one on each side, and led his horse through the St. Louis Gate. On the open space within, among the excited crowd, were several women, drawn, no doubt, by eagerness to know the result of the fight. One of them recognized him, saw the streaming blood, and shrieked, "*O mon Dieu! mon Dieu! le Marquis est tué!*" "It's nothing, it's nothing," replied the death-stricken man; "don't be troubled for me, my good friends." ("*Ce n'est rien, ce n'est rien; ne vous affligez pas pour moi, mes bonnes amies.*")

The Boston Massacre[1]

ESTHER FORBES

AND AT LAST the day came, snowy and cold at first, but gradually clearing and warmer. On the fifth of March, 1770, Boston was padded with thick white silence. Surely a foot of snow should be enough to keep the regulars in their barracks and the inhabitants off the streets. There had been an increasing number of threats, the town boys boasting they were going to clean up the "bloody-backs," the soldiers swearing they would teach the "cowardly rascals" respect for His Majesty's uniform. The fifth of March was Monday. On the previous Friday an unusually large number of pates had been broken at Gray's ropewalks, on Hutchinson Street. When the very name Hutchinson became hateful to Boston, it was re-named Pearl.

One of the ill-paid, hornet-tempered privates of the Twenty-Ninth went to the walks

[1] From *Paul Revere and the World He Lived In*, by Esther Forbes. Reprinted by permission of Houghton Mifflin Company.

hoping to earn a little money. Sam Gray, a journeyman, employed there but not related to the owner, asked him if he wanted work. The soldier humbly said, yes, he did. But the work offered him (in pure Anglo-Saxon) started a fist fight between them. The soldier was defeated, ran back to his barracks, and returned with a crowd of his fellows. The "squabble" went on, augmented by more and more soldiers and more and more workmen. It began to rise to the proportions of a Pope's Day frolic. Among the regulars was Private Kilroy, who was as bad a fellow as was to be found, even in the Twenty-Ninth. Shortly before this encounter at the ropewalks, George Robert Twelvetrees Hewes had caught him robbing a Boston woman of most of her outside clothing. This consisted of a "cardinal," bonnet, muff, and tippet. Hewes forced Kilroy to give up his booty. Everyone knew that Kilroy was a scamp, even as they knew that Captain Preston, for instance, "bears a good character." These six hundred men had, in a year and a half, become individuals. Finally officers and citizens ended the battle, and the soldiers, wiping bloody noses, nursing black eyes, and counting missing teeth, were forced back to their barracks. They had been defeated by the smouldering sticks and tar-pots of the ropewalk men, and were swearing vengeance.

Mr. Gray promptly fired Sam Gray. The colonels, although humiliated by the trouncing their men had taken, promised to keep them under restraint. Both sides privately began to watch for a chance to go on with this interrupted battle. The soldiers, especially of the Twenty-Ninth, busily went to work preparing cudgels and sharpening cutlasses and prophesying to anyone who would listen to them the vengeance they would take on Boston.

Just how systematic the badgering of the regulars had been is now impossible to say. John Adams, who never once wavered from the principles of the Whig Party, believed that "certain busy characters," seeking "to kindle immortal hatred between the inhabitants of the lower class and the soldiers," urged them on to "quarrels, re-encounters and combats." And he pitied "the poor tools" who had been "intentionally wrought upon by designing men, who knew what they were aiming at better than the instruments employed." To get rid of these two regiments, without whose protection civil government could not function in Boston, was the avowed ambition of the radical Whig leaders. One obvious way to do this was to goad the soldiers into firing upon the "innocent" inhabitants. Then public opinion of all political color would unite to demand their withdrawal. Sam Adams would have proved his statement that you cannot quarter troops on an unwilling town without bloodshed, and Boston would have some martyrs—which has never hurt any political party. There was also the possibility that a popular uprising would take vengeance into its own hands. The Boston garrison had recently been reduced, and there were left only the original Fourteenth and Twenty-Ninth. Many people thought then—and think now—that this was what Sam Adams was leading up to during the winter of '69-'70. He had certainly warned towns roundabout Boston that their help might be needed on that Monday night. Something was going to happen.

The snow, already a foot deep, stopped. The sun came out and icicles formed along the eaves. The sun set, the moon rose, and it was night. The colonels did not restrain their men. More of them than usual were out "driving the streets" in small packs. They pushed and cursed at civilians, who got in their way as much as possible and cursed back. The regulars were at their worst, and what John Adams calls "the lower classes" (Cousin Sam had more endearing terms for them) were out in full force. But by eight o'clock that night the air was so charged with dynamite any flash-in-the-pan would blow the whole town sky high.

Captain Goldfinch, of the Fourteenth, seems to have been a well-disposed young officer, with the failing so fashionable among eighteenth-century gentlemen of not bothering to pay "tradesmen." He owed the French barber, Piemont, quite a bill for shaving him, and Piemont, unable to get a cent out of him, told one of his apprentices that any

money he could squeeze out of Goldfinch he could have for himself.

By eight o'clock, outside Murray's Barracks on Brattle Street, a boy had been knocked down and was bawling that he was killed. Captain Goldfinch was standing there as the crowd began to gather. Some soldiers, returning from duty, tried to get down the black and narrow street to their barracks, but found their way blocked. Ensign Mall, in charge of them, lost his head, bade the men make a way for themselves with bayonets, "he'll stand by them." Goldfinch intervened, scolded the ensign, and got the men inside the heavy doors of the old sugar house, but a good many blows had been exchanged and both sides were ugly.

Goldfinch himself tried to slip unseen over to King Street, where the main guard was housed, and see what was afoot. So the Captain, with the "greasy" and diminutive barber's boy bawling at his heels, emerged into the moonlit width of King Street. The child pointed at the officer, roaring out what a bad fellow he was not to pay his bills, also suggesting canine ancestry. The officer paid no heed, but it was too much for the solitary sentry stationed outside the custom house.

This man, Montgomery, had been enduring more than the usual amount of snowballs, chunks of ice, oyster shells, sea-coal, and provincial wit which was the fate of solitary sentries. For some time he had been muttering and cursing and saying what he'd do if any came within reach of his bayonet. A large crowd had gathered about to enjoy his spleen, but he had not been attacked thus far except by missiles and adjectives. In spite of his threats he had run nobody through. Now he left his box, stepped down, demanded the saucy boy to "show his face." The boy smugly said he wasn't ashamed of his face and Montgomery (old enough to know better, for he was bald as an egg) hit him a glancing blow which did not even knock him down. Instantly the crowd rushed him, yelling that the bloodthirsty butcher was murdering the child.

There was still a third crowd gathered in the neighborhood that night. This has always been the most mysterious. Two hundred able-bodied sailors, porters, and other likely street-fighters were lined up at this time close to Faneuil Hall, listening to an oration by a "tall gentleman" in red cloak and white wig. This may have been Sam Adams (who was not tall), but was probably William Molineaux. It was also said that this was "Joyce Jr." When the oration was done, the cry went up, "To the Main Guard!" and there were threats to kill all the "lobsters" they could find.

What had been three separate, angry groups now all came together on King Street, milling about in the snow and the moonlight, just in front of the old State House. On its corbels strutted the lion and unicorn of England.

And now, close on nine o'clock, the bell of Old Meeting began to ring as though for fire. All over Boston doors flew open and windows up.

"Where is the fire?"

"The regulars are cutting and slashing everyone."

"They are cutting down Liberty Tree."

"The regulars are massacring the people."

And that other cry from the gates on the Neck to Copp's Hill, "Town-born, turn out . . . town-born, turn out."

But others were calling excitedly that the town was on fire. Many rushed into the streets carrying their fire-buckets. Boys went too. And Mrs. Maverick, a poor widow who ran a small shop, flung a cloak about her and plunged off into the snow in pursuit of her seventeen-year-old son, sure that if trouble was abroad her Samuel would be in it. He had been doing so well as Mr. Greenwood's apprentice, learning the ivory-turner's arts.

Montgomery was now hard-pressed. Besides the usual cries of "lobster" and "bloody-back," there rang in his ears, "kill him, kill him."

"If you come near me," he panted, "I'll blow your brains out."

"Fire and be damned."

Montgomery loaded. An enormous mulatto loomed up over him. Crispus Attucks would have frightened any man. He was well over six feet, was part Indian, part negro, and

part white. His master in Framingham thought highly of him. He was forty-seven at this time. Attucks had a crowd of sailors at his heels and a stick in his hand. He poked at Montgomery and said he'd "have off one of his claws."

The hard-pressed "lobster" did not fire, but he called in a loud voice. "Turn out Main Guard." His voice carried across King Street to the guardhouse, through the hubbub of whistles, Indian yells, and jangling bells.

Instantly a corporal's guard stepped out of the main guardhouse, followed by Captain Preston, the officer for the day. They had to struggle to cross King Street and reach the sentry, who stepped down and joined the semicircle of level bayonets presented to his assailants. Captain Preston's reputation was good. His colonel called him "cool and distinct," but the judgment that sent only seven men and himself to rescue the sentry was poor. Nine men are enough for a target, but not enough to overawe a mob. Someone yelled at Preston to keep his men in order and mind what he was about. The Captain did not answer, but ordered the soldiers to prime and load. The silence at that moment was so complete everyone heard the rattle of the iron ramrods. Preston put his body between the men and the crowd to keep them from firing. Henry Knox, a plump, likable, twenty-year-old bookseller, grabbed Preston by the arm, begged him for God's sake to take his men back; for if he fired his life must answer for it. Preston said he was "sensible to it."

Now the rumor spread that the guns were not loaded. But when asked, the Captain said that they were "with powder and ball."

"Do you mean to fire upon the inhabitants?"

"By no means," but Knox noticed that he seemed much agitated.

A number of people (Captain Goldfinch among them) were entreating the crowd to go home, not to lose their heads. Instead they made a sudden, blind rush at the soldiers, those behind pushing on those in front, even jumping on their backs to see.

Crispus Attucks was still muttering about the "claws" he was going to get off lobsters. He hit at Preston with his stick of cordwood, grazed him, but knocked down Montgomery. The two of them fought a moment for the soldier's musket. In the mêlée that followed, Montgomery got it and was up on his feet. Now "the motley mob of saucy boys, negroes, mulattoes, Irish teagues and outlandish jack-tars" (to use John Adams' words) had pushed against the soldiers until you couldn't get a hat between them. Among the soldiers was Private Kilroy and among the mob Sam Gray, now out of a job. Kilroy was watching him.

Above the hubbub came the sinister word, "Present . . ." The struggle went on. And then the fatal command, "Fire . . ." No one knows who gave the order. Unbiased witnesses, close to Preston at the moment, agreed with him and said that he did not.

Montgomery, his hat gone, his bald head shining in the moonlight, fired first at Attucks, who got two balls through the chest.

Kilroy had not forgotten Sam Gray's leadership of the ropewalk men two days before. He took deliberate aim at him. Gray, too, died instantly, as did James Caldwell, a mate from a coasting vessel. Sam Maverick had been holding his master's twelve-year-old son, Isaac Greenwood, by the hand. At this moment he threw up his arms crying, "Fire away, you damned lobster-backs." The British bullets dropped him. He died a few hours later. But Patrick Carr, "the Irish teague," and the only victim who deserves our grateful memory, lived in torture for several days. A number of others were hit, but only these five died.

Kilroy (as unpleasant as ever) stepped forward and thrust his bayonet into Gray's lifeless body. The crowd rushed backwards over each other, tripping and slipping on the packed snow as they went. The width of the street was littered with lost overcoats and hats. It was still being said that the soldiers' guns were not loaded with ball. And some thought all those huddles of clothing on the snow were lost garments. A few of these bundles were struggling and crying out. Three at least lay completely quiet. Captain Preston, once more in front of his men, was desperately pushing up their

guns, demanding they hold their fire, and prevented a second shot.

Now all over Boston the British drums beat to arms. Soldiers half dressed, officers with waistcoats unbuttoned, poured into King Street, forming their precise platoons, their disciplined faces stony, their bayonets fixed ready to resist the charge of the mob.

Lieutenant Governor Hutchinson, struggling through milling, infuriated masses, of fellow townsmen, fought his way to the State House, under whose shadow the "Massacre" had taken place. He was incensed through and through, loathing what seemed to him the stupid brutality of the regulars and the wilful recklessness of the inhabitants. Although the "lower classes" had been taught by their leaders that Thomas Hutchinson was a more dangerous enemy to their liberties than any minister in England, that night they seemed to have remembered their former confidence in him. He spoke from the balcony of the State House—and it was the last time his people listened to him. He swore that justice should be done, and they gratefully accepted his leadership. So he got the mob off the streets and the regiments locked up in their barracks.

Before sunrise, Captain Preston and his eight men were under arrest for murder. They were to be tried immediately and the feeling was so high no jury could possibly be found in Boston who would not have convicted them. Seemingly no lawyer would even dare defend them. Whoever did would be mobbed and ostracized.

The Pilgrim Ship[1]

ARCHIE BINNS

SEATTLE, TOO, had its Puritans and pilgrims and gentlemen adventurers, and adventurers who were no gentlemen. The city acted out the building of America accurately, but with the growing momentum of more than two centuries. At the far end of telescoped time, Seattle's beginning was the same as the beginning of the nation. The pilgrims of Seattle landed from their little sailing ship on a shore as unknown and forbidding as the shore of Plymouth, and as isolated from the home states as Plymouth was from England, at the edge of a denser forest, as well supplied with Indians and wild beasts. And though the Indians, ignorant of history, were friendly at the time, that flaw in the parallel was soon corrected.

On November twelfth, 1851, the stage was set for the arrival of the pilgrims who founded Seattle. From unnamed Smith Cove to Duwamish Head the bluff shore and mud flats of Elliott Bay were walled by a heavy fir forest that had never been penetrated by a white man. A few miles up the Duwamish River, on meadow lands and little prairies, there were the Collins, two Maples and Van Asselt claims. All of the men were bachelors except Collins. His wife and fourteen-year-old daughter, Lucinda, were the first white women in the region. West of the divided mouth of the Duwamish River, near Duwamish Head, was the only settlement on Elliott Bay. That was a temporary fishing camp where Chief Seattle and some of his tribe were catching salmon for their winter food supply. The place was called "Skwudux," a name that never would have done for a great city.

From bold Duwamish Head the heavily timbered shore inclined southwest and diminished to low-shored Alki Point, which was then called "Smaquamox." There, on Alki Point, was the beginning of a city, and one white resident. The beginning of a city was a log cabin, complete as to walls but without a roof. That evening the heavy November rain roared down into the building and ran

[1] From *Northwest Gateway* by Archie Binns. Copyright 1941 by Archie Binns. Reprinted by permission of Doubleday & Company, Inc.

out of the doorway. It was no place to live, and the one white resident huddled under a leaking shelter of cedar boughs, with his blanket around him like an Indian, while he kept his fire alive under the kettle in which he was cooking his supper.

The white resident was a young man who had crossed the plains that year from Illinois. He was nineteen and his name was David Denny. For three weeks he had been alone, except for visits from the Indians. There was a certain amount of discomfort in his situation that November evening. An older man in the same fix would have considered the situation desperate. A few days before, working on the unfinished cabin, he had cut his foot with the ax. He had managed to stop the bleeding, but the wound left him too crippled to work or hunt. Along with the wound he had a return of malarial chills and fever, brought in his blood from Illinois. On top of malaria he had a bad case of neuralgia. And that afternoon, hobbling back from a look at the roofless cabin, he had found a family of wild animals in possession of his shelter. He was not afraid, but neither was he a fool, and he stood patiently in the rain while the skunk tribe ate up the last of his food. When they were gone, the comforts of life were vigorously reduced. About all David Denny had were a leaking shelter of thatched boughs, a handful of tea that the skunks had left, and his hopeful youth.

A sad song might be written about a boy of nineteen, sick and wounded, without food and almost without shelter, deserted on an unexplored shore among the Indians and battered by the icy rain of northern autumn. But David Denny did not feel deserted or sorry for himself. He was at the beginning of manhood, at the beginning of great things. Not many young men have the opportunity to keep vigil in such a primeval place, with the knowledge that it is the beginning of a great city. John Low and Lee Terry had decided that six weeks before, when the exploring party of three landed at Smaquamox. They decided to build a city there, and their plans went ahead so fast that within a few days Terry had decided on a name for their city. They would call it "New York," after his birthplace, which their city would shortly rival. So John Low left young Terry and David to build the first house while he walked back to Portland, two hundred miles away, to bring his family. David Denny's father and four brothers were also there, and he sent a letter to his married brother, Arthur, to come at once to Puget Sound. Arthur had already decided on that region, but chills and fever had kept him helpless in Portland while his young brother and John Low had gone to drive Low's cattle north for winter range and to spy out the country.

At the village of Olympia, in northern Oregon, the two explorers met Lee Terry, the boy from New York, and the three of them joined forces with Captain Fay, who had a boat and who was setting out to buy salmon from the Indians to ship to San Francisco. The four sailed down the Sound as far as Elliott Bay and up the Duwamish as far as the four newly staked claims. Then Captain Fay left the others at Smaquamox, which later became Alki, and the party was reduced to three. Low went back to Portland to bring some population for his city, and the party was reduced to two. David Denny and Lee Terry built the city as far as one cabin without a roof. Then they discovered they had no frow for splitting shakes. Luther Collins came down the Duwamish in his scow, on the way to the Hudson's Bay station at Nisqually, and Terry caught a ride with him. The settlement was thus reduced to one man of nineteen and a roofless cabin. And after three weeks of solitude and an invasion of skunks, the food supply of the budding city was reduced to a handful of tea.

When his pot boiled, young David made some tea and drank it, hot and strong and straight. Then he muffled himself in his damp blanket and crawled out of his shelter for the evening look around, which had become part of his Robinson Crusoe life.

There was not much to see but night coming down fast with the autumn rain. On the wide reach of the Sound there was no sail or running lights of any ship. To the northeast there was the luminous smoke of an

Indian fire on Duwamish Head. All the other shores were black with the impenetrable darkness of the forest, where night came early and materialized into a solid thing of multiplied blackness. There was nothing to hear but a breath of wind passing through the great fir trees on the point and the cold wash of waves on the gravel beach. Inherently there was not much comfort in standing there alone at the edge of the primeval world in the roaring cold rain. But the young man did not feel cold. He was full of hot tea and burning with malarial fever that made him lightheaded, and he did not feel like a lonely castaway. From Alki to Duwamish Head and across Elliott Bay, north to West Point, he saw the lighted buildings of a great city. It was the city that he and young Terry had dreamed, and it was real because Lee Terry was from New York and he had described the city and the gas-lit windows, seen from the opposite shore across dark water at night. Terry, gone for three weeks now, was sure they could build as big a city out here. Low, the cautious, middle-aged man of thirty-one, had said it would take years. But David and Lee were both in their teens. Working on the cabin or lying under their shelter of boughs at night, they had talked as if the city were already a fact. This night David could see it at last: the dark bulk of buildings walling the shore like a forest, shot with the twinkling lights of countless windows. It was so vast and grand that it made him feel delirious, and he could even hear the roar of traffic, like wind going through great trees. . . . The city faded and the countless lighted windows dwindled to dancing fever sparks inside his eyes. He was alone at the edge of the forest, beside a roofless cabin in the rain. Sick and wounded and supperless, with no food left for breakfast, he crawled into the shelter of boughs and went to bed under his damp blankets. He was not sorry for himself, because he was young and holding the fort where a great city was about to spring up at the edge of the unexplored forest.

When John Low reached Portland with David Denny's letter and his own endorsement of northern Oregon, he found everything favorable. Arthur Denny and his wife had somewhat recovered from their malaria. Between chills and fevers, Arthur had learned more about Puget Sound, and he was eager to start north at once. His brother-in-law, Carson Boren, also wanted to go, and Boren's attractive young sister, Louisa, was of the same mind. She and Arthur Denny's wife were sisters, and she and David had crossed the plains together and were good friends. An emigrant by the name of William Bell had also caught the "Northern Oregon Fever," and in the small world of Portland, which had a population of two thousand, another man had joined the party. He was a California gold miner of 'forty-nine, and he already had some experience in the west although he was only twenty-two. He was Charles Terry of New York, and he joined the main party without knowing that his young brother, Lee, had already joined the advance guard. It was a party of young people for a young country. The oldest member was John Low, who was thirty-one, and the youngest was Arthur Denny's son, Roland, born in Portland two months before.

Everything had gone well for John Low's plan to round up a population for his city at Smaquamox. He had found more willing recruits than he had expected, and there was no difficulty about transportation. The *Exact* was at Portland, fitting out for an expedition to the Queen Charlotte Islands, and on the way she was entering Puget Sound with emigrants for Olympia. Captain Folger agreed to take the city builders to Smaquamox, if they could find it. He had never seen Puget Sound, which was only sketchily charted, and he could not be expected to recognize a spot the Indians called Smaquamox unless it was pointed out to him.

Carrying emigrants to Puget Sound was only a sideline for Captain Folger. The real destination of the *Exact*, Queen Charlotte Islands, was the home of the fierce Haidahs, who terrorized the Indians of Puget Sound on their raids for slaves and plunder. A discovery of gold in the Queen Charlottes had been reported, and now it was the Haidahs'

turn to be plundered. Most of the passengers in the little schooner were miners on their way to the islands of a strange and splendid race that wore armor and helmets in battle, and carved great totem poles and tombs for their dead, which were raised on cedar columns five feet through and ornamented with great, brooding figures of the Thunderbird. The Haidahs also carved beautiful canoes that were sometimes seventy feet long and carried upwards of a hundred trouble-loving warriors. Only the lure of gold would have tempted men in their right senses to their forbidding islands.

The founders of Seattle were hitching onto the star of a gold rush, and it was a good omen.

The pilgrim ship was the schooner *Exact*, and she hailed from Nantucket, not very far away from where the *Mayflower* landed. She was not so big as the *Mayflower*, and probably no easier on the stomach, but she was a better, more seaworthy ship for those who could stay with her. The *Exact* was a two-masted, bald-headed schooner, seventy-three feet long, twenty feet in beam and six feet deep in the hold, of about seventy tons burden. She was the product of generations of pilgrim descendants: English colonists becoming Yankees and developing fast and handy smuggling craft to outsmart the revenue cutters of the mother country, and outright Yankees developing still faster craft for outright competition.

The *Exact* had the profile of a Gloucester fisherman and, except for the lack of topsails, she had the same rig; and she could sail. In her day she was one of the smallest craft to round Cape Horn, and she made a better passage of it than some of the big ships. And she was easier on her crew. With her bald-headed rig there was no occasion for men to go aloft, and when the wind piped up and the helm threatened to take charge, they clapped tackles on the tiller and drove her like a clipper ship.

The *Exact* was commanded by Captain Isaiah Folger of Nantucket, Isaiah was the son of Walter Folger, the scholar and inventor, and one of his crew was his young son, George, who was there by way of a health experiment. All the other Folger children had died, and when the youngest began to pine away, the captain said to his wife, "Sarah, we won't have a doctor to George. I'll take him with me in the schooner." Sea life and salt horse and Cape Horn weather and hard chances did the trick, and George lived to be a man.

Captain Fay had brought the advanced guard for the founding of the city, and Grandma Fay was in the pilgrim ship, but she was not called that until long afterward. Captain Fay and she had not even met. At the time she was Mrs. Alexander, and she and her husband and their two little boys were on their way to Olympia. But Grandma Fay was the right woman to be on board. She was the only one of that party of inland people who would ever talk about the voyage of the pilgrim ship. She had gone on observing, no matter what, and she should have been a novelist because she remembered the right things; for instance, how the women prepared for the voyage, and what they had for breakfast on the fifth of November 1851, and how Charlie Terry got seasick, and what the gold miners sang on their way to the island of the Haidahs.

The *Exact* was to sail on November fifth, and on the fourth the pilgrims brought their belongings on board and the women primped up for the voyage. Grandma Fay, who remembered the right things, observed that they starched their sunbonnets very stiffly and ironed them against the firm, short grass on the river bank.

Charles Terry had decided to go into business at the new city, and in the morning his stock of goods came on board and he wrote in his memorandum book:

schooner
Shipped on the brig *Exact*
1 Box Tin ware
1 " Axes
1 " tobacco
1 Keg Brandy
1 " Whiskey
1 Box Raisins
Portland Nov. 5 1851

His first calling the *Exact* a brig has the flavor of his earlier days in San Francisco,

where nearly every small vessel was a brig. It also suggests that he was no seaman, and while it required only a few seconds to correct the error on paper, it took him years to correct an error in city planning that came from the same ignorance of maritime matters.

While Terry checked the goods for his store, Indians came on board offering fresh salmon. All the emigrants bought some, and as many women as could get frying pans on the stove began frying salmon cutlets for breakfast. The one small stove was in the center of the *Exact's* cabin, and the double tier of berths around the cabin were filled with emigrant families and household goods, and fish waiting to be cooked. The packed cabin was hazy with grease smoke and the smell of raw and cooking salmon, and through it all there was the undefined but ever-present smell of the ship, which none of the landsmen commented on, and none of them failed to note.

From above there came the sound of creaking halyard blocks as the sails were hoisted, and the clatter of capstan pawls as the cable was hove in short and the anchor broken out. The *Exact* dropped down the Willamette River toward the Columbia, with the emigrant women cooking salmon on the little stove or quieting their hungry children and trying to make order out of cramped chaos while they waited their turn to cook. All of them had learned patience in the hard school of wagon trains across the continent, and everyone was good natured in the family confusion and cooking smoke and smells of the crowded little cabin. Now and then a bearded face looked down from the hatch, and the miner made relishing comments on the good smell of frying salmon, but the miners did not add themselves to the uproar below.

Considerately the miners stayed on deck, where they sang and played poker. The miners for the Queen Charlotte Islands were fine fellows. Some of them were from the California diggings and some were not; but all of them followed the cut and pattern of the 'Forty-niners: disreputable slouch hats, all the beards their faces would raise and all the dirt they could collect, heavy flannel shirts and trousers tucked into high cowhide boots. And at least everyone who could justify the repair had the seat of his trousers patched with the choice cut of flour sacking that bore the legend XXXX, like kisses appended to a letter.

The miners stayed on deck, playing poker and singing "Three Blind Mice," and in the cabin below the relays of pilgrims waited their turn and fried their salmon and ate, precariously, in the crowded bunks. The hardly little *Exact* reached down the Willamette to the Columbia, with a freshening wind, and came into the great, rolling river.

Mrs. Alexander, later Fay, had a long wait for the stove, but she was a young woman of cheerful patience. She fixed up her little boys so they would be clean and neat for breakfast, and had a go at the impossible task of arranging her housekeeping affairs in quarters so cramped that everything had to be on top of something else, with something else on top of it. And nothing could be moved without moving everything, and there was no room to move anything. After that, she sliced her fine fat salmon and fixed her coffeepot. All the time there was the disturbing, foreign smell of the ship and the rich smell of salmon sizzling in fat. All around her in the jammed cabin people were eating salmon, and on deck the miners were singing "Three Blind Mice." It sounded innocent at first, but it became exhausting and made her head ache as it went on endlessly, with the parts of the round overlapping. It was such a short song and it went on forever, like identical waves running after the farmer's—running after each other, and it made her a little dizzy. "*Three blind mice, three blind mice—*" The round went on in successive waves, and it seemed to make waves as the little schooner surged along in the rolling Columbia. "*Three blind mice—*" One of the women took her breakfast from the stove, and it was Mrs. Alexander's chance to cook her mice—to cook her salmon.

She started for the stove with her frying pan and coffeepot. The cabin floor heaved under her feet, and the air of the cabin swam with the smells of fat salmon, raw and fried,

and the awful smell of disturbed bilge water. Mrs. Alexander knew that she was about to be very sick.

With a second to decide where, and wondering sickly what the others would think, she gave one glance and saw and heard them pushing their breakfasts away and hanging over the edge of their bunks. She stumbled vaguely to her own, and they were all sick in unison. Abandoned coffeepots and pans of salmon drifted about the reeling cabin floor as the little schooner surged along in the rolling river. And on deck the heartless miners roared their round, unceasingly, and the three blind mice ran round and round in the aching heads of the pilgrims and in their retching stomachs.

The Dennys had a bunk on one side of the stove, and Mrs. Alexander and her boys were on the opposite side. Arthur Denny was very sick, but he was also under the spell of something ludicrous he had seen. Whenever he found time to speak, he looked at the prostrate woman on the other side of the cabin and gasped, with a wan twinkle in his eyes: "What are you lying there for, Mrs. Alexander? Why don't you get up and cook your fish?" And Mrs. Alexander could not answer because each mention of the word "fish" brought on a new wave of nausea.

All of the pilgrims were seasick except Charles Terry. He was on deck, visiting with the miners and feeling very good indeed. He was a man of the world, and he could be with the happy-go-lucky gold miners in spirit though he was not with them in a business way because he knew something better. He had had his try at the diggings on the Sacramento, and he had observed that the man who runs the store has the best chance of getting rich. He was an experienced man of twenty-two, and that was why he was sailing with store goods in the hold instead of a pick and shovel and gold pan on deck. But Terry could talk the miners' language and he felt generous toward them. So he said, "Boys, how about a smoke to celebrate our sailing? I have some good cigars downstairs."

The miners cheered the suggestion, and Terry descended, whistling, into the cabin of affliction. While he bent over his traveling chest and had a struggle with the lock, the schooner rose and fell and rolled, mixing strange odors, and derelict coffeepots and pans of fish skated about the slippery cabin floor. Leaning over the chest, Terry began to vomit. And while he vomited, the heartless miners crowded round the companion hatch and called, "Hurry up with them cigars you went after, Terry! What are you doing down there, Terry?" They kept it up long after Terry had crawled into a bunk. Then they gave him up, loudly, as a stingy four-flusher who promised good cigars and did not give them even a civil word. They went back to playing poker and singing "Three Blind Mice" in rhythm with the plunge and roll of the schooner, and the pilgrims, with mice running around in their aching heads and convulsed stomachs, loathed the healthy sound of their singing. In a seasick world the unnatural monsters are the healthy ones. "Did ever you see such a sight in your life as three blind mice?"

It was a voyage of blind mice and blind destiny. The by-product was the founding of a great city, and the main expedition came to nothing. The Queen Charlotte Islands gold strike was a false alarm, and the *Exact's* miners sailed back without one nugget. At that, they were fortunate. The other schooner in search of gold was wrecked on one of the islands. When a rescue party went in search of them, long afterward, they found that the fierce Haidahs had a sense of humor. They had made slaves of the shipwrecked men, and the schooner crew and miners served a long apprenticeship at menial work usually reserved for old women and Indians captured on Puget Sound.

With her passenger list of gold-seekers and home-seekers, the *Exact* was cleared by the custom's authorities at Astoria on November seventh. The same day she bucked and rolled her way across the bar between the furious breakers on the sands south of Point Adams and the furious breakers on the sands east of Cape Disappointment. After that terrifying introduction to the sea, the Pacific looked quite reasonable to the pilgrims. They were only normally seasick

as the little schooner sailed up the coast of northern Oregon, which is now the coast of Washington.

On November eleventh the *Exact* rounded Cape Flattery and sailed in the generous Strait of Juan de Fuca to where it opens into a much wider sea. There the wind deserted her altogether and she lay becalmed for twenty-four hours off Dungeness Spit.

At three o'clock on the rainy morning of the thirteenth a northwesterly breeze stirred and freshened, and Captain Folger tumbled his crew out to make sail. By the time they had the anchor catted, half a gale was blowing and the little Nantucket schooner was running off before it with a bone of gleaming spray in her teeth. At daybreak she was storming along between the towering, forested shores of Admiralty Inlet, making better than ten knots.

Captain Folger called passenger John Low and told him to keep a good lookout for Smaquamox. Low was the only man on board who had ever been on Puget Sound, and he was one of the half-dozen white men in the world who could vouch for the existence of Smaquamox. If he could not identify the place, the *Exact* would pass it up as one of the lost cities of the earth.

With half a gale behind her, the *Exact* roared past Point No Point against the push of the outgoing tide. The great reach of the inland sea opened still wider, and the little schooner ran due south in Puget Sound. While she stormed along, John Low stood in the wind and rain forward, steadying himself against the port foreshrouds and keeping an anxious lookout. The honor of his city was at stake. He knew it was somewhere on the left side of the Sound, but he did not know exactly where. And the left shore was ten miles away, blotted out by drifting rain clouds and gray rain.

As the *Exact* raced on, the Sound narrowed to a five-mile width and the left shore came within eye's reach: three-hundred-foot yellow bluffs topped by two-hundred- and three-hundred-foot fir forests that seemed to be sailing through the rain clouds. The shore of Smaquamox was low and gently sloping. They were not yet there, unless they had already passed it.

The *Exact* passed an Indian camp at the mouth of a river that looked something like one of the mouths of the Duwamish, but the rest of the landscape did not fit, and the point of land beyond was tremendously high. They roared past the high point and opened up a great bay. Half the bay was surrounded by steep bluffs that left off suddenly, and the rest of it was bordered by wet, gray mud flats uncovered by the outgoing tide. Above the bluffs and beyond the misty ooze of the mud flats was the tremendous, unbroken forest, with rain clouds sailing past the great trees; about everything there was the primeval look of a world at the beginning of time. At the head of the bay mud flats and marshy land and water and mist were mixed up at the edge of the wet northern jungle. It looked as if there might be a river mouth in there; maybe the twin mouths of the Duwamish. Then, looking ahead, up the Sound, Low saw a long, wooded point of land with a gently sloping shore that thinned to nothing where it met the exposed beach. It looked like the point the Indians called "Smaquamox," but there should be the beginnings of a city there if young Denny and Lee Terry had done their part. Then, between the forest and the beach, he caught the wet shine of peeled logs. Low ran aft, calling to Captain Folger that Smaquamox was dead ahead.

He had found the obscure port of call, but on closer look he was disappointed. The new cabin was roofless in the driving rain, and there was no sign of life about the point. It looked as if the boys had abandoned the place, unfinished, or been killed by the Indians.

While Low pondered the mystery, Captain Folger shouted commands. The long tiller was swung over and the *Exact* rounded up into the wind, well off the point. The big single jib crumpled and came down, and the anchor was let go with a harsh roar of cable chain that echoed from the lonely woods. It was then eight o'clock on the morning of November thirteenth, 1851.

In his leaking bower of cedar boughs David Denny was awakened by the sudden harsh roar of cable chain. He crawled out and saw the schooner lying off the point, with her crew smothering the wet, threshing sails as they came down. The deck of the little pilgrim ship was dark with bearded men and shawl-wrapped women with their sunbonnets flapping in the wind and rain. The population for the city had arrived, and the hungry boy hobbled to the outer edge of the wide beach, with his neuralgic head tied up in a cloth and his damp blanket drawn around him Indian style. He was so excited and happy that it did not occur to him that the women might not be thrilled by the prospect ashore.

Actually, the women had considered the new city from the *Exact*, and they were crushed by what they saw: one roofless cabin at the edge of the tremendous forest, in the rain; something like a sick Indian waving to them from the edge of the wet beach; and a rabble of naked and half-naked Indians hurrying along the beach toward the landing place.

The men in the party did not notice the temporary lack of conveniences ashore, and they were busy and excited getting their possessions out of the hold to start their new life in a new world. Louisa Boren was the only woman who was not in tears by the time they crowded into the longboat. The cold autumn rain had wilted the sunbonnets they had starched so stiffly and ironed with such care on the grassy bank of the Willamette. Mrs. Alexander, who was going on to Olympia, saw them crying as they were rowed ashore, with their stricken sunbonnets going flip-flap, flip-flap in the wind and rain. Mrs. Denny and Mrs. Bell and Mrs. Boren each carried a baby in her arms, and Mrs. Low held a two-year-old girl. Among them, the four had twelve children, nine of them girls, and the oldest was nine. Mrs. Alexander was sorry for them all, but she was sorriest for Mrs. Denny. Her baby was only two months old; she was weak from chills and fever and seasickness, and she was going ashore in a storm of rain to a city of one house with no roof.

The Run[1]

MARQUIS JAMES

IN THE BARN LOT I saw a saddletree stripped bare and asked Mama about it. She took the tree and disappeared through the barn door. An old dried-out unused saddle that had hung in the barn as long as I could remember was missing from its peg.

"Of all things. This belongs to your father's saddle. Who on earth stripped it?"

She learned that a neighbor had stripped it. He wanted some leather for shoe soles for the young'uns and Papa had told him to strip the saddle.

Mama certainly gave Papa the what-for.

"Houstin James, you get that saddle leather right back. I want that saddle for Marquis."

Papa said the saddle was no good. A stirrup was gone and the cinch was broken. He said he would get me a proper boy's saddle one day.

"But that's the saddle you made the Run in. It'll be an heirloom for Marquis when he grows up."

It was too late about the leather. The man had cut it up. But I was the gainer by the day's events. First was the promise of a saddle of my own. And, of course, there would have to be a pony. You wouldn't put a new saddle on Billy, the big, jug-headed, spavined, dirty-black plug used for light plowing and hauling wood, and the only horse I had to ride. He didn't even belong

[1] From *The Cherokee Strip* by Marquis James. Copyright 1945 by Marquis James. Reprinted by permission of The Viking Press, Inc, New York.

to us. A man had left him in our barn and never come for him. The second thing was that Papa told me about the Run.

Of course this was a story everyone knew —the commonest story in all the Strip. By now I didn't bother to listen to it, sometimes. But I listened to Papa because it was Papa telling a story and because he told it so differently. Never before had I known that there were so many, so very, very many people in the Run. Somehow, I'd only thought of there having been just a few—like Mr. Howell and Mr. Schrock and Clark the claim-jumper and Jim Utsler's cowboy and Mrs. Ackerman and so on. But no, there was a whole world of people in the Run. More than I had ever seen in Enid on circus day. Papa covered the prairie with them.

He said the Run was the biggest horse race that ever had been; and for the biggest purse —all the Cherokee Strip. He asked me to think of four or five horses lined up at the post at the Fair Grounds. They break and are away. Well, sir, in this race there were thousands of horses and thousands of riders and drivers, and they stretched in a line across the prairie as far as you could see. Papa asked me to look to the east and look to the west and imagine all those horses strung out ready to break. Most of the horses were under saddle. The others were hitched to every kind of rig. Light rigs—buckboards, spring wagons and sulkies—were the best. But there were covered wagons, lots of them, and even people on foot.

They broke with a yell and at first you couldn't see a thing for the dust that was raised where the grass had been trampled away along the starting line. In this blinding cloud the wheels of rigs locked and there were spills at the very start. When the racers got out on the grass, the dust went down, except along the Chisholm Trail. The riders took the lead, mostly, with the fastest driving horses and lightest wagons next. And on they went. There were no roads, mind you, except the Trail, and no bridges. You got down and up draws and across creeks and ravines and gullies as best you could. Or you headed them. Wagons stuck in the streams and stalled in draws. Rigs broke down from the rough going. By and by the horses that had been ridden or driven too hard began to play out. Horses that had started slower began to edge ahead

The thing to do was to get to Enid first, and get the choice of town lots, or of the claims close by It was seventeen miles by beeline from the nearest point on the starting line north of Hennessey, in Old Oklahoma, to Enid's south line. With five miles to go, of the thousands who started about a hundred held the lead. Most of the others were far behind, some dropping out all the time to stake claims along the Trail or to veer east or west. The rest pressed on to get nearer Enid. The hundred leaders dwindled to fifty, nearly all on horseback, though a few buckboards were still keeping up.

A small man on a small and fleet cow pony was gliding past rider after rider. The man was Walter Cook, a twenty-two-year-old cowpuncher from the Chickasaw Nation. Pretty soon he was ahead of everyone. He kept his lead and was the first to reach the townsite. He could have had any town lot there. But the little cowhand was out for bigger game. Sweeping past the land office he staked the claim—one hundred and sixty acres—adjoining the Square on the north: the prize quarter-section in the whole Cherokee strip.

Two or three minutes later Albert Hammer dashed up, threw himself from his heaving horse, and without batting an eye staked the same claim. Then came Ben Clampitt in a swaying buckboard behind a foam-flecked team that was beating its own dust in a high south wind. All the way Clampitt's race had been a sight to see. A lean old Texan, he had rigged his buckboard with leather stirrups like those on a racing sulky. Mounted behind the driver was a hired hand with a pitchfork who in the crowded early stages of the race had jabbed to the right and left, keeping competitors at a distance and making a clear track for Ben.

Next came Bill Coyle; and after him people just swarmed in. Before night there were three hundred claim-jumpers on the quarter-section Walter Cook had staked first.

"What happened, Pa?" I asked breathlessly, knowing that a dose of lead was the thing for claim-jumpers caught in the act.

"A lot of things happened. First off, the claim-jumpers got together and began to divide the claim into town lots. They called the place Jonesville. Now, if you're the better man, you can put one claim-jumper off your land. But you can't put three hundred of them off. Walter Cook could have had a share of the town lots, a big share, but he insisted on having his claim. He was just a boy, you see, and green. There were contests and contests and in the end the organized townsters came out on top. Walter Cook, who had won fair and square the greatest horse race in the world, never got a thing."

I always think of Walter Cook, whose path was to cross mine before I left Oklahoma, as a victim of democracy in its most primitive form: the law of the pack.

In addition to an active indignation over the injustice to Walter Cook, my father's long-winded or oft-repeated accounts of the Run gave me a feeling of the dash and scope of that contribution to the Southwest's boisterous history which I have had from no other source. When old enough to understand a map of the United States I chanced to note that the Cherokee Strip was larger than the State of Massachusetts, and, lopping off Cape Cod, about the same shape. That made me feel pretty good, for the historian made so much of what had gone on in Massachusetts. There were a hundred thousand people in the Run, and they came in from all four directions. About fifteen thousand started from the Hennessey section of the south line. All who staked near Enid (either Enid) came from there. Yet Mr. Howell, in his story, mentioned only perhaps a half dozen riders besides himself—his immediate competitors. Other storytellers did the same. Each was pretty much the hero of his own story. Only my father brought before me a picture of all those hard-riding thousands. And he did it without mentioning himself.

My father had not seen Walter Cook, Albert Hammer, Ben Clampitt and the rest pile onto the Strip's most-sought-after claim, for he was two miles away and with other things to attend to at the time. The scene he laid before me must have been reconstructed from testimony in Oklahoma's most famous series of claim contests. Then, too, Papa would have had the benefit of Mr. Pat Wilcox's story. Nobody had so good a view of the birth of Enid as Mr. Wilcox, an observer whom the research of half a century has not proved mistaken on an essential point. Before the Run, there was one building in Enid, the L-shaped land office, one room of which was set aside for the post office. Young Mr. Wilcox was assistant postmaster. As soon as he had washed his dinner dishes, he climbed to the roof and began scanning the southern skyline.

When I was older I got Mr. Wilcox to tell more than once what he had seen: first a haze faintly discernible above the crest of the slope we called South Hill. The haze grew larger and denser. His eyes on this looming dust cloud, Mr. Wilcox did not see Walter Cook, who was ahead of it, until Walter had topped the rise and was tearing down the slope inside the townsite. Ben Clampitt and the others who followed next engrossed the attention of the observer. Then Mr. Wilcox happened to glance to the west. Riding easily on a fairly fresh horse was a man in light blue overalls—without doubt, thought Mr. Wilcox, a sooner who had hidden out in the blackjacks. The man mixed with the crowd which by nightfall had swelled to ten thousand, and Mr. Wilcox was unable to spot him again.

From my mother I learned of Papa's own part in the race. It was the kind of story that Mama, with her love of horses, would tell with relish.

Especially for the Run, Papa had bought a race horse in El Reno. It was wind-broken but otherwise a sound and strong animal, capable of carrying my father's more than two hundred pounds.

"In his young days your father was a real fancy rider," Mama would say. "And for a man of his size very easy on a horse."

This was no small tribute. My mother was about as accomplished a judge of riding as any woman in our part of the country.

The Run was a young man's undertaking. My father was crowding forty-nine, a good twenty years older than the average man who entered the race on horseback with serious intentions of reaching Enid in time to stake anything. A year and half of law practice in Old Oklahoma and the Indian nations had made him fairly used to the saddle again. Nevertheless, he took three weeks to condition himself and to find out what he and his horse could do. He knew the ropes well enough to get himself the best possible place on the starting line—smack on the Chisholm Trail, just north of Hennessey, in Old Oklahoma.

You could begin your race anywhere you could get on one of the four borders of the Strip, which was about a hundred and sixty-five miles east and west and fifty-eight miles north and south. Papa picked the Hennessey section because it lay closest Enid, which he figured would be *the* town of the Strip. There was also the Trail to follow. It made for easier riding and led straight to the desired township. On a prairie experience is necessary to preserve a sense of direction.

Mama's understanding was that Papa spent about three days and nights on the line, holding his place. The wonder is that the wait wasn't longer, considering the premium on places in the neighborhood of the Trail. I have heard men tell of spending three weeks on the line. Possibly they were with covered-wagon outfits, but, unless close to water, they must have got pretty tired of it. The sheets of some of the wagons were scrawled with notices of intention such as "Oklahoma or Bust." Substituting "Texas" or "Oregon," the phrase had been western usage for a good fifty years.

The line was patrolled by soldiers to prevent anyone from crossing over before the opening gun. The country had been evacuated by the cattle outfits which formerly leased it from the Indians. Excepting land-office and post-office staffs and soldiers on the site of each county seat, the Strip was depopulated. That was the theory, and it came tolerably close to being the fact. Nobody knows how many sooners did manage to hide out in the promised land before the opening gun was fired, but probably not more than you would find trying to obtain their ends by illegal means in any collection of a hundred thousand persons. (Walter Cook, you understand, lost his claim by strictly legal procedure.)

After a man had staked a claim he had to "file" at the nearest land office. In order to file he was required to exhibit an evidence of registration permitting him to make the Run in the first place. Registration slips were issued from booths along the line. It was in no way difficult for a prospective sooner who knew the country to register a week before the Run and sneak up a draw through the thinly patrolled line. He could camp in the blackjacks west of Enid, for instance, and ride out with the first honest comers—as Mr. Wilcox suspected the man in light blue overalls had done. A cavalry troop encamped on the Enid site had reconnoitred the surrounding country for three weeks. Though the lieutenant in command was sure a number of sooners had eluded him, they must have formed a minute proportion of the whole body of settlers.

The Hennessey stretch of the line broke five minutes before the official gun. Somebody may have discharged a firearm by accident. My father was in the saddle and ready. Waiting only to see that there was no turning back the tide, he, too, set off, keeping to the Chisholm Trail and reining his horse to a pace it could maintain for fifteen or sixteen miles and have a spurt left for an emergency.

The Chisholm Trail was the name cowmen gave to the Oklahoma section of the Abilene Trail, greatest of the southwestern cattle thoroughfares. It ran from San Antonio, Texas, to the railway terminus at Abilene, Kansas, a distance of eight hundred miles. Though little used for cattle drives since the completion of the Rock Island Railroad through the Cherokee Strip in 1889, the famous prairie road was still distinct. Like a carelessly laid ribbon, which your eye would lose in the dips and pick up in the rises of the undulating plain, the Oklahoma part stretched almost due north. On level places it was like several ribbons side by

side. These markings were the Trail's core, made by the wheels of chuck wagons, calf wagons, freighters and stages. When wheels and hoofs wore through the sod, creating a "high center," teamsters would start a new road alongside the old. For two or three hundred yards on either side of these ruts the grass had been beaten down by the feet of the cattle. This on level stretches. To ford a stream or cross a draw the Trail narrowed.

The race was going well for my father. At first many riders and some drivers passed him; but this he had counted on. In the fullness of time, however, without increasing the pace of his horse, he began to pass them. When Papa calculated that he had gone about fifteen miles he was feeling the strain, and his horse was feeling it. Ahead of him were perhaps fifty riders in sight whom he doubted his ability to pass. (Fifty out of fifteen thousand starters from Hennessey.)

Glancing to the east my father saw the top of a distant string of trees. That meant a stream, an asset of great value to a claim: also an asset of great value to my father, who liked trees. They were the thing he missed most on the plains. Turning his horse from the Trail, he crossed the Rock Island track and the bed of a dry creek. He urged his tiring mount up the rise. On the other side he saw only a shallow draw, its naked sides exposing coarse sandy soil tinted from red to orange. Was this a wild-goose chase? Holding a northeast course he made for the next rise. He was traveling over short-grass prairie, knobby-surfaced and with washes of bare red soil: a good place for a horse, especially a tired, wind-broken horse, its breath coming in rasps, to stumble; and no good to grow anything. The crest of this second rise brought a welcome sight into view: the trees he had seen from the Trail; and beyond them more trees.

Watering the roots of the first trees was a disappointing stream, hardly more than a yard wide. (This was the driest season of the year.) But better trees were beyond; indeed, what seemed a veritable forest, in terms of the plains, with a noble green mass—surely the granddaddy of all the trees in the Cherokee Strip—dominating the whole. The first of these trees were soon reached. The creek was wider there: ten or twelve feet across. The illusion of a grove had been caused by the way the creek curved in the shape of an S. Papa followed the course of the stream in the direction of the Big Tree. He crossed the creek once and found that, to reach the Big Tree, he must cross again or double a loop. He started to double the loop and came upon a steep ravine. The ravine wouldn't have been much to head, but Papa didn't take the time. Precious minutes had been lost feeling his way toward the trees. On the next fold of the prairie to the south other riders were in sight. Unseen riders might be coming up the draws. Papa wanted that creek, flowing in the shape of an S with good bottom lands in the loops; and he wanted the Big Tree. His horse barely made the steep yonder side of the ravine. A few rods farther, at the high point on our pasture, luxuriant in red top, Papa dismounted and set his stake on what proved to be the Southeast Quarter of Section 17, Township 22, Range 6 West of the Indian Meridian.

It was 12:53 P.M., September 16, 1893. As the Hennessey line had broken at 11:55, my father had ridden seventeen miles in fifty-eight minutes without injuring his horse. A note of pride would touch Mama's tone as she spoke the last four words. Walter Cook covered eighteen miles in fifty to fifty-five minutes—he carried no watch and no one seems to have timed him exactly.

Something else my father had had to watch out for during the last part of his ride were the markers, designating section and certain quarter-section corners. Twenty years before, surveyors had checker-boarded the Strip with these little monuments. Where there were any, roughly cut sandstones sticking six or eight inches above the ground were used; elsewhere, "pits and mounds." A pit-and-mounds marker consisted of a hole about three feet deep, surrounded by four piles of earth and sod indicating the points of the compass. Virgin prairie sod is thick and durable. Except where beaten down by cattle, these mounds could still be picked up by a person who knew what to look for easier than the stones hidden by grass.

Before the Run much of the Strip had been urned over. I have heard this laid to soon-rs, in an effort to drive off rightful home-steaders. It appears, however, to have been he work of the troops—with the object of endering markers more readily visible, of preventing prairie fires with possible serious onsequences during the chaotic first days of ettlement, and of smoking out sooners. The ires had been set too late. In areas they vere burning on the day of the Run, and or some time after. I have heard men tell f riding through lines of flame, and of roves of rabbits, coyotes, and snakes fleeing he fires. Near North Town a woman was urned to death trying to save her team.

Streams, arid gulches, green bottom-land grass and so on stopped the fires in places. Where my father was had not been burned t all. Stone and pit-and-mounds markers vere mixed in together and all hard to see. ater examination disclosed the three desig-nated corners of his quarter to be marked vith stones—in all likelihood not visible more han a few yards away. As there was no ime to search out these markers before he taked, my father had to estimate his bound-aries by eye—while in motion on horseback, aking his bearings from the last marker he ad seen. In the matter of acquiring title to he Big Tree luck was with him, too. Only hree corners of any quarter-section were marked. Lines had to be run to determine the fourth. When they were run on our place the Big Tree was found to be less than a hundred yards from the Utsler boundary. Of course my father could have tried to make sure of the tree by setting his stake right under it. But he would have sacrificed the advantage of observation—for claim-jumpers and sooners—which his commanding position in the pasture afforded.

Having driven his stake, Papa set up a pup tent to which he affixed an American flag. I would like to know who gave him that flag, which was the last thing my father would ever have thought of taking along. From the tent he could see almost the entire claim, barring the East Draw and where the bluff hid the creek. He removed his saddle and, leading his horse so it would cool off gradually, began a tour of his estimated boundaries—probably looking for the markers. In the East Bottom he found a man preparing to set his stake. Cases of lead poisoning developed from a number of such meetings that day. But this man was no sooner or intentional claim-jumper. He rode with Papa to higher ground and took a look at the tent and the flag.

"You beat me out, stranger," said the man. "I'll strike eastward a piece."

Papa wished him luck, and never saw the man again.

Hurry, Honyocker![1]

Joseph Kinsey Howard

Honyocker, Scissorbill, Nester. . . .He was he Joad of a quarter century ago, swarming nto a hostile land: duped when he started, obbed when he arrived; hopeful, courag-ous, ambitious: he sought independence r adventure, comfort and security. Or per-aps he sought wealth; for there were some who did not share the Joads' love of the soil, whose interest was speculative. . . .

The honyocker was farmer, spinster, deep-sea diver; fiddler, physician, bartender, cook. He lived in Minnesota or Wisconsin, Massachusetts or Maine. There the news sought him out—Jim Hill's news of free land in the Treasure State:

"More Free Homesteads; Another Big Land Opening; 1,400,000 Acres Comprising

[1] From *Montana, High, Wide and Handsome* by oseph Kinsey Howard. Copyright, 1943, and re-rinted by permission of Yale University Press.

Rocky Boy Indian Lands Open to Settlers; MONTANA. . . .

"By order of the secretary of the interior, the lands shown on the map herein will be opened to homestead settlement March 1, 1910, and to entry at the Glasgow, Montana, land office.

"Professor Thomas Shaw, the well-known agricultural expert, after making a thorough examination of the soil and crop conditions of this land, writes as follows:

" 'The soil of this entire area is essentially a clay loam, very rich in mineral matter . . . has great staying power. The native grasses are more than ordinarily abundant and in this fact is evidence of producing power that can be relied on. The water supply is relatively good. In much of this area it is possible to secure a quarter section without a single foot of broken land on it. . . . A portion of this region has been homesteaded for the past *two or three years* by persons who have prospered since they came.' "

The italics are this writer's not Professor Shaw's!

The honyocker read on:

"The winter climate . . . is less cold than that of eastern Dakota. The snowfall is also usually considerably less than that of the Red River valley. [Was this supposed to be advantageous?] There have been no records kept of the rainfall for any lengthened period, but it is safe to conclude that it is not far different from the rainfall of Williston in North Dakota. This would mean the average rainfall is about 15 to 16 inches in a year, sometimes running higher than 18, sometimes, but rarely, as low as 11 to 12. This is not high rainfall . . . but it is sufficient to grow crops fair to excellent on summer fallow land *any season*. . . ."

Again the italics are mine.

"The statements made above are not mere guesses. They are based upon observation and experience. North from Culbertson 20 miles, and not so very far from the heart of this area, is a post-office named Homestead. The farmers around have tilled their lands for two or three years. They have grown nearly all the crops enumerated in this circular and with gratifying success."

Hurry, honyocker, hurry!

"As stated previously, these lands comprise 1,400,000 acres. Giving each man who files 160 acres, this area will furnish 8,750 farms. At first thought it might seem to be many months before all these farms would be taken. If any cherish such a view they will be greatly disappointed. It is questionable if a single farm will be left unfiled upon one month after the opening of the lands for entry."

Hurry, honyocker!

"One-way settlers' fares, $12.50 from St. Paul and Minneapolis to Bainville, Culbertson, and other points in eastern Montana."

Hurry, honyocker, and do not investigate too closely!

To be sure, no records of rainfall had been kept "for any lengthened period" at Culbertson: once a cowtown, careless of statistics, it was just being reborn. But in Glasgow, a hundred miles west, the records had been kept since 1894. There the 15-16 inches which you were told were "average" had only been recorded three times in fifteen years; precipitation had been 12 inches or less ("rarely," said the brochure) seven times in fifteen years. Williston was less than half Glasgow's distance from Culbertson, and Williston, though no Garden of Eden, had a better record; but you could not go by that, honyocker. Bozeman, Montana, has an average annual precipitation of about 19 inches. Sixty miles west as the crow flies the average is 11. That is Montana.

And how could you have been expected to know, honyocker, that even a "normal" 15-inch rainfall would have given you no guarantee of success, for "normal" means nothing in the arid high plains? It is not the "normal" (which, anyway, can only be determined by study of precipitation over a score of years) but the frequency and extent of *variation from the normal* which indicates the crop potentialities of the soil. On the dry Montana prairie the "normal" is always so close to the minimum for crop production that any variation extended in degree or in time must mean failure.

You could not know; but Jim Hill didn't know either. . . . Though had he listened to

the old-timers and the experts, he could have guessed. It was fifteen years, however, before a Montana scientist, after thorough study of the state's young weather records, was able to report:

> From the crop standpoint (as differentiated from the meteorological) the term drought must include not only lack of rainfall, but a consideration of temperature, relative humidity, winds, soil, moisture content, weather and precipitation preceding the rainless period, and the stage of the plant's growth. A year of abundant rainfall may be followed by one of great deficiency, or the reverse, and with no apparent order. All such plans (agricultural programs) should be developed in the light of the erratic nature of the rainfall, and the number of years with the different extremes should be known.

And what would you know, honyocker, of humidity? It was fifteen years before this admission came: "During the major growing season the relative humidity (ratio of actual moisture in the air to the total amount it could hold) in this region is low. Extremes as low as 4 per cent have been recorded."

You did not know these things, honyocker, and so you were coming. On one day—May 3, 1913—one Great Northern railroad conductor took up 503 railroad tickets from you folks who were bound for Montana!

The origin of your name, "honyocker," is obscure. In Minnesota, the Dakotas, Canada, Slav immigrants were "hunyaks." There were Slavs among you, though most of you were native-born, hailing from middle western states. Your advance guard was greeted with hostility in Montana, and it may be that the contemptuous term "hunyak" had been expanded by custom to cover all "foreigners" or outlanders. The Montana cowboy's original term for the tenderfoot arrival was "pilgrim"; but that was an honorable, if slightly derisive word, and too good for the likes of you!

The honyockers came in tourist sleepers which reeked with the greasy odor of heavy food cooking. These cars were equipped with stoves upon which the wives took turns preparing the family's meals.

They came in model T Fords—and model T Fords, with their high, slim wheels, are still good cars for a muddy farm road. They came in rattling little Maxwells, and broke their axles on rutted trails.

And they came on immigrant trains. The honyocker rented a freight car (St. Paul to eastern Montana, $50) and in it he was permitted to place "all second hand articles such as household goods, machinery, agricultural implements, vehicles, wagons, tools, etc.," and the following: "Fifty bushels of grain, a sufficient amount of feed grain for animals in transit, 2,500 feet of lumber, 500 fence posts, a small portable house, trees and shrubbery, small stock including hogs and sheep not to exceed 20 head, or horses, mules and cattle not to exceed 10 head," or equivalent numbers of both. Some of the immigrant cars were a bit crowded.

When a car contained livestock the owner could ride in it free, to care for his animals. Frequently his son was smuggled into the car to help his Dad with the stock—and to save payment of another fare. Occasionally other wanderers sneaked in, too—ambitious adventurers looking for homes in the west, or just plain bums. When trainmen spotted these extra passengers at division points, the farmer who had engaged the car was called upon to pay their passage. If he refused, the stowaways were thrown off the train. There were instances, however, when the glib-tongued vagrant had become so popular with his host that the latter paid enough out of his meager store of cash to retain his new friend's company.

The trip from St. Paul to Malta, Montana, in an immigrant car took from Sunday night to Thursday morning. Then the freight car door was rolled back and the honyocker climbed stiffly out—into a den of wolves.

"Almost every man, woman and child," wrote a pioneer Montanan of the scene when the immigrant trains came in, "has become obsessed with a wish to help locate the 'scissorbills' and secure a little of the money they were bringing into the country—get it while they could, as too many of them had no hope that these people would succeed in making a permanent home for themselves."

The land was free to the homesteader (save for his nominal filing fee) but first he had to find it. Standing bewildered in the railroad yard, back to his loaded car, he gazed across thousands of acres of grassland and wondered what to do next. He was not long left in doubt, for here came the locators. Some were Montanans, but many came in from "outside" with the homesteaders.

Locating homesteads was just about the juiciest racket Montana ever had. It got so good that before the vein had run out locators were traveling east on the cushions to round up their own suckers and bring them to the promised land, thus making sure that no other locator would get to them first in that confused moment when the Great Northern train slid to a stop in front of a prairie depot.

The locator's standard fee for finding the homesteader his place and helping him to file upon it was $20. Not infrequently, however, the fee was $50—if the honyocker had it, if competition were not too tough, and if the prospective settler seemed to be in enough of a hurry. The $20 fee perhaps would not have been excessive had each honyocker been escorted singly about the country until a site could be found for his home. . . . But the locators took several in their democrat wagons on a single trip. Frequently the men arriving on one immigrant train were from the same, or neighboring, districts "back east"; usually they were eager to locate near each other. The fortunate locator who got to them first could take the whole bunch and collect $20 from each. During the peak of the boom, some locators carted five to ten newcomers in a day's trip over the prairie. In a few months they were rich.

Sometimes they earned their money; sometimes their clients were fussy. And there were honest locators. There was one who tried earnestly to talk a woman settler out of the tract she had chosen: it contained a lake and she wanted her home to front a lake. The locator's arguments (he could not bring himself, however, to tell the whole truth) proving fruitless, he bore the woman back to town to file on the place and gather her belongings. When she returned to her farm a day or so later, her "lake," one of the type frequently formed by "flash floods" in the spring, was gone—dried up. That was twenty-six years ago; the woman is still there, but her lake has never come back.

This first well-paid service did not end the locator's relationship with the homesteader. Most of the locators were real estate men or had ranches of their own. A few were ex-stockmen, bitter and cynical, hating the newcomers and convinced they were doomed, getting their revenge in advance. Most of them had land to sell; and the homesteaders often were infected on their first day in Montana with the germ of greed for land which later was to step up the pace of disaster.

Of course, the honyocker was told, his homestead was all right, the soil and weather were perfect, and he would make a good living; but to *get rich*—then he would need more land.

It was a clever argument, so good that some of the locators believed it themselves. And it did more to wreck the state than even the initial homestead rush had done. . . . It held out hope to those for whom there was none now, and never would be; it extended the life of a futile experiment entailing criminally wasteful exploitation of unfit soil, and it created a credit boom based upon inflated crop values which was to end in financial collapse.

The years 1910-18 were "good" years on the northern plains. It rained, and the war sent wheat to above $2 a bushel. The price doubled between 1914 and 1918, and in that final year of war Montana expected the greatest wheat crop in its history—50,000,000 bushels. City men, said the newspapers in May, were going to be needed to help with the harvest. They were not needed, for drought brought crop failure that fall, and the next, and the next; but in the meantime the honyocker, egged on by virtually every public and private influence, had bought more land, more machinery. From 1910 to 1920 the number of farms more than doubled, the crop land acreage was trebled. The inflation in land "values" was even more startling:

from less than $250,000,000 in 1910 to nearly $700,000,000 in 1920.

Montana newspapers in May of the disastrous year 1918 carried advertisements signed by Alfred Atkinson, United States food administrator for the state, which said: "The government of the United States, as well as its war associates, is in great need of wheat. Every available pound is needed if the German flood is to be stemmed." Newspapers in dryland towns began calling upon the honyockers to increase their purchases of mechanized equipment. (The machinery companies were good advertisers throughout this period.) Montana had sent its young men to war—too many of them, as we shall see later—and farm labor scarcity was becoming serious. Machinery might be the answer, the homesteader thought. True, its cost was high—even the newspapers admitted it; but on the other hand wheat had doubled in value in four years. There were some who said that in 1920 it would bring $4 a bushel. With machinery the farmer could handle more land, grow more wheat, stop the Germans, and grow rich.

The homesteaders began to buy the new combine harvester-thresher, paying $1,500 to $2,000 or more for it. They bought tractors and Ford trucks. From 15 men and 14 horses for harvesting and threshing 25 acres with the header system, they reduced the labor and power factors to 2 men, no horses, a tractor-drawn combine and 2 trucks. . . . But there was nothing to harvest.

During the good years it had been possible for some homesteaders to pay off their initial indebtedness and find themselves square with the world after one or two years, perhaps even make a few hundred dollars. Now, even as bad year followed incredibly upon bad year, their credit was still good. They were improving their farming practices; surely, in the long run, it must rain.

Their credit was good, too, for land. If, in those few good years, they were able to make money on 320 or 640 acres, simple arithmetic (too simple) indicated that they could double it on 640 or 1,000. But most of the homestead land had been taken up, or that which was still available was too distant from the homesteader's place to make it practicable. There was plenty of land to be bought, and according to middle western standards it was still cheap. The locator who had helped the honyocker select his farm had some land for sale; he had quoted a price of $5 an acre.

But that had been some years ago, the locator now explained. The price had gone up and 160 acres were now worth $1,000. He urged the farmer to make up his mind, for values were rising rapidly. Before the boom collapsed there would be instances when 160 acres of virtually worthless land would sell for $4,000.

Nevertheless, $1,000 was a lot of money, and the honyocker went home to think it over.

That night the banker came. The honyocker had met him before, several times. This same banker sent his clerk to copy the names of homesteaders as they were posted at the land office; on follow-up visits he offered the facilities of his institution for loans to purchase machinery or land. He kept in touch with the real estate men, too; and tonight he found the honyocker in receptive mood. A thousand dollars? It was chicken feed in Montana!

The banker had plenty of money. Eastern capital was coming into the state now; the banker paid 6 per cent for it, charged 10. With wheat at $2 a bushel, he told the homesteader, and with some of the land producing 50 bushels to the acre (when it produced at all) how could he lose, if he had any crop? The deal was closed.

But that year the homesteader's crop was insufficient to pay the cost of harvesting. . . .

Well, he hadn't had enough land. His neighbor had a crop; not very good, but still a crop. If you had land enough you were sure to get crop on some of it; and he had always suspected that the first 320 had been poor soil. Now he had 480, but a man needed 640 in this country. . . . He went back to see locator and banker. Sure, his credit was still good!

Strange tales have come down in Montana

from the days of the land boom which accompanied the homestead rush.

There was the rancher who entertained all the young, single women of a whole town—teachers, stenographers, salesgirls—at dinner and a dance on his place. Before they left he had the signature of each on a homestead claim.

There were other ranchers who took up homesteads in the names of their cowpunchers, built shacks for them, and had them live there to establish residence. When the punchers had proved up, they were to turn the places over to the rancher and receive their reward—$100 each; but frequently these well-laid plans went awry. The cowpoke might have caught the fever himself, and then he would announce calmly that he was staying on his place; in that case the boss sometimes sent other cowpunchers to make things uncomfortable for the treacherous nester. Or the cowhand might calmly repudiate his earlier, verbal agreement and demand $1,000 or more. Then the boss would curse, but sometimes he would pay: the homestead frequently was so situated that the rancher had to have it to preserve his range.

The epic double-cross of the Montana homestead era involved a banker and his loving son. The banker had lent $1,400 on a homestead which had not yet been proved up—a fantastic piece of financial recklessness, as the borrower had as yet no equity in the land he offered for security. Discovering that the debtor was about to abandon the place, the banker secured a "relinquishment" in his son's name and put him on the land to serve out the residence requirement, prove up, and enable the father to sell the place and get his money back. The son stayed a few weeks; someone then appeared and offered him $500 to relinquish the homestead. He took the $500 and skipped the country.

Few of the homesteaders were smart enough to sell when land and crop values were up. The immigrants were still coming, still clamoring for farms. United States commissioners, in towns which had no land offices, received entries for a fee of $2, and at the rate of a hundred a day soon became tolerably prosperous. Homestead land gone, the "scissorbills" bought from land companies and ranchers. The big cattle and sheep spreads were being broken up. "We feel [one brochure asserted] that there is not a place offered by the Montana Ranches Co. which will not pay at least 10 per cent interest yearly on the investment if properly handled. Most of our properties are priced so that they should yield from 20 to 25 per cent as an operating return, and in addition to these returns is bound to be an enormous increase in value with the great influx of immigration that is now being brought to this state. . . ."

Thus Montana pulled land values up by their bootstraps. "There is bound to be an enormous increase in value. . . ." The refrain echoed in the land dealers' circulars, in the press, in the railroads' advertising; especially in the railroads' advertising. There was no audible questioning of the state's ability to support this influx; it was taken for granted that where there were so many people the formula for their support would develop automatically. It was a naive theory of economic perpetual motion which had caused trouble for older empires than this.

The homesteaders, however, were convinced. They responded eagerly to the railroads' request for testimonial letters. H. W. Lebeck wrote the Great Northern in 1912 that he had been a store clerk six years before, in Iowa, that now his land in Montana was worth $100 an acre "due to the increase in value of real estate, also the prospects of the Great Northern building through this section." Ola L. Grice of Dawson County started with $500; he wrote that he wouldn't take $5,000 for his place, "with the railroad coming so close to me." William C. Moores, also of that county, had only 88 acres under cultivation, but "I consider my place worth $8,000; land is increasing in value with the prospects of the new railroad."

The railroad never got to their town; a spur did, however, finally reach a town fifteen miles from them. From 1920 to 1930 their county lost 7 per cent of its population; in the succeeding ten years it lost another 15 per cent. In 1939, two hundred of its farm

families—20 per cent of the total—were "stranded or migratory," destitute and unable to make a living. The Montana planning board, surveying rehabilitation possibilities, found that even with expensive irrigation development only about half of these families could subsist in that county. The rest, said the planning board, are "surplus."

And what of the Lebecks, the Grices, and the Moores—those hopeful Dawson County Joads of three decades ago?

Some of their neighbors are included in that "surplus"; of these particular individuals, however, there remains no trace. The Grices stuck it out until a few years ago, then moved away; friends reported they had gone back to the Ozarks. Moores, who valued his dry-land farm of 88 cultivated acres at $8,000, abandoned it in the cropless '20's and moved to California. Good farm land, better than his, today is worth in that district about $10 an acre—a little more than a tenth of what Moores thought his place was worth.

Last Page Out of Homer[1]

ROBERT P. TRISTRAM COFFIN

IT WAS THE brightest and the bluest day of the blue-and-golden October of 1874, October 27. The sun was as clear as a ball of solid gold in a sky without a cloud. The last terrific yellow flames of Fall were burning among the birches, and the maples were still burning red in the swamps.

The old Twelve-Rod Road out of Brunswick toward Maquoit was afire. Smoke went up from it from the town's end and down to where it forked to the left and went on to Middle Bays. It smoked along the high elms with the Pennell Brothers' houses behind them. It smoked right down to the dark blue bay at the shipyard.

It wasn't a common fire, though. It was the Fall dust being churned up in the sunlight by hundred of carriages. Everybody in town who owned or could borrow a buggy, a buckboard, a carryall, or even a gig, was there. And lots who couldn't on foot. Everybody who was anybody was on the road. And some who weren't. There were horses that looked as if they had staggered out of the ark and buggies built before the Flood. There were horses that were all nervousness and breeding so exquisite that it hurt them like horseflies and they couldn't keep still. There were new buckboards which put people's eyes out with their blazing on their bright new black-and-gold, black-and-red wheels in the sun. There were old ladies with snowy hair and bonnets no bigger than a teacup with strings that tied under the chin, ladies so delicate that the breeze might break them into shining splinters any minute. There were huge fathers of families, huge as only the men in our fathers' day could grow, wide in the beam, with moustaches that swept like a mass of golden wire away back to their ears, half buried in spite of their bigness under a baker's dozen of children in striped stockings, velvet dresses, or pants with bursting seams and pearl buttons at the knee. There were big bugs and little bugs, and all the bugs in between. There were girls like bouquets of flowers tied up with flying ribbons. Boys as dangerous as dynamite, sitting in farmers' express wagons and jolting along with their legs hanging down over the tailboard. They had innocent eyes of angels, but they might go off any minute and strew destruction over the earth. There were farmers' wives who had put all the nice things they had in the house on their backs. The livery stables of Brunswick and Topsham stood empty as last year's crows' nests. Every horse was hired for the day. People had

[1] From Robert P. Tristram Coffin: *Captain Abby and Captain John* Copyright 1939 by The Macmillan Company and used with their permission.

come by the steam cars from Portland and Bath. They had even come from Boston.

A page in the history of Brunswick was about to be turned, and all the town was going down to Middle Bays to see it go over.

At the end of the road, the carriages were turning into the field which swept up to the headland. Charles Pennell's yard was crowded, and Ben's. The shore was alive with people.

Up in the house of Charles the Great, tables were spread and waiting. Tables were spread out on the lawns, too, and in under the apple trees. The white linen cloths were held down by round pebbles to keep them from ruffling in the wind. Glass pitchers were there, green with lemonade and red with raspberry shrub. Platters of cold tongue and beef and chicken breasts. Caraway cookies and cinnamon cookies and pumpkin pies big as the Fall sun, apple pies, mince. Turkey meat and cranberry sauce around it. Tarts heaped with red jelly. Swarms of late bees burned in the sun over dishes of strawberry jam. The feast was ready.

And over the heads of stout fathers sitting on the dry grass and being careful of the seats of their pants and boys and girls careless of theirs, in the midst of them all, the largest ship ever built in the town of Brunswick lay quiet above the billows of Queen Anne's lace. Twenty-four feet high, 218 feet of curved beauty, 1433 tons of solid and honest Maine oak. The ship *Benjamin Sewall,* built by the Pennell Brothers, waiting the word to go out on the Atlantic and around the world! She was the last word in loveliness and strength, "the finest ship ever launched," all finished in her cabins with solid mahogany. She was alive with pennons from her noble stem under Charles the Great's parlor windows to her stern over the thatch and dead sea lavender of Middle Bay. It was the peak in the history of the Pennells and of Middle Bays. It was a peak in the life story of Brunswick.

It was close to twelve o'clock. It was tip-top high-water mark of the highest-run neap tide of the year. And even so, the bay had been dredged out for the ship's coming. The air ran with excitement. A thousand voices were murmuring under the hill. All eyes were on the ship. It was the moment of a lifetime.

There was a knot of people high overhead on the ship's topgallant forecastle, under a cloud of flags. Benjamin Sewall himself was there, the business man from Boston for whom the ship was named. He was eighty years old, but his eyes were like those of a boy who has skipped school, or is at least running away to sea. The President of Bowdoin College was there, General Joshua L. Chamberlain, who kept the Stars and Bars off Little Round Top and so off the Capitol at Washington, that bloody Second Day at Gettysburg. Reverend Professor John S. Sewall of Bowdoin was there. The Honorable Charles J. Gilman, head of the Republican party and civic righteousness at Brunswick.

And three other people stood on top of the ship. On top of their world. On top of the highest moment in their life together, Captain John D. Pennell, Abby, and the boy, Arthur, born in the Pacific, up to his father's shoulder now. And maybe another boy, two years taller by measure of earthly years, whom nobody but Abby could see, with the face of an angel, the boy who had been cradled at a mainmast and who had sailed there around half the globe and back. Abby and John were standing on their ship, the ship John had designed, the ship they had dreamed of all their life together.

But the third boy in the family was down in the crowd under the lofty prow, among the common run of cousins and uncles, and he was crying as if his heart would break. Freddie could see his mother and father and brother up there on the sky, and he thought they were going to go away and leave him for good with the thousand strangers around him. He sobbed and sobbed. He was only four years old. His cheeks were rivers of tears. And up in Charles the Great's apple tree, the young daughter of Charles the Great, Helen Pennell, was crying bitterly behind the bandage over her eyes that was going to keep her from seeing what would have made her weep to see anyway. Helen had sore eyes, and she had to be in darkness

this greatest day in the life of the Pennell family!

Helen and Freddie, as Sancho to her blindness, had raided the bathtub up in Helen's house filled with sickel pears put there against the coming feast. They had filled their blouses with the fruit. Helen had eaten many of them, but her clothes were still bulged out with pears here and there. But the raid and that feast had been half an hour ago. Her heart was breaking now, she knew. No one had noticed her and Freddie in their raid, because everybody was all excitement over the preparations. The raid had been too easy a one. Helen's heart was a long ways from it now. She was weeping internally, she felt, though her eyes were scalding under the bandage. Helen leaned on the tree trunk for comfort. She felt a pear give way. It was miserable.

All the Pennell brothers who were left were there under the ship's nose, with their wives and children. Widow Pennell with Master James's son, Carroll, thirteen years old and gorgeous in a new blue sailor suit with a real sailor cap and tie. James Henry was missing. But perhaps his father was there for one moment, on the spot where he had fallen to his death nine years before. Old Jacob was there. And Robert and Joseph. But Job of the unhandsome hare lip and the handsome child and Ben and old Deborah were all up under their marble stones a mile away, and could not come.

General Chamberlain was saying something high up on the sky. Too high to hear. And people were talking. The General's long white hair and moustache flowed out back from his face in the light breeze and burned with ineffable brightness in the sun. Then Professor Sewall raised his two hands against the blue, and bowed his head. A hush came over the crowd. The thousand heads there bowed, too. The prayer floated out half-heard and was lost in the wind and sunlight. Something about God's holding the ocean and ships in the hollow of his hand. In the hush people could hear the seagulls calling out over the bay clearer than the words of the prayer.

The preacher's head went back. The mauls and hammers began. The hard, seasoned supporting beams rang like bells in their fibres. The whoa-haish! the gee-haw! of the bearded men goading their oxen and dragging away the fallen beams. Cries of sweaty men. The sound swept up like a sudden gale. The people drew back in their best clothes from the dust and the sounds. Higher and faster the sounds crowded, quickening and quickening up to a terrific crescendo. And then they stopped as if they had been cut off by scissors in the air. All the blows on metal and wood stopped at once. The sudden silence hurt the ears. An instant of utter stillness. Every man drew in his breath. It was like something at the very core of the process of being a man and creating man's kind. Then there was a last small and inadequate-seeming blow. Like a great bowstring, maybe, snapping somewhere out beyond the headland to the south.

"There she goes!"

No one believed it for a moment. The ship seemed as still and dead as ever. But there was something different. And then the ship came slowly to life, as a planet might come to life, gathered her strength upon her, gathered speed, went on her way, lonely, independent, went on her way from out of the people's midst. Down the ways and into the high water. Two long and lovely ripples curled up each side, turning to green gold in the sunlight. John and Abby and their son rode backward into the bay, a handsome family, their faces to their brothers and the people on the shore, their faces turned up and full of sun.

But their other boy, the four-year-old, broke from his aunts and ran after them, ran after the ship that was taking his parents away. He held up his hands and sobbed deep as they went, as a man might, wounded deep. He cried to them to stop, to wait for him. But the ship went away. He saw it glide half the width of the world away on the water. He fell on his face in the grass. No one heard his sobs any more. And the little girl up in the apple tree felt the tears hot on her bandage. The *Benjamin Sewall* stood up suddenly

tall and comely on the bay, even and straight, as she would stand up till the day she got her death.

It was finished.

The crowd gave three cheers. Everybody threw up his hat. Young Master Carroll Pennell seized his sailor hat to throw it into the air with the rest, with the hundreds of others there. But he had forgotten the elastic under his chin. The hat snapped back upon him and covered his face and eyes. He swore the first oath of his life. "God damn the thing!" His mother did not hear him. Nobody heard him. Nobody heard young Freddie Pennell crying on his face where the ship had been. Everybody was cheering, cheering. The only sound was joy.

Nobody could hear the sound of waves rolling in upon rocky Formosa where this ship would break her heart and leave her ribs to bleach among the wicked rocks in the sun. It was too far to hear those waves, for the thickness of the world was between them and the people. Nobody heard an even lower sound, something like a whisper about her captain's lying cold and still in far-away Rio de Janeiro. And not one there heard the whisper, as low as the faint Fall wind that day, that this, the loveliest Pennell ship and the greatest, was the last. The line had stretched out for a century. But this was the last ship of them all.

The page of history had turned over. The people of Brunswick had seen a sight that would be like a page out of Homer in a handful of years.

9

Opinion and Points of View

At Oxford University in the fall of 1810, two freshmen got into an argument over the relative merits of German and Italian literature. For some time they continued to make decided and sweeping assertions. Suddenly these two young men—Percy Bysshe Shelley and Thomas Jefferson Hogg—agreed it was sensible to drop the discussion entirely. For both confessed that they knew next to nothing about either literature and had not thought much about what they did know. Years later, Hogg remarked: "It is upon such scanty data that young men reason; upon such slender materials do they build up their opinions." One doubts whether this tendency is confined to young people. Moreover, these two men were unusual in being wise enough to stop. As altogether too few do, they had seen that opinion without sufficient knowledge and without satisfactory contemplation has little value beyond revealing one's own shortcomings.

But how much knowledge and how much thought are needed before one's opinion will be worth listening to or reading? An examination of writings of this sort will shortly convince us there is no sure yardstick and that it is dangerous to employ a merely quantitative judgment. Still, when a man or woman has been for years a devoted student of a subject, a worker in a special area, a leader in a particular profession, we have a greater initial curiosity and respect for what he will say. If we know anything at all of William Allen White, the

title "Good Newspapers and Bad" will doubly interest us because his name is attached to it. Here is a man, we say, who spent years with newspapers, who owned and edited a famous one—he must have had to do much thinking about the good and bad in newspapers over a long period of time. Surely, then, whatever the point of view from which he distinguishes between "good" and "bad," this will be the voice of long experience and contemplation. With much the same attitude we begin a piece about some aspect of education by a man long in the field, like Howard Mumford Jones.

Of course, we may know nothing at all about our writer. There is always the question whether it is good or bad to have such knowledge before we start to read. Actually it usually takes but a few sentences to tell us whether or not this is the voice of experience.

One thing is sure: the *amount* of thinking that has preceded the writing and the *quality* of the outcome, are matters to decide on finally only when we have read an essay through. Even then, it will be a matter of personal judgment. One great aid in making such judgments is Randolph Bourne's "What Is Opinion?" In the estimate of quality one should always consider the *scope* of the point of view. Do special knowledge and long concentration on particular occupations sometimes breed narrowness and not the comprehensive mind? One should always be mindful of such a possibility. From *our* point of view, as editors, three authors represented here deserve particular attention from this angle. One is Edward J. Flynn. As one of the most experienced and successful political bosses in the United States, he should know what he is talking about and must have had to do considerable thinking about the problems involved. From the point of view of the boss he gives his opinion in "Bosses and Machines." Again, Eleanor Wembridge worked for years with morons before expressing an opinion about them; in fact, her book is entitled *Life Among the Lowbrows*. This is the point of view of the social worker—is it more? Subtlest of all is C. S. Lewis's examination of "What Christians Believe." Is it mere explanation, or a defense by a devoted Christian, or an attack on Christian narrowness and shortcomings? Is it—whatever its point of view—rigid, dogmatic, and inflexible, and so out of the pale of Randolph Bourne's approval?

There is another aspect to Bourne's definition. Opinion must be held provisionally until modified by further knowledge and experience. But it must really be *held;* it must be not flabby, but firm. It has to be firm, says Bourne, to have any quality at all. In "Who is Loyal to America" Henry Steele Commager exhibits this commendable firmness. Commager's special knowledge of the United States and his point of view as historian have affected his approach and given variety to his illustrations. He has had certain phenomena of our time on his mind for a long while. In addition to these observations, we can perceive that Professor Commager's mind and emotions are determined at the time of writing; he believes that his logic is sound and his emotions well-considered. If no "opinion" has merit without this resolution, how imperative is the demand when dealing with the so-called "controversial"!

Analysis of any good expression of opinion takes us back quickly to first principles, to the writer's active philosophy. A few words of commentary may reveal not only the direction of a whole life, but the very culture of which it is an expression. In the history of thinking many plans for education have been developed and many have been put into effect. To learn how men have wished to "educate" the young and guide the newer generations is one of the

best ways of understanding these men—even to seeing deeply into them and their times. So with Thomas Jefferson's plan for the good American education; it is not something casual, done in passing and superficial. Here Jefferson reveals a point of view toward life as another might disclose his point of view through a plan for housing or some ideas about recreation.

The revelation may come through reporting. At first glance Rebecca West's "The Insane Root" might seem wholly unlike the plan of Jefferson. But in one respect it is closely related: it too expresses a whole culture. Reporting is there, and pertinent biography. In addition this is the expression of profound disturbance in the writer; it begins with the words "insane root" and continues throughout. It is a tribute to the style of Rebecca West that she writes so well despite the agitation. For it is a philosophy that is shaken, an idea of what is credible and predictable and sane. Here in the words and deeds of John Amery, the traitor, the only pattern is fearful and "insane," for that is the only point of view one can take and remain balanced himself. This is hardly the confident forward-looking trust of Jefferson, but both express the point of view of much more than their private selves.

This group of authors all share one abiding faith—that as responsible and thinking people they not only have the right to state their views but are happy in so doing. It is significant that of them all only Thomas Paine had difficulties in getting his opinions made public. Unlike Galileo, no one of them here claims to make a scientific utterance, no one has anything to *prove*. But at the time they speak, mostly out of experience in fact and thinking, they would say easily and well what they vigorously believe to be stupid or wise, good or not good, responsible or irresponsible, in a society of free and active minds. It is (to offer another opinion of our own) good to be able to have a section of non-fiction prose entitled "Opinion and Points of View." This is part of the heritage of a free society.

What Is Opinion?[1]

Randolph Bourne

A JOURNAL OF OPINION has always to face the attack of the practical man that it is a mere vehicle for dilettantism, which wastes in expressing sentiments the energy which should go to the presentation of sober fact and sound data. There is far too much opinion at large in the world already, he thinks. What he wants is not more opinion, but a guide out of the fog bank into some clear light.

Such a practical man flatters too highly most of that comment which passes for opinion in the journals of the day. Most current reactions to the war, have been, for example, not opinion at all, but mere batteries of guns in an emotional warfare. In all the discussion little emerges that is not articulate emotion or articulate group interest. This variedly articulate anger, disgust, prejudice, moral reaction, has little more right to be termed opinion than the start one gives when one meets a bear. It is instinctive response clothed with words.

Our molders of opinion—our preachers and politicians and editors and publicists—are not speaking in order so much to convince us as to make us act or vote or feel with them.

[1] From *The New Republic*, September, 1915, and used with the permission of the editors.

Their words are chains of phrases strung together almost undesignedly with a view to pulling us to the cause or party or idea they are supporting. It is a curious delusion that words express thought. The object of most words is to short-circuit thought. Phrases like democracy, liberty, militarism, the principles of justice and humanity, are not primarily meanings at all. They are epithets hurled at us to arouse some desired resentment, or they are spotlights guaranteed to create certain warm emotional glows of assent in the mind which receives them. It is the reaction they touch off that makes them significant, not their meaning. Words are such deadly things not because they mean something. but because they get wrapped up with our emotion and pull it out with them when they are seized. In support of the articulate emotion there may be any number of highly rational arguments. But it is not the arguments which have come first. It is the antagonism or the glow of approval, while the evidence has grown almost vegetatively around the emotion. The world is always willing to be fooled in this way. It is always willing to take the ideas at their face value, instead of going straight to the emotional core and discovering the animus that directed the collection of the ideas. The constant danger to the mind that would be intellectual, that would "have opinions," is that it is willing to identify itself or indolently let itself be identified with groups that are not expressing opinion at all, but only articulating their emotion.

Genuine opinion is neither cold, logical judgment nor irrational feeling. It is scientific hypothesis, to be tested and revised as experience widens. Opinion is a view of a situation based on grounds short of proof. In a valid opinion they must be *just* short of proof. Good opinion is not spasmodic. The mind must have made a very wide sweep, made the complete circuit of the compass. It must first have hunted down the predisposing prejudice and neutralized it, and then bent itself to discovering all the factors that converge upon the situation. A good opinion places the event or person or idea it is judging firmly in a scheme of things. You get its position in a spreading field as well as in a historical chain.

But good opinion is not flabby and uncertain. It is not a "much to be said on both sides." It is a provisional conviction to be held as a conviction until new light alters it. It is an interpretation with a definite slant and bias. But it presses hotly for proof. It strains constantly towards the accuracy of truth. Good opinion, although firm, is the direct opposite of dogma. Dogma is hard and unyielding, a sort of petrified emotion. It is constantly masquerading as proof, as genuine opinion never does. You do not revise dogmas. You smash them. But opinion is flexible and gracious. It does not object to examining itself, to publishing the source of its interpretations. It takes you freely behind the scenes. It is not afraid to show you the foundations of the categories and terms in which it is expressed. It will let the bony framework of its presuppositions stand out rather boldly at times. It invites criticism. It has the scientist's disinterestedness in its own conviction. What it wants is to understand, to get the thing it is judging rightly placed, to grasp its true meaning in the world.

Opinion, however, aims not at a mere static comprehension. It does not merely survey the field with serene Olympian gaze. It is a force, and the only force that can be relied upon in the long run to fortify the will and clear the vision. Conviction, gripped after the widest possible survey of the field, is what we must act upon if we are to effect those social changes which most of us desire. The world has generally preferred to act from logical consistency or from the high elation of feeling rather than upon daring and clear-sighted experiment. The idea of a social and political opinion which, free from moral prejudice, strains towards scientific proof, as the hypotheses of the physicist strain towards physical laws, is still very new, but it is already playing havoc with the old crusted folkways.

If such opinion is to be this force of the future, there cannot be too much of its guiding thread. Yet it constantly becomes not easier but harder to form valid opinions. We

are stunned by the volume of what there is to know in the human world. We are overwhelmed by the mass of sociological data, and brought to despair even more by the great gaps which must be filled. We have every day set before us infinitely more than we can possibly digest. We run the constant risk of missing completely the relevant and the important. Opinion never had a better chance of being based on substrata of quite meaningless facts. The result is often an excessive caution among those whose business it is to know. The universities remain esoteric through the refusal of those who have the wide survey to commit themselves. Those who have the "grounds just short of proof" will not form opinions. Those who will loosely express their opinions have not the grounds. This treason of the intellectual class has neutralized the expected effects of public education. Discussion and universal reading have not really made popular opinion any more intelligent or reliable. They have merely made great masses emotionally articulate, rendered prejudice more vociferous and varied. The need for interpreters, for resolute expressers of opinion, becomes therefore more urgent. Even if real opinion is a Utopian ideal, and no mind can ever make the wide survey and go through the stringent processes necessary to form it, the brave effort must always be made. Its best will not be valueless. To work at breaking up the cake of intellectual custom, at setting the new terms and values that current society needs, at judging events in the light of the larger conceptions of science and the most fruitful social tendencies, will be not to remain entirely futile in the modern world. Quixotic as the enterprise may seem, it is the formation of opinion and not dusty scholarship and solemn cant that will enlist the good will and best endeavors of those who aim to think worthily.

What Christians Believe[1]

C. S. Lewis

I

I have been asked to tell you what Christians believe, and I am going to begin by telling you one thing that Christians don't need to believe. If you are a Christian you don't have to believe that all the other religions are simply wrong all through. If you are an atheist you do have to believe that the main point in all the religions of the whole world is simply one huge mistake. If you are a Christian, you are free to think that all these religions, even the queerest ones, contain at least some hint of the truth. When I was an atheist I had to try to persuade myself that the whole human race were pretty good fools until about one hundred years ago; when I became a Christian I was able to take a more liberal view. But, of course, being a Christian does mean thinking that where Christianity differs from other religions, Christianity is right and they are wrong. Like in arithmetic—there's only one right answer to a sum, and all other answers are wrong: but some of the wrong answers are much nearer being right than others.

The first big division of humanity is into the majority, who believe in some kind of God or gods, and the minority who don't. On this point, Christianity lines up with the majority—lines up with ancient Greeks and Romans, modern savages, Stoics, Platonists, Hindoos, Mohammedans, etc., against the modern Western European materialist. There are all sorts of different reasons for believing in God, and here I'll mention only one. It is this. Supposing there was no intelligence behind the universe, no creative mind. In that case nobody designed my brain for the purpose of thinking. It is merely that when the

[1] From *The Case for Christianity* by C. S. Lewis. Used with permission of The Macmillan Company, publishers in the United States. Circulated in Canada by permission of Geoffrey Bles, Ltd.

atoms inside my skull happen for physical or chemical reasons to arrange themselves in a certain way, this gives me, as a by-product, the sensation I call thought. But if so, how can I trust my own thinking to be true? It's like upsetting a milk-jug and hoping that the way the splash arranges itself will give you a map of London. But if I can't trust my own thinking, of course I can't trust the arguments leading to atheism, and therefore have no reason to be an atheist, or anything else. Unless I believe in God, I can't believe in thought: so I can never use thought to disbelieve in God.

Now I go on to the next big division. People who all believe in God can be divided according to the sort of God they believe in. There are two very different ideas on this subject. One of them is the idea that He is beyond good and evil. *We* call one thing good and another thing bad. But according to some people that's merely our human point of view. These people would say that the wiser you become the less you'd want to call anything good or bad, and the more clearly you'd see that everything is good in one way and bad in another, and that nothing could have been different. Consequently, these people think that long before you got anywhere near the divine point of view the distinction would have disappeared altogether. We call a cancer bad, they'd say, because it kills a man; but you might just as well call a successful surgeon bad because he kills a cancer. It all depends on the point of view. The other and opposite idea is that God is quite definitely "good" or "righteous," a God who takes sides, who loves love and hates hatred, who wants us to behave in one way and not in another. The first of these views—the one that thinks God beyond good and evil—is called Pantheism. It was held by the great Prussian philosopher Hegel and, as far as I can understand them, by the Hindoos. The other view is held by Jews, Mohammedans, and Christians.

And with this big difference between Pantheism and the Christian idea of God, there usually goes another. Pantheists usually believe that God, so to speak, animates the universe as you animate your body: that the universe almost *is* God, so that if it didn't exist He wouldn't exist either, and anything you find in the universe is a part of God. The Christian idea is quite different. They think God *made* the universe—like a man making a picture or composing a tune. A painter isn't a picture, and he doesn't die if his picture is destroyed. You may say, "He's put a lot of himself into it," but that only means that all its beauty and interest have come out of his head. His skill isn't in the picture in the same way that it's in his head, or even in his hands. I expect you see how this difference between Pantheists and Christians hangs together with the other one. If you don't take the distinction between good and bad very seriously, then it's easy to say that anything you find in this world is a part of God. But, of course, if you think some things really bad, and God really good, then you can't talk like that. You must believe that God is separate from the world and that some of the things we see in it are contrary to His will. Confronted with a cancer or a slum the Pantheist can say, "If you could only see it from the divine point of view, you would realise that this also is God." The Christian replies, "Don't talk damned nonsense."[2] For Christianity is a fighting religion. It thinks God made the world—that space and time, heat and cold, and all the colours and tastes, and all the animals and vegetables, are things that God "made up out of His head" as a man makes up a story. But it also thinks that a great many things have gone wrong with the world that God made and that God insists, and insists very loudly, on our putting them right again.

And, of course, that raises a very big question. If a good God made the world why has it gone wrong? And for many years I simply wouldn't listen to the Christian answers to this question, because I kept on feeling "whatever you say, and however clever your arguments are, isn't it much simpler and easier to say that the world was

[2] One listener complained of the word *damned* as frivolous swearing. But I mean exactly what I say—nonsense that is *damned* is under God's curse, and will (apart from God's grace) lead those who believe it to eternal death.

not made by any intelligent power? Aren't all your arguments simply a complicated attempt to avoid the obvious?" But then that threw me back into those difficulties about atheism which I spoke of a moment ago. And soon I saw another difficulty.

My argument against God was that the universe seemed so cruel and unjust. But how had I got this idea of *just* and *unjust?* A man doesn't call a line crooked unless he has some idea of a straight line. What was I comparing this universe with when I called it unjust? If the whole show was bad and senseless from A to Z, so to speak, why did I, who was supposed to be part of the show, find myself in such violent reaction against it? A man feels wet when he falls into water, because man isn't a water animal: a fish wouldn't feel wet. Of course I could have given up my idea of justice by saying it was nothing but a private idea of my own. But if I did that then my argument against God collapsed too—for the argument depended on saying that the world was really unjust, not that it just didn't happen to please my private fancies. Thus in the very act of trying to prove that God didn't exist—in other words, that the whole of reality was senseless—I found I was forced to assume that one part of reality—namely my idea of justice—was full of sense. Consequently atheism turns out to be too simple. If the whole universe has no meaning, we should never have found out that it has no meaning: just as if there were no light in the universe and therefore no creatures with eyes we should never know it was dark. *Dark* would be a word without meaning.

II

Very well then, atheism is too simple. And I'll tell you another view that is also too simple. It's the view I call Christianity-and-water, the view that just says there's a good God in Heaven and everything is all right—leaving out all the difficult and terrible doctrines about sin and hell and the devil, and the redemption. Both these are boys' philosophies.

It is no good asking for a simple religion. After all, real things *aren't* simple. They *look* simple, but they're not. The table I'm sitting at looks simple: but ask a scientist to tell you what it's really made of—all about the atoms and how the light waves rebound from them and hit my eye and what they do to the optic nerve and what it does to my brain—and, of course, you find that what we call "seeing a table" lands you in mysteries and complications which you can hardly get to the end of. A child, saying a child's prayer, looks simple. And if you're content to stop there, well and good. But if you're not—and the modern world usually isn't—if you want to go on and ask what's really happening—then you must be prepared for something difficult. If we ask for something more than simplicity, it's silly then to complain that the something more isn't simple. Another thing I've noticed about reality is that, besides being difficult, it's odd: it isn't neat, it isn't what you expect. I mean, when you've grasped that the earth and the other planets all go round the sun, you'd naturally expect that all the planets were made to match—all at equal distances from each other, say, or distances that regularly increased, or all the same size, or else getting bigger or smaller as you go further from the sun. In fact, you find no rhyme or reason (that we can see) about either the sizes or the distances; and some of them have one moon, one has four, one has two, some have none, and one has a ring.

Reality, in fact, is always something you couldn't have guessed. That's *one* of the reasons I believe Christianity. It's a religion you couldn't have guessed. If it offered us just the kind of universe we'd always expected, I'd feel we were making it up. But, in fact, it's not the sort of thing anyone would have made up. It has just that queer twist about it that real things have. So let's leave behind all these boys' philosophies—these over-simple answers. The problem isn't simple and the answer isn't going to be simple either.

What is the problem? A universe that contains much that is obviously bad and apparently meaningless, but containing creatures like ourselves who know that it is bad and meaningless. There are only two views

that face all the facts. One is the Christian view that this is a good world that has gone wrong, but still retains the memory of what it ought to have been. The other is the view called Dualism. Dualism means the belief that there are two equal and independent powers at the back of everything, one of them good and the other bad, and that this universe is the battlefield in which they fight out an endless war. I personally think that next to Christianity Dualism is the manliest and most sensible creed on the market. But it has a catch in it.

The two powers, or spirits, or gods—the good one and the bad one—are supposed to be quite independent. They both existed from all eternity. Neither of them made the other, neither of them has any more right than the other to call itself God. Each presumably thinks it is good and thinks the other bad. One of them likes hatred and cruelty, the other likes love and mercy, and each backs its own view. Now what do we mean when we call one of them the Good Power and the other the Bad Power? Either we're merely saying that we happen to prefer the one to the other—like preferring beer to cider—or else we're saying that, whatever *they* say about it, and whichever *we* happen to like, one of them is actually wrong, actually mistaken, in regarding itself as good. Now if we mean merely that we happen to prefer the first, then we must give up talking about good and evil at all. For good means what you ought to prefer quite regardless of what you happen to like at any given moment. If "being good" meant simply joining the side you happened to fancy, for no real reason, then good wouldn't *be* good. So we must mean that one of the two powers is actually wrong and the other actually right.

But the moment you say that, you are putting into the universe a third thing in addition to the two Powers: some law or standard or rule of good which one of the powers conforms to and the other fails to conform to. But since the two powers are judged by this standard, then this standard, or the being who made this standard, is farther back and higher up than either of them, and He will be the real God. In fact, what we meant by calling them good and bad turns out to be that one of them is in a right relation to the real ultimate God and the other in a wrong relation to Him.

The same point can be made in a different way. If Dualism is true, then the Bad Power must be a being who likes badness for its own sake. But in reality we have no experience of anyone liking badness just because it is bad. The nearest we can get to it is in cruelty. But in real life people are cruel for one of two reasons—either because they are sadists, that is, because they have a sexual perversion which makes cruelty a cause of sensual pleasure to them, or else for the sake of something they are going to get out of it—money, or power, or safety. But pleasure, money, power, and safety are all, as far as they go, good things. The badness consists in pursuing them by the wrong method, or in the wrong way, or too much. I don't mean, of course, that the people who do this aren't desperately wicked. I do mean that wickedness, when you examine it, turns out to be the pursuit of some good in the wrong way. You can be good for the mere sake of goodness· you can't be bad for the mere sake of badness. You can do a kind action when you're not feeling kind and when it gives you no pleasure, simply because kindness is right; but no one ever did a cruel action simply because cruelty is wrong—only because cruelty was pleasant or useful to him. In other words, badness can't succeed even in being bad *in the same way* in which goodness is good. Goodness is, so to speak, itself: badness is only spoiled goodness. And there must be something good first before it can be spoiled. We called Sadism a sexual perversion; but you must first have the idea of a normal sexuality before you can talk of it being perverted; and you can see which is the perversion, because you can explain the perverted from the normal, and can't explain the normal from the perverted. It follows that the Bad Power, who is supposed to be on an equal footing with the Good Power, and to love badness in the same way as the good one loves goodness, is a mere bogey. In order to be bad he must have good things to want and then to pursue in the wrong way: he

must have impulses which were originally good in order to be able to pervert them. But if he is bad he can't supply himself either with good things to desire or with good impulses to pervert. He must be getting both from the Good Power. And if so, then he is not independent. He is part of the Good Power's world: he was made either by the Good Power or by some power above them both.

Put it more simply still. To be bad, he must exist and have intelligence and will. But existence, intelligence, and will are in themselves good. Therefore he must be getting them from the Good Power: even to be bad he must borrow or steal from his opponent. And do you now begin to see why Christianity has always said that the devil is a fallen angel? That isn't a mere story for the children. It's a real recognition of the fact that evil is a parasite, not an original thing. The powers which enable evil to carry on are powers given it by goodness. All the things which enable a bad man to be effectively bad are in themselves good things—resolution, cleverness, good looks, existence itself. That's why Dualism, in a strict sense, won't work.

But I want to say that real Christianity (as distinct from Christianity-and-water) goes much nearer to Dualism than people think. One of the things that surprised me when I first read the New Testament seriously was that it was always talking about a Dark Power in the universe—a mighty evil spirit who was held to be the Power behind death and disease, and sin. The difference is that Christianity thinks this Dark Power was created by God, and was good when he was created, and went wrong. Christianity agrees with Dualism that this universe is at war. But it doesn't think this is a war between independent powers. It thinks it's a civil war, a rebellion, and that we are living in a part of the universe occupied by the rebel.

Enemy-occupied territory—that's what this world is. Christianity is the story of how the rightful king has landed, you might say landed in disguise, and is calling us all to take part in a great campaign of sabotage. When you go to church you're really listening in to the secret wireless from our friends: that's why the enemy is so anxious to prevent us going. He does it by playing on our conceit and laziness and intellectual snobbery. I know someone will ask me, "Do you really mean, at this time of day, to re-introduce our old friend the devil—hoofs and horns and all?" Well, what the time of day has to do with it I don't know. And I'm not particular about the hoofs and horns. But in other respects my answer is, "Yes, I do." I don't claim to know anything about his personal appearance. If anybody really wants to know him better I'd say to that person, "Don't worry. If you really want to, you will. Whether you'll like it when you do is another question."

III

Christians, then, believe that an evil power has made himself for the present the Prince of this World. And, of course, that raises problems. Is this state of affairs in accordance with God's will or not? If it is, He's a strange God, you'll say: and if it isn't, how *can* anything happen contrary to the will of a being with absolute power?

But anyone who has been in authority knows how a thing can be in accordance with your will in one way and not in another. It may be quite sensible for a mother to say to the children, "I'm not going to go and make you tidy the school-room every night. You've got to learn to keep it tidy on your own." Then she goes up one night and finds the Teddy bear and the ink and the French Grammar all lying in the grate. That's against her will. She would prefer the children to be tidy. But on the other hand, it is her will which has left the children free to be untidy. The same thing arises in any regiment, or trades union, or school. You make a thing voluntary and then half the people don't do it. That isn't what you willed, but your will has made it possible.

It's probably the same in the universe. God created things which had free will. That means creatures which can go wrong *or* right. Some people think they can imagine a creature which was free but had no possibility of going wrong, but I can't. If a thing

is free to be good it's also free to be bad. And free will is what has made evil possible. Why, then, did God give them free will? Because free will, though it makes evil possible, is also the only thing that makes possible any love or goodness or joy worth having. A world of automata—of creatures that worked like machines—would hardly be worth creating. The happiness which God designs for His higher creatures is the happiness of being freely, voluntarily united to Him and to each other in an ecstasy of love and delight compared with which the most rapturous love between a man and a woman on this earth is *mere milk and water*. And for that they've got to be free.

Of course God knew that would happen if they used their freedom the wrong way: apparently He thought it worth the risk. Perhaps we feel inclined to disagree with Him. But there's a difficulty about disagreeing with God. He is the source from which all your reasoning power comes: you couldn't be right and He wrong any more than a stream can rise higher than its own source. When you are arguing against Him you're arguing against the very power that makes you able to argue at all: it's like cutting off the branch you're sitting on. If God thinks this state of war in the universe a price worth paying for free will—that is, for making a *real* world in which creatures can do real good or harm and something of real importance can happen, instead of a toy world which only moves when He pulls the strings—then we may take it it *is* worth paying.

When we've understood about free will, we shall see how silly it is to ask, as somebody once asked me: "Why did God make a creature of such rotten stuff that it went wrong?" The better stuff a creature is made of—the cleverer and stronger and freer it is—then the better it will be if it goes right, but also the worse it will be if it goes wrong. A cow can't be very good or very bad; a dog can be both better and worse; a child better and worse still; an ordinary man, still more so; a man of genius, still more so; a superhuman spirit best—or worst—of all.

How did the Dark Power go wrong? Well, the moment you have a self at all, there is a possibility of putting yourself first—wanting to be the centre—wanted to *be* God, in fact. That was the sin of Satan: and that was the sin he taught the human race. Some people think the fall of man had something to do with sex, but that's a mistake. What Satan put into the heads of our remote ancestors was the idea that they could "be like gods"—could set up on their own as if they had created themselves—be their own masters—invent some sort of happiness for themselves outside God, apart from God. And out of that hopeless attempt has come nearly all that we call human history—money, poverty, ambition, war, prostitution, classes, empires, slavery—the long terrible story of man trying to find something other than God which will make him happy.

The reason why it can never succeed is this. God made us: invented us as a man invents an engine. A car is made to run on petrol, and it won't run properly on anything else. Now God designed the human machine to run on Himself. He Himself is the fuel our spirits were designed to burn, or the food our spirits were designed to feed on. There isn't any other. That's why it's just no good asking God to make us happy in our own way without bothering about religion. God can't give us a happiness and peace apart from Himself, because it isn't there. There's no such thing.

That is the key to history. Terrific energy is expended—civilisations are built up—excellent institutions devised; but each time something goes wrong. Some fatal flaw always brings the selfish and cruel people to the top and it all slides back into misery and ruin. In fact, the machine konks. It seems to start up all right and runs a few yards, and then it breaks down. They're trying to run it on the wrong juice. That's what Satan has done to us humans.

And what did God do? First of all He left us conscience, the sense of right and wrong: and all through history there have been people trying (some of them very hard) to obey it. None of them ever quite succeeded. Secondly, He sent the human race what I call good dreams: I mean those queer stories scattered all through the heathen religions

about a god who dies and comes to life again and, by his death, has somehow given new life to men. Thirdly, He selected one particular people and spent several centuries hammering into their heads the sort of God He was—that there was only one of Him and that He cared about right conduct. Those people were the Jews, and the Old Testament gives an account of the hammering process.

Then comes the real shock. Among these Jews there suddenly turns up a man who goes about talking as if He was God. He claims to forgive sins. He says He has always existed. He says He is coming to judge the world at the end of time. Now let us get this clear. Among Pantheists, like the Indians, anyone might say that he was a part of God, or one with God: there'd be nothing very odd about it. But this man, since He was a Jew, couldn't mean that kind of God. God, in their language, meant the Being outside the world Who had made it and was infinitely different from anything else. And when you've grasped that, you will see that what this man said was, quite simply, the most shocking thing that has ever been uttered by human lips.

I'm trying here to prevent anyone from saying the really silly thing that people often say about Him: "I'm ready to accept Jesus as a great moral teacher, but I don't accept His claim to be God." That's the one thing we mustn't say. A man who was merely a man and said the sort of things Jesus said wouldn't be a great moral teacher. He'd either be a lunatic—on a level with the man who says he's a poached egg—or else he'd be the Devil of Hell. You must make your choice. Either this man was, and is, the Son of God: or else a madman or something worse. You can shut Him up for a fool; you can spit at Him and kill Him as a demon; or you can fall at His feet and call Him Lord and God. But don't let us come with any patronising nonsense about His being a great human teacher. He hasn't left that open to us. He didn't intend to.

A Plan for Education[1]

THOMAS JEFFERSON

ANOTHER OBJECT of the revisal is to diffuse knowledge more generally through the mass of the people. The bill proposes to lay off every county into small districts of five or six miles square, called hundreds, and in each of them to establish a school for teaching reading, writing and arithmetic. The tutor to be supported by the hundred, and every person in it entitled to send their children three years gratis, and as much longer as they please, paying for it. These schools to be under a visitor, who is annually to choose the boy of best genius in the school, of those whose parents are too poor to give them further education, and to send him forward to one of the grammar schools, of which twenty are proposed to be erected in different parts of the country, for teaching Greek, Latin, Geography and the higher branches of numerical arithmetic.

Of the boys thus sent in one year, trial is to be made at the grammar schools one or two years, and the best genius of the whole selected, and continued six years, and the residue dismissed. By this means twenty of the best geniuses will be raked from the rubbish annually, and be instructed at the public expense so far as the grammar schools go. At the end of six years' instruction, one half are to be discontinued (from among whom the grammar schools will probably be supplied with future masters); and the other half, who are to be chosen for the superiority of their parts and disposition, are to be sent and continued three years in the study of such sciences as they shall choose, at William

[1] From *Notes on the State of Virginia.* Paris, 1784-1785.

and Mary college, the plan of which is proposed to be enlarged, as will be hereafter explained, and extended to all the useful sciences. The ultimate result of the whole scheme of education would be the teaching all the children of the state reading, writing, and common arithmetic: turning out ten annually, of superior genius, well taught in Greek, Latin, Geography, and the higher branches of arithmetic: turning out ten others annually, of still superior parts, who, to those branches of learning, shall have added such of the sciences as their genius shall have led them to: the furnishing to the wealthier part of the people convenient schools at which their children may be educated at their own expense.

The general objects of this law are to provide an education adapted to the years, to the capacity, and the condition of every one, and directed to their freedom and happiness. Specific details were not proper for the law. These must be the business of the visitors entrusted with its execution. The first stage of this education being the schools of the hundreds, wherein the great mass of the people will receive their instruction, the principal foundations of future order will be laid here. Instead therefore of putting the Bible and Testament into the hands of the children at an age when their judgments are not sufficiently matured for religious enquiries, their memories may here be stored with the most useful facts from Grecian, Roman, European and American history. The first elements of morality too may be instilled into their minds; such as, when further developed as their judgments advance in strength, may teach them how to work out their own greatest happiness, by showing them that it does not depend on the condition of life in which chance has placed them, but is always the result of a good conscience, good health, occupation, and freedom in all just pursuits.

Those whom either the wealth of their parents or the adoption of the state shall destine to higher degrees of learning, will go on to the grammar schools, which constitute the next stage, there to be instructed in the languages. The learning Greek and Latin, I am told, is going into disuse in Europe. I know not what their manners and occupations may call for, but it would be very ill-judged in us to follow their example in this instance. There is a certain period of life, say from eight to fifteen or sixteen years of age, when the mind like the body is not yet firm enough for laborious and close operations. If applied to such, it falls an early victim to premature exertion: exhibiting, indeed, at first, in these young and tender subjects, the flattering appearance of their being men while they are yet children, but ending in reducing them to be children when they should be men. The memory is then most susceptible and tenacious of impressions; and the learning of languages being chiefly a work of memory, it seems precisely fitted to the powers of this period, which is long enough too for acquiring the most useful languages ancient and modern.

I do not pretend that language is science. It is only an instrument for the attainment of science. But that time is not lost which is employed in providing tools for future operation: more especially as in this case the books put into the hands of the youth for this purpose may be such as will at the same time impress their minds with useful facts and good principles. If this period be suffered to pass in idleness, the mind becomes lethargic and impotent, as would the body it inhabits if unexercised during the same time. The sympathy between body and mind during their rise, progress and decline, is too strict and obvious to endanger our being misled while we reason from the one to the other.

As soon as they are of sufficient age, it is supposed they will be sent on from the grammar schools to the university, which constitutes our third and last stage, there to study those sciences which may be adapted to their views. By that part of our plan which prescribes the selection of the youths of genius from among the classes of the poor, we hope to avail the state of those talents which nature has sown as liberally among the poor as the rich, but which perish without use, if not sought for and cultivated

But of the views of this law none is more important, none more legitimate, than that

of rendering the people safe, as they are the ultimate guardians of their own liberty. For this purpose the reading in the first stage, where they will receive their whole education, is proposed, as has been said, to be chiefly historical. History by apprising them of the past will enable them to judge of the future; it will avail them of the experience of other times and other nations; it will qualify them as judges of the actions and designs of men; it will enable them to know ambition under every disguise it may assume; and knowing it, to defeat its views. In every government on earth is some trace of human weakness, some germ of corruption and degeneracy, which cunning will discover, and wickedness insensibly open, cultivate and improve. Every government degenerates when trusted to the rulers of the people alone. The people themselves therefore are its only safe depositories. And to render even them safe, their minds must be improved to a certain degree.

This indeed is not all that is necessary, though it be essentially necessary. An amendment of our constitution must here come in aid of the public education. The influence over government must be shared among all the people. If every individual which composes their mass participates of the ultimate authority, the government will be safe, because the corrupting the whole mass will exceed any private resources of wealth, and public ones cannot be provided but by levies on the people. In this case every man would have to pay his own price. The government of Great Britain has been corrupted, because but one man in ten has a right to vote for members of parliament. The sellers of the government therefore get nine-tenths of their price clear. It has been thought that corruption is restrained by confining the right of suffrage to a few of the wealthier of the people; but it would be more effectually restrained by an extension of that right to such numbers as would bid defiance to the means of corruption.

The Attractions of Stupidity[1]

HOWARD MUMFORD JONES

THE OBJECT of a college education is supposed to be the training of the mind. We hold that a student who presents himself at the door of one of our institutions and who remains with us long enough, is bound to go out that door a better and brainier man than when he went in. He is supposed, among other things, to be better prepared to enter upon the profession or occupation of his choice.

But it is curious that those who pursue such an occupation—let us say, journalism—though they may acclaim the virtues of college education in other fields, are sceptical about it in their own, and hold to the philosophy that the young graduate, once he has had the nonsense knocked out of him, may amount to something in spite of his college education. Or they argue that, to be sure, a B.S. in blacksmithing is better than no B.S. at all; but better than a B.S. in blacksmithing is a bachelor's degree in nothing in particular. They argue this way because they suppose that a college education gives a general training to the mind superior to specific training in skills.

When you try to pin these people down to what it is that is learned in college, they elude you. Will a course in chemistry give you this mysterious general training? Well, they say, a course in chemistry is a very good thing in its way, but of course unless you are going to be a professional chemist, you will soon forget your chemistry. Well, you ask, is a course in English desirable? Yes, they will respond, a course in literature

[1] Reprinted from *The Tuftonian* by permission.

is a very good thing. Of course, people don't generally read the classics except when they have to, so that, if you are going to lead a busy life, you had better read the classics in college, for otherwise you will never read them. If you press the point, if you ask some alumnus whether he still reads the classics, he will look uncomfortable, and probably say something about enjoying Professor So-and-So's course in Shakespeare—but he hasn't kept up his reading, though he remembers the course with pleasure.

All this suggests that no specific subject furnishes the essence of what people get out of college. Is there, then, some residue which courses leave in the mind and which constitutes a general education? What is this residue? There are the pleasant memories of Professor So-and-So's course which the alumnus retains. Unfortunately one doesn't have to go to college to acquire pleasant memories, since there are more interesting people outside college walls than there are in them. Is there some mysterious effect upon the mind, some impalpable essence engendered in college, some thing of which everybody admits the existence, though nobody knows its definition? If there be such a thing, it will scarcely help us, since one cannot define the indefinable. Moreover, as we look about among our friends on the campus, few of them seem distinguished by any impalpable essence, or, for that matter, any extraordinary amount of intellect. There are always a few who prefer books to activity, but the general run of students pay only that decent regard to their lessons which represents the last-ditch stand of the faculty. In truth, if a college education means no more than is represented by an alumni meeting, why bother about it? Perhaps we are in the center of a good-natured conspiracy in which everybody refuses to call things by their right names.

Now I am going to venture upon an explanation of this dilemma. I have lately been reading the essays of Walter Bagehot, and in his letters on the *coup d'etat* of Louis Napoleon, Bagehot suggests that the English people are protected against any such violent upheavals as a French revolution by their superior stupidity. He compares the English to the Romans as a great political people. Of the Romans he says: "is not a certain dullness of mind their most visible characteristic? What is the history of their speculative mind? A blank. What their literature? A copy. They have not left a single discovery in any abstract science, not a single perfect or well-formed work of high imagination." He points out that the Greeks, in contrast, who invented almost everything worth inventing, succumbed to the Romans at last, and that in general the stupid people win and the clever people lose. Such are the attractions of stupidity.

This is an illuminating theory. It sheds a good deal of light on the colleges. Take, for example, the classroom. The classroom may be described as a scene of polite warfare between the professors and the undergraduates. A hundred years ago that warfare often broke out in actual violence, but we have changed to more civilized forms of conflict. In that warfare the faculty are on the side of the Greeks and the students are on the side of the Romans. It is the business of the faculty to transmit to the students a body of culture, and it is the business of the Romans to resist as long as they can. It is obvious, on Bagehot's theory, that the Romans—that is to say, the stupid majority—will always win. That they do win is amply evident. For example, the faculty has to bring instruction down to the level of the students, they seldom succeed in lifting the students up to the level of the Greeks. Again, the standards set in any college are inevitably the standards of the average—that is to say, of the great middle body of the stupid as compared with the minority of clever people. If you raise the standard too high, you fail almost everybody, and the trustees complain; if you sink them too low, you let almost everybody in.

Perhaps there is a great law of nature at work in these matters, against which we struggle in vain. There is something fresh, sound, and admirable about stupidity. This has been remarked by numerous philosophers, including Carlyle, and confirmed in our time by mental tests invented by edu-

cators. Not to know too much, not to think too much, not to ask too many questions—these are the conditions of a normal or median existence. Let us have men about us who are fat, sleek-headed men, and men that sleep o'night. Perhaps the great body of American undergraduates are following right instinct in resisting instruction as capably as they do. Last year I taught freshmen and sophomores, and I was delighted to find them writing the same hazy ideas in the same bad sentences they used when I began teaching 25 years ago. There was something refreshing in this discovery. Time stood still while I renewed my youth.

On the other hand, the colleges have set their faces against the universal law. They continue to battle on the side of the Greeks. They seem to think the great law of the survival value of stupidity can somehow be got around. When they can lure a student into deserting the Romans for the Greeks, they are quite shameless in their treason. This suggests that the student may, if he likes, desert the ranks of the Romans; and because the ranks of the Romans are so large, perhaps he is not missed. What attracts the student to this remarkable act of treason?

If he remain among the Romans, who were, you will recall, a great political people, he will have the solid satisfaction of belonging to a large majority. If he looks around him in college, he will discern, as far as the eye can see, the serried ranks of the Roman battalions drawn up to protect him and themselves from the inroads of the Greeks. When he graduates, he will graduate into the world of the Romans—a world of comfortable conformity, of conventional interests, of tried and solid satisfactions. He will become one of the great average of American citizens, good, respectable, worthy; he will marry and rear his children in the way of the Romans; he may join a luncheon club and a country club, living very much as his father did. It will not be an exciting life—at least from the Greek point of view—but it will be a natural, conformable sort of existence.

What have the Greeks to offer? Not very much. In the first place, the student will have to abandon his natural place in the ranks of the Romans, and strike out for himself. From the Roman point of view, he is a deserter, and stupidity is always expert in this, that it knows how to punish desertion. If he gives himself up to intellectual adventure, if he tries to do his own thinking, if he attempts to reach conclusions for himself, if he announces and stands by his convictions, he may rest assured his friends will begin by looking at him askance, and probably end by abandoning him altogether. He may find a few acquaintances among the Greeks, but the Greeks have ever been a queer sort of people, more remarkable for their eccentricities than otherwise. They hold to the philosophy (I do not say they practise it) that every tub should stand on its own bottom. The undergraduate who deserts the ranks of the stupid has, from the Roman point of view, queered himself. He fits into no campus pigeon hole. The Romans cannot think of him as a member of the faculty, for he is clearly of an age with themselves; and they cannot think of him as one of themselves, for he thinks, in some respects like a member of the faculty.

Our young friend is, then, likely to have a painful time. He will find even the faculty unsympathetic, for the Greeks have a polity of their own, which has no assured place for the converted barbarian. He will read books, and disagree with them; he will take courses, and find the courses designed and taught for the Romans. If he writes out what he thinks, he will discover that nobody has much patience with manuscripts. And when he graduates, he will graduate into the world of the Romans,, which has no use for non-Romans except to assimilate them.

Will he have any durable satisfactions? I can think of only one. He will be master of his own intellectual house. His thoughts will be his own thoughts, and not borrowed ones —the Romans, you remember, were great borrowers. He will have his own point of view, his own scale of values, his own philosophy. And he is headed for an interesting, if painful, life, a life of incessant conflict with the ideas and standards of the Romans. The Apostle Paul, who was something of a

Greek, wrote to the church in Corinth that he had been "in stripes, in imprisonments, in tumults, in labours, in watchings, in fastings." He led, in other words, the life of a nonconformist. The incessant struggle of the mind to be true to itself, to absorb new truths, to grow, to overcome pressures—these are the painful portion of the independent thinker. Almost his sole reward is the satisfaction of integrity.

He may not even have that—as the Romans have it. The Calvinists used to struggle with themselves to discover whether they were saved; just when they had a comforting sense of salvation, a voice whispered that this satisfaction might be a lure of the old deluder. The kind of intellectual integrity the Greeks have is of this sort. It does not generalize from insufficient instances. When it receives proof that an opinion is false, it yields. It is humble before the vast ocean of ignorance, and modest in respect to its own minute attainments. It allows a considerable margin for the possibility of being self-deceived. On one point, and on one point only, it continually insists: its thoughts are its own thoughts, its conclusions its own conclusions, based upon information, analysis, and belief.

Despite the superior attractions of stupidity, it happens from time to time that college students really choose the difficult way of intellectual life. I suppose it is due in some degree to the lamentable influence of the faculty upon them. I suppose it is due to the lingering truth of John Stuart Mill's statement that it is better to be Socrates dissatisfied than a pig satisfied. Whatever the cause, it is the occasional appearance of a convert to the Greeks that causes these flutters of alarm among the solid and conservative members of the community. They awake to the fact that colleges do really offer an opportunity to live the intellectual life provided anybody wants to live it.

I do not know how many at Tufts College have chosen the Roman, and how many have chosen the Greek, way of life in this unhistorical history, but I seem to see a number of the Greek persuasion before me; and if there are others present, if there are those who are wavering, let me quote to you and to them in conclusion this famous quatrain of Montrose:

> He either fears his faith too much
> Or his deserts are small
> Who fears to put it to the touch,
> To win or lose it all.

If you have any capacity which may fit you for the life of the Greeks, and should you choose to conceal it and live among the Romans, nobody will be any the wiser. Even if you elect the Greek way, your choice may be wrong because you may lack the intellectual fortitude to go it alone. But if your choice is made, if you have deserted the Romans, I can at least promise you an uncertain, an uncomfortable, possibly an inglorious, but most surely and emphatically a crowded, interesting, and exciting career.

Of the Old and New Systems of Government[1]

THOMAS PAINE

NOTHING CAN APPEAR more contradictory than the principles on which the old governments began, and the condition to which society, civilization, and commerce, are capable of carrying mankind. Government on the old system is an assumption of power for the aggrandizement of itself; on the new, a delegation of power for the common benefit of

[1] *Rights of Man,* Part II, Chapter 3, written in 1791 and 1792.

society. The former supports itself by keeping up a system of war; the latter promotes a system of peace as the true means of enriching a nation. The one encourages national prejudices; the other promotes universal society as the means of universal commerce. The one measures its prosperity by the quantity of revenue it extorts; the other proves its excellence by the small quantity of taxes it requires.

Mr. Burke has talked of old and new whigs. If he can amuse himself with childish names and distinctions, I shall not interrupt his pleasure. It is not to him, but to the Abbé Sièyes, that I address this chapter. I am already engaged to the latter gentleman to discuss the subject of monarchical government; and as it naturally occurs in comparing the old and new systems, I make this the opportunity of presenting to him my observations. I shall occasionally take Mr. Burke in my way.

Though it might be proved that the system of government now called the *new* is the most ancient in principle of all that have existed, being founded on the original inherent rights of man: yet, as tyranny and the sword have suspended the exercise of those rights for many centuries past, it serves better the purpose of distinction to call it the *new* than to claim the right of calling it the old.

The first general distinction between those two systems is that the one now called the old is *hereditary*, either in whole or in part; and the new is entirely *representative*. It rejects all hereditary government:

1st, As being an imposition on mankind.

2d, As inadequate to the purposes for which government is necessary.

With respect to the first of these heads, it cannot be proved by what right hereditary government could begin; neither does there exist, within the compass of mortal power, a right to establish it. Man has no authority over posterity in matters of personal right; and therefore no man or body of men had, or can have, a right to set up hereditary government. Were even ourselves to come again into existence, instead of being succeeded by posterity, we have not now the right of taking from ourselves the rights which would then be ours. On what ground, then, do we pretend to take them from others?

All hereditary government is in its nature tyranny. A heritable crown, or a heritable throne, or by what other fanciful name such things may be called, have no other significant explanation than that mankind are heritable property. To inherit a government is to inherit the people, as if they were flocks and herds.

With respect to the second head, that of being inadequate to the purposes for which government is necessary, we have only to consider what government essentially is and compare it with the circumstances to which hereditary succession is subject.

Government ought to be a thing always in full maturity. It ought to be so constructed as to be superior to all the accidents to which individual man is subject; and therefore, hereditary succession, by being *subject to them all*, is the most irregular and imperfect of all the systems of government.

We have heard the *rights of man* called a *leveling* system; but the only system to which the word *leveling* is truly applicable is the hereditary monarchical system. It is a system of *mental leveling*. It indiscriminately admits every species of character to the same authority. Vice and virtue, ignorance and wisdom, in short, every quality, good or bad, is put on the same level. Kings succeed each other, not as rationals, but as animals. Can we then be surprised at the abject state of the human mind in monarchical countries, when the government itself is formed on such an abject leveling system? It has no fixed character. Today it is one thing; and tomorrow it is something else. It changes with the temper of every succeeding individual, and is subject to all the varieties of each. It is government through the medium of passions and accidents. It appears under all the various characters of childhood, decrepitude, dotage, a thing at nurse, in leading strings, or on crutches. It reverses the wholesome order of nature. It occasionally puts children over men, and the conceits of non-age over wisdom and experience. In short, we cannot conceive a more ridiculous figure of govern-

ment than hereditary succession, in all its cases, presents.

Could it be made a decree in nature, or an edict registered in heaven, and man could know it, that virtue and wisdom should invariably appertain to hereditary succession, the objections to it would be removed; but when we see that nature acts as if she disowned and sported with the hereditary system; that the mental characters of successors, in all countries, are below the average of human understanding; that one is tyrant, another an idiot, a third insane, and some all three together, it is impossible to attach confidence to it, when reason in man has power to act.

It is not to the Abbé Sièyes that I need apply this reasoning; he has already saved me that trouble by giving his own opinion upon the case. "If it be asked," says he, "what is my opinion with respect to hereditary right, I answer, without hesitation that, in good theory, an hereditary transmission of any power or office can never accord with the laws of true representation. Hereditaryship is, in this sense, as much an attaint upon principle as an outrage upon society. But let us," continues he, "refer to the history of all elective monarchies and principalities; is there one in which the elective mode is not worse than the hereditary succession?"

As to debating on which is the worst of the two, is admitting both to be bad; and herein we are agreed. The preference which the abbé has given, is a condemnation of the thing he prefers. Such a mode of reasoning on such a subject is inadmissible, because it finally amounts to an accusation of providence, as if she had left to man no other choice with respect to government than between two evils, the best of which he admits to be "*an attaint upon principle, and an outrage upon society.*"

Passing over, for the present, all the evils and mischiefs which monarchy has occasioned in the world, nothing can more effectually prove its uselessness in a state of *civil government* than making it hereditary. Would we make any office hereditary that required wisdom and abilities to fill it? And where wisdom and abilities are not necessary, such an office, whatever it may be, is superfluous or insignificant.

Hereditary succession is a burlesque upon monarchy. It puts it in the most ridiculous light by presenting it as an office which any child or idiot may fill. It requires some talents to be a common mechanic; but to be a king requires only the animal figure of man—a sort of breathing automaton. This sort of superstition may last a few years more, but it cannot long resist the awakened reason and interest of man.

As to Mr. Burke, he is a stickler for monarchy, not altogether as a pensioner, if he is one, which I believe, but as a political man. He has taken up a contemptible opinion of mankind, who, in their turn, are taking up the same of him. He considers them as a herd of beings that must be governed by fraud, effigy, and show; and an idol would be as good a figure of monarchy with him, as a man. I will, however, do him the justice to say that, with respect to America, he has been very complimentary. He always contended, at least in my hearing, that the people of America were more enlightened than those of England, or of any country in Europe; and that therefore the imposition of show was not necessary in their governments.

Though the comparison between hereditary and elective monarchy which the abbé had made, is unnecessary to the case, because the representative system rejects both; yet were I to make the comparison, I should decide contrary to what he has done.

The civil wars which have originated from contested hereditary claims are more numerous, and have been more dreadful, and of longer continuance than those which have been occasioned by election. All the civil wars in France arose from the hereditary system; they were either produced by hereditary claims, or by the imperfection of the hereditary form, which admits of regencies, or monarchy at nurse. With respect to England, its history is full of the same misfortunes. The contests for succession between the houses of York and Lancaster lasted a whole century; and others of a similar nature have renewed themselves since that period. Those of 1715

and 1745 were of the same kind. The succession-war for the crown of Spain embroiled almost half of Europe. The disturbances in Holland are generated from the hereditaryship of the stadtholder. A government calling itself free, with an hereditary office, is like a thorn in the flesh that produces a fermentation which endeavors to discharge it.

But I might go further, and place also foreign wars, of whatever kind, to the same cause. It is by adding the evil of hereditary succession to that of monarchy that a permanent family interest is created, whose constant objects are dominion and revenue. Poland, though an elective monarchy, has had fewer wars than those which are hereditary; and it is the only government that has made a voluntary essay, though but a small one, to reform the condition of the country.

Having thus glanced at a few of the defects of the old, or hereditary systems of government, let us compare it with the new, or representative system.

The representative system takes society and civilization for its basis; nature, reason, and experience for its guide.

Experience, in all ages and in all countries, has demonstrated that it is impossible to control nature in her distribution of mental powers. She gives them as she pleases. Whatever is the rule by which she, apparently to us, scatters them among mankind, that rule remains a secret to man. It would be ridiculous to attempt to fix the hereditaryship of human beauty, as of wisdom.

Whatever wisdom constituently is, it is like a seedless plant; it may be reared when it appears; but it cannot be voluntarily produced. There is always a sufficiency somewhere in the general mass of society for all purposes; but with respect to the parts of society, it is continually changing its place. It rises in one today, in another tomorrow, and has most probably visited in rotation every family of the earth, and again withdrawn.

As this is the order of nature, the order of government must necessarily follow it, or government will, as we see it does, degenerate into ignorance. The hereditary system, therefore, is as repugnant to human wisdom as to human rights; and is as absurd as it is unjust.

As the republic of letters brings forward the best literary productions by giving to genius a fair and universal chance; so the representative system of government is calculated to produce the wisest laws by collecting wisdom where it can be found. I smile to myself when I contemplate the ridiculous insignificance into which literature and all the sciences would sink, were they made hereditary; and I carry the same idea into governments. An hereditary governor is as inconsistent as an hereditary author. I know not whether Homer or Euclid had sons; but I will venture an opinion that if they had, and had left their works unfinished, those sons could not have completed them.

Do we need a stronger evidence of the absurdity of hereditary government than is seen in descendants of those men, in any line of life, who once were famous? Is there scarcely an instance in which there is not a total reverse of the character? It appears as if the tide of mental faculties flowed as far as it could in certain channels, and then forsook its course and arose in others. How irrational then is the hereditary system which establishes channels of power in company with which wisdom refuses to flow! By continuing this absurdity, man is perpetually in contradiction with himself; he accepts, for a king, or a chief magistrate, or a legislator, a person whom he would not elect for a constable.

It appears to general observation that revolutions create genius and talents; but those events do no more than bring them forward. There exists in man a mass of sense lying in a dormant state, and which, unless something excites it to action, will descend with him, in that condition, to the grave. As it is to the advantage of society that the whole of its faculties should be employed, the construction of government ought to be such as to bring forward, by a quiet and regular operation, all that extent of capacity which never fails to appear in revolutions.

This cannot take place in the insipid state of hereditary government, not only because it prevents, but because it operates to be-

numb. When the mind of a nation is bowed down by any political superstition in its government, such as hereditary succession is, it loses a considerable portion of its powers on all other subjects and objects. Hereditary succession requires the same obedience to ignorance as to wisdom; and when once the mind can bring itself to pay this indiscriminate reverence, it descends below the stature of mental manhood. It is fit to be great only in little things. It acts a treachery upon itself, and suffocates the sensations that urge to detection.

Though the ancient governments present to us a miserable picture of the condition of man, there is one which above all others exempts itself from the general description. I mean the democracy of the Athenians. We see more to admire and less to condemn, in that great, extraordinary people, than in anything which history affords.

Mr. Burke is so little acquainted with constituent principles of government that he confounds democracy and representation together. Representation was a thing unknown in the ancient democracies. In those the mass of the people met and enacted laws (grammatically speaking) in the first person. Simple democracy was no other than the common hall of the ancients. It signifies the *form* as well as the public principle of the government. As these democracies increased in population, and the territory extended, the simple democratical form became unwieldly and impracticable; and as the system of representation was not known, the consequence was they either degenerated convulsively into monarchies or became absorbed into such as then existed. Had the system of representation been then understood, as it now is, there is no reason to believe that those forms of government now called monarchical or aristocratical would ever have taken place. It was the want of some method to consolidate the parts of society after it became too populous and too extensive for the simple democratical form, and also the lax and solitary condition of shepherds and herdsmen in other parts of the world, that afforded opportunities to those unnatural modes of government to begin.

As it is necessary to clear away the rubbish of errors into which the subject of government has been thrown, I shall proceed to remark on some others.

It has always been the political craft of courtiers and court governments to abuse something which they called republicanism; but what republicanism was, or is, they never attempt to explain. Let us examine a little into this case.

The only forms of government are the democratical, the aristocratical, the monarchical, and what is now called the representative.

What is called a *republic* is not any *particular form* of government. It is wholly characteristical of the purport, matter, or object for which government ought to be instituted, and on which it is to be employed, *res-publica,* the public affairs, or the public good; or, literally translated, the *public thing.* It is a word of good original, referring to what ought to be the character and business of government; and in this sense it is naturally opposed to the word *monarchy,* which has a base original signification. It means arbitrary power in an individual person; in the exercise of which, *himself,* and not the *res-publica,* is the object.

Every government that does not act on the principle of a republic, or, in other words, that does not make the *res-publica* its whole and sole object, is not a good government. Republican government is no other than government established and conducted for the interest of the public, as well individually as collectively. It is not necessarily connected with any particular form, but it most naturally associates with the representative form, as being best calculated to secure the end for which a nation is at the expense of supporting it.

Various forms of government have affected to style themselves republics. Poland calls itself a republic, but is in fact an hereditary aristocracy, with what is called an elective monarchy. Holland calls itself a republic, which is chiefly aristocratical, with an hereditary stadtholdership. But the government of America, which is wholly on the system of representation, is the only real republic

in character and practice that now exists. Its government has no other object than the public business of the nation, and therefore it is properly a republic; and the Americans have taken care that *this*, and no other, shall be the object of their government, by their rejecting everything hereditary and establishing government on the system of representation only.

Those who have said that a republic is not a *form* of government calculated for countries of great extent mistook, in the first place, the *business* of a government for a *form* of government; for the *res-publica* equally appertains to every extent of territory and population. And in the second place, if they meant anything with respect to form, it was the simple democratical form, such as was the mode of government in the ancient democracies, in which there was no representation. The case, therefore, is not that a republic cannot be extensive, but that it cannot be extensive on the simple democratic form; and the question naturally presents itself; remedying at once the defects of the simple democracy as to form, and the incapacity of the other two with regard to knowledge.

Simple democracy was society governing itself without the use of secondary means. By ingrafting representation upon democracy, we arrive at a system of government capable of embracing and confederating all the various interests and every extent of territory and population; and that also with advantages as much superior to hereditary government as the republic of letters is to hereditary literature.

It is on this system that the American government is founded. It is representation ingrafted upon democracy. It has settled the form by a scale parallel in all cases to the extent of the principle. What Athens was in miniature, America will be in magnitude. The one was the wonder of the ancient world—the other is becoming the admiration and model of the present. It is easiest of all forms of government to be understood and the most eligible in practice; and excludes at once the ignorance and insecurity of the hereditary mode and the inconvenience of the simple democracy.

It is impossible to conceive a system of government capable of acting over such an extent of territory, and such a circle of interests, as is produced by the operation of representation. France, great and populous as it is, is but a spot in the capaciousness of the system. It adapts itself to all possible cases. It is preferable to simple democracy even in small territories. Athens, by representation, would have surpassed her own democracy.

That which is called government, or rather that which we ought to conceive government to be, is no more than some common center in which all the parts of society unite. This cannot be established by any method so conducive to the various interests of the community as by the representative system. It concentrates the knowledge necessary to the interests of the parts and of the whole. It places government in a state of constant maturity. It is, as has been already observed, never young, never old. It is subject neither to nonage nor dotage. It is never in the cradle nor on crutches. It admits not of a separation between knowledge and power, and is superior, as government ought always to be, to all the accidents of individual man, and is therefore superior to what is called monarchy.

A nation is not a body, the figure of which is to be represented by the human body; but is like a body contained within a circle, having a common center in which every radius meets; and that center is formed by representation. To connect representation with what is called monarchy is eccentric government. Representation is of itself the delegated monarchy of a nation, and cannot debase itself by dividing it with another.

Mr. Burke has two or three times in his parliamentary speeches, and in his publications, made use of a jingle of words that convey no ideas. Speaking of government, he says, "It is better to have monarchy for its basis, and republicanism for its corrective, than republicanism for its basis, and monarchy for its corrective." If he means that it is better to correct folly with wisdom

than wisdom with folly, I will no otherwise contend with him than to say it would be much better to reject the folly altogether.

But what is this thing which Mr. Burke calls monarchy? Will he explain it—? all mankind can understand what representation is; and that it must necessarily include a variety of knowledge and talents. But what security is there for the same qualities on the part of monarchy? Or, when this monarchy is a child, where then is the wisdom? What does it know about government? Who then is the monarch? Or where is the monarchy? If it is to be performed by regency, it proves it to be a farce. A regency is a mock species of republic, and the whole of monarchy deserves no better appellation. It is a thing as various as imagination can paint. It has none of the stable character that government ought to possess. Every succession is a revolution, and every regency a counter-revolution. The whole of it is a scene of perpetual court cabal and intrigue, of which Mr. Burke is himself an instance.

Whether I have too little sense to see, or too much to be imposed upon; whether I have too much or too little pride, or of anything else, I leave out of the question; but certain it is that what is called monarchy always appears to me a silly, contemptible thing. I compare it to something kept behind a curtain, about which there is a great deal of bustle and fuss, and a wonderful air of seeming solemnity; but when, by any accident, the curtain happens to be open and the company see what it is, they burst into laughter.

In the representative system of government, nothing like this can happen. Like the nation itself, it possesses a perpetual stamina as well of body as of mind, and presents itself on the open theater of the world in a fair and manly manner. Whatever are its excellencies or its defects, they are visible to all. It exists not by fraud and mystery; it deals not in cant and sophistry; but inspires a language that, passing from heart to heart, is felt and understood.

We must shut our eyes against reason, we must basely degrade our understanding, not to see the folly of what is called monarchy. Nature is orderly in all her words; but this is a mode of government that counteracts nature. It turns the progress of the human faculties upside down. It subjects age to be governed by children, and wisdom by folly.

On the contrary, the representative system is always parallel with the order and immutable laws of nature, and meets the reason of man in every part. For example:

In the American federal government, more power is delegated to the President of the United States, than to any other individual member of congress. He cannot, therefore, be elected to this office under the age of thirty-five years. By this time the judgment of man becomes matured, and he has lived long enough to be acquainted with men and things, and the country with him. But on the monarchical plan (exclusive of the numerous chances there are against every man born into the world, of drawing a prize in the lottery of human faculties), the next in succession, whatever he may be, is put at the head of a nation, and of a government, at the age of eighteen years. Does this appear like an act of wisdom? Is it consistent with the proper dignity and the manly character of a nation? Where is the propriety of calling such a lad the father of the people? In all other cases, a person is a minor until the age of twenty-one years. Before this period he is not trusted with the management of an acre of land, or with the heritable property of a flock of sheep, or a herd of swine; but wonderful to tell! he may at the age of eighteen years be trusted with a nation.

That monarchy is all a bubble, a mere court artifice to procure money, is evident (at least to me) in every character in which it can be viewed. It would be almost impossible, on the rational system of representative government, to make out a bill of expenses to such an enormous amount as this deception admits. Government is not of itself a very chargeable institution. The whole expense of the federal government of America, founded, as I have already said, on the system of representation, and extending over a country nearly ten times as large as Eng-

land, is but six hundred thousand dollars, or one hundred and thirty thousand pounds sterling.

I presume that no man in his sober senses will compare the character of any of the kings of Europe, with that of General Washington. Yet, in France, and also in England, the expense of the civil list only, for the support of one man, is eight times greater than the whole expense of the federal government of America. To assign a reason for this appears almost impossible. The generality of people in America, especially the poor, are more able to pay taxes than the generality of people either in France or England.

But the case is that the representative system diffuses such a body of knowledge throughout the nation, on the subject of government, as to explode ignorance and preclude imposition. The craft of courts cannot be acted on that ground. There is no place for mystery; nowhere for it to begin. Those who are not in the representation know as much of the nature of business as those who are. An affectation of mysterious importance would there be scouted. Nations can have no secrets; and the secrets of courts, like those of individuals, are always their defects.

In the representative system, the reason for everything must publicly appear. Every man is a proprietor in government, and considers it a necessary part of his business to understand. It concerns his interest because it affects his property. He examines the cost, and compares it with the advantages; and above all, he does not adopt the slavish custom of following what in other governments are called *leaders.*

It can only be by blinding the understanding of man, and making him believe that government is some wonderful mysterious thing, that excessive revenues are obtained. Monarchy is well calculated to ensure this end. It is the popery of government; a thing kept up to amuse the ignorant, and quiet them into paying taxes.

The government of a free country, properly speaking, is not in the persons, but in the laws. The enacting of those requires no great expense; and when they are administered, the whole of civil government is performed—the rest is all court contrivance.

Bosses and Machines[1]

EDWARD J. FLYNN

1

"THE MEETING will come to order. The Chair recognizes Mr. Brown."

Mr. Brown: "I offer the following resolution and move its adoption."

The Chairman: "The Secretary will read."

The Secretary: "*Resolved,* That the Executive Committee of the Democratic County Committee of Bronx County offer to the enrolled Democrats of Bronx County at the primary election to be held on July 31, 1945, the following named persons for the respective offices to be filled at the said primary:—

"For Mayor of the City of New York: William O'Dwyer.

For Comptroller of the City of New York: Lazarus Joseph.

For President of the Council: Vincent R. Impellitteri.

For President of the Borough of the Bronx: James J. Lyons.

For District Attorney, County of Bronx: Samuel J. Foley.

For Justices of the Municipal Court, 1st Municipal Court District, County of Bronx: William Lyman, Christopher C. McGrath, Charles A. Loreto.

For Justices of the Municipal Court, 2nd Municipal Court District, County of

[1] From *You're the Boss* by Edward J. Flynn. Copyright 1947 by The Viking Press, Inc. Reprinted by permission of The Viking Press, Inc.

Bronx: Michael N. Delagi, Agnes M. Craig."

The Chairman: "All those in favor of the resolution will kindly so signify by saying 'Aye.' The motion is carried and the resolution is adopted. The Chair recognizes Mr. Buckley."

Mr. Buckley: "I move that the meeting adjourn."

The Chairman: "All those in favor of the motion to adjourn kindly so signify by saying 'Aye.' The meeting is adjourned."

These are the minutes of a meeting of the Executive Committee of the Democratic Party of Bronx County, New York. The meeting was called to present formally the Democratic organization's slate to the enrolled Democrats of that county.

The Executive Committee of the Democratic Party in Bronx County consists of thirty-three men and women, who are Executive Members of the County Committees. They are the heart of the Democratic organization in the county. They are presided over by the Chairman, who happens to be myself. There you have, very simply, what is known as a "machine."

It took only ten minutes to hold the meeting. There were no objections, for everything had been arranged in advance. The very smoothness of the proceedings exemplifies practical politics in action. For within the periphery of that meeting may be found, one by one, the axioms on which practical politics are based—beginning with the voter root and extending to the highest political office: the Presidency of the United States.

In discussing mechanism, and in trying to arrive at just what makes a political machine tick, I am calling on my own twenty-four years of political experience and the specific example of Bronx County. For more than a quarter of a century, Bronx County has elected only Democratic county officials. It has become, on percentage, the greatest Democratic county north of the Mason and Dixon Line.

Thus, by augmenting or reducing the model of Bronx County, and with due allowance for variations in state laws, one can get a picture of party working in almost any part of the United States, for political divisions are substantially the same in fundamentals all over the country.

Before the meeting described at the beginning of this article, the nominations for the city-wide offices had already been agreed upon by the five County Leaders of the City of New York. Nominations for Bronx County offices were agreed to after a series of conferences between the Executive Members and the Chairman of the Executive Committee.

How, then, were these nominations actually arrived at? As Chairman of the Executive Committee, I am the controlling force, and any action I take must be one which I believe will benefit the people of the Bronx first and enhance the prestige of the organization second. I mention the people first because it is one of our political legends that bosses never pay any attention to the public. Of course the legend will not stand analysis, for obviously a political boss can survive only so long as he wins elections—and the only way to win elections year after year is to know what the voters want and give it to them.

The slate I gave at the beginning is an example. James J. Lyons was renominated for President of the Borough of the Bronx. He had been elected three times and was looking toward his fourth term. From the standpoint of the people generally, he had done a good job. There had been no scandals connected with his office, and the people believed him to be an honest official. For that reason, it was expedient for the organization to renominate him. If, however, he had been a failure, or if there had been any scandals in his administration, the organization and I, without any qualms, would have turned him down for renomination. For always the primary purpose is to win an election.

In the same resolution, Samuel J. Foley was offered as a candidate for re-election as Bronx County District Attorney. His office had a splendid reputation. Foley himself had been praised highly in many New York newspapers for the conduct of his office. In

fact, rackets had been stopped in Bronx County long before the term "racket-buster" was invented. The criminal element knew that they could not exert political influence in the Bronx, and so they fought shy of the county. One instance will illustrate my point. Terrenova, one of the most notorious racketeers of his time, lived in Westchester County. Now one cannot reach Manhattan from Westchester without crossing the Bronx or crossing either the Hudson River twice or Long Island Sound and the East River. Yet Terrenova chose to cross the Hudson twice—over to New Jersey and back again—rather than risk being picked up in the Bronx. So it was to the advantage of the organization to offer Foley to the people again.

Four of the five Municipal Court Judges were also seeking re-election. The records of Lyman, McGrath, Delagi, and Craig were good, and they were re-nominated. The fifth, Charles A. Loreto, was being presented as a candidate for the first time. His nomination was agreed upon at a series of conferences between myself and some of the members of the Executive Committee.

2

What factors were taken into consideration in this nomination?

The Bronx is a cosmopolitan place. The Jewish and Italian populations are large. There are also many Roman Catholics. These three groups make up the largest portions of the county. Therefore, when the organization is forming a ticket to present to the people, it is important that the candidates represent and come from these three large groups. It is curious how some "reformers" labor this point, arguing that it is "pandering to racial and religious blocs." Our whole system of government is based on proportional representation. But of course the "reformers" in question are not always consistent, for just now they see nothing wrong with special appeals to organized labor, to take one example. (Neither do I—but the distinction is that I am consistent in my belief that special-interest groups have a perfect right to be represented in the bodies that govern us all.)

Today, there are more Jewish than Irish Catholic voters in the Bronx. Yet there is no such thing as a "Jewish bloc"—as Governor Dewey discovered in the last New York mayoral election. Dewey thought that by nominating Judge Jonah Goldstein, a one-time Tammany Democrat, for Mayor on the Republican ticket, he could ensure the Jewish vote of the city in his own gubernatorial race a year later. Goldstein had everything a Jewish candidate should have—except that not all Jews thought him the better-qualified candidate. The Jew is a discriminating individualist.

In the vacancy which Loreto was a candidate to fill, it was important to name a man of Italian extraction. This was so because Lazarus Joseph, candidate for Comptroller, was Jewish and came from the Bronx. Beyond this, it was important that every geographical section of the Bronx be represented. Neighborhood feeling carries great weight with a political organization. Men and women who are prominent in their own localities are recognized by being placed in public office.

Before the meeting I have described, I consulted with members of the Executive Committee who were from that particular part of the county and asked them to suggest names. Various leaders suggested different persons. The abilities and political strengths of each were looked into. Finally I myself decided that Loreto was the man.

Hence our ticket shaped up a well-rounded one: Lyons and Foley were Catholics, Joseph and Lyman were Jewish, Delagi and Loreto were of Italian descent.

"Cynical!" the "reformers" will say. "Shocking!" "Calculating!" "So this is how a machine functions!"

Yes, this is the way a machine functions. How else could it function in the interests of all the people? It should be remembered that we were offering these names to the enrolled Democrats of Bronx County in a Democratic primary. It did not mean that there could be no opposition to them. Any person who wished to dispute our judgment had that right in the primary polling booth, where none could see him.

True, scattered individuals cannot successfully challenge the decisions of a machine. But if the machine is a bad one—if it deserves to be beaten because of its offensive political activities or because of the caliber of the men it nominates—opposition can be organized to fight out the issues in the primaries. I'll admit it is not easy. It takes time, patience, money, and a lot of hard work to beat a machine in this way. Nor am I attempting to say that this is the best method. It just happens to be the only one provided under the election laws of the State of New York.

3

I have been Chairman of the Democratic Executive Committee of Bronx County for a quarter century. In order to remain in that position, I must always have the Committee votes to support me. My control is entirely dependent upon this support. If a majority of the Committee decided they no longer wanted me, they could call a meeting tomorrow and supplant me. But during my entire service as Chairman, there has never been any serious threat to my leadership. There has been occasional scattered opposition, but never any real danger.

How do I maintain the majority support of the Executive Committee? To begin with, I always see to it that the key party workers have exempt positions, if they want them. Some of the salaries are small (particularly those given to women). They run from $2500 to $5000, with only one at $10,000. Still, to use the political parlance, all the District Leaders have been "taken care of" during my entire term as County Leader. In New York County, by contrast, there have been many changes among the District Leaders during the same period—because they were not put into exempt positions. The biggest turnover came about when the Democrats lost the county and borough offices in the Fusion heyday. Bronx County is the only county within the city that has never been defeated either for county or for borough offices.

The families also—sons, daughters, husbands, wives—of the District Leaders are taken care of in some way or other. Sometimes they are given exempt positions, and sometimes they get help from us in the line of civil service promotion. It is rather difficult to say if this is the real reason why I have had their support down through the years, but I cannot deny that it has been extremely important to my remaining as leader.

There is one other important factor in retaining the support of the Executive Committee, and although it has never been put to test, I am confident that it could be with perfect safety. I have the final word about who should be appointed to positions which control exempt jobs. The County Committeemen who elect the Executive Members know this. Also, it is inevitable that during the years of my leadership I have come to know these Committeemen well, and they in turn to know me. I feel sure that should I express to them a desire to have a District Leader removed, a new Leader would be selected immediately. Thus not only my long association with the party, but my absolute control of exempt positions, is a powerful influence in my control.

The importance of this business of patronage in the success of a party and a leader may be seen by studying the strengthening of the Democratic Party during Roosevelt's terms as Governor of New York and his first terms in the White House. Because he paid attention to his leaders and made the party appointments they recommended (always after previously investigating the candidate's abilities) Roosevelt built up the greatest vote-getting machine, both state and Federal, that has ever been known. When he began to accept the recommendation of the New Dealers of "non-political" appointments, there was a falling away of his vote-getting ability. However, by that time Roosevelt's name had such magic that he was able, notwithstanding, to maintain his leadership.

After so many years, the machine had become a more or less personal one. For several years past I have seriously considered resigning. The detail work in a county organization no longer has any appeal to me. Financially,

the job has been expensive, for I myself contribute to the support of the party. But there is another item which can hardly be classed as a party contribution, but which goes hand in hand with the party job I hold. Whenever a member of the organization is in financial difficulty and comes to me for assistance, I usually lend him money. Some of these loans have even been paid back.

Because of my long association, however, I naturally feel responsible to men who have loyally supported me down through the years. If I resigned, these men would be left out in the cold. I do not say it in any spirit of vanity, but it is perfectly logical to suppose that an organization which has been kept so compact through all these years would disintegrate if the moving spirit died or resigned. This did happen in the case of Tammany Hall after the death of Charles F. Murphy. Tammany has never since been able to occupy the place it did under his leadership. There have been constant change and constant squabbling for power among the leaders. Undoubtedly the same situation would develop in the Bronx if I resigned.

4

I have said that I never had any serious opposition. There is always some opposition. There is a group at the present time in Bronx County that has, for years, been seeking to unseat me as County Chairman. They have tried to do so in primaries, in the election of County Committeemen and Leaders, and in the election of candidates other than those named by the organization. But because of the closeness with which the organization is held together, they have not yet been able to score a single triumph.

Victory is easier for the organization than for the insurgent. The organization at all times has its own personnel in each small unit. An insurgent who questions the decisions of the machine must first place a man and woman Captain in every Election District. This is not an easy task. It is difficult to build up in two or three months what it has taken the organization years to achieve. Furthermore, under a good administration, it is not easy to find enough people who will disagree with the machine.

At various times, candidates for the Legislature have challenged the nominees of the organization. There have been primary fights. But in every instance, the organization has won, because all its forces could be centered in the troublesome district. The result has been that the insurgent not only was defeated, but overwhelmingly so.

Once a person who has been a member of the organization turns against it in a primary election, he is forever barred from any political preferment. Since most people who feel like fighting the organization have hopes for political advancement, their assignment to organization Coventry makes their political futures dubious, to say the least. This discipline inevitably turns up some malcontents who will stoop to anything to bring disrepute to the organization. There have been leveled against the organization in Bronx County—and perhaps always will be—charges of illegal registration and illegal voting. Some thirty years ago, such charges undoubtedly had some basis in fact. In those days, there was considerable laxity. Elections were not watched or checked as they are today, when each political party has its own poll watchers as well as its members on the Board of Elections.

Since we are speaking of the Bronx, let us consider the possibility that such a thing might take place. What would be the result? The total number of votes cast in the Bronx averages from 450,000 to 500,000. Should the Democratic organization attempt to conduct a campaign for illegal registration, it would have to be done within each Election District. In every Election District, there are one Republican man and one Republican woman Captain, and also a Republican man and a Republican woman member on the Board of Elections. Assuming the cleverest organization one could imagine, there could not be more than about five illegal registrations in each Election District without attracting attention. Certainly the Republican Captains and Inspectors of Elections would know of even that small number.

Suppose, however, they didn't. There are 850 Election Districts in Bronx County. Multiplying the number of Election Districts by 5, you get a total of 4250 votes. At no time in my experience would even 10,000 votes have been enough to change the outcome of an election in Bronx County. Most certainly there would be no advantage to the organization in this type of campaign. It would not change the result.

There have also been charges that in many instances persons have been brought to places outside the districts in which they reside to take the literacy test required of first voters in New York State. First of all, most of the people who apply for literacy tests have recently become naturalized and admitted by the courts as citizens of the United States. It is very true that the organization will take these new voters to places where the test is not so severe as it might be in other places. Every other organization throughout the country does precisely the same thing. Indeed, an excellent argument can be advanced against requiring a literacy test. To begin with, the New York law presumes that anyone who cannot write English is illiterate, even if he holds a dozen degrees and is quite proficient in any number of other languages. Moreover, illiteracy is no excuse from paying taxes, and if there is anything to the business of "taxation without representation" being an evil, it can be argued that anyone who pays taxes is entitled to vote.

In any event, the record of the Bronx County Democratic organization is open for all to see. That the members of the party support it overwhelmingly is shown by its success, year after year, at the polls. That they take pride in its achievements, not only individually but as a whole, is beyond doubt.

A political leader or "boss," however, must not only be able to pick his men, but he must be able to "guess right." During my leadership, I have been lucky enough to do this in many political situations. The first big decision I had to make "on my own" was on the question of displacing Hylan as Mayor of New York City. I was lucky enough to be one of the two leaders who supported Walker. Had Walker lost, my reward would have been political oblivion. I supported Roosevelt when he was nominated and became Governor of New York, and when I was his Secretary of State (New York). In Chicago, I supported him again when he was nominated, and when he became President. In Albany, I supported Lehman, and he was nominated and elected. In each case, I risked the penalty for guessing wrong.

All these things together have helped to build up my strength as a leader. My District Leaders realize that I have usually guessed right. It has put the Bronx organization in the forefront in various campaigns, and my Leaders have taken pride in the fact that because of my friendship with Roosevelt I have become a national figure in the Democratic Party.

5

The impression of secrecy which seems to veil the position of political boss exists for no other reason than that the idea has been handed down by one political generation to another. Most of the appearance of secrecy arises from the fact that the leader himself cannot make up his mind as to what course to pursue—or more often, because it is not propitious to announce his decision at the precise moment the newspapers clamor for it.

Political skill is mostly built on proper timing. The correct time to announce a candidacy or the support of a particular candidate is as important as the announcement itself. If it is badly timed, the whole effect can be lost. In this connection, Roosevelt often resorted to the "trial balloon"—that is, letting someone other than himself make a statement to see how it would be received by the public. If the time was not right, the statement would be criticized severely. If it was well received, Roosevelt would step in and "carry the ball." I myself have never been completely convinced that this is a good thing to do, but I am considerably in the minority in that opinion.

Should a man announce his candidacy too far in advance of a convention or primary, he can easily kill himself off through the

opposition which will tend to develop and crystallize. Therefore, in practical politics an announcement is delayed as long as practicable, to prevent such a situation. It is usually thoroughly understood between a candidate and a leader just what the leader intends to do, and the leader very seldom lets the cat out of the bag until it is absolutely necessary to do so.

In the case of Presidential candidates, this is particularly important. Albert Ritchie of Maryland became known as a "perennial" candidate. He was always campaigning for the nomination, and although his background was good and his record as Governor of Maryland was excellent, he was never nominated because he came to be "old stuff."

In the Republican Party, General Wood and Governor Lowden of Illinois were two candidates who destroyed each other by their too early timing of announcements and their long campaigns before the 1920 convention. This permitted a situation to develop which prevented the convention from naming either one. The resultant nomination was of Harding. The same thing happened to Smith and McAdoo in the 1924 Democratic convention, when John W. Davis finally emerged as the nominee.

Even in state politics, there is a concrete example of what bad timing does to a candidate. When John Lyons was Secretary of State of New York, he campaigned actively for the Republican gubernatorial nomination. By the time the convention rolled around, he had worn himself out and nullified any chance he might have had. The time is short between a primary or convention and the general election. But it is time enough to destroy a candidate. If he adds to that period a pre-primary or pre-convention campaign, his risk increases. The candidate gets shopworn.

Roosevelt was a master at timing, and in every case he made the most of this gift. Even though, to the average person, his timing of announcements for both his third and fourth terms may have seemed late (and admittedly this was partly due to the fact that he had not made up his mind), they were perfect under the conditions then prevailing.

Conversely, Governor Smith's announcement in 1932 was too late in view of conditions. When Roosevelt first announced his candidacy, Smith persisted in his position that he would not be a candidate under any circumstances. Thus many delegates were pledged to Roosevelt who might otherwise have gone to Smith, had he been an avowed candidate at the time. This was particularly true in Bronx County and other counties in New York that were pledged to Roosevelt in the primaries.

Smith told me later that in his opinion it made no difference how the delegates were pledged in the primary they should have changed their minds when his candidacy was announced. I did not agree. I told Smith that so far as the Bronx delegates were concerned, they were pledged to Roosevelt and they would "stay hitched." The people of the Bronx know that once I pledge myself and the organization to a candidate, that pledge holds. I have maintained this attitude throughout my leadership. And it is because the majority of the Executive Committee agree with these principles that they continue to back my leadership.

6

As long as we have a two-party system of government, we shall have machines. Whether they will be good or bad depends upon the interest of citizens in their party government, and upon whether that interest is just as strong and unflagging as their interest in their local, state, and Federal governments.

The reason more people do not accept the inevitability of machine politics is that whenever they think of machines and bosses, they seem to think only of the successful ones. In every county in New York City there is and always has been a Republican machine. To be sure, they call themselves "organization," but they are as truly machines as their Democratic counterparts in every respect save that of success at the polls. The nominations for the various offices in the Republican Party

are dictated by the Republican County Leaders, who are, of course, the Republican county bosses.

The present Governor of New York, Thomas E. Dewey, accepts advice and even dictation from the Republican bosses in the various counties throughout the state. The newspapers favorable to Dewey (or to the Republican Party generally) describe this as "receiving suggestion from the leaders of the party." It is only the "leader" you don't like who is a "boss," and the "organization" you don't like that is a "machine."

This is equally true throughout the United States. In practically every city and every state, there are a Republican machine and a Democratic machine, and there is always one man who is the boss of the machine. The final responsibility for nominations is wholly in his hands. Thus, when you condemn the "boss system" you condemn both major parties and indeed all political parties, because all operate in exactly the same way.

This system is a direct result of the election laws not only in the State of New York but in every state of the Union. The election laws provide the method under which parties are organized. The same laws that apply to the Democratic Party apply to the Republican Party.

If this is true, then what can be done and what should be done? One must work with the tools at hand. If a machine is bad, it can be reformed only by the members of the party concerned. Many people criticize government—and then announce that they are not affiliated with either of the major parties. This is ridiculous. They can never hope, through unorganized mass, to accomplish anything. If they wish to cure a situation, they must do it through the machinery that is set up by the election laws.

I do not want to minimize how difficult a job this is. It is difficult because in a successful machine the leaders have so well fortified themselves that it takes time to upset them. It cannot be done in a year. In some cases, it cannot be done for many years. But if the start is made, eventually the vicious element in an organization can be removed. Those who have the courage and persistence to survive early discouragements win out in the end.

An instance of this that probably is fresh in the minds of most is the so-called "Pendergast machine" in Kansas City, Missouri This organization got so bad the Pendergast and others connected with it went to prison. This did not mean the end of Democratic organizations in Kansas City. There is still a machine there. It is a better machine because of the exposures that purged it, but it is still a machine. Its legal structure is exactly the same as before. But because the decent Democrats of Kansas City finally became sufficiently aroused to take part in the primaries and in the selection of County Committeemen and District Leaders, the Pendergast machine, as such, was destroyed.

There is no use periodically electing "Fusion" or "Good Government" candidates. They will either stay in power a short time, or they will set up their own machines, or—what is far more likely—they will merge back into one or the other of the two major parties. The Republican and Democratic parties have survived a good many "reform" movements in the form of third parties, the one over a period of ninety years, the other over a period of nearly a century and a half. Third-party movements have never succeeded nationally. They have succeeded about once in fifty times in the states. They have succeeded, all too briefly, about once in twenty times in the cities. These figures speak for themselves.

If we are to have uniformly good government, local, state, and national, I am afraid a lot of men and women will have to get down off their high horses and grub around in practical politics as active members of a party. I wish we had in our school systems required courses of training in citizenship which would send forth graduates by the hundreds of thousands who would assume such responsibilities as readily and as naturally as they assume the responsibility of earning a living. So far as I can see, the emphasis in whatever practical politics is taught is placed upon elections, rather than

primaries. The so-called "independent" voter is all but deified, when he ought to be condemned as a shirker.

Waiting until after the candidates are nominated is waiting until you have missed the boat. Whatever is to be done must be done before the nominations are made. There is no machine—I do not care how powerful and well-intrenched it appears to be—that would dare to nominate a candidate for office it knew its own people did not want. Many poor candidates are named because of the fact that the so-called boss of the organization knew that the great majority of the members of his party would take no interest in the primary election anyway. Bosses get away with a good deal by default—your default.

7

Today, much criticism is being leveled at the Political Action Committee, because of the fact that it is taking an active part in the primaries of the Republican and Democratic parties, seeking to have named on both sides candidates who are friendly to PAC—which is to say, to organized labor. PAC has become a very potent factor in national politics. In states like New York, Pennsylvania, New Jersey, Illinois, Massachusetts, and some border states, its intensive work undoubtedly helped in the election of President Roosevelt in 1940 and 1944.

It is significant, I think, for the student of politics that PAC did not set out to form a third party and thus far has resisted the temptation to do so on a national scale. The tactics are fundamentally the same as those of people who choose to work within one of the older parties, in that the aim is to influence the selection of candidates before the choice has narrowed to two. That the results are sometimes more meager than those obtained by Republican and Democratic "regulars," at least in New York City, has been indicated in several recent elections there.

In the last municipal election in New York City, for example, the Bronx Democratic organization did not accept the endorsement of the American Labor Party, which is a part of the PAC organization, although the other four counties did. In the Bronx, therefore, there were four tickets in the field: Democratic, Republican, American Labor, and Liberal. Each had its own slate of candidates. The Democratic Party made a better showing than ever before. Thus it will be seen that, to be successful at the polls, PAC usually has to make common cause with one or the other of the old-line parties and vote for its candidates.

A great deal has been made of this "balance of power" theory, and it is a fact that in many instances the endorsement of PAC has brought about the election of Democratic candidates who might not otherwise have won. But as far as New York is concerned, the American Labor Party's claim to a "balance of power" role is at least open to question. For example, if Mayor O'Dwyer had run on the Democratic ticket alone in the last mayoral election, he still would have been overwhelmingly elected.

If the citizens whose interests are different from or broader than those championed by PAC would take as much pains to protect those interests as labor is taking to protect its interests, the story might be an entirely different one. Certainly there is no point in condemning PAC-endorsed candidates because of their obligation to organized labor. Unfortunately, however, the citizen with broad interests is rarely a party worker, or even an active citizen. Why, therefore, should he be surprised that more "independent" candidates are not elected to office? It would be a fine thing if all officeholders felt under obligation to all types of citizens, and hence based their judgments on the rule of the greatest long-term good for the greatest number. But we shall never reach that Utopia unless or until all the citizens resolve to work 365 days a year at being citizens.

There, then, is the machine and its boss. While bosses are inevitable under our system of government, bad bosses are not. For, in the last analysis, the real boss is you.

Good Newspapers and Bad[1]

WILLIAM ALLEN WHITE

I

NEWS VENDING has become highly diversified in the modern world. Of old, the town crier and the beggar going from European village to village purveyed the news. Their companion in commerce was the peddler of oddments with his pack on his back. The town crier was more or less a subsidized news merchant. The beggar was a free agent, except that the better his story, the better bed and board he got. Thus lying early became highly profitable in merchandising the news. But after the peddler put down his pack and opened a store he found beside him the town crier or the beggar, or both, running a printing office. The peddler's store developed departments. The mendicant printer and the town crier became editors, selling opinions with the news.

Two or three generations back, in the English-speaking countries, the editor, who had prospered partly by mendacity and partly by blackmail, who until then would crook a knee to a patron and pull a forelock to his betters, suddenly began to brace up. The merchant prince, grandson of the peddler, was using the printer and editor to promote merchandising. In the early part of the last quarter of the old century, in the English-speaking world the sums paid to publishers for advertising began to outstrip the sums paid to editors for subscriptions. Advertising directed the course of development of the newspaper. In continental Europe, where such advertising as we know in the English-speaking democracies is considered unethical, the press remains a pamphlet—more or less. It is subsidized. It is still the town crier with a louder voice than his knee-breeched great-grandfather had.

But in the English-speaking world the domination of advertising in the printer's revenue has developed a new profession. The journalist is a hybrid—partly business man, partly sleuth, partly professional worker, partly publicist, carrying traces here and there of showman, philosopher, scavenger, and charlatan. In different newspapers different qualities take precedence, coloring the product of the different presses. Broadly speaking, however, American journalism divides along one line, an ancient line, the line which marks the precedence of the business office over the editorial department. Speaking broadly again and allowing for many notable exceptions, this is the truth—that the more definitely the business office dominates a newspaper and makes it conspicuously profitable, the less valuable the newspaper is to its community. Like all simplifications, this one should be distrusted, because it implies a connection between dishonesty and prosperity in a newspaper which is not always warranted by the facts. Yet, while obvious venality and a lust for profits are evidences of dishonesty, a newspaper may prosper tremendously and yet be incorruptible. Possibly its dishonesty is intellectual. Or maybe its dishonesty is imaginary—a matter of good taste or bad.

Now that matter of good taste or bad brings us down to another subdivision in the newspaper business. This subdivision separates newspapers that appeal to the higher strata of intelligence in their potential readers from those that appeal to the lower strata of intelligence. Similarly, churches in our urban centres attract their members from men and women living upon a certain economic standard, and hence, presumably, of a similar grade of intelligence. At any rate, different newspapers in many communities are directed at different reader groups up and down the spectrum of intellectual capacity in their communities. In general, a newspaper that tries to give its community

[1] From *The Atlantic Monthly*, Vol. CLIII, 1934. Reprinted by permission.

complete coverage has a hard task, especially in our great metropolitan areas.

Now these different kinds of newspapers appealing to different classes of readers would seem to have different standards of morals. Thus one speaks loosely of certain newspapers which appeal to the more literate, the more reasonable, and the more comfortable classes of society as good newspapers. Similarly, one refers to newspapers that pander to the ignorant, to the underprivileged, to the men and women of clouded vision and low I.Q., as bad newspapers. Possibly, indeed probably, the terms used thus are unjustfied. New Yorkers, for instance, who buy either type of newspaper regard the other as mercenary and wicked. The subscriber who invests in the tabloid and in the gutter sheet regards the *Times* as corrupt and class-conscious, and what the readers of the *Times* think of the newspapers that appeal blatantly or even unconsciously to their less fortunate neighbors fills the *Times* readers with emotion inexpressible in their polite vocabulary.

II

Two books appeared last autumn significantly telling the stories of these differences in objective so often manifest in American newspapers. *Watching the World Go By* is the autobiography of Willis J. Abbot, long-time editor of the *Christian Science Monitor,* now member of its Editorial Board. *Timber Line,* by Gene Fowler, is the chronicle of the professional careers, with more or less of the private lives, of H. H. Tammen and F. G. Bonfils, who made the *Denver Post,* which proclaimed itself at its masthead the "paper with a heart and soul"—and, added its unfair enemies, a price. It may be worth while for a moment to consider two opposite careers in American journalism. For in these books the lives, aims, and achievements of Willis Abbot and the Denver editors dramatize broad differences of character and purpose in our journalism.

Mr. Abbot's story recalls a well-born youth with average American college education setting forth in the newspaper profession to find his Holy Grail: this being, first, distinction through services; second, security in his person; third, a modicum of honor; and finally, but above all, well-grounded self-respect. He begins as a reporter in New Orleans, tries his hand at establishing an evening paper in Kansas City and fails like a gentleman, turns up in Chicago, capitalizes his experience, becomes managing editor and editor-in-chief of a number of journals in the interior metropolis, moves up and on in his profession until he finds himself seated in the editorial chair of the *Christian Science Monitor.* That journal has been established by Mrs. Eddy, prophetess of the Christian Science Church. The *Monitor* is to be a newspaper appealing to readers who are not interested in sensations, who do not demand the news of crimes, of sex, or of violence. Under the guidance of Mr. Abbot the ideals of the founder are mantained. After a generation of hard, intelligent work, a successful newspaper appears, a newspaper known all over the world, a model for newspaper men who are counted leaders of the upper middle class. Mr. Abbott has achieved success. He is not without honor, he has personal and economic security, he may well take pride in his life.

His career exemplifies a typical American journalist of, let us say for euphony, the best type. He has sought for rewards in realities, asking of Fate only incidentally fame and money and power. He has made a lifelong appeal to newspaper readers of good taste, men and women of discernment and of a certain sophisticated perspicacity, who are not fooled by flash and blare and boasting—solid upper-middle-class citizens, the solid basis of a burgeois civilization, citizens who like to feel that they form our ruling class. Indeed, in the long run, probably they do dominate America and finally have their say, considering American life in terms of decades.

III

Behold now the shining contrast. Let us open the book *Timber Line,* wherein Gene Fowler tells the story of Tammen and Bonfils, owners and editors of the *Denver Post.*

Harry Tammen was a barkeeper in Denver in the eighties. Fred Bonfils in the early nineties was running what is commonly known as a policy game—a lottery device that did not use the mails, but appealed to the proletarian submerged tenth around the packing houses of Kansas City. Many of his patrons were the Negroes who had come from the South in the exodus of the seventies. Tammen was a child of the streets, a Dutch immigrant boy who had drifted from the Atlantic Coast to the Rocky Mountains, and then in his twenties knew that life was a merciless, cruel game, in which the winner was a fool if he hesitated to deal from the bottom or run in cards from another deck.

Tammen and Bonfils bought the *Denver Evening Post* during the depression of the middle 1890's. They ran it for forty years on Showman Barnum's theory that a sucker was born every minute. Tammen also was a showman. Every thimblerigger's trick, every form of ballyhoo, every cheap device to attract cheap people, Tammen used as a publisher. Bonfils was the editor of the *Post*. He had been exposed to a West Point education, was an able abettor of the showman in baiting the hook with a certain flashy elegance which attracted the vulgar.

Denver, in the 1890's, was the capital of a pure plutocracy. Colorado was a mining state in those days. Hard metal, chiefly gold and silver, came out of the Colorado hills. Great fortunes fell into the laps of pick-and-shovel miners, men frankly seeking raw wealth for its raw sake. This wealth, when it came, being ignorant, was arrogant and purse-proud and an easy mark for swindlers. Colorado politics were full of violence and sudden death. The chief end of man was the immediate dollar and no questions asked.

In such a society the *Denver Post* "waxed fat and kicked"! Its antics seemed to give shrewd encouragement to the gossip that some part of the *Post's* revenues came from blackmail. Probably reputation brought more revenues than actual achievement in blackmail, if it was ever tried. Yet, as the harlot insists upon being called a lady, so the *Post* advertised its honor, its devotion to the common people. With their profits Tammen and Bonfils built a newspaper office building and emblazoned on the portals, "Let Justice, When Denied Another Home, Find Refuge Here." Bonfils, who wrote the editorials wrote under the caption, "So the People May Know." Money rolled into the coffers of the *Post* in a steady golden stream.

With money came power, with power came a certain prestige that was almost respectability. Politicians doffed their hats and smirked when they crossed the threshold of the Red Room where the editors presided. Circulation spread their sphere of influence all over Colorado, into New Mexico, Arizona, Wyoming, and Utah. Famed hack writers, whom money would tempt, were promised and sometimes paid fabulous prices to contribute special articles or run departments for the *Post*. Naturally, as the circulation widened and included practically all of the gullibles within two hundred miles of Denver, the *Post* became a braggart. It swaggered. It sought to imitate gentility. In the meanwhile, irate subscribers called with their firearms and chased the editors around the Red Room, and Bonfils retaliated with assault and battery.

Here were scenes that would have pleased Dickens. Yet for all the obviousness of its vulgarity, for all the plain evidences of its quackery, if not venality, its profits mounted steadily. The sucker born every minute seemed to be hurrying with his pennies to the office of the *Post*. It reigned over and more or less ruled a region of America. Its rich owners were able to demand baksheesh from oil men who were "cutting melons" in this region. They were to be seen on presidential trains—on Harding's train, for instance. They had congress with statesmen of sorts. Yet, in the newspaper profession, among editors who held fast to certain old American ideals, Bonfils and Tammen were not names to conjure with. They were outcasts in higher journalistic circles—perhaps Pecksniffian circles, but nevertheless quarters that are highly esteemed.

IV

While Bonfils and Tammen caricatured a type of American journalist which has infested our urban population, and while they emphasized its meaner points, they still did represent the virtues of their type. They and their kind represent today the only sort of journalism that the newly literate moron in American life can understand and enjoy. This moron's name is Legion. He spawns by the millions in our high schools and on the campuses of our colleges. In flashy raiment he runs over the great stadia. He roars through the fraternity houses, at football games, not half so drunk as he pretends to be. He is moved by catchwords, slogans; talks in the short, monosyllabic headline language of the first-page screamer. His wife, his sisters, and his daughters get their art from the dime store, their intellectual stimulus from bridge, and their morals from the movies. The members of this branch of the Legion family form mobs, mass movements. They follow phantoms, and in vast schools go darting hither and yon on the surface of the times, attracted by the shibboleth of the hour. These mobs set their heroes on thrones, adore them for an hour, and forget them. They seem to have no memories, no capacity for logical processes. They are shallow and rather shameless in their inconsistencies. That Tammen and Bonfils ruled the mobs of Rocky Mountain region and so held sway there for three decades indicates certain substantial qualities in these two merry monarchs of mendacity.

It is a long, genealogical jump from the town crier's rival, the beggar, to editors of the sensational press. Yet the line comes down without a break, and collateral lines reach into every American city of over 200,000, where some editor, either on his own or operating upon a transcontinental or a regional chain, is spreading his net for the same shoal of suckers that are fattening the vats of our American journalistic garbage refiners. And always remember that they generally die after attaining success, according to their lights and leadings.

And who shall gainsay their success according to their lights? They serve their clients. They give the multitude the sort of newspaper that the multiude can read and understand. Wherever a newspaper thrives which makes a low appeal, other newspapers which are intelligent and apparently honest are offered to the public. But the readers who support the sensational press will not have the other type of paper.

In every community this human stratum exists. It is one of our modern problems rising out of universal education. We are teaching the mentally submerged and sluggish how to read and write. We are giving them all they will take of education in high schools and colleges. They remain what they were. Happily, they do not always breed their kind. Probably, as their environment improves, each generation moves up a peg in its I.Q. But today they make our different kinds of lynching mobs. They exalt our movie heroes, our baseball and football stars.

Occasionally some sharp demagogue is able to segregate this group into one voting unit when more intelligent groups are dividing. Thus for the hour he has power. But we have always had demagogues. They thrive as they have always thrived, sporadically, by uniting dupes who ordinarily may be depended upon to divide in political matters. Yet if they are more in evidence than in other days and times, they are probably not numerically greater, nor much more important politically, than they have been before in human history.

V

About so many of us are dumb, so many of us are keen, and so many of us are nondescript—which means that, being between poles, so many of us are the salt of the earth. And alas, those who are smart about one thing are dumb about other things. Genius and stupidity often walk under the same hat. Those who know good books, good pictures, and so-called good newspapers, are often easily fooled in statesmen. The philosopher is easily misled in business. Those in the middle crowd, the average mill run

of persons, have always had this problem of their betters and their inferiors. Or they think so. Generally speaking, they seem to run the world. But often their smarter friends become antisocial, develop into great scoundrels, unscrupulous rulers, dishonest financiers; whereupon the common man curbs them and sometimes cuts off their heads. Sometimes he puts them in jails or banishes them and knocks them about rather roughly. Very likely the other group—lower or upper—breaks out only in crises. The abnormals frequently have menaced the ordinary processes of civilization. But apparently here in America they have been growing more vocal than formerly, more noisy, more arrogant. They insist more ruthlessly on ruling the roost, on vulgarizing the country. Their united support of a man or an institution like a flashy newspaper or the movie industry presents really grave difficulties in social progress.

What are we going to do about them—"we" meaning the average citizen, "them" meaning these literate millions who make the intellectual underworld? "They" are pious, God-fearing Americans, many of them well-to-do; most of them live within a fairly stable economic status. They are by no means the underprivileged and the dispossessed. They are the dumb, brash, noisy, opinionated hillbillies of our cities, our country towns, our rural communities, led by the smart ones with highly developed instincts for money or power for antisocial leadership. They are here, those feckless followers of humbugs. We cannot pop off their heads, banish them, or put out poison for them as we do for our antisocial gamins who turn crooked or get too much financial or economic power. The overcredulous, who are also oversuspicious, must have diversion and amusement. They must have their *Denver Posts*, which call for more Bonfils and Tammens. In the meantime, men like Willis Abbot continue to make their private opinion public opinion, and so govern the land.

Now this issue in American life between those of the low intelligence quotient and those with a normal degree of intellectual capacity would seem to point to stratification. But no—they do not stratify. In the blood strain of our national life the genes which carry the thing, whatever it is, called brains, or the lack of it, are liable to occur in any grade, step, or stratum of our social, economic, or intellectual life. We are likely to go from moron to genius in a generation, and from genius to moron in the next generation. The same parents breed children of widely different qualities, so completely have we mixed our social classes here in the last three hundred years. There can be no hereditary ruling class because of this pied blood stream of ours—which fact brings some comfort.

But here and now abide these two entirely different careers, each successful according to its kind and its aim. A career like that of Willis Abbot appeals bravely, courageously, with chivalry and distinction in all its attitudes, to one type of our citizenship. And there are the *Denver Post* and its kind, the tabloids, the cheap chain newspapers, with their flashy features, their emphasis on crime, smearing sex across their front pages in dirty headlines, making money, making even ideals of a sort, crystallizing vulgarity into institutions. And what does it mean? Where are we going? Who knows the answer?

Moronia [1]

ELEANOR ROWLAND WEMBRIDGE

IT WAS THE custom during the Middle Ages, when human nerves and tastes were more robust than they are now, to entertain one's guests with the antics of dwarfs and cripples. The philosophy behind the court jester evidently was this: If a man is so absurd as to choose to be awkward and misshapen, he deserves to be laughed at. We have now passed beyond this stage of humor, and such afflictions as palsy or a malfunctioning pituitary body are no longer considered amusing. But the individual with the crippled intelligence is still a target for derisive laughter. He (and even more inevitably, she) is the court jester and the whipping-boy for our highly geared and very clever world.

The current idea that a person must be either normally intelligent or a sheer imbecile is, of course, as untrue as the notion that one must be either perfectly healthy or sick unto death. There are all stages of rheumatism, indigestion, and inflamed tonsils. And there are also all stages of skill or lack of skill at reasoning, and all sorts of facilities with numbers and with words. Only by the sum total of these aptitudes and defects can we judge the individual. If the total is just a trifle too meager for the complex demands of modern life, and cannot be made to develop further, we are confronted with the moron, the borderline feeble-minded, the dull, and the retarded. All these terms designate weak but often likable individuals, who have been born to stagger helplessly under a social load too heavy for them.

In exposing their mental helplessness and the grotesque gropings of their minds, I cannot but feel that I have descended to the humane level of those medieval worthies who may have said, "Isn't the gait of that club-footed child amusing? Let's chase him and have a good laugh when he trips." That the mental operations of those of low intelligence are absurd, there can be no doubt. But the defense which seems the most appropriate for them, when one more job has been lost because of stupidity, or one more arrest made because of suggestibility, or one more child got into its coffin by gullibility, is the speech of Shylock with but a few words changed: "I am a moron. Hath not a moron eyes? Hath not a moron hands, organs, dimensions, senses, affections, passions? Fed with the same food, hurt with the same weapons, subject to the same diseases, healed by the same means, warmed by the same Winter and Summer as the intelligent are? If you prick us, do we not bleed? If you tickle us, do we not laugh? If you poison us, do we not die? And if you wrong us, shall we not revenge? If we are like you in the rest, we will resemble you in that—the villainy you teach us, we will execute, and it shall go hard, but we will better the instruction." No words could better fit the moron, who must lead a citizen's life without a citizen's equipment, and the somber concluding threat is no less ominous because no moron would have the wit to make it.

From which preamble I descend to the concrete fact of Flora's wedding. For Chuck had met Flora on the street and said, "How about a show, Blondey?" to which she had replied, "O Boy!" With this introduction matters had gone far before she even knew his last name—a name which she was now to assume under a wedding bell of Easter lilies. We did not approve of the wedding any more than we had approved of others about which our opinion had not been asked. But both high contracting parties were of legal age, however low their mental ages might be

[1] From *Life Among the Lowbrows* by Eleanor Rowland Wembridge, 1931. Reprinted by permission of Houghton Mifflin Company, publishers.

(Flora's was between ten and eleven as it happened, and Chuck, who was very dull but not quite so feeble, scored a scant year higher), and they wanted to marry, so there was nothing to do but ring the wedding bells, turn on the "Lohengrin" record, throw rice and old shoes, and wait for the inevitable. Incidentally, let no one underestimate the value of an elaborate wedding for morons, if wedded they must be. The mere signing of of a license is essentially too abstract and trivial a formality for those who cannot grasp the idea of law. It takes more than a scrap of paper to hold the family together after a quarrel. But if the veil is long enough, enough jokes are made by the best man, and enough shrieks uttered by the bridesmaids, the impression is made upon the dimly endowed pair that something really important socially has taken place. They are helped thereby to remember that somehow the clergy and the police will see to it that the bride does not sell the household furniture behind her husband's back, and that he will not leave her with the rent to pay. So Flora married Chuck on twenty dollars a week, and they went to housekeeping in two furnished rooms.

Flora had been getting twelve dollars and her lunches as a dishwasher in a restaurant, but that could not continue for long. The aspect of the case, however, was not discussed very much, for Chuck seemed genuinely fond of his Flora, and was marrying her under no outside pressure. Ultimately, therefore, Flora must budget his twenty dollars a week to cover rent, food, clothes, movies, gas, tobacco, lipstick, chewing gum, and layette. To do this required addition, subtraction, and even multiplication, and these processes must be accurate and rapid enough to count the change before the peddler walked away with the extra dollar.

Furthermore, a certain ability to use and to understand language was necessary, because the only callers at Flora's door would be agents for hosiery, vacuum cleaners, vanishing creams and cleaning fluids, veterans selling needles, and children raffling sofa pillows for a fair. It was a good deal of strain for Flora, used to the sociability of a café kitchen, to reconcile herself to the solitude of her own, and her hospitality never could resist letting persistent agents in for an exposition of their wares. She had consorted pleasantly with Chuck and with her other acquaintances, both girls and boys, without much recourse either to her vocabulary or to her arithmetic. She had always spent her money until she was broke, and then got herself fed by her escort of the period until the next payday. Her conversation was about as follows: If Chuck remarked, "There goes a white horse," she shouted with laughter, and said, "Hot dog!" If he said, "There's a Ford," she agreed, murmuring, "You said it," and snuggled closer. She could also say, "Ain't it so?" "You're a fright," "I'll say!" "Hell's bells," and "You're crazy with the heat." She could, moreover, giggle and say nothing, which worked quite as well. She was healthy and good-natured, she liked company, and was normal in all but mind.

To come back to the agents who were so voluble, and whose living depended upon selling goods, could anyone expect Flora to be a match for them? "Start a home library with *Flames of Fervor*," urged one. "Greatest deeds done, and who done 'em—for less than a cent a page." Flora was dazzled—less than a cent a page for so much print! She made a five-dollar installment payment, and had nothing left to pay on the grocer's weekly bill, for she had paid a like amount toward a fur coat, the same on rent, and Chuck had retained five dollars for his own use. Four times five makes twenty—surely not difficult for a normal mind. But a moron cannot grasp its significance rapidly enough to come to a decision before the agent has disappeared around the block.

You recall, no doubt, the standard example in arithmetic which every fourteen-year-old school-child is supposed to be able to solve: If two pencils cost five cents, how many can you get for fifty cents? Not only pencils, but doughnuts, dill-pickles, apples, and cotton handkerchiefs are bought at about this price. But neither Flora nor any of her moron friends could master the problem. We knew they could not because we had asked them. Flora's answer was twenty-five because two

into fifty was twenty-five. Her friend Lucille's, on the other hand, was a hundred, because two times fifty is a hundred. (Lucille's husband is in the penitentiary for stealing motor-cars—he had to steal *something* to keep ahead of her shopping.) Another friend, Annie, ventured a still more generous estimate. She said: "Five times fifty, because five cents times fifty cents is five times fifty—whatever that is." Chuck himself answered ten, because "You get two for five, and two times five is ten." It will be observed that all of them knew that *something* must be done in the way of arithmetic, and that their arithmetic was generally correct—except for the fact that they could not select the right process to employ. A simple problem was to them as Relativity is to the rest of us. If our household accounts depended upon a real understanding of Relativity, we should be precisely in Flora's case, for her capacity to live within her income depends upon simple arithmetical analysis. If she and her friends had been low-grade feeble-minded, they could not even have multiplied their twos and fives. But they were only morons.

It was certainly essential that Flora, out of Chuck's weekly twenty dollars, should save a little for the future, so another example suitable for a fourteen-year-old was set for her. "If you have twenty dollars a week, and spend fourteen a week, how long will it take you to save three hundred dollars?" Flora, who had a sense of humor, could not at first get past the joke that she should ever save anything. "A lifetime," she answered—" and a long lifetime." Then, "three hundred times fourteen." "Three hundred times fourteen what?" we persisted, and Flora answered "dollars." The example was written out for her, but she had completely lost the connection, and when she was again reminded, "But how long a time would it take to save it?" she answered, as if through the telephone, "2025." What she meant by that we shall never know. We know only that the firms equipped to solicit business with the mentally unsound will find Flora out and use the courts to collect their bills. We know also that with such arithmetical equipment her savings account will never be large.

Flora's good nature had often led her into difficulties, not only with agents in the way of rash purchases, but with friends in the way of picking up joy-rides, calling out of the windows to people she did not know, wearing ultra-conspicuous dress when she and Lucille (whom she soon took as a boarder) went shopping, and overindulgence in matinées which neither could afford, and in which her flirtations with the trombonist made Chuck very jealous. Lucille, as a temporary widow, felt that she had a right to flirt with whom she chose, and Flora, from long habit, followed her example. In what words shall one urge the laws of morals and good taste upon a moron of flaming cheeks and healthy appetites, whose inclinations are those of an adult body with a child's mind? Unfortunately, there is no value in exhortations unless one's auditor understands the words in which they are phrased, and what do Flora or Lucille (or Chuck, for that matter) understand? All of them stuck in the fifth or sixth grade in school until they were so large that they were ashamed to be seen with the smaller children, and were tired of being scolded for not getting their lessons. Then they quit, and went to work. It is hard, indeed, to discover just what words convey to morons with such a background. Flora when questioned says that "lecture" means "getting hanged," while Lucille says, "It's the chair." The fact that the latter's husband is in the penitentiary, perhaps explains why both girls should associate the word "electric." Flora says skill is "You do it," which isn't so bad. Lucille says, "You do it to fish." "Not scale, but skill," we repeat. "In your head," she answers, which seems perhaps on the right track, until she adds "a bone." "Not skull, but skill," we insist patiently. "Fry in it," she tries again, and we give it up. For purposes of ordinary conversation, words of that abstraction are too hazy for Lucille.

Of course, uneducated people necessarily have smaller vocabularies than the highly trained. But on the other hand, children taught in American schools and confronted

by the newspapers have been exposed to a good many words, and the meanings of a few of them have got to penetrate if any sermon on behavior is to be intelligible. Moreover, it is impossible for good advice to be couched entirely in words devoid of some degree of abstraction. So we ask—"What is pity?" That seems easy: "You're sorry." Encouraged, we proceed, "What is justice?" "Peace," answers Lucille. "I got married by one." Envy is "enemy" or "You like them" or (hesitating), "You *don't* like them." Insure, to Flora, means "sure," or, "You get it when you're dead," or, "They get it at the house," or, "It's in the company like," or, "It's when you get hurt." So much for Flora grasping the insurance principle when some new agent at the door wheedles her out of a first installment, never to be followed by a second!

Cotton is "wood-like," to Flora, but "comes from animals" to Lucille. ("Like coal," she adds, to make it more clear.) Chuck, however, says with a flourish that "it can be viewed from a perspective point," and Flora is silenced with admiration. Brunette, says Flora, means "blondes"; regard means "guard-like"; civil is "civilized" or "big." "Why big?" "Because the Civil War was big." Another venture was "with knives"—because the war was fought with knives! In what words, then, shall we express to Flora, "You must learn to keep an account of your money, not spend more than you have, and be faithful to Chuck," when she has already told us that charity is "Don't be silly," faith is "You do it," and when, to a question requiring the answer "thirty-five cents," she has answered, "eighteen hundred weeks"? When it is possible to say that control means "wagon" and chastity means "tricks," what hodge-podge of ideas has one's sermon produced in the good-natured mind of the moron bride, who probably has not been listening in any case, but has only been wondering whether her hair would look better in bangs or with a marcel?

Chuck, who was a barber, specializing in the haircuts of sailors along the lake-front, had a curious facility for words, which always made a profound impression on Flora and on his other friends, and left one in doubt as to how much of what he was saying he understood himself. It was to be expected, of course, that as soon as the sprightly Lucille was accepted as a boarder, complications would arise. Flora wanted Lucille for the sake of her company. But so, unfortunately, did Chuck. He would not have sought her out, and neither, perhaps, would she have angled for him. But both being there, in somewhat crowded quarters (when entertaining guests they always slept three in a bed), jealousies soon arose, and a lawsuit pended.

Lucille had twice before held the proud distinction of being a newspaper headliner. When Joe was sentenced, she had had her picture taken with her arms around him, and a dotted line issuing from her mouth enclosed the legend, "I'll be so lonely without my Buddy." Then there had been a dingy fracas later on, when Lucille charged unknown ruffians with tattooing her shoulder-blade, and that, of course, made a magnificent picture for the evening paper. Lucille's friends regarded the tattooing episode with their tongues in their cheeks—but no one could deny that her pictures had decorated the pictorial section, and that she had twice been presented to one hundred thousand readers, first as "Pretty Girl-Wife Waits for Thug," and then as "Flapper Tattooed. Is Chivalry Dead?" It was natural that Flora, equally ambitious for fame, should look about her for some path to glory. The easiest way was to start a lawsuit against Lucille for the alienation of Chuck's affections.

We had long arguments with Chuck at this turn of events, and were, of course, dazzled by his vocabulary, as no one could fail to be. Since simple language was only a haze to him, we tried the experiment of teaching him virtue through fables, in a manner that has been popular since Aesop, and which is apparently still dear to the public, for no movie program is complete without its pictured symbolic moral. Chuck was fond of fables and read them fluently. But the question was: What lesson, if any, did he learn from them? We soon found out. From the fable of the man who called to Hercules for

help, and was advised by him to put his own shoulder to the wheel, he derived the lesson, "Always do the same to them." He laughed appreciatively at the girl who counted her chickens before they hatched and said, "It pays to be broad-minded." He sighed over the crow who was flattered into dropping her meat in order to sing, and said, "That's like Lucille. These flappers. It don't pay to be led by flappery." Of the miller and his son who took everyone's advice about their donkey instead of using their own judgment, he said, "They're so backward, these dumb animals. Too backward, much more backward than human beings!"

Despite these responses from Chuck, the alienation suit went on, and so, joy of joys, Flora's picture got into the paper with the caption, "Bride Sobs, I Loved Him So!" This eminence, of course, nettled Lucille, but pleased Chuck as well as Flora, and the resulting letter from him to his wife effected a reconciliation. "I have thought this thing out pretty thoroughly," he wrote, "and I have done this according to the balance method of applied logic. As a result, I am convinced that you are wrong. Not only that, but I have analyzed you psychologically, and checked up on the results. You have heard of psychoanalysis, of course. The results upon synthesis tallied with the facts." This astonishing letter was correctly spelled, written on pink paper, and delivered in person! We helped Flora to read it, and with the concrete suggestion added by us, that Lucille board elsewhere, the home life of Chuck and Flora was resumed.

I should feel more sure of the reconciliation being permanent if Flora's picture had been as conspicuously placed in the papers as that of her friend had been. Alas, it was not, and Lucille has not hesitated to point out the distinction. We'd all be easier in our minds if Flora had sobbed upon the front page instead of the ninth. As for the lawyer in the case, he may now join the grocer and the rest of the bill collectors in trying to squeeze blood from two little turnips.

If the thought processes of our moron friends are analyzed, it is evident that in almost every case one may determine, by vague word associations, why they say what they do. Through a hazy mist of associations they see a vague outline of what is being discussed, and because of the sound of a word, or some more or less intangible link, they clutch at a memory which prompts a response of some appropriateness. Having these vague associations, they escape downright imbecility, but never, except in the simplest of concrete sentences, do they clearly understand what is being said. Their own language is largely Greek to them. They never can make out why it is that other people make so many and such violent distinctions, or why they take such determined stands.

Chuck and Flora will now resume their interrupted domestic life as if nothing had happened, and Lucille will rejoin Joe when he emerges from the penitentiary, or will elope with Micky. Flora on a later occasion will flirt with Tony, and Chuck will make love to Sadie, and they will again make up, or will *not* make up, as the case may be. But in either case, Flora will merely smile, and pat her collar and fidget until we are done scolding, and Chuck will continue to shave the sailors, and nod his head over their "interogeneous accounts of reserved times." They will hurl obscene abuse at each other when they are angry (with as little grasp of its meaning as they have of any other words). Much of this abuse may be justified, but they will hurl it as readily when it is not. Many an exasperated moron mother addresses her own daughter as "*son* of a bitch." She uses the term, regardless of its sense, merely because it registers disapproval, as we murmur "how interesting" to the statistician's explanation which we have not in the least understood.

In the same manner the moron daughter will agree to some admonition with a tittering, "That's an earful." Because her answer has a vestige of relevance, the enraged employer, the overtrustful merchant, or some other victim, will be convinced that all morons are in complete possession of normal reasoning powers, or as, in his heat, he tends so aptly to express it, "They're exactly as

bright as I am." Because to the question "How much does seven feet of cloth cost at fifteen cents a yard?" they can answer, "Arithmetic," or "You got me—more money than I got," or "Somewhere around a coupla dollars," the inference is that they are capable of providing for their families. Because, though twenty-one and voters, their answer to "What is the difference between a President and a King?" is "Presidents are better," or "Kings are stuck up and want lotsa service," or "Generally kill you, Kings do, at least *some* don't," it is assumed that the vote they cast has an opinion behind it. I have known many a citizen who voted the straight —well, anyhow, who voted *a* straight ticket, whose only answer to the above question was some variation of "They *sit* different—on thrones, but a President wears regular clothes."

There must be no sweeping inference from this that all troublemakers are morons, or that all morons are trouble-makers. Far from it! It is a marvel what can be done with a good disposition and small mental equipment, if the training is good, the surroundings simple, and the social standards high. Not much real thought is required if one is protected and lives with intelligent friends. A well-trained moron boy, who has enough of a way with him to get a smart girl to marry him, is often in clover. His little shop is run well, his wife sees to it that he has tobacco and that his dinners are good. She brings up the children and there is nothing left for him to do but to praise her in the city gates. Also an intelligent man with a moron wife can get along pretty well if she has learned good manners at boarding-school, and he has money enough to pay her debts. Unfortunately, both will get into difficulties with their children. Nature slipped when she made an intelligent mother a necessity for successful children, and yet allowed so many men to be attracted by defective mates. The fact that the dull girl cannot realize how dull she is, and that the ineffective father cannot know how little he is to blame for his failures, makes the ensuing catastrophes no less pathetic. On the contrary, their profuse excuses, their stories so wide of the point, their miscellaneous and irrelevant conversation, their fate always dogging them, but never understood, provide all the essentials of tragedy, for the comic is never absent.

It was my duty at one time to interview a young man, Flora's mental counterpart, on trial for the murder of a policeman. The little fellow had been part of a hold-up party, in which he was either the cat's paw for cleverer members of the group, or had misunderstood directions, or was too drunk to know what he was doing—or any one of several explanations, none of which could he give himself. He was gentle and good-natured, simple and entirely vague as to the whole affair, for which he was later electrocuted. Even the bailiff, inclined to be severe over the murder of an officer on duty, looked at the mild little murderer with some misgivings.

"It seems hard that policemen must be at the mercy of stupid little fellows like David, and hard that the first notice anyone takes of David is to electrocute him," I remarked.

The bailiff peered at him in doubt. "Can I do anything for ya, Dave?" he inquired gently, but murmured in an aside, "He ain't got a chancet. He shot him all right and before witnesses, and that gets the chair."

Then he puffed away down the corridor, shaking his head, while David smiled pleasantly, and remarked, "I'm off the booze, all right. Excuse my necktie." The policeman's widow, and Dave's widow, the policeman's orphans and Dave's orphans, the arrest, the trial, the chair—all because Dave could not exercise the foresight and imagination which he did not possess, respect the law which he could not grasp, and think quickly in a new emergency when he could not think at all. His children will go through the same routine, and we all foresee it—all but Dave. He meditates upon his necktie, and then is seen no more.

Of course, the real victims of such tragedies are the children. Many are the remedies that have been suggested—none, perhaps, adequate. Certainly none has been adequately tried. Early discovery of morons is granted as desirable, but what then? Reduc-

tion of the number of their offspring is also regarded by most people as desirable. But by what means? Segregation? That means money from the taxpayers. Sterilization? That means fright, opposition, and general panic. No granting of marriage licenses? That means the elimination of something which the moron is only too ready to do without. Birth control? Illegal, or morons cannot understand it, or it is irreligious—or what you will. Education of the feeble-minded for unskilled labor? Does that solve the problem of the delinquent tendencies of children reared by a moron mother? And so it goes. In the meantime they multiply. Today they compose from five to ten per cent of the population of the United States—according to how dull they must be to be included.

As Flora, Lucille, and Chuck advance in age from twenty to forty, their escapades become less amusing, and even the most callous reporter does not consider them suitable for his pages. They are doing as well as they can, considering their training, their talents, their temptations, and the heavy burdens laid on their weak shoulders. But they and their pale babies are recognized as disasters. They are still subject to the same diseases and healed by the same means as we. Their children die from epidemics like flies, but they pass their germs on to our children before they go. Their children see ours in automobiles, and steal them from us. Our girls must dress in fashion, and so must theirs, even though our boys pay the bills. All of them flock gladly toward any frivolity or indecency which we commercialize. And ever the grim chorus chants monotonously in the background—"The villainy you teach us we will execute, and it shall go hard but we will better the instruction."

It is too dreadful and too stern a refrain for such frail little clowns as Chuck and Flora, and their children. And in the final tragedy, who are the villains and who the victims—They or We?

Who Is Loyal to America?[1]

HENRY STEELE COMMAGER

ON MAY 6 [1947] a Russian-born girl, Mrs. Shura Lewis, gave a talk to the students of the Western High School of Washington, D. C. She talked about Russia—its school system, its public health program, the position of women, of the aged, of the workers, the farmers, and the professional classes—and compared, superficially and uncritically, some American and Russian social institutions. The most careful examination of the speech—happily reprinted for us in the *Congressional Record*—does not disclose a single disparagement of anything American unless it is a quasi-humorous reference to the cost of having a baby and of dental treatment in this country. Mrs. Lewis said nothing that had not been said a thousand times, in speeches, in newspapers, magazines, and books. She said nothing that any normal person could find objectionable.

Her speech, however, created a sensation. A few students walked out on it. Others improvised placards proclaiming their devotion to Americanism. Indignant mothers telephoned their protests. Newspapers took a strong stand against the outrage. Congress, rarely concerned for the political or economic welfare of the citizens of the capital city, reacted sharply when its intellectual welfare was at stake. Congressmen Rankin and Dirksen thundered and lightened; the District of Columbia Committee went into a huddle; there were demands for housecleaning in the whole school system, which was obviously shot through and through with Communism.

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All this might be ignored, for we have learned not to expect either intelligence or understanding of Americanism from this element in our Congress. More ominous was the reaction of the educators entrusted with the high responsibility of guiding and guarding the intellectual welfare of our boys and girls. Did they stand up for intellectual freedom? Did they insist that high-school children had the right and the duty to learn about other countries? Did they protest that students were to be trusted to use intelligence and common sense? Did they affirm that the Americanism of their students was staunch enough to resist propaganda? Did they perform even the elementary task, expected of educators above all, of analyzing the much-criticized speech?

Not at all. The District Superintendent of Schools, Dr. Hobart Corning, hastened to agree with the animadversions of Representatives Rankin and Dirksen. The whole thing was, he confessed, "a very unfortunate occurrence," and had "shocked the whole school system." What Mrs. Lewis said, he added gratuitously, was "repugnant to all who are working with youth in the Washington schools," and "the entire affair contrary to the philosophy of education under which we operate." Mr. Danowsky, the hapless principal of the Western High School, was "the most shocked and regretful of all." The District of Columbia Committee would be happy to know that though he was innocent in the matter, he had been properly reprimanded!

It is the reaction of the educators that makes this episode more than a tempest in a teapot. We expect hysteria from Mr. Rankin and some newspapers; we are shocked when we see educators, timid before criticism and confused about first principles, betray their trust. And we wonder what can be that "philosophy of education" which believes that young people can be trained to the duties of citizenship by wrapping their minds in cotton-wool.

Merely by talking about Russia Mrs. Lewis was thought to be attacking Americanism. It is indicative of the seriousness of the situation that during this same week the House found it necessary to take time out from the discussion of the labor bill, the tax bill, the International Trade Organization, and the world famine, to meet assaults upon Americanism from a new quarter. This time it was the artists who were undermining the American system, and members of the House spent some hours passing around reproductions of the paintings which the State Department had sent abroad as part of its program for advertising American culture. We need not pause over the exquisite humor which congressmen displayed in their comments on modern art: weary statesmen must have their fun. But we may profitably remark the major criticism which was directed against this unfortunate collection of paintings. What was wrong with these paintings, it shortly appeared, was that they were un-American. "No American drew those crazy pictures," said Mr. Rankin. Perhaps he was right. The copious files of the Committee on Un-American Activities were levied upon to prove that of the forty-five artists represented "no less than twenty were definitely New Deal in various shades of Communism." The damning facts are specified for each of the pernicious twenty; we can content ourselves with the first of them, Ben-Zion. What is the evidence here? "Ben-Zion was one of the signers of a letter sent to President Roosevelt by the United American Artists which urged help to the USSR and Britain after Hitler attacked Russia." He was, in short, a fellow-traveler of Churchill and Roosevelt.

The same day that Mr. Dirksen was denouncing the Washington school authorities for allowing students to hear about Russia ("In Russia equal right is granted to each nationality. There is no discrimination. Nobody says, you are a Negro, you are a Jew") Representative Williams of Mississippi rose to denounce the *Survey-Graphic* magazine and to add further to our understanding of Americanism. The *Survey-Graphic*, he said, "contained 129 pages of outrageously vile and nauseating anti-Southern, anti-Christian, un-American, and pro-Communist tripe, ostensibly directed toward the elimination of

the custom of racial segregation in the South." It was written by "meddling un-American purveyors of hate and indecency."

All in all, a busy week for the House. Yet those who make a practice of reading their *Record* will agree that it was a typical week. For increasingly Congress is concerned with the eradication of disloyalty and the defense of Americanism, and scarcely a day passes that some congressman does not treat us to exhortations and admonitions, impassioned appeals and eloquent declamations, similar to those inspired by Mrs. Lewis, Mr. Ben-Zion, and the editors of the *Survey-Graphic*. And scarcely a day passes that the outlines of the new loyalty and the new Americanism are not etched more sharply in public policy.

And this is what is significant—the emergency of new patterns of Americanism and of loyalty, patterns radically different from those which have long been traditional. It is not only the Congress that is busy designing the new patterns. They are outlined in President Truman's recent disloyalty order; in similar orders formulated by the New York City Council and by state and local authorities throughout the country; in the programs of the D.A.R., the American Legion, and similar patriotic organizations; in the editorials of the Hearst and the McCormick-Patterson papers; and in an elaborate series of advertisements sponsored by large corporations and business organizations. In the making is a revival of the red hysteria of the early 1920's, one of the shabbiest chapters in the history of American democracy; and more than a revival, for the new crusade is designed not merely to frustrate Communism but to formulate a positive definition of Americanism, and a positive concept of loyalty.

What is the new loyalty? It is, above all, conformity. It is the uncritical and unquestioning acceptance of America as it is—the political institutions, the social relationships, the economic practices. It rejects inquiry into the race question or socialized medicine, or public housing, or into the wisdom or validity of our foreign policy. It regards as particularly heinous any challenge to what is called "the system of private enterprise," identifying that system with Americanism. It abandons evolution, repudiates the once popular concept of progress, and regards America as a finished product, perfect and complete.

It is, it must be added, easily satisfied. For it wants not intellectual conviction nor spiritual conquest, but mere outward conformity. In matters of loyalty it takes the word for the deed, the gesture for the principle. It is content with the flag salute, and does not pause to consider the warning of our Supreme Court that "a person gets from a symbol the meaning he puts into it, and what is one man's comfort and inspiration is another's jest and scorn." It is satisfied with membership in respectable organizations and, as it assumes that every member of a liberal organization is a Communist, concludes that every member of a conservative one is a true American. It has not yet learned that not everyone who saith Lord, Lord, shall enter into the kingdom of Heaven. It is designed neither to discover real disloyalty nor to foster true loyalty.

II

What is wrong with this new concept of loyalty? What, fundamentally, is wrong with the pusillanimous retreat of the Washington educators, the barbarous antics of Washington legislators, the hysterical outbursts of the D.A.R., the gross and vulgar appeals of business corporations? It is not merely that these things are offensive. It is rather that they are wrong—morally, socially, and politically.

The concept of loyalty as conformity is a false one. It is narrow and restrictive, denies freedom of thought and of conscience, and is irremediably stained by private and selfish considerations. "Enlightened loyalty," wrote Josiah Royce, who made loyalty the very core of his philosophy,

> means harm to no man's loyalty. It is at war only with disloyalty, and its warfare, unless necessity constrains, is only a spiritual warfare. It does not foster class hatreds; it knows of

nothing reasonable about race prejudices; and it regards all races of men as one in their need of loyalty. It ignores mutual misunderstandings. It loves its own wherever upon earth its own, namely loyalty itself, is to be found.

Justice, charity, wisdom, spirituality, he added, were all definable in terms of loyalty, and we may properly ask which of these qualities our contemporary champions of loyalty display.

Above all, loyalty must be to something larger than oneself, untainted by private purposes or selfish ends. But what are we to say of the attempts by the NAM and by individual corporations to identify loyalty with the system of private enterprise? Is it not as if officeholders should attempt to identify loyalty with their own party, their own political careers? Do not those corporatons which pay for full-page advertisements associating Americanism with the competitive system expect, ultimately, to profit from that association? Do not those organizations that deplore, in the name of patriotism, the extension of government operation of hydroelectric power expect to profit from their campaign?

Certainly it is a gross perversion not only of the concept of loyalty but of the concept of Americanism to identify it with a particular economic system. This precise question, interestingly enough, came before the Supreme Court in the Schneiderman case not so long ago—and it was Wendell Willkie who was counsel for Schneiderman. Said the Court:

> Throughout our history many sincere people whose attachment to the general Constitutional scheme cannot be doubted have, for various and even divergent reasons, urged differing degrees of governmental ownership and control of natural resources, basic means of production, and banks and the media of exchange, either with or without compensation. And something once regarded as a species of private property was abolished without compensating the owners when the institution of slavery was forbidden. Can it be said that the author of the Emancipation Proclamation and the supporters of the Thirteenth Amendment were not attached to the Constitution?

There is, it should be added, a further danger in the willful identification of Americanism with a particular body of economic practices. Many learned economists predict for the near future an economic crash similar to that of 1929. If Americanism is equated with competitive capitalism, what happens to it if competitive capitalism comes a cropper? If loyalty and private enterprise are inextricably associated, what is to preserve loyalty if private enterprise fails? Those who associate Americanism with a particular program of economic practices have a grave responsibilty, for if their program should fail, they expose Americanism itself to disrepute.

The effort to equate loyalty with conformity is misguided because it assumes that there is a fixed content to loyalty and that this can be determined and defined. But loyalty is a principle, and eludes definition except in its own terms. It is devotion to the best interests of the commonwealth, and may require hostility to the particular policies which the government pursues, the particular practices which the economy undertakes, the particular institutions which society maintains. "If there is any fixed star in our Constitutional constellation," said the Supreme Court in the Barnette case, "it is that no official, high or petty, can prescribe what shall be orthodox in politics, nationalism, religion, or other matters of opinion, or force citizens to confess by word or act their faith therein. If there are any circumstances which permit an exception they do not now occur to us."

True loyalty may require, in fact, what appears to the naïve to be disloyalty. It may require hostility to certain provisions of the Constitution itself, and historians have not concluded that those who subscribed to the "Higher Law" were lacking in patriotism. We should not forget that our tradition is one of protest and revolt, and it is stultifying to celebrate the rebels of the past—Jefferson and Paine, Emerson and Thoreau—while we silence the rebels of the present. "We are a rebellious nation," said Theodore Parker,

known in his day as the great American Preacher, and went on:

> Our whole history is treason; our blood was attained before we were born; our creeds are infidelity to the mother church; our constitution, treason to our fatherland. What of that? Though all the governors in the world bid us commit treason against man, and set the example, let us never submit.

Those who would impose upon us a new concept of loyalty not only assume that this is possible, but have the presumption to believe that they are competent to write the definition. We are reminded of Whitman's defiance of the "never-ending audacity of elected persons." Who are those who would set the standards of loyalty? They are Rankins and Bilbos, officials of the D.A.R. and the Legion and the NAM, Hearsts and McCormicks. May we not say of Rankin's harangues on loyalty what Emerson said of Webster at the time of the Seventh of March speech: "The word honor in the mouth of Mr. Webster is like the word love in the mouth of a whore."

What do men know of loyalty who make a mockery of the Declaration of Independence and the Bill of Rights, whose energies are dedicated to stirring up race and class hatreds, who would straitjacket the American spirit? What indeed do they know of America—the America of Sam Adams and Tom Paine, of Jackson's defiance of the Court and Lincoln's celebration of labor, of Thoreau's essay on Civil Disobedience and Emerson's championship of John Brown, of the America of the Fourierists and the Come-Outers, of cranks and fanatics, of socialists and anarchists? Who among American heroes could meet their tests, who would be cleared by their committees? Not Washington, who was a rebel. Not Jefferson, who wrote that all men are created equal and whose motto was "rebellion to tyrants is obedience to God." Not Garrison, who publicly burned the Constitution; or Wendell Phillips, who spoke for the underprivileged everywhere and counted himself a philosophical anarchist; not Seward of the Higher Law or Sumner of racial equality. Not Lincoln, who admonished us to have malice toward none, charity for all; or Wilson, who warned that our flag was "a flag of liberty of opinion as well as of political liberty"; or Justice Holmes, who said that our Constitution is an experiment and that while that experiment is being made "we should be eternally vigilant against attempts to check the expression of opinions that we loathe and believe to be fraught with death."

III

There are further and more practical objections against the imposition of fixed concepts of loyalty or tests of disloyalty. The effort is itself a confession of fear, a declaration of insolvency. Those who are sure of themselves do not need reassurance, and those who have confidence in the strength and the virtue of America do not need to fear either criticism or competition. The effort is bound to miscarry. It will not apprehend those who are really disloyal, it will not even frighten them; it will affect only those who can be labeled "radical." It is sobering to recall that though the Japanese relocation program, carried through at such incalculable cost in misery and tragedy, was justified to us on the ground that the Japanese were potentially disloyal, the record does not disclose a single case of Japanese disloyalty or sabotage during the whole war. The warning sounded by the Supreme Court in the Barnette flag-salute case is a timely one:

> Ultimate futility of such attempts to compel obedience is the lesson of every such effort from the Roman drive to stamp out Christianity as a disturber of pagan unity, the Inquisition as a means to religious and dynastic unity, the Siberian exiles as a means to Russian unity, down to the fast-failing efforts of our present totalitarian enemies. Those who begin coercive elimination of dissent soon find themselves exterminating dissenters. Compulsory unification of opinion achieves only the unanimity of the graveyard.

Nor are we left to idle conjecture in this matter; we have had experience enough. Let us limit ourselves to a single example, one

that is wonderfully relevant. Back in 1943 the House Un-American Activities Committee, deeply disturbed by alleged disloyalty among government employees, wrote a definition of subversive activities and proceeded to apply it. The definition was admirable, and no one could challenge its logic or its symmetry:

> Subversive activity derives from conduct intentionally destructive of or inimical to the Government of the United States—that which seeks to undermine its institutions, or to distort its functions, or to impede its projects, or to lessen its efforts, the ultimate end being to overturn it all.

Surely anyone guilty of activities so defined deserved not only dismissal but punishment. But how was the test applied? It was applied to two distinguished scholars, Robert Morss Lovett and Goodwin Watson, and to one able young historian, William E. Dodd, Jr., son of our former Ambassador to Germany. Of almost three million persons employed by the government, these were the three whose subversive activities were deemed the most pernicious, and the House cut them off the payroll. The sequel is familiar. The Senate concurred only to save a wartime appropriation; the President signed the bill under protest for the same reason. The Supreme Court declared the whole business a "bill of attainder" and therefore unconstitutional. Who was it, in the end, who engaged in "subversive activities"—Lovett, Dodd, and Watson, or the Congress which flagrantly violated Article One of the Constitution?

Finally, disloyalty tests are not only futile in application, they are pernicious in their consequences. They distract attention from activities that are really disloyal, and silence criticism inspired by true loyalty. That there are disloyal elements in America will not be denied, but there is no reason to suppose that any of the tests now formulated will ever be applied to them. It is relevant to remember that when Rankin was asked why his Committee did not investigate the Ku Klux Klan he replied that the Klan was not un-American, it was American!

Who are those who are really disloyal? Those who inflame racial hatreds, who sow religious and class dissensions. Those who subvert the Constitution by violating the freedom of the ballot box. Those who make a mockery of majority rule by the use of the filibuster. Those who impair democracy by denying equal educational facilities. Those who frustrate justice by lynch law or by making a farce of jury trials. Those who deny freedom of speech and of the press and of assembly. Those who press for special favors against the interest of the commonwealth. Those who regard public office as a source of private gain. Those who would exalt the military over the civil. Those who for selfish and private purposes stir up national antagonisms and expose the world to the ruin of war.

Will the House Committee on Un-American Activities interfere with the activities of these? Will Mr. Truman's disloyalty proclamation reach these? Will the current campaigns for Americanism convert these? If past experience is any guide, they will not. What they will do, if they are successful, is to silence criticism, stamp out dissent—or drive it underground. But if our democracy is to flourish it must have criticism, if our government is to function it must have dissent. Only totalitarian governments insist upon conformity and they—as we know—do so at their peril. Without criticism abuses will go unrebuked; without dissent our dynamic system will become static. The American people have a stake in the maintenance of the most thorough-going inquisition into American institutions. They have a stake in nonconformity, for they know that the American genius is non-conformist. They have a stake in experimentation of the most radical character, for they know that only those who prove all things can hold fast that which is good.

IV

It is easier to say what loyalty is not than to say what it is. It is not conformity. It is not passive acquiescence in the status quo.

It is not preference for everything American over everything foreign. It is not an ostrich-like ignorance of other countries and other institutions. It is not the indulgence in ceremony—a flag salute, an oath of allegiance, a fervid verbal declaration. It is not a particular creed, a particular version of history, a particular body of economic practices, a particular philosophy.

It is a tradition, an ideal, and a principle. It is a willingness to subordinate every private advantage for the larger good. It is an appreciation of the rich and diverse contributions that can come from the most varied sources. It is allegiance to the traditions that have guided our greatest statesmen and inspired our most eloquent poets—the traditions of freedom, equality, democracy, tolerance, the tradition of the higher law, of experimentation, co-operation, and pluralism. It is a realization that America was born of revolt, flourished on dissent, became great through experimentation.

Independence was an act of revolution; republicanism was something new under the sun; the federal system was a vast experimental laboratory. Physically Americans were pioneers; in the realm of social and economic institutions, too, their tradition has been one of pioneering. From the beginning, intellectual and spiritual diversity have been as characteristic of America as racial and linguistic. The most distinctively American philosophies have been transcendentalism—which is the philosophy of the Higher Law—and pragmatism—which is the philosophy of experimentation and pluralism. These two principles are the very core of Americanism: the principle of the Higher Law, or of obedience to the dictates of conscience rather than of statutes, and the principle of pragmatism, or the rejection of a single good and of the notion of a finished universe. From the beginning Americans have known that there were new worlds to conquer, new truths to be discovered. Every effort to confine Americanism to a single pattern, to constrain it to a single formula, is disloyalty to everything that is valid in Americanism.

The Insane Root[1]

Rebecca West

The first people to come into Room No. 1 of The Central Criminal Court, where John Amery was to be tried for high treason, were two American officers, who sat and stared about them for some moments before any came to join them, drab figures in a court sallow with November. They were the soberer sort of soldier, their faces lined and greyish with the prolonged overwork that led up to and away from D-day. There arrived next the Director of Public Prosecutions, Sir Theobald Mathew, a long-headed, tall slender Irishman with jutting eyebrows. He watched his clerk set down an enormous file at the counsel's table and turned away, moving as if he had reason to feel something like pleasure: better put it down as unusually acute interest. Then the regular personnel of the court filtered in. First came the chief prosecuting counsel, the Attorney-General, Sir Hartley Shawcross, just home from the trial of the war criminals at Nuremberg. The fall of those desperate men to their last place in the pit can also be looked at from another point of view: a creditably conducted incident in a sunnily successful career. There is nothing callous or even smug about him, he has indeed the gentlest and most charitable of tempers; but he is fortunate, visibly fortunate. Had Pippa passed him she would have added him to her list of proofs that all's right with the world. He was followed

[1] From *The Meaning of Treason* by Rebecca West. Copyright 1945, 1947 by Rebecca West. Originally published in *The New Yorker Magazine;* reprinted by permission of The Viking Press, Inc., New York.

by the counsel for the defence: Gerald Osborne Slade, who was counsel for Joyce, who pecks at his cases like a sparrow, as tireless and as careful of the smallest grain; and his assistant, John Foster, he who spent the first years of the war at the British Embassy in Washington, dark and high-coloured and genially menacing, like a Renaissance bravo.

The three long tables in front of the judge's bench were soon filled up with lawyers and those two strongly contrasted types who had to be present at all the trials—the men with iron faces who belong to the special police, and the Military Intelligence officers, who are usually of notably mild appearance, having been detached from the ordinary army service because of their clerkly gifts. Indeed the court looked very much as it was during the trial of William Joyce except for the spectators. When Joyce was being tried, the court became a background for him and his followers, who, though they were scattered in twos or threes, achieved by their emotions an effect of unity, so that the remembered scene has the quality of a chapter in a legend of martyrdom. The people who had come to see John Amery tried were drawn by an interest in the treason laws, or by a recollection of his broadcasts, or by curiosity about the black sheep of a deeply respected family; but there were no apostles, for there was no leader. The eyes turned towards the dock that day were certain to be dry. The trial of John Amery was the end of a long story dessicating to the heart.

It began years ago in the Augustan age, among children of promise. Some time in the 'eighties, the impudent red-haired son of the brilliant politician Lord Randolph Churchill was sent to the famous public school Harrow. Exploring the possibilities of the establishment, he came on the swimming bath and found a very small boy standing, fully dressed, at its edge. He fell to the obvious temptation, but he realized, as the victim turned about in the water and struck out for the side, that it was one of the lions of Harrow, Leopold Amery, who, though small in stature, was older than his assailant and of awesome accomplishment both as a scholar and an athlete. Obviously the situation was awkward. The young Winston's first attempt to put matters right was not inspired. "I am very sorry," he said. "I mistook you for a fourth-form boy. You are so small." But his guardian daemon came to save him in the end. "My father," he added, "who is a great man, is also small." This was the beginning of a lifelong, bickering, and unbreakable friendship.

Leopold Amery never grew much in inches. In any gathering he can be easily picked out, the small and stocky protagonist with the fighting look that little men often have, but not tetchy: on the contrary, happy with the happiness enjoyed by those whose bodies are in good shape. All his life he has kept up his skiing and sailing, and his mountaineering to the extent of climbing the Matterhorn just once again, for old times' sake, when he was sixty-five; and he, who was born in 1873, is still notably neat-footed and buoyant of tread. In mind he grew as he did not in body. He worked well at Oxford, took a first in Greats, the combined course in classics and philosophy which attracts the best minds, and was elected a Fellow of All Soul's College. This is a curious institution which, unlike other colleges, does not undertake the teaching of undergraduates, but tries to bridge the gulf eternally existing between thinkers and men of action by housing together some of the one and some of the other. Thus, graduates who are engaged in scholarly pursuits, whether in literature or history or law, mingle with graduates who are engaged in public affairs. Only the first-rate get these fellowships, and Amery, if not a first-rate intellectual, was a first-rate man.

During the past fifty years, Amery has spun a triple thread of the law, journalism, and politics, and there are few knots in it. He filled various administrative posts during the South African War and the two world wars and in the intervening times of peace in Parliament and out of it. Sometimes he found himself in the same cabinet as Winston, and then there were tremendous fallings out and making up. His particular in

terest has been the economic development of the Empire, which he has regarded as the instrument for extending the rule of law over the earth. For that reason the left sees him as a jingo. But nobody, left or right, has ever seen him as anything but an honest man; the worst that his enemies have ever discovered about him is that he holds (or held) shares in a company manufacturing a purgative which is perhaps not so physically redemptive as its makers claim. As politicians go this is not a grave fault; and people like him for the perpetual intrusion of his schoolboy toughness. In 1927, because he was Secretary of State for Dominion affairs, the Canadian government by way of compliment christened an eleven-thousand-foot peak Mount Amery, and thought no more about it. They were enchanted when, two years later, he came over and put blood into this paper courtesy by making the first ascent of the peak, being then fifty-six years old. But there is more in Leopold Amery than the public servant and the athlete. These might be the virtues that spring from insularity and run in grooves. But Leopold Amery has a taste for the whole world. He has travelled everywhere, and not only officially, but in shirt sleeves with a rucksack, finding a quick way into foreign lives by his remarkable linguistic gifts, enormously enjoying any festival he may come across, a wedding or a chistening or a harvest supper. Whatever is pleasant and of good repute, he has sought it.

Fairly late in life, going out of his thirties, Leopold Amery married a beautiful young woman. She was the sister of Hamar Greenwood, a Canadian who came over to England and, becoming involved with Lloyd George, entered politics and reached cabinet rank. He was remarkable only for his unpopularity. Twenty-five years ago he was Secretary for Ireland and was held responsible for some of the ungodlier passages in the severance of England and Ireland. It was he who let loose the Black and Tans, the English troops recruited and trained in a spirit alien from the modern tradition of the British army which envenomed the last year of the union. But in that unpopularity his sister had no share. It is conceded by all that Mrs. Amery is as good and kind as a woman may be, and that if she had a fault it lay in her idolization of her two sons. It is said that she made the lives of their pastors and masters burdensome with her urgent effort to ensure that they should be happy and respected and long-lived. The younger son was Julian Amery, who, if one may go by such signs as are visible in the twenties, rewarded her obsession. Authority gave him important work in this war and it is said he performed it well. He is certainly delightful in appearance and manner. The other was John Amery, who at the time of his trial had lived thirty-three years and had been in trouble for most of them.

John Amery was not insane, he was not evil, but his character was like the kind of automobile that will not hold the road. As a child, he would be taken by his parents to a hotel at some holiday resort and would be discovered in a corner of the gardens or in the lounge, after dinner, amusing the guests with some mimicry or musical fooling. But the entertaining monologue would become a dribble of nonsense, the dance would go on too long, and there would break in a hint of frenzy. The child would turn from a pet to a pest, and sooner or later there would be trouble, trouble of an odd unpredictable kind which could not be guarded against, which was not cruel or cowardly but slapped the normal human process in the face. What is one to do with a boy of fifteen who from school issues prospectuses for a film-producing company and collects money from investors, not with the intention of embezzling it but inevitably with that effect? What is one to do with him when he is so really or apparently delicate that it is not possible to subject him to the discipline of work? One can but say hopefully that he will not always be fifteen. This is, however, not necessarily true. There are some who are always fifteen. John Amery continued, into his twenties and thirties, to like glossy, costly automobiles as an adolescent likes them, and as an adolescent he liked glossy, costly women, disregarding the plainest whorishness. And in such automobiles and

with such women he delighted to visit those grandiose hotels which delight the immature and revolt the mature as the very antithesis of home.

But on these adolescent appetites was superimposed a wholly individual gift for complication. He was convicted seventy-four times for automobile offences which for the most part were not just breaches of regulations but quite unforseen embroideries on the commonplace process of travelling from point to point aided by a combustion engine. He fell in very public and generous love with a well-known prostitute, whose identity could not be disguised because she had for most evenings during many years stood in the most conspicuous spot in Piccadilly. He stripped concubinage of the simplicity which is its undoubted advantage; marriage, always so much more complicated, he made into a game like snakes-and-ladders, with his family and himself playing against each other. He fell in love with a lady older than himself, and when his family had employed the most recondite legal means to prevent their union, circumvented them by marrying her in an Orthodox church in Athens, a place not covered by their strategy. As for those hotels, credit was to him what orchestral tone is to a conductor. In business, an obsession with films led him to some honourable though brief connexions with the industry, but also to participation, perhaps innocent, in a firm which bribed clerks in the offices of reputable motion picture companies to tell them when any directors were thinking of engaging young and unknown actors and actresses. The heads of the firm would then rush out and engage these actors and actresses to work in imaginary films on long contracts with low salaries, and then sublet them to the reputable motion picture companies at a large profit. He also stranded an entire motion picture outfit in Africa in extraordinary circumstances. Nobody could imagine how he had got the credit to take them out there; but there they were, in quite the wrong continent.

When John Amery was only twenty-four his loyal but exhausted family had to let him become bankrupt. He failed for five thousand pounds, with assets nil. That was in the autumn of 1936. The following summer he evoked a yelp of protest, oddly passionate for official proceedings, from the receiver in charge of his estate, though such men are usually inured to the financial optimism which soars like a lark from the heart of the imbecile. Amery had asked for a discharge from bankruptcy, so that he could add another and crazier story to the crazy edifice of credit which he had built on the site where, given his nurture, a more noble structure might have been raised. Did there always have to be equivocation added to fatuity, and risk joined to inconsequence? The answer, through the years, in various sorts of court, was that there seemed indeed to be some such necessity. Nothing in John Amery's life was simple, nothing was of good repute. After his bankruptcy he left England, his family giving him an allowance. Let this exile not be counted as unkindness on their part. Under English law it is an offence for a bankrupt to obtain goods on credit without disclosing his situation, and he could not possibly have fulfilled this obligation. The new, immensely long, and shark-nosed automobile would have been too tempting; another hotel might have been opened in London. He would have had to go to jail.

Once abroad, John Amery was absorbed into a bath of purity which was washing clean many a poor tarnished body. At that time the Spanish Civil War obviously offered a theatre for left-wing gallants, and so generously did they play their roles that the labour movement in every country in Europe is the poorer for the young men who died there. But the war also offered an asylum to certain persons who, if of no definite political faith, knew that they were failures, refused to recognize that they had failed from inability to achieve the average standard, and preferred to think that they were natural leaders who had been trodden down by the inferiors. These found new hope in Franco's fascism. It is true that there was some genuine pro-Franco feeling in all countries, but it is also true that there was at this time a great deal of money flowing out of

Spain. Never before did corruption so slime the British press. There was honest and intelligent Roman Catholic support of Franco. Letters to the newspapers constantly appeared stating, and of course truly, that nuns should not be raped, and many of them were written by old journalists of the baser sort, who, to take the pence and write the piece, had had to push back the garbage can behind which they had been sleeping for the last ten years. There were other more demanding and more lucrative tasks laid before the enterprising. There was gun-running. Many right-wing ne'er-do-wells were drawn to Franco by greed, love of adventure, and the hope of being accorded a value which, till then, all societies had denied them. John Amery was irresistibly attracted by the hope of attaining this triple gratification which had always been denied him by his loving but so conventional family, with their excessive lamentations over trifling automobile accidents that might have happened to anyone, and over hotel bills which could have easily been settled if hide-bound officials had been able to see that there was no reason, just because one had promoted six companies, that one should not promote a seventh.

John Amery was not an unsuccessful aide to Franco. It is claimed that he held a commission in his army and was in the fighting-line. In any case, he had a fairly continuous career as a gun-runner and as a liaison officer with the French Cagoulards; and in these capacities received a *laissez-passer* which gave him as much right to come and go as a Franco Spaniard. But he had no place of honour in Franco's Spain. In any state that cried for survival, his type would be rejected.

When the Second World War broke out, John Amery was living on the borders of Spain, at San Sebastian. He crossed over to France, possibly under orders, and lived with a Cagoulard group, knowing or at least meeting the French Fascist leaders Jacques Doriot and Marcel Déat. Among the Cagoulards were a certain number of enthusiastic and shapely young women. With one of them, Jeannine Barde, John Amery contracted a permanent relationship. Sometimes he said he had married her. Mark now the peculiarly flimsy silliness which does not know enough to come in out of the rain, which, indeed, stays outside while it is raining and, when it stops, goes inside just as the ceiling is falling. John Amery remained inactive throughout 1940 and 1941, when there was a very good chance that Germany might win the war. He was called into activity by the Germans when they wanted some person who would catch European attention to conduct an anti-Russian campaign at a time when they were making peace overtures to the Russians; but it is unlikely that the idea of using him would have come into the Germans' heads had not Amery himself, instead of quietly drinking himself to death in a Savoy village, repeatedly volunteered for service with the Germans. So in 1942, when it was becoming obvious that the Allies had at least a chance of winning, he began to broadcast from Berlin. In 1943, when the Allies' position was improving daily, he went into a camp of British internees at St. Denis, near Paris, and attempted to raise an anti-Bolshevik Free Corps to fight with the Germans against the Russians. This is the classic type of treachery which every educated person knows at once for the base and fatal act it is, for Sir Roger Casement committed it during the last war and was hanged for it. In 1944, when it was practically certain that the Axis was defeated, the poor young idiot travelled all over Europe, visiting Norway, France, Yugoslavia, and Belgium, and talking to large audiences which inevitably contained many members of the resistance movements. It is not true that he was caught up in the machine and could not break loose. If he had been a little more drunken the Germans would have let him go back into obscurity. They found him almost impossible to handle as it was, and conceived a lasting hatred for him which was to find expression after the end of the war. But, like a child who tries to obey an angry nanny, Amery tried to keep sober, and kept sober enough to carry on this job long enough to leave no possible loophole for his safety.

Again and again throughout John Amery's life his family must have said to themselves,

"He can't be doing that, but, my God, he is!" They must have said it to themselves with unimaginable agony when they heard him speak on the radio; for in this supreme folly was disclosed his private sweetness that forbade them ever to free themselves of their love for him. His voice was young and eager and honest and good-natured, and he sounded like a crusader when he talked anti-Semitic nonsense and declared that London was in a state of shame because the Lord Mayor was a Jew (and so he was; and a very decent body too). There could be seen the city of his desire, rising in the radiance of unspotted honour, its purity a fitting casket for his own, for he was one of those who are reborn every day no matter what the night has brought. It is a curious example of the fatuity of German propaganda that these broadcasts should have been widely announced as by the elder son of the Secretary of State for India; the public felt a wave of sympathy for the Amery family, and an increased disgust at the Nazis.

At the end of the war John Amery was captured by the partisans in Italy; and when he was questioned by a British Military Intelligence Officer he asked for a typewriter and proceeded to type a statement some thousands of words long, which was brilliantly composed, put the noose around his neck, and gave the history of two different people. One of these was a wise young man of lofty principles who sought to reconcile England and Germany in order that together they might fight the rising tide of communism, and to that end travelled about Europe, a weary Titan urging common sense on statesmen who for some reason would not heed the voice of sanity; the other was a crazy harlequin enmeshed in unfortunate adventure. "After a few days in Paris and travelling under the names of Mr. and Mrs. Browne, I arrived in Berlin early in October 1942," he wrote. For a time this inveterately companionate "I," who was always travelling under the names of Mr. and Mrs. Somebody, was to be alone. "On April 7-8," he wrote, "my beloved friend and political revolutionary, Jeannine Barde, died." The poor creature's death was said not to be natural. By some accounts she killed herself, life being rendered unendurable by the sour flavour of treachery, the air raids, the humiliations of life dragged out in dependence on the Nazis who knew that these two had no alternative employers. By other accounts she died because of a blow received at a wild party. The circumstances of her death, whatever they were, increased the Germans' distaste for Amery; and their feeling for etiquette was further outraged by his failure to attend her funeral, though as like as not it was through unbridled grief that he absented himself. But to the wandering wit sorrow is no prison. In no time he was on his feet again. "In the end of September," he wrote, 'I returned to Paris. Once more much political talk, and on October 4 I remarried at the German Consulate. Politically, the situation remained almost unchanged." And at the end of the statement comes Harlequin's supreme antic. This man awaiting a capital charge writes: "Moreover, the colonel commanding the Piazza di Milano, who brought me from Sarono to Milan, undertook at the time to have returned my property that was seized by the partisans when they arrested me. Of this nothing has so far been seen. It consists of one suitcase (important documents and personal effects), one overcoat, one fur coat, and two silver foxes, a 20-litre petrol tin, full, one Lancia Aprilia motorcar No. 78410 MICDI."

When John Amery was brought to England, it was widely believed that he was not going to die. His case was postponed several times in order that evidence might be collected for his defence, which rested on a claim that he had become a naturalized Spanish citizen, and it was known that his brother Julian had gone to Spain to collect evidence in proof of that claim. It seemed quite certain, when the court assembled, that the search had been successful, for nearly a whole side of one of the three tables in front of the bench was taken up by a number of trim and plump and florid young men who were said to be Spanish lawyers. Before them there appeared presently that famous figure of the courts, Mr. Salcedo the interpreter, a Spanish Jew, lean and brown and

white-haired and antique in courtesy, who passed around the table shaking hands with his compatriots, not perfunctorily but as if they would presently be engaged in a considerable enterprise together. Julian Amery, his young face sleepy with the extreme of strained reserve, his slender body lounging in a dogged attempt at ease, was talking to the defence counsel, and it was said that he was to be the principal witness for the defence. This could hardly be, unless his search for evidence of his brother's naturalization had been successful. There had been distress among the kindly officials of the court because Mrs. Amery had applied for a seat. It might be that they had no reason for perturbation; she might joyfully witness her son's acquittal.

But if there was a wealth of Spanish lawyers, there were lacking some of the court's most usual features. There was no judge, there was no jury, there was no prisoner. The Lord Mayor and two aldermen, in their fine black gowns and jewelled chains, took their places on the bench, but the chair under the sword of justice was empty. In the jury box, leaflets of instruction lay yellow on the dark wood at each juror's place, but there was none to pick them up. The kitchen chairs in the dock were naked in their discomfort. (Surely that is the last ungraciousness of society, that it should make its failures learn their doom sitting on a hard wooden chair.) Half-past ten had passed, though that was the hour at which the trial should have begun, and one could set one's watch by the law courts. Half an hour passed, and still there was no judge, no jury, no prisoner.

Just after eleven a messenger came to the lawyers' table and spoke to John Amery's counsel. The dock is a shallow square box without a lid, with glass walls rising on all sides except the side which faces the judge. A staircase runs down from the dock to the cells where the prisoners are kept from the time of their arrival in the prison van at the court till they are brought up for trial. From the gallery of the court, one can look down into the staircase, which is lined with those obscene creations, white sanitary tiles. There was seen a sight rare in the courts: the counsel going through a door in the glass walls of the dock and down the stairway to the cells. They looked like ravens in their black gowns, stooping as they gathered up their skirts. While they were gone, people in the court, particularly the lawyers, began to laugh a great deal as they talked among themselves. This had nothing to do with anything they were thinking or feeling about the trial of Amery. It was a collective nervous reaction, like the storm of coughing that sometimes sweeps through a theatre when a play is going badly. After twenty-five minutes, Amery's counsel returned. There was talk with Sir Hartley Shawcross, from whose look of gentle, reflective well-being nothing could be learned, and with the Director of Public Prosecutions, who nodded as if something had happened which he had foreseen. There was a flurry of messengers. The trial began.

The Judge entered in shrivelled and eccentric majesty. It was Mr. Justice Humphries, a very old man whose age was crisp as a fine winter night, with a fierce wit on his tongue and a fiercer wit on his face, where there is often written what he will not let himself say lest necessary institutions fall. He had a son whom he named Christmas, who grew up to be president of the Buddhist Society and the Ballet Guild. To such a fantastical world, resembling Peacock's novels, does Mr. Justice Humphries belong. He made a little, stiff, old man's bow to the court and sat down, small in the depth of his red-and-purple robes, to try the poor shadow who had been brought into the dock. It had been said that John Amery was deeply diseased with tuberculosis. There was no truth in it. The prison doctors, who are nowadays able men, pronounced him free of this or any other disease. But it was with his body as with his mind. He was, judged by any accepted standard, not mad, but he was not sane. He was free from disease but it would have been absurd to call him healthy. His skin was yellow and grooved round the small bones of his face by long exhaustion and fear and the immediate strain of the moment, which was evidently frightful to him. His face was the muzzle of a little monkey; and

it could be seen that in youth there must have been here much animal vitality and charm, as well as an animal secretiveness that would make him incomprehensible. He wore an overcoat that was the colour of the bloom on grapes, and a black-and-lime scarf of the heavy and subtly coloured sort that used to be sold at the expensive shops on the Croisette at Cannes. The weight of these good clothes was too much for the worn trifle of his body. He leaned on the ledge of the dock, his small, bare hands very white and limp. By his appearance he made, as prisoners so often do, the ultimate appeal against human justice. It is not fair that some vessels should be made for honour and some for dishonour. The lawyers in front of him seemed guilty of a kind of theft in having so much prospering vitality while this creature had none. The two American officers who had been the first in the court seemed grasping in having secured those lines on their faces which spoke of fatiguing service of an honoured sort.

Again the kitchen chair in the dock seemed monstrous, and it could hardly be imagined that John Amery would be able to sit through the trial upright on this bleak piece of carpentry. But such anxiety was immediately proved unnecessary. They read out the indictments against him, charging him with having made treasonable broadcasts and speeches and having attempted to seduce British subjects from their allegiance, and asked him whether he pleaded guilty or not guilty. It had been supposed that he would answer "Not guilty." Then the jurors would have been called in and sworn, and the counsel would have addressed the Court, and the routine would have rolled on for perhaps as long as four days. But when the question was put to him he answered, "I plead guilty to all counts," and the trial lasted eight minutes. A murmur ran through the court which was horrified, which was expostulatory, which was tinged with self-pity, for this was suicide. If he pleaded guilty he must be sentenced to death. There is no alternative sentence for treason. It is not in the power of any judge to substitute imprisonment, and there is no appeal. There is only the possibility that the Home Secretary may advise the Crown to reprieve the condemned man; and this happens only in certain circumstances, not to be found by any eye in the case of John Amery. In effect, the young man was saying, "I insist on being hanged by the neck in three weeks' time," and the strength of his desire to die was forcing his weak voice through his shuddering lips and ignoring his pain, which was great, for he was blasted by what he did. He was like an insect that falls on a hot stove and is withered, and what he did felt like an act of cruelty to the whole court. It rejected the life that was in all of us. It could be perceived that the legal tradition whereby a man under a capital charge must be urged by every possible means to plead not guilty is no meddling excess of humanitarianism but is an expression of the fundamental belief of living things in life. It relates to that saying of Charles Dickens which so profoundly impressed Tolstoy, that whatever power gave us life, and for whatever purpose, he was sure it was given to us on the understanding that we defend it to the last breath. It is true, of course, that there are conditions in which a man can die without betraying his life, because his death will give it the spiritual value without which material existence is worthless, but these conditions do not usually arise in the criminal courts, which practise on the plane of simplication.

The old Judge leaned forward and said to the clerk of the court, "Before that is recorded . . ." and broke off. Then he said to Mr. Slade, "I never accept a plea of guilty on a capital charge without assuring myself that the accused thoroughly understands what he is doing and what the immediate result must be, and that he is in accord with his legal advisers in the course he has taken." Mr. Slade stood up and answered, no longer like a bird but speaking with obvious careful fidelity to a prepared model, "I can assure you of that, my lord. I have explained the position to my client and I am satisfied that he understands it." This passage had the quietness of the worst sort of nightmare. It was as if he had said, "Yes, this man chooses to be walled

up, and all proper arrangements have been made to get suitable bricks." The old Judge's eyebrows and the corners of his mouth made a queer pattern. Yes, life has to be defended to the last ditch, but what a damned thing it is! He said, "Right. Let it be recorded." Then the clerk of the court asked John Amery if he had anything to say. The young man answered, weakly and politely, "No, thank you." The attendant placed the square of black cloth on the Judge's head, but the Judge did not deliver the death sentence. Instead he leaned forward and asked, "You do not want to say anything?" Still in the same well-bred and dying voice, the young man said, "No, thank you, sir." It was quite clear that he was morally satisfied and that he was congratulating himself on having at last, at the end of his muddled and frustrated existence, achieved an act crystalline in its clarity, an act which fulfils the conditions in which a man can choose to die without betraying life. Yet none of the many people who were watching him with the intensest interest had the faintest idea what that act was, with perhaps the exception of the lawyers, who were bound by professional etiquette to keep silent.

It was immediately spread about that John Amery had suddenly insisted on pleading guilty for the sake of his family, to spare them the prolonged humiliation of his trial. That would have provided a simple explanation had it not been for the Spanish lawyers. They must have attended to give testimony in support of John Amery's story that he had been naturalized as a Spanish citizen; and their testimony must have been previously examined by Amery's counsel and judged to be conclusive. Had it been so, then he would have been acquitted, and by that his family would have been spared much of the pain and humiliation inherent in his case. And if John Amery's motive for pleading guilty was really concern for his family, it was odd that his counsel did not mention it when the Judge questioned him about the pleas, thus softening what was an oddly stark statement. There was also the suggestion that he pleaded guilty simply because he wanted to die as quickly as possible, without enduring the slow torture of the trial, but the impression given by his flinching flesh was that he wanted very much to live, and there was that in his air which suggested that by his conduct he was serving more than himself. It is, of course, possible that his counsel did not know his motive. That animal secretiveness may have made him put forward nothing to them but some babbling nonsense such as used to break his teachers' hearts, or he may have been cut off from their comprehension and their kindness by his old gift for complication. His inhabiting devil may have long ago set forces working which had produced an event so monstrous that it was almost as hard to grasp as it would have been to foresee, so monstrous that even he would have recognized it as intractable and surrendered to despair. In any case, his end was as his beginning. What should have been light was dark. There never was a more turbid martyrdom.

Perhaps there was a clue to the nature of that monstrous event that day in court. It could be seen by those who looked about them during that period of waiting that the Spanish lawyers did not all belong to one party. They seemed to be split into two groups. Perhaps one group had come to put forward papers in support of John Amery's claim to be a naturalized Spaniard, and the other to prove that those papers were forged. How that situation might have arisen was indicated some months later to a traveller in Spain who found himself at a dinner with a member of the Franco government. This traveller remembered that Julian Amery had gone out to Spain with letters from the British authorities asking the Spanish authorities to give all facilities for searching the records for proofs of his brother's claim, and that shortly afterwards a British law officer, bearing credentials from the same fount of authority as Julian Amery, had also gone out to Spain, apparently on some errand of investigation. It occurred to the traveller that perhaps the Spanish politician might have met one of these visitors, and he mentioned their names. "Now, tell me," said the Spaniard, "just what happened in that case. What made the British government change

their minds about John Amery?" "Change their minds?" echoed the traveller. "Yes," said the Spaniard petulantly. "First they wanted not to hang him, and then the next thing we knew they wanted to hang him."

It must be remembered that John Amery probably believed that he was a Spanish subject. Once he heard of the defence that William Joyce was raising, his feather wits would easily convert the *laissez-passer* he had received from Franco when he was a gun-runner into a certificate of naturalization. His brother must have gone to Spain to look for the evidence of that naturalization in the belief that it existed, and unprepared for complaisance. It would not have crossed his mind that any Spanish official would misinterpret the request of the British authorities that he should be given facilities for such a search, since such a request would have been made on behalf of any reputable person in a like position. In good faith he must have brought back the evidence of his brother's Spanish citizenship, in good faith his parents and their legal advisers must have accepted it, and John Amery, in his mental twilight, would not have been surprised that his myth had become a fact. But by then Amery's private papers had fallen into the hands of British Intelligence Officers. It was unlikely that a Spanish official, however willing to oblige, would invent a date on which an imaginary ceremony of naturalization was performed which would fit into the accounts of his life contained in these papers. It was inevitable that the deception should bemuse the Amery family, inevitable that it should be uncovered by the prosecution. It is not possible to think how life must have appeared to the Amery family at the moment of the disclosure. A persecuting destiny had for long inhabited their older son's body; inextricably confused with what they loved. They had conquered it, for it had never made them fail their son. Now it must have seemed to them to have broken loose and ranged the earth, acting at a great distance, acting through men so stupid that they were dangerous even when they meant to please —that they could not recognize what pleases the civilized; acting through the supposed neutrality of inanimate objects, through volumes in the shelves of a registry office, which could have been judged eternally innocuous through dedication to uninteresting fact. The Amery family stood together under the shadow of this astonishing doom; but were not together, for John went from them. He escaped into another fantasy. Now he saw himself as a martyr in the Fascist cause, and swaggered as he had done when he drove the high-powered automobile he had not paid for at ninety miles an hour on the wrong side of the road to the hotel where he would not be able to meet the bill. That was the source of his faintly consequential air in the dock, his air of knowing something.

The Judge spoke some words to him before passing sentence, expressing hatred of his crime. Many people thought the Judge heartless, forgetting that a very old man might well feel himself on an equality with a prisoner under sentence of death, and might even think that the prisoner would find a precise evaluation of his position more interesting than tenderness from a stranger. Also the Judge seemed baffled, like the rest of us, and there was a certain ineptness in his enlargement on a passage in the depositions which described how John Amery had visited the camp at St. Denis to enlist internees for his renegade British Free Corps and had been warned by some of the men that he was committing high treason but had taken no notice. It was not a point worth making, so far as Amery was concerned, for by that time his magic circle was sealed, and he must have thought that he was giving the internees an opportunity to join the winning side. Yet, if what the Judge said had little application to Amery, he seemed to say it because his mind had been shocked into flight underground to some place near the sources of our general destiny. The Judge said slowly, with accusation and querulous wonder in his voice, "They called you traitor and you heard them." It was as if he spoke to all men, marvelling at their knowledge of good and evil and their preference for evil, and looking at his own heart from far away that he might see the cause.

10

Problems and the Future

The range of human interest is both broad and deep. Curiosity about the past seems never to stop, but rather to increase with each new discovery. Does what we call "the present" seem hard to understand? Then we bend every resource to dig the deeper, for better understanding and wiser doing. And every man will have his big or little guesses about the future. Whence did we come? Where are we going? Why are we here? and What shall we think and do now? Restless man has propounded these questions to himself for a long time now, and many an answer has come and gone. Some few have agreed with the poet of the *Rubáiyát*:

> Myself when young did eagerly frequent
> Doctor and Saint, and heard great argument
> About it and about: but evermore
> Came out by the same door where in I went.--

or have summed it up much as the sage in *Ecclesiastes*: all is vanity; love God and keep his commandments from day to day. But the desires and fears and imagination of man persist, and the answers to the questions keep on coming.

It is not true that all the old answers have faded and gone. Many of them are the bedrock of faith and the mainstay of millions of believers. This has been one of the principal reasons for the persistence into our times of many writings, including the sacred books and particularly the Bible. Ethical teachings of a great order endure, and so do those which deal with deity and the extra-mundane.

But the course of man's thinking and discovery in the last few centuries has been such as to promote wonder about the present and future of man on this planet. From whatever approach, it seems to be a concern with man among his fellows, working out or trying to work out a kind of salvation on earth. Knowledge grows, experience makes us wiser (we devoutly hope), and it seems to be our destiny to be not passive but ever active and searching. Hence arises the idea of progress for men like Dean Inge to examine critically, and it seems not inpious to consider with Kirtley Mather the future of man at least as an inhabitant of earth. Out on the keen edge of living men cope with the mysteries of energy and space and reproduction, and always to some extent with the translation of tremendous new knowledge into human action. It is this translation that seems to constitute the greatest problem of our time. Even as late as the twenties in our century Charles Beard could speak in *Whither Mankind?* with comparative calm and assurance. Then like Prometheus we stole our fire from heaven in producing atomic fission, and the first bomb fell on Hiroshima!

So the old words in *Ecclesiastes* seem almost to leap up from the page: "And I applied my heart to know wisdom, and to know madness and folly: I perceived that this also was a striving after wind. For in much wisdom is much grief; and he that increaseth knowledge increaseth sorrow." Or these words might come from one who had followed the course of John Hersey: "Then I returned and saw all the oppressions that are done under the sun, and, behold, the tears of such as were oppressed, and they had no comforter; and on the side of their oppressors there was power, but they had no comforter. Wherefore I praised the dead that have been long dead more than the living that are yet alive; yea, better than them both did I esteem him that hath not yet been, who hath not seen the evil work that is done under the sun."

And since such a speaker nowadays might be merely dubbed a "sentimentalist," one handicapped by an archaic humanitarianism, the modern problem might seem to be pre-eminently one of moral philosophy, a matter of ethical judgment and action, human control of all this power so often predicted and now in man's possession. It would appear to be what Albert Einstein endeavors to answer when he says "The Real Problem is in the Hearts of Men." New predictions of the future must certainly recognize the question of what moral bases the society of the future shall rest upon, if any. Whether Alexander Weinstein is right or not in his analysis of one proposal by science with reference to controlled society in the future, he seems to rely upon a modicum of the rational and the co-operative in man. We are given to wonder today about the validity of such a premise, to wonder even whether man, at least as an inhabitant of the earth, has any future.

For here is the story of Hiroshima, given to us in one of the greatest pieces of reporting we have ever had, since it is so much more than mere reporting. And if it is not filled with cosmic ironies, they do not fall far short of the cosmic. Of one Mr. Tanimoto Hersey remarks: "He had nothing to work with except his own energy, and that was not what it had been." But in our absorption with the story we must not forget the image of John Hersey, who ranged to the Orient and by the intensity and penetration of his interest revealed the problem of our time and the uncertain shape of things to come.

Ecclesiastes[1]

CHAPTER 1

1. ¶The words of the Preacher, the son of David, king in Jerusalem.

2. Vanity of vanities, saith the Preacher, vanity of vanities; all is vanity.

3. What profit hath a man of all his labour which he taketh under the sun?

4. One generation passeth away, and another generation cometh: but the earth abideth for ever.

5. The sun also ariseth, and the sun goeth down, and hasteth to his place where he arise.

6. The wind goeth toward the south, and turneth about unto the north; it whirleth about continually, and the wind returneth again according to his circuits.

7. All the rivers run into the sea; yet the sea is not full; unto the place from whence the rivers come, thither they return again.

[1] From the Bible, according to the Version of King James I.

8. All things are full of labour; man cannot utter it: the eye is not satisfied with seeing, nor the ear filled with hearing.

9. The thing that hath been, it is that which shall be; and that which is done is that which shall be done: and there is no new thing under the sun.

10. Is there any thing whereof it may be said, See, this is new? it hath been already of old time, which was before us.

11. There is no remembrance of former things; neither shall there be any remembrance of things that are to come with those that shall come after.

12.¶I the Preacher was king over Israel in Jerusalem.

13. And I gave my heart to seek and search out by wisdom concerning all things that are done under heaven: this sore travail hath God given to the sons of man to be exercised therewith.

14. I have seen all the works that are done under the sun; and, behold, all is vanity and vexation of spirit.

15. That which is crooked cannot be made straight: and that which is wanting cannot be numbered.

16. I communed with mine own heart, saying, Lo, I am come to great estate, and have gotten more wisdom than all they that have been before me in Jerusalem: yea, my heart had great experience of wisdom and knowledge.

17. And I gave my heart to know wisdom, and to know madness and folly: I perceived that this also is vexation of spirit.

18. For in much wisdom is much grief: and he that increaseth knowledge increaseth sorrow.

CHAPTER 2

1.¶I said in mine heart, Go to now, I will prove thee with mirth, therefore enjoy pleasure: and, behold, this also is vanity.

2. I said of laughter, It is mad: and of mirth, What doeth it?

3. I sought in mine heart to give myself unto wine, yet acquainting mine heart with wisdom; and to lay hold on folly, till I might see what was that good for the sons of men, which they should do under the heaven all the days of their life.

4. I made me great works; I builded me houses; I planted me vineyards:

5. I made me gardens and orchards, and I planted trees in them of all kind of fruits:

6. I made me pools of water, to water therewith the wood that bringeth forth trees:

7. I got me servants and maidens, and had servants born in my house; also I had great possessions of great and small cattle above all that were in Jerusalem before me:

8. I gathered me also silver and gold, and the peculiar treasure of kings and of the provinces: I gat me men singers and women singers, and the delights of the sons of men, as musical instruments, and that of all sorts.

9. So I was great, and increased more than all that were before me in Jerusalem: also my wisdom remained with me.

10. And whatsoever mine eyes desired I kept not from them, I withheld not my heart from any joy; for my heart rejoiced in all my labour: and this was my portion of all my labour.

11. Then I looked on all the works that my hands had wrought, and on the labour that I had laboured to do: and, behold, all was vanity and vexation of spirit, and there was no profit under the sun.

12.¶And I turned myself to behold wisdom, and madness, and folly: for what can the man do that cometh after the king? even that which hath been already done.

13. Then I saw that wisdom excelleth folly, as far as light excelleth darkness.

14. The wise man's eyes are in his head; but the fool walketh in darkness: and I myself perceived also that one event happeneth to them all.

15. Then I said in my heart, As it happeneth to the fool, so it happeneth even to me; and why was I then more wise? Then I said in my heart, that this also is vanity.

16. For there is no remembrance of the wise more than of the fool for ever; seeing that which now is in the days to come shall all be forgotten. And how dieth the wise man? as the fool.

17. Therefore I hated life; because the

work that is wrought under the sun is grievous unto me: for all is vanity and vexation of spirit.

18.¶Yea, I hated all my labour which I had taken under the sun: because I should leave it unto the man that shall be after me.

19. And who knoweth whether he shall be a wise man or a fool? yet shall he have rule over all my labour wherein I have laboured, and wherein I have shewed myself wise under the sun. This is also vanity.

20. Therefore I went about to cause my heart to despair of all the labour which I took under the sun.

21. For there is a man whose labour is in wisdom, and in knowledge, and in equity; yet to a man that hath not laboured therein shall he leave it for his portion. This also is vanity and a great evil.

22. For what hath man of all his labour, and of the vexation of his heart, wherein he hath laboured under the sun?

23. For all his days are sorrows, and his travail grief; yea, his heart taketh not rest in the night. This is also vanity.

24.¶There is nothing better for a man than that he should eat and drink, and that he should make his soul enjoy good in his labour. This also I saw, that it was from the hand of God.

25. For who can eat, or who else can hasten hereunto, more than I?

26. For God giveth to a man that is good in his sight wisdom, and knowledge, and joy: but to the sinner he giveth travail, to gather and to heap good before God. This also is vanity and vexation of spirit.

CHAPTER 3

1.¶To every thing there is a season, and a time to every purpose under the heaven:

2. A time to be born, and a time to die; a time to plant, and a time to pluck up that which is planted;

3. A time to kill, and a time to heal; a time to break down, and a time to build up;

4. A time to weep, and a time to laugh; a time to mourn, and a time to dance;

5. A time to cast away stones, and a time to gather stones together; a time to embrace, and a time to refrain from embracing;

6. A time to get, and a time to lose; a time to keep, and a time to cast away;

7. A time to rend, and a time to sew; a time to keep silence, and a time to speak;

8. A time to love, and a time to hate; a time of war, and a time of peace.

9. What profit hath he that worketh in that wherein he laboureth?

10. I have seen the travail, which God hath given to the sons of men to be exercised in it.

11. He hath made every thing beautiful in his time: also he hath set the world in their heart, so that no man can find out the work that God maketh from the beginning to the end.

12. I know that there is no good in them, but for a man to rejoice, and to do good in his life.

13. And also that every man should eat and drink, and enjoy the good of all his labour, it is the gift of God.

14. I know that, whatsoever God doeth, it shall be for ever: nothing can be put to it, nor any thing taken from it: and God doeth it, that men should fear before him.

15. That which hath been is now; and that which is to be hath already been; and God requireth that which is past.

16.¶And moreover I saw under the sun the place of judgment, that wickedness was there; and the place of righteousness, that iniquity was there.

17. I said in mine heart, God shall judge the righteous and the wicked: for there is a time there for every purpose and for every work.

18. I said in mine heart concerning the estate of the sons of men, that God might manifest them, and that they might see that they themselves are beasts.

19. For that which befalleth the sons of men befalleth beasts; even one thing befalleth them: as the one dieth, so dieth the other; yea, they have all one breath; so that a man hath no preëminence above a beast: for all is vanity.

20. All go unto one place; all are of the dust, and all turn to dust again.

21. Who knoweth the spirit of man that goeth upward, and the spirit of the beast that goeth downward to the earth?

22. Wherefore I perceive that there is nothing better, than that a man should rejoice in his own works; for that is his portion: for who shall bring him to see what shall be after him?

CHAPTER 4

1.¶So I returned, and considered all the oppressions that are done under the sun: and behold the tears of such as were oppressed, and they had no comforter; and on the side of their oppressors there was power; but they had no comforter.

2. Wherefore I praised the dead which are already dead more than the living which are yet alive.

3. Yea, better is he than both they which hath not yet been, who hath not seen the evil work that is done under the sun.

4.¶Again, I considered all travail, and every right work, that for this a man is envied of his neighbour. This is also vanity and vexation of spirit.

5. The fool foldeth his hands together, and eateth his own flesh.

6. Better is an handful with quietness, than both the hands full with travail and vexation of spirit.

7.¶Then I returned, and I saw vanity under the sun.

8. There is one alone, and there is not a second; yea, he hath neither child nor brother: yet is there no end of all his labour; neither is his eye satisfied with riches; neither saith he, For whom do I labour, and bereave my soul of good? This is also vanity, yea, it is a sore travail.

9.¶Two are better than one; because they have a good reward for their labour.

10. For if they fall, the one will lift up his fellow: but woe to him that is alone when he falleth; for he hath not another to help him up.

11. Again, if two lie together, then they have heat: but how can one be warm alone?

12. And if one prevail against him, two shall withstand him; and a threefold cord is not quickly broken.

13.¶Better is a poor and a wise child than an old and foolish king, who will no more be admonished.

14. For out of prison he cometh to reign; whereas also he that is born in his kingdom becometh poor.

15. I considered all the living which walk under the sun, with the second child that shall stand up in his stead.

16. There is no end of all the people, even of all that have been before them: they also that come after shall not rejoice in him. Surely this also is vanity and vexation of spirit.

CHAPTER 12

1.¶Remember now thy Creator in the days of thy youth, while the evil days come not, nor the years draw nigh, when thou shalt say, I have no pleasure in them;

2. While the sun, or the light, or the moon, or the stars, be not darkened, nor the clouds return after the rain:

3. In the day when the keepers of the house shall tremble, and the strong men shall bow themselves, and the grinders cease because they are few, and those that look out of the windows be darkened,

4. And the doors shall be shut in the streets, when the sound of the grinding is low, and he shall rise up at the voice of the bird, and all the daughters of musick shall be brought low;

5. Also when they shall be afraid of that which is high, and fears shall be in the way, and the almond tree shall flourish, and the grasshopper shall be a burden, and desire shall fail: because man goeth to his long home, and the mourners go about the streets:

6. Or ever the silver cord be loosed, or the golden bowl be broken, or the pitcher be broken at the fountain, or the wheel broken at the cistern.

7. Then shall the dust return to the earth as it was: and the spirit shall return unto God who gave it.

8.¶Vanity of vanities, saith the preacher; all is vanity.

9. And moreover, because the preacher was wise, he still taught the people knowledge; yea, he gave good heed, and sought out, and set in order many proverbs.

10. The preacher sought to find out acceptable words: and that which was written was upright, even words of truth.

11. The words of the wise are as goads, and as nails fastened by the masters of assemblies, which are given from one shepherd.

12. And further, by these, my son, be admonished: of making many books there is no end; and much study is a weariness of the flesh.

13. ¶ Let us hear the conclusion of the whole matter: Fear God, and keep his commandments: for this is the whole duty of man.

14. For God shall bring every work into judgment, with every secret thing, whether it be good, or whether it be evil.

The Idea of Progress [1]

WILLIAM RALPH INGE

THE BELIEF in Progress, not as an ideal but as an indisputable fact, not as a task for humanity but as a law of Nature, has been the working faith of the West for about a hundred and fifty years. Some would have us believe that it is a long neglected part of the Christian revelation, others that it is a modern discovery. The ancient Pagans, we are told, put their Golden Age in the past; we put ours in the future. The Greeks prided themselves on being the degenerate descendants of gods, we on being the very creditable descendants of monkeys. The Romans endeavoured to preserve the wisdom and virtue of the past, we to anticipate the wisdom and virtue of the future. This, however, is an exaggeration. The theory of progress and the theory of decadence are equally natural, and have in fact been held concurrently wherever men have speculated about their origin, their present condition, and their future prospects. Among the Jews the theory of decadence derived an inspired authority from Genesis, but the story of the Fall had very little influence upon the thought of that tenaciously optimistic race. Among the Greeks, who had the melancholy as well as the buoyancy of youth, it was authorized by Hesiod, whose scheme of retrogression from the age of gold to the age of iron was never forgotten in antiquity. Sophocles, in a well-known chorus imitated by Bacon, holds that the best fate for men is "not to be born, or being born to die." Aratus develops the pessimistic mythology of Hesiod. In the Golden Age Dike or Astraea wandered about the earth freely; in the Silver Age her visits became fewer, and in the Brazen Age she set out for heaven and became the constellation Virgo. Perhaps Horace had read the lament of the goddess: "What a race the golden sires have left—worse than their fathers; and your offspring will be baser still." In the third century after Christ, when civilization was really crumbling, Pagans and Christians join in a chorus of woe. On the other side, the triumphs of man over Nature are celebrated by the great tragedians, and the Introduction to the First Book of Thucydides sketches the past history of Greece in the spirit of the nineteenth century. Lucretius has delighted our anthropologists by his brilliant and by no means idealized description of savage life, and it is to him that we owe the blessed word Progress in its modern sense.

> Usus et impigrae simul experientia mentis
> paulatim docuit pedetemtim *progredientes*.
> sic unum quicquid paulatim protrahit aetas
> in medium, ratioque in luminis erigit oras.

[1] From *Outspoken Essays: second series.* Copyright 1922, and reprinted by permission of Longmans, Green & Co., publishers.

Pliny believes that each age is better than the last. Seneca, in a treatise, parts of which were read in the Middle Ages, reminds us that "not a thousand years have passed since Greece counted and named the stars, and it is only recently that we have learned why the moon is eclipsed. Posterity will be amazed that we did not know some things that will be obvious to them." "The world," he adds, "is a poor affair if it does not contain matter for investigation for men in every age. We imagine that we are initiated into the mysteries of Nature; but we are still hanging about her outer courts." These last are memorable utterances, even if Seneca confines his optimism to the pleasure of exploring Nature's secrets. The difference between Rousseau, who admired the simple life, and Condorcet, who believed in modern civilization, was no new one; it was a common theme of discussion in antiquity, and the ancients were well aware that the same process may be called either progress or decline. As Freeman says, "In history every step in advance has also been a step backwards." (The picture is a little difficult to visualize, but the meaning is plain.) The fruit of the tree of knowledge always drives man from some paradise or other; and even the paradise of fools is not an unpleasant abode while it is habitable. Few emblematic pictures are more striking that the Melencolia (as he spells it) of Durer, representing the Spirit of the race sitting mournfully among all her inventions: and this was at the *beginning* of the age of discovery! But the deepest thought of antiquity was neither optimistic nor pessimistic. It was that progress and retrogression are only the incoming and outgoing tide in an unchanging sea. The pulse of the universe beats in an alternate expansion and contraction. The result is a series of cycles, in which history repeats itself. Plato contemplates a world-cycle of 36,000 solar years, during which the Creator guides the course of events; after which he relaxes his hold of the machine, and a period of the same length follows during which the world gradually degenerates. When this process is complete the Creator restores again the original conditions, and a new cycle begins. Aristotle thinks that all the arts and sciences have been discovered and lost "an infinite number of times." Virgil in the Fourth Eclog tries to please Augustus by predicting the near approach of a new Golden Age, which, he says, is now due. This doctrine of recurrence is not popular to-day; but whether we like it or not, no other view of the macrocosm is even tenable. Even if those physicists are right who hold that the universe is running down like a clock, that belief postulates a moment in past time when the clock was wound up; and whatever power wound it up once may presumably wind it up again. The doctrine of cycles was held by Goethe, who in reply to Eckermann's remark that "the progress of humanity seems to be a matter of thousands of years," answered:

> Perhaps of millions. Men will become more clever and discerning, but not better or happier, except for limited periods. I see the time coming when God will take no more pleasure in our race, and must again proceed to a rejuvenated creation. I am sure that the time and hour in the distant future are already fixed for the beginning of this epoch. But we can still for thousands of years enjoy ourselves on this dear old playground of ours.

Nietzsche also maintained the law of recurrence, and so did the Danish philosophic theologian Kierkegaard. Shelley's fine poem, "The world's great age begins anew," is based upon it. Still, I must admit that on the whole the ancients did tend to regard time as the enemy: *damnosa quid non imminuit dies?* They would have thought the modern notion of human perfectibility at once absurd and impious.

The Dark Ages knew that they were dark, and we hear little talk about progress during those seven centuries which, as far as we can see, might have been cut out of history without any great loss to posterity. The Middle Ages (which we ought never to confuse with the Dark Ages), though they developed an interesting type of civilization, set their hopes mainly on another world. The Church has never encouraged the belief that this

world is steadily improving; the Middle Ages, like the early Christians, would have been quite content to see the earthly career of the race closed in their own time. Even Roger Bacon, who is claimed as the precursor of modern science, says that all wise men believe that we are not far from the time of Antichrist, which was to be the herald of the end. The Renaissance was a conscious recovery from the longest and dreariest setback that humanity has ever experienced within the historical period—a veritable glacial age of the spirit. At this time men were too full of admiration and reverence for the newly recovered treasures of antiquity to look forward to the future. In the seventeenth century a doctrine of progress was already in the air, and a long literary battle was waged between the Ancients and the Moderns. But it was only in the eighteenth century that Western Europe began to dream of an approaching millennium without miracle, to be gradually ushered in under the auspices of a faculty which was called Reason. Unlike some of their successors, these optimists believed that perfection was to be attained by the self-determination of the human will; they were not fatalists. In France, the chief home of this heady doctrine, the psychical temperature soon began to rise under its influence, till it culminated in the delirium of the Terror. The Goddess of Reason hardly survived Robespierre and his guillotine; but the belief in progress, which might otherwise have subsided when the French resumed their traditional pursuits—*rem militarem et argute loqui*—was reinforced by the industrial revolution, which was to run a very different course from that indicated by the theatrical disturbances at Paris between 1789 and 1794, the importance of which has perhaps been exaggerated. In England above all, the home of the new industry, progress was regarded (in the words which Mr. Mallock puts into the mouth of a nineteenth-century scientist) as that kind of improvement which can be measured by statistics. This was quite seriously the view of the last century generally, and there has never been, nor will there ever be again, such an opportunity for gloating over this kind of improvement. The mechanical inventions of Watt, Arkwright, Crompton, Stephenson, and others led to an unparalleled increase of population. Exports and imports also progressed, in a favorite phrase of the time, by leaps and bounds. Those who, like Malthus, sounded a note of warning, showing that population increases, unlike the supply of food, by geometrical progression, were answered that compound interest follows the same admirable law. It was obvious to many of our grandparents that a nation which travels sixty miles an hour must be five times as civilized as one which travels only twelve, and that, as Glanvill had already declared in the reign of Charles II, we owe more gratitude to the inventor of the mariner's compass "than to a thousand Alexanders and Cæsars, or to ten times the number of Aristotles." The historians of the time could not contain their glee in recording these triumphs. Only the language of religion seemed appropriate in contemplating so magnificent a spectacle. If they had read Herder, they would have quoted with approval his prediction that "the flower of humanity, captive still in its germ, will blossom out one day into the true form of man like unto God, in a state of which no man on earth can imagine the greatness and the majesty." Determinism was much in vogue by this time; but why should determinism be a depressing creed? The law which we cannot escape is the blessed law of progress—"that kind of improvement that can be measured by statistics." We had only to thank our stars for placing us in such an environment, and to carry out energetically the course of development which Nature has prescribed for us, and to resist which would be at once impious and futile.

Thus the superstition of progress was firmly established. To become a popular religion, it is only necessary for a superstition to enslave a philosophy. The superstition of progress had the singular good fortune to enslave at least three philosophies—those of Hegel, of Comte, and of Darwin. The strange thing is that none of these philosophies is really

favourable to the belief which it was supposed to support. Leaving for the present the German and the French thinkers, we observe with astonishment that many leading men in Queen Victoria's reign found it possible to use the great biological discovery of Darwin to tyrannize over the minds of their contemporaries, to give their blessing to the economic and social movements of their time, and to unite determinism with teleology in the highly edifying manner to which I have already referred. Scientific optimism was no doubt rampant before Darwin. For example, Herschel says: "Man's progress towards a higher state need never fear a check, but must continue till the very last existence of history." But Herbert Spencer asserts the perfectibility of man with an assurance which makes us gasp. "Progress is not an accident but a necessity. What we call evil and immorality must disappear. It is certain that man must become perfect." "The ultimate development of the ideal man is certain—as certain as any conclusion in which we place the most implicit faith; for instance, that all men will die." "Always towards perfection is the mighty movement—towards a complete development and a more unmixed good."

It has been pointed out by Mr. Bradley that these apocalyptic prophecies have nothing whatever to do with Darwinism. If we take the so-called doctrine of evolution in Nature as a metaphysics of existence, which Darwin never intended it to be, "there is in the world nothing like value, or good, or evil. Anything implying evolution, in the ordinary sense of development or progress, is wholly rejected." The survival of the fittest does not mean that the most virtuous, or the most useful, or the most beautiful, or even the most complex survive: there is no moral or æsthetic judgment pronounced on the process or any part of it.

Darwinism [Mr. Bradley goes on to say] often recommends itself because it is confused with a doctrine of evolution which is radically different. Humanity is taken in that doctrine as a real being, or even as the one real being; and humanity (it is said) advances continuously. Its history is development and progress toward a goal, because the type and character in which its reality consists is gradually brought more and more into fact. That which is strongest on the whole must therefore be good, and the ideas which come to prevail must therefore be true. This doctrine, though I certainly cannot accept it, for good or evil more or less dominates or sways our minds to an extent of which most of us perhaps are dangerously unaware. Any such view of course conflicts radically with Darwinism, which only teaches that the true idea is the idea which prevails, and this leaves us in the end with no criterion at all.

It may further be suggested that Spencer's optimism depends on the transmissibility of acquired characters; but this is too dangerous a subject for a layman in science to discuss.

Although the main fact of cosmic evolution, and the main course of human history from pithecanthropus downwards, are well know to all my hearers, and to some of them much better than to myself, it may be worth while to recall to you in bald and colourless language, what science really tells us about the nature and destiny of our species. It is so different from the gay colours of the rhapsodists whom I have just quoted, that we must be amazed that such doctrines should ever have passed for scientific. Astronomy gives us a picture of a wilderness of space, probably boundless, sparsely sown with aggregations of elemental particles in all stages of heat and cold. These heavenly bodies are in some cases growing hotter, in other cases growing colder; but the fate of every globe must be, sooner or later, to become cold and dead, like the moon. Our sun, from which we derive the warmth which makes our life possible, is, I believe, an elderly star, which has long outlived the turbulent heats of youth, and is on its way to join the most senile class of luminiferous bodies, in which the star 19 Piscium is placed. When a star has once become cold, it must apparently remain dead until some chance collision sets the whole cycle going again. From time to time a great conflagration in the heavens, which occurred perhaps in the seventeenth century, becomes visible from this earth; and we may imagine, if we will,

that two great solar systems have been reduced in a moment to incandescent gas. But space is probably so empty that the most pugnacious of astral knights-errant might wander for millions of years without meeting an opponent worthy of its bulk. If time as well as space is infinite, worlds must be born and die innumerable times, however few and far between their periods of activity may be. Of progress, in such a system taken as a whole, there cannot be a trace. Nor can there be any doubt about the fate of our own planet. Man and all his achievements will one day be obliterated like a child's sand-castle when the next tide comes in. Lucretius, who gave us the word progress, has told us our intimate fate in sonorous lines:

Quorum naturam triplicem, tria corpora, Memmi,
tres species tam dissimiles, tria talia texta,
una dies dabit exitio, multosque per annos
sustentata ruet moles et machina mundi.

The racial life of the species to which we happen to belong is a brief episode even in the brief life of the planet. And what we call civilization or culture, though much older than we used to suppose, is a brief episode in the life of our race. For tens of thousands of years the changes in our habits must have been very slight, and chiefly those which were forced upon our rude ancestors by changes of climate. Then in certain districts man began, as Samuel Butler says, to wish to live beyond his income. This was the beginning of the vast series of inventions which have made our life so complex. And, we used to be told, the "law of all progress is the same, the evolution of the simple into the complex by successive differentiations." This is the gospel according to Herbert Spencer. As a universal law of nature it is ludicrously untrue. Some species have survived by becoming more complex, others, like the whole tribe of parasites, by becoming more simple. On the whole, perhaps the parasites have had the best of it. The progressive species have in many cases flourished for a while and then paid the supreme penalty. The living dreadnoughts of the Saurian age have left us their bones, but no progeny. But the microbes, one of which had the honour of killing Alexander the Great at the age of thirty-two, and so changing the course of history, survive and flourish. The microbe illustrates the wisdom of the maxim, λάθε Βιώσας. It took thousands of years to find him out. Our own species, being rather poorly provided by nature for offence and defence, had to live by its wits, and so came to the top. It developed many new needs, and set itself many insoluble problems. Physiologists like Metchnikoff have shown how very ill-adapted our bodies are to the tasks which we impose upon them; and in spite of the Spencerian identification of complexity with progress, our surgeons try to simplify our structure by forcibly removing various organs which they assure us that we do not need. If we turn to history for a confirmation of the Spencerian doctrine, we find, on the contrary, that civilization is a disease which is almost invariably fatal, unless its course is checked in time. The Hindus and Chinese, after advancing to a certain point, were content to mark time; and they survive. But the Greeks and Romans are gone; and aristocracies everywhere die out. Do we not see today the complex organization of the ecclesiastic and college don succumbing before the simple squeezing and sucking apparatus of the profiteer and trade-unionist? If so-called civilized nations show any protracted vitality, it is because they are only civilized at the top. Ancient civilizations were destroyed by imported barbarians; we breed our own.

It is also an unproved assumption that the domination of the planet by our own species is a desirable thing, which must give satisfaction to its Creator. We have devastated the loveliness of the world; we have exterminated several species more beautiful and less vicious than ourselves; we have enslaved the rest of the animal creation, and have treated our distant cousins in fur and feathers so badly that beyond doubt, if they were able to formulate a religion, they would depict the Devil in human form. If it is progress to turn the fields and woods of Essex into East and West Ham, we may be thankful that

progress is a sporadic and transient phenomenon in history. It is a pity that our biologists, instead of singing pæons to Progress and thereby stultifying their own researches, have not preached us sermons on the sin of racial self-idolatry, a topic which really does arise out of their studies. *L'anthropolatrie, voilà l'ennemi,* is the real ethical motto of biological science, and a valuable contribution to morals.

It was impossible that such shallow optimism as that of Herbert Spencer should not arouse protests from other scientific thinkers. Hartmann had already shown how a system of pessimism, resembling that of Schopenhauer, may be built upon the foundation of evolutionary science. And in this place we are not likely to forget the second Romanes Lecture, when Professor Huxley astonished his friends and opponents alike by throwing down the gauntlet in the face of Nature, and bidding mankind to find salvation by accepting for itself the position which the early Christian writer Hippolytus gives as a definition of the Devil—"he who resists the cosmic process" ('ὁ ἀντιτάττων τοῖς κοσμικοῖς). The revolt was not in reality so sudden as some of Huxley's hearers supposed. He had already realized that "so far from gradual progress forming any necessary part of the Darwinian creed, it appears to us that it is perfectly consistent with indefinite persistence in one state, or with a gradual retrogression. Suppose, *e.g.*, a return of the glacial period or a spread of polar climatical conditions over the whole globe." The alliance between determinism and optimism was thus dissolved; and as time went on, Huxley began to see in the cosmic process something like a power of evil. The natural process, he told us in this place, has no tendency to bring about the good of mankind. Cosmic nature is no school of virtue, but the headquarters of the enemy of ethical nature. Nature is the realm of tiger-rights; it has no morals and no ought-to-be; its only rights are brutal powers. Morality exists only in the "artificial" moral world: man is a glorious rebel, a Prometheus defying Zeus. This strange rebound into Manicheism sounded like a blasphemy against all the gods whom the lecturer was believed to worship, and half-scandalized even the clerics in his audience. It was bound to raise the question whether this titanic revolt against the cosmic process had any chance of success. One recent thinker, who accepts Huxley's view that the nature of things is cruel and immoral, is willing to face the probability that we cannot resist it with any prospect of victory. Mr. Bertrand Russell, in his arresting essay, "A Free Man's Worship," shows us Prometheus again, but Prometheus chained to the rock and still hurling defiance against God. He proclaims the moral bankruptcy of naturalism, which he yet holds to be forced upon us.

> That man is the product of causes which had no prevision of the end they were achieving; that his origin, his growth, his hopes and fears, his loves, and his beliefs, are but the outcome of accidental collocations of atoms; that no fire, no heroism, no intensity of thought and feeling, can preserve an individual beyond the grave; that all the labours of the ages, all the devotion, all the inspiration, all the noonday brightness of human genius, are destined to extinction in the vast death of the solar system, and that the whole temple of man's achievement must inevitably be buried beneath the débris of a universe in ruins—all these things, if not quite beyond dispute, are yet so nearly certain, that no philosophy which rejects them can hope to stand. Only within the scaffolding of these truths, only on the firm foundation of unyielding despair, can the soul's habitation henceforth be safely built.

Man belongs to "an alien and inhuman world," alone amid "hostile forces." What is man to do? The God who exists is evil; the God whom we can worship is the creation of our own conscience, and has no existence outside it. The "free man" will worship the latter; and, like John Stuart Mill, "to hell he will go."

If I wished to criticize this defiant pronouncement, which is not without a touch of bravado, I should say that so complete a separation of the real from the ideal is impossible, and that the choice which the writer offers us, of worshiping a Devil who exists

or a God who does not, is no real choice, since we cannot worship either. But my object in quoting from this essay is to show how completely naturalism has severed its alliance with optimism and belief in progress. Professor Huxley and Mr. Russell have sung their palinode and smashed the old gods of their creed. No more proof is needed, I think, that the alleged law of progress has no scientific basis whatever.

But the superstition has also invaded and vitiated our history, our political science, our philosophy, and our religion.

The historian is a natural snob; he sides with the gods against Cato, and approves the winning side. He lectures the vanquished for their wilfulness and want of foresight, sometimes rather prematurely, as when Seeley, looking about for an example of perverse refusal to recognize facts, exclaims "Sedet, æternumque sedebit unhappy Poland!" The nineteenth-century historian was so loath to admit retrogression that he liked to fancy the river of progress flowing underground all through the Dark Ages, and endowed the German barbarians who overthrew Mediterranean civilization with all the manly virtues. If a nation, or a religion, or a school of art dies, the historian explains why it was not worthy to live.

In political science the corruption of the scientific spirit by the superstition of progress has been flagrant. It enables the disputant to overbear questions of right and wrong by confident prediction, a method which has the double advantage of being peculiarly irritating and incapable of refutation. On the theory of progress, what is "coming" must be right. Forms of government and modes of thought which for the time being are not in favor are assumed to have been permanently left behind. A student of history who believed in cyclical changes and long swings of the pendulum would take a very different and probably much sounder view of contemporary affairs. The votaries of progress mistake the flowing tide for the river of eternity, and when the tide turns they are likely to be left stranded like the corks and scraps of seaweed which mark the high-water line. This has already happened, though few realize it. The praises of Liberty are mainly left to Conservatives, who couple it with Property as something to be defended, and to conscientious objectors, who dissociate it from their country, which is not to be defended. Democracy—the magic ballot-box—has few worshipers any longer except in America, where men will still shout for about two hours—and indeed much longer—that she is "great." But our pundits will be slow to surrender the useful words "progressive" and "reactionary." The classification is, however, a little awkward. If a reactionary is anyone who will not float with the stream, and a progressive anyone who has the flowing tide with him, we must classify the Christian Fathers and the French Encyclopedists as belonging to the same type, the progressive; while the Roman Stoics under the Empire and the Russian bureaucrats under Nicholas II will be placed together under the opposite title, as reactionaries. Or is the progressive not the supporter of the winning cause for the time being, but the man who thinks, with a distinguished Head of a College who, as I remember, affirmed his principles in Convocation, that "any leap in the dark is better than standing still"; and is the reactionary the man whose constitutional timidity would deter him from performing this act of faith when caught by a mist on the Matterhorn? Machiavelli recognizes fixed types of human character, such as the cautious Fabius and the impetuous Julius II, and observes that these qualities lead sometimes to success and sometimes to failure. If a reactionary only means an adherent of political opinions which we happen to dislike, there is no reason why a bureaucrat should not call a republican a reactionary, as Maecenas may have applied the name to Brutus and Cassius. Such examples of evolution as that which turned the Roman Empire into a principate and then into an empire of the Asiatic type, are inconvenient for those who say "It is coming," and think that they have vindicated the superiority of their own theories of government.

We have next to consider the influence

of the superstition of progress on the philosophy of the last century. To attempt such a task in this place is a little rash, and to prove the charge in a few minutes would be impossible even for one much better equipped than I am. But something must be said. Hegel and Comte are often held to have been the chief advocates of the doctrine of progress among philosophers. Both of them give definitions of the word—a very necessary thing to do, and I have not yet attempted to do it. Hegel defines progress as spiritual freedom; Comte as true or positive social philosophy. The definitions are peculiar; and neither theory can be made to fit past history, though that of Comte, at any rate, falls to the ground if it does not fit past history. Hegel is perhaps more independent of facts; his predecessor Fichte professes to be entirely indifferent to them. "The philosopher," he says, "follows the *a priori* thread of the world-plan which is clear to him without any history; and if he makes use of history, it is not to prove anything, since his theses are already proved independently of all history." Certainly, Hegel's dialectical process cannot easily be recognized in the course of European events; and, what is more fatal to the believers in a law of progress who appeal to him, he does not seem to have contemplated any further marked improvements upon the political system of Prussia in his own time, which he admired so much that his critics have accused him of teaching that the Absolute first attained full self-consciousness at Berlin in the nineteenth century. He undoubtedly believed that there has been progress in the past; but he does not, it appears, look forward to further changes; as a politician, at any rate, he gives us something like a closed system. Comte can only bring his famous "three stages" into history by arguing that the Catholic monotheism of the Middle Ages was an advance upon Pagan antiquity. A Catholic might defend such a thesis with success; but for Comte the chief advantage seems to be that the change left the Olympians with only one neck for Positive Philosophy to cut off. But Comte himself is what his system requires us to call a reactionary; he is back in the "theological stage"; he would like a theocracy, if he could have one without a God. The State is to be subordinate to the Positive Church, and he will allow "no unlimited freedom of thought." The connexion of this philosophy with the doctrine of progress seems very slender. It is not so easy to answer the question in the case of Hegel, because his contentment with the Prussian government may be set down to idiosyncrasy or to prudence; but it is significant that some of his ablest disciples have discarded the belief. To say that "the world is as it ought to be" does not imply that it goes on getting better, though some would think it was not good if it was not getting better. It is hard to believe that a great thinker really supposed that the universe as a whole is progressing, a notion which Mr. Bradley has stigmatized as "nonsense, unmeaning or blasphemous." Mr. Bradley may perhaps be interpreting Hegel rightly when he says that for a philosopher "progress can never have any temporal sense," and explains that a perfect philosopher would see the whole world of appearance as a "progress," by which he seems to mean only a rearrangement in terms of ascending and descending value and reality. But it might be objected that to use "progress" in this sense is to lay a trap for the unwary. Mathematicians undoubtedly talk of progress, or rather of progression, without any implication of temporal sequence; but outside this science to speak of "progress without any temporal sense" is to use a phrase which some would call self-contradictory. Be that as it may, popularized Hegelianism has laid hold of the idea of a self-improving universe, of perpetual and universal progress, in a strictly temporal sense. The notion of an evolving and progressing cosmos, with a Creator who is either improving himself (though we do not put it quite so crudely) or who is gradually coming into his own, has taken strong hold of the popular imagination. The latter notion leads straight to ethical dualism of the Manichean type. The theory of a single purpose in the universe seems to me untenable. Such a purpose, being infinite, could

never be accomplished. The theory condemns both God and man to the doom of Tantalus. Mr. Bradley is quite right in finding this belief incomparable with Christianity.

It would not be possible, without transgressing the limits set for lecturers on this foundation, to show how the belief in a law of progress has prejudicially affected the religious beliefs of our time. I need only recall to you the discussions whether the perfect man could have lived in the first, and not in the nineteenth or twentieth century —although one would have thought that the ancient Greeks, to take one nation only, have produced many examples of hitherto unsurpassed genius; the secularization of religion by throwing its ideals into the near future—a new apocalyptism which is doing mischief enough in politics without the help of the clergy; and the unauthorized belief in future probation, which rests on the queer assumption that, if a man is given time enough, he must necessarily become perfect. In fact, the superstition which is the subject of this lecture has distorted Christianity almost beyond recognition. Only one great Church, old in worldly wisdom, knows that human nature does not change, and acts on the knowledge. Accordingly, the papal syllabus of 1864 declares: "*Si quis dixerit*: Romanus pontifex potest ac debet cum progressu, cum liberalismo, et cum recenti civilitate sese reconciliare et componere, *anathema sit.*"

Our optimists have not made it clear to themselves or others what they mean by progress, and we may suspect that the vagueness of the idea is one of its attractions. There has been no physical progress in our species for many thousands of years. The Cro-Magnon race, which lived perhaps twenty thousand years ago, was at least equal to any modern people in size and strength; the ancient Greeks were, I suppose, handsomer and better formed than we are; and some unprogressive races, such as the Zulus, Samoans, and Tahitians, are envied by Europeans for either strength or beauty. Although it seems not to be true that the sight and hearing of civilized peoples are inferior to those of savages, we have certainly lost our natural weapons, which from one point of view is a mark of degeneracy. Mentally, we are now told that the men of the Old Stone Age, ugly as most of them must have been, had as large brains as ours; and he would be a bold man who should claim that we are intellectually equal to the Athenians or superior to the Romans. The question of moral improvement is much more difficult. Until the Great War few would have disputed that civilized man had become much more humane, much more sensitive to the sufferings of others, and so more just, more self-controlled, and less brutal in his pleasures and in his resentments. The habitual honesty of the Western European might also have been contrasted with the rascality of inferior races in the past and present. It was often forgotten that, if progress means the improvement of human nature itself, the question to be asked is whether the modern civilized man behaves better in the same circumstances than his ancestor would have done. Absence of temptation may produce an appearance of improvement; but this is hardly what we mean by progress, and there is an old saying that the Devil has a clever trick of pretending to be dead. It seems to me very doubtful whether when we are exposed to the same temptations we are more humane or more sympathetic or juster or less brutal than the ancients. Even before this war, the examples of the Congo and Putumayo, and American lynchings, proved that contact with barbarians reduces many white men to the moral condition of savages; and the outrages committed on the Chinese after the Boxer rebellion showed that even a civilized nation cannot rely on being decently treated by Europeans if its civilization is different from their own. During the Great War, even if some atrocities were magnified with amiable object of rousing a good-natured people to violent hatred, it was the well-considered opinion of Lord Bryce's commission that no such cruelties had been committed for three hundred years as those which the Germans practised in Belgium and France. It was startling to observe how easily

the blood-lust was excited in young men straight from the fields, the factory, and the counter, many of whom had never before killed anything larger than a wasp, and that in self-defence. As for the Turks, we must go back to Genghis Khan to find any parallel to their massacres in Armenia; and the Russian terrorists have reintroduced torture into Europe, with the help of Chinese experts in the art. With these examples before our eyes, it is difficult to feel any confidence that either the lapse of time or civilization has made the *bête humaine* less ferocious. On biological grounds there is no reason to expect it. No selection in favour of superior types is now going on; on the contrary, civilization tends now, as always, to an *Ausrottung der Besten*—a weeding-out of the best; and the new practice of subsidizing the unsuccessful by taxes extorted from the industrious is cacogenics erected into a principle. The best hope of stopping this progressive degeneration is in the science of eugenics. But this science is still too tentative to be made the basis of legislation, and we are not yet agreed what we should breed for. The two ideals, that of the perfect man and that of the perfectly organized State, would lead to very different principles of selection. Do we want a nation of beautiful and moderately efficient Greek gods, or do we want human mastiffs for policemen, human greyhounds for postmen, and so on? However, the opposition which eugenics has now to face is based on less respectable grounds, such as pure hedonism ("would the superman be any happier?"); indifference to the future welfare of the race ("posterity has done nothing for me; why should I do anything for posterity?"); and, in politics, the reflection that the unborn have no votes.

We have, then, been driven to the conclusion that neither science nor history gives us any warrant for believing that humanity has advanced, except by accumulating knowledge and experience and the instruments of living. The value of these accumulations is not beyond dispute. Attacks upon civilization have been frequent, from Crates, Pherecrates, Antisthenes, and Lucretius in antiquity to Rousseau, Walt Whitman, Thoreau, Ruskin, Morris, and Edward Carpenter in modern times. I cannot myself agree with these extremists. I believe that the accumulated experience of mankind, and his wonderful discoveries, are of great value. I only point out that they do not constitute real progress in human nature itself, and that in the absence of any real progress these gains are external, precarious, and liable to be turned to our own destruction, as new discoveries in chemistry may easily be.

But it is possible to approach the whole question of progress from another side, and from this side the results will not be quite the same, and may be more encouraging. We have said that there can be no progress in the macrocosm, and no single purpose in a universe which has neither beginning nor end in time. But there may be an infinite number of finite purposes, some much greater and others much smaller than the span of an individual life; and within each of these some Divine thought may be working itself out, bringing some life or series of lives, some nation or race or species, to that perfection which is natural to it—what the Greeks called its "nature." The Greeks saw no contradiction between this belief and the theory of cosmic cycles, and I do not think that there is any contradiction. It may be that there is an immanent teleology which is shaping the life of the human race towards some completed development which has not yet been reached. To advocate such a theory seems like going back from Darwin to Lamarck; but "vitalism," if it be a heresy, is a very vigorous and obstinate one; we can hardly dismiss it as unscientific. The possibility that such a development is going on is not disproved by the slowness of the change within the historical period. Progress in the recent millennia seems to us to have been external, precarious, and disappointing. But let this last adjective give us pause. By what standard do we pronounce it disappointing, and who gave us this standard? This disappointment has been a constant phenomenon, with a very few exceptions. What does it mean? Have those who reject

the law of progress taken it into account? The philosophy of naturalism always makes the mistake of leaving human nature out. The climbing instinct of humanity, and our discontent with things as they are, are facts which have to be accounted for, no less than the stable instincts of nearly all other species. We all desire to make progress and our ambitions are not limited to our own lives or our lifetimes. It is part of our nature to aspire and hope; even on biological grounds this instinct must be assumed to serve some function. The first Christian poet, Prudentius, quite in the spirit of Robert Browning, names Hope as the distinguishing characteristic of mankind.

Nonne hominum et pecudum distantia separat una?
quod bona quadrupedum ante oculos sita sunt, ego contra spero.

We must consider seriously what this instinct of hope means and implies in the scheme of things.

It is of course possible to dismiss it as a fraud. Perhaps this was the view most commonly held in antiquity. Hope was regarded as a gift of dubious value, an illusion which helps us to endure life, and a potent spur to action; but in the last resort an *ignis fatuus*. A Greek could write for his tombstone:

I've entered port. Fortune and Hope, adieu!
Make game of others, for I've done with you.

And Lord Brougham chose this epigram to adorn his villa at Cannes. So for Schopenhauer hope is the bait by which Nature gets her hook in our nose, and induces us to serve her purposes, which are not our own. This is pessimism, which, like optimism, is a mood, not a philosophy. Neither of them needs refutation, except for the adherent of the opposite mood; and these will never convince each other, for the same arguments are fatal to both. If our desires are clearly contrary to the nature of things, of which we are a part, it is our wisdom and our duty to correct our ambitions, and, like the Bostonian Margaret Fuller, to decide to "accept the universe." "Gad! she'd better," was Carlyle's comment on this declaration. The true inference from Nature's law of vicarious sacrifice is not that life is a fraud, but that selfishness is unnatural. The pessimist cannot condemn the world except by a standard which he finds somewhere, if only in his own heart; in passing sentence upon it he affirms an optimism which he will surrender to any appearances.

The ancients were not pessimists; but they distrusted Hope. I will not follow those who say that they succumbed to the barbarians because they looked back instead of forward; I do not think it is true. If the Greeks and Romans had studied chemistry and metallurgy instead of art, rhetoric, and law, they might have discovered gunpowder and poison gas and kept the Germans north of the Alps. But St. Paul's deliberate verdict on pagan society, that it "had no hope," cannot be lightly set aside. No other religion, before Christianity, ever erected hope into a moral virtue. "We are saved by hope," was a new doctrine when it was pronounced. The later Neoplatonists borrowed St. Paul's triad, Faith, Hope, and Love, adding Truth as a fourth. Hopefulness may have been partly a legacy from Judaism; but it was much more a part of the intense spiritual vitality which was disseminated by the new faith. In an isolated but extremely interesting passage St. Paul extends his hope of "redemption into the glorious liberty of the children of God" to the "whole creation" generally. In the absence of any explanation or parallel passages it is difficult to say what vision of cosmic deliverance was in his mind. Students of early Christian thought must be struck by the vigour of hope in the minds of men, combined with great fluidity in the forms or moulds into which it ran. After much fluctuation, it tended to harden as belief in a supermundane future, a compromise between Jewish and Platonic eschatology, since the Jews set their hopes on a terrestrial future, the Platonists on a supermundane present. Christian philosophers still inclined to the Platonic faith, while popular belief retained the apocalyptic Jewish ideas under the form of

Millenarianism. Religion has oscillated between these two types of belief ever since, and both have suffered considerably by being vulgarized. In times of disorder and decadence, the Platonic ideal world, materialized into a supraterrestrial physics and geography, has tended to prevail: in times of crass prosperity and intellectual confidence the Jewish dream of a kingdom of the saints on earth has been coarsened into promises of "a good time coming." At the time when we were inditing the pæans to Progress which I quoted near the beginning of my lecture, we were evolving a Deuteronomic religion for ourselves even more flattering than the combination of determinism with optimism which science was offering at the same period. We almost persuaded ourselves that the words "the meek-spirited shall possess the earth" were a prophecy of the expansion of England.

It is easy to criticize the forms which Hope has assumed. But the Hope which has generated them is a solid fact, and we have to recognize its indomitable tenacity and power of taking new shapes. The belief in a law of progress, which I have criticized so unmercifully, is one of these forms; and if I am not mistaken, it is nearly worn out. Disraeli in his detached way said, "The European talks of progress because by the aid of a few scientific discoveries he has established a society which has mistaken comfort for civilization." It would not be easy to sum up better the achievements of the nineteenth century, which will be always remembered as the century of accumulation and expansion. It was one of the great ages of the world; and its greatness was bound up with that very idea of progress which, in the crude forms which it usually assumed, we have seen to be an illusion. It was a strenuous, not a self-indulgent age. The profits of industry were not squandered, but turned into new capital, providing new markets and employment for more labour. The nation, as an aggregate, increased in wealth, numbers, and power every day; and public opinion approved this increase, and the sacrifices which it involved. It was a great century; there were giants in the earth in those days; I have no patience with the pygmies who gird at them. But, as its greatest and most representative poet said:

God fulfils himself in many ways,
Lest one good custom should corrupt the world.

The mould in which the Victorian age cast its hopes is broken. There is no law of progress; and the gains of that age now seem to some of us to have been purchased too high, or even to be themselves of doubtful value. In Clough's fine poem, beginning "Hope evermore and believe, O man," a poem in which the ethics of Puritanism find their perfect expression, the poet exhorts us:

Go! say not in thine heart, And what then were it accomplished,
Were the wild impulse allayed, what were the use and the good?

But this question, which the blind Puritan asceticism resolutely thrust on one side, has begun to press for an answer. It had begun to press for an answer before the great cataclysm, which shattered the material symbols of the cult which for a century and a half had absorbed the chief energies of mankind. Whether our widespread discontent is mainly caused, as I sometimes think, by the unnatural conditions of life in large towns, or by the decay of the ideal itself, is not easy to say. In any case, the gods of Queen Victoria's reign are no longer worshiped. And I believe that the dissatisfaction with things as they are is caused not only by the failure of nineteenth-century civilization, but partly also by its success. We no longer wish to progress on those lines if we could. Our apocalyptic dream is vanishing into thin air. It may be that the industrial revolution which began in the reign of George III has produced most of its fruits, and has had its day. We may have to look forward to such a change as is imagined by Anatole France at the end of his *Isle of the Penguins,* when, after an orgy of revolution and destruction, we shall slide back into the quiet rural life of the early modern

period. If so, the authors of the revolution will have cut their own throats, for there can be no great manufacturing towns in such a society. The race will have tried a great experiment, and will have rejected it as unsatisfying. We shall have added something to our experience. Fontenelle exclaimed, "How many foolish things we should say now, if the ancients had not said them all before us!" Fools are not so much afraid of plagiarism as this Frenchman supposed; but it is true that *Eventu rerum stolidi didicere magistro.*

There is much to support the belief that there is a struggle for existence among ideas, and that those tend to prevail which correspond with the changing needs of humanity. It does not necessarily follow that the ideas which prevail are better morally, or even truer to the law of Nature, than those which fail. Life is so chaotic, and development so sporadic and one-sided, that a brief and brilliant success may carry with it the seeds of its own early ruin. The great triumphs of humanity have not come all at once. Architecture reached its climax in an age otherwise barbarous; Roman law was perfected in a dismal age of decline; and the nineteenth century, with its marvels of applied science, has produced the ugliest of all civilizations. There have been notable flowering times of the Spirit of Man—Ages of Pericles, Augustan Ages, Renaissances. The laws which determine these efflorescences are unknown. They may depend on undistinguished periods when force is being stored up. So in individual greatness, the wind bloweth where it listeth. Some of our greatest may have died unknown, *careni quia vate sacro.* Emerson indeed tells us that:

> One accent of the Holy Ghost
> The careless world has never lost.

But I should like to know how Emerson obtained this information. The World has not always been "careless" about its inspired prophets; it has often, as Faust remarks, burnt or crucified them, before they have delivered all their message. The activities of the Race-Spirit have been quite unaccountable. It has stumbled along blindly, falling into every possible pitfall.

The laws of Nature neither promise progress nor forbid it. We could do much to determine our own future; but there has been no consistency about our aspirations, and we have frequently followed false lights, and been disillusioned as much by success as by failure. The well-known law that all institutions carry with them the seeds of their own dissolution is not so much an illustration of the law of cyclical revolution, as a proof that we have been carried to and fro by every wind of doctrine. What we need is a fixed and absolute standard of values, that we may know what we want to get and whither we want to go. It is no answer to say that all values are relative and ought to change. Some values are not relative but absolute. Spiritual progress must be within the sphere of a reality which is not itself progressing, or for which, in Milton's grand words, "progresses the dateless and irrevoluble circle of its own perfection, joining inseparable hands with joy and bliss in overmeasure for ever." Assuredly there must be advance in our apprehension of the ideal, which can never be fully realized because it belongs to the eternal world. We count not ourselves to have apprehended in aspiration any more than in practice. As Nicolas of Cusa says: "To be able to know ever more and more without end, this is our likeness to the eternal Wisdom. Man always desires to know better what he knows, and to love more what he loves; and the whole world is not sufficient for him, because it does not satisfy his craving for knowledge." But since our object is to enter within the realm of unchanging perfection, finite and relative progress cannot be our ultimate aim, and such progress, like everything else most worth having, must not be aimed at too directly. Our ultimate aim is to live in the knowledge and enjoyment of the absolute values, Truth, Goodness, and Beauty. If the Platonists are right, we shall shape our surroundings more effectively by this kind of idealism than by adopting the creed and the methods of sec-

ularism. I have suggested that our disappointments have been very largely due to the unworthiness of our ideals, and to the confused manner in which we have set them before our minds. The best men and women do not seem to be subject to this confusion. So far as they can make their environment, it is a society immensely in advance of anything which has been realized among mankind generally.

If any social amelioration is to be hoped for, its main characteristic will probably be simplication rather than further complexity. This, however, is not a question which can be handled at the end of a lecture.

Plato says of his ideal State that it does not much matter whether it is ever realized on earth or not. The type is laid up in heaven, and approximations to it will be made from time to time, since all living creatures are drawn upwards towards the source of their being. It does not matter very much, if he was right in believing—as we too believe—in human immortality. And yet it does matter; for unless our communing with the eternal Ideas endows us with some creative virtue, some power which makes itself felt upon our immediate environment, it cannot be that we have made those Ideas in any sense our own. There is no alchemy by which we may get golden conduct out of leaden instincts—so Herbert Spencer told us very truly; but if our ideas are of gold, there is an alchemy which will transmute our external activities, so that our contributions to the spiritual temple may be no longer "wood, hay, and stubble," to be destroyed in the next conflagration, but precious and durable material.

For individuals, then, the path of progress is always open; but, as Hesiod told us long before the Sermon on the Mount, it is a narrow path, steep and difficult, especially at first. There will never be a crowd gathered round this gate; "few there be that find it." For this reason, we must cut down our hopes for our nation, for Europe, and for humanity at large, to a very modest and humble aspiration. We have no millennium to look forward to; but neither need we fear any protracted or widespread retrogression. There will be new types of achievement which will enrich the experience of the race; and from time to time, in the long vista which science seems to promise us, there will be new flowering-times of genius and virtue, not less glorious than the age of Sophocles or the age of Shakespeare. They will not merely repeat the triumphs of the past, but will add new varieties to the achievements of the human mind.

Whether the human type itself is capable of further physical, intellectual, or moral improvement, we do not know. It is safe to predict that we shall go on hoping, though our recent hopes have ended in disappointment. Our lower ambitions partly succeed and partly fail, and never wholly satisfy us; of our more worthy visions for our race we may perhaps cherish the faith that no pure hope can ever wither, except that a purer may grow out of its roots.

Whither Mankind?[1]

CHARLES A. BEARD

ANXIETY ABOUT the values and future of civilization is real. It has crept out of the cloister and appears in the forum and market place. It will not pass; it will endure and increase. Forces as potent as the struggle for existence—economic, racial, and nationalistic—will continue to feed it. But while the controversy becomes more intense, the very diversity of the collisions that keep it alive lends confusion to all discussions bearing on the nature

[1] From *Whither Mankind*, parts III to VIII of the Introduction, copyright 1928 by Longmans, Green and Co. Reprinted by permission of Longmans, Green and Co., Inc., publishers.

and destiny of civilization. So while our library shelves sink under the weight of books on the subject, ambiguity rather than clarity and frankness mark the trend of their arguments. Civilization, like politics, makes strange bedfellows

In various places in Europe, for example, we find Marxian communists, Roman Catholics, and violent Chauvinists united in condemning the megalopolitan civilization of modern capitalism, all for different reasons, and certain to divide savagely on the nature and work of the order which they would substitute for it. In Germany, the Nationalists turn against science, machine, and industrialism all the sentiments, religious, patriotic, and class, that spring from their practical situation. In England and America, a school of anti-imperialists, disgusted with the slums and sooty towns of the machine, imagine that the kingdom of heaven must be in the Orient and, under the guise of Oriental wisdom, assail the evils of capitalism at home.

This psychology, of course, is not new. The account of Germany which Tacitus gave to the Romans nearly two thousand years ago may have been designed to hold up the mirror to Roman vices rather than to present a true picture of the tribes beyond the Rhine. The war which Rousseau waged on the civilization of science and reason was conducted in the name of nature, the noble savage, and agriculture. When all the metaphysics and verbiage of Spengler's "Decline of the West" are put aside and the heart of the matter is revealed, it becomes evident that the author is really aiming to glorify an agricultural, as contrasted with a metropolitan, civilization. What really gives him distress and causes him to think that the West is declining is the fact that the city is overcoming the country. "In place of a people true to type," he says, "springing from the soil and reared on it, there now appears a new kind of nomad, loosely cooperating with instable and changing masses, the parasitical city-dweller, without traditions, without religion, concerned only with matters of fact; clever, sterile, and profoundly contemptuous of the countryman, in particular that highest type of agriculturalist, the country gentleman." Stripped of rhetorical paint, this merely reflects the grudge of the Prussian landed-proprietor against the Berlin or Hamburg banker, merchant and manufacturer.

Nor is the confusion that exists among the contestants over the merits of particular "cultures" cleared up by those who speak either glibly or profoundly about the downfall of civilizations. Just what happened when Rome "fell" is nowhere clearly set forth in the immortal pages of Gibbon. It is true, he shows us the unitary state (if a state ever beset by social war deserves the name) dissolving and great artists in letters giving place to sophists and stylists; but whether Roman civilization perished or merely passed over into the next period he leaves for the scholars to debate; whether the masses of the Roman empire, even those upstanding Roman citizens who lived like rabbits in the slums of the Eternal City and were sustained by bread and circuses, were happier, stronger, wiser, and nobler than the people of the so-called "dark-ages" which followed the blaze of Augustan days is nowhere made plain by the philosopher of London and Lausanne.

And it must be confessed that the case presented by Spengler is not much better on the side of explications. He does, no doubt, speak of the coming "transition from constitutional systems to the informal sway of individuals," of "wars of annihilation," of "imperialism," and of "primitive human conditions thrusting themselves upward into high civilized modes of living"; but just how this represents a "decline" and why it presents features more alarming those those of the ages past cannot be discerned from the text of his argument.

Given the liveliness of the present discussion about civilization and the confusion that reigns among those engaged in inquiries respecting the subject, it seems worth while and pertinent to the thinking of our age to take stock, to clarify our notions by defini-

tions and specifications, to invite those who talk with facility about it to deliver a bill of particulars. . . .

At the outset, certain questions seem relevant. What is meant intrinsically by the contrast between Western and Oriental civilizations? By the contrast between the modern, mediaeval, and classical civilizations? What is "the West" that is threatened with a decline? What does a decline imply in terms of population, economy, art, government, literature, and life in general? Is the assumption supported by data or is it a mere hypothesis born of temperament and certain psychological situations induced by outward events such as defeats, disappointments, and adversities in general? If the decline is really imminent, can anything be done about it? If not, must philosophy despair and assume that the universe is meaningless, that the force which carries nations to high pinnacles will shortly become bankrupt itself?

Conceivably a master mind, a modern Aristotle, equipped with all the sciences of the time, could attempt the solution of this riddle, but the intense specialization of our age, the enormous mass of accumulated knowledge precludes any such unitary treatment. Hence the concurrence of many minds is necessary if any progress is to be made.

Beyond yielding the fruits of co-operation, such concurrence itself may be a contribution of some consequence to civilization. "The various forms of intellectual activity which together make up the culture of an age," remarks Walter Pater, "move for the most part from different starting points and by unconnected roads. . . . There come, however, from time to time, eras of more favorable conditions, in which the thoughts of men draw nearer together than is their wont and the many interests of the intellectual world combine in one complete type of culture. The fifteenth century in Italy is one of these happier eras, and what is sometimes said of the age of Pericles is true of that of Lorenzo: it is an age productive in personalities, many-sided, centralized, complete. Here artists and philosophers and those whom the action of the world has elevated and made keen do not live in isolation but breathe a common air and catch light and heat from each other's thought. There is a spirit of general elevation and enlightenment in which all alike communicate."

If Pater's thesis is sound, and it seems to be, then a search for the essence of civilization ought to advance all the arts of the good life, reduce the social friction based upon misconceptions, illuminate the roads before us, and serve humanity in its struggle to get possession of the helm. A symposium on civilization, therefore, appears to be timely and it might possibly be a contribution of something to itself, if that is not an incredible paradox.

But a symposium may readily end in confusion rather than clarification, darkness rather than light, especially if no target is set up to give a general direction to the work of the participants. There is truth in the saying of the poet that everything written is in the nature of a confession. Nothing is more futile than a pretense to a kind of divine omniscience that leads readers by secret passages to predetermined ends.

The purpose of this book is, therefore, publicly admitted. It is not designed to bolster up the arguments of any economic, racial, religious, or nationalist school. It attempts to set forth clearly indubitable facts relevant to the consideration of the subject in hand. It proceeds from the conviction that history reveals no golden age in the past and the additional belief that the achievements of the past three hundred years, good and bad, are not the deeds of willful men and women who have perverted the perfection offered by the middle ages. While laying a firm emphasis on certain aspects of the problems before us, the book is not dominated by any facile optimism. It frankly concedes the force of numerous items in the bill of indictment lodged by critics against modern civilization —its darker and more dangerous features— without condemning it wholesale as a terrible error made through the neglect of the superlative wisdom of other times and places. At any rate, density seems to point to the future —not to the past.

With these preliminary admissions duly made, let us begin the discussion by recalling that a standard dictionary defines civilization as "the state of being reclaimed from the rudeness of savage life and advanced in the arts and learning." In origin, it derives immediately from the Latin word *civitas*, meaning in its concrete usage the rights and privileges of a Roman citizen, and figuratively a body of citizens, the state, commonwealth, or city. Now the rights and privileges of Roman citizens, as over against slaves and subject peoples, were realistic and economic, and it is of more than passing interest to note that in its deeper roots *civitas* comes from *quies*, repose from labor, perhaps that leisure enjoyed by ruling orders. Aside from all philological subtleties, civilization in its strict sense includes all these implements, devices, and practices by which men and women lift themselves above savages—the whole economic order, the system of leisure built upon it, the employment of that leisure, and all manifestations of religion, beauty, and appreciation.

Since the substructure of any civilization is the material fabric that frees mankind from the status of the savage, it follows that every civilization must depend in a large measure upon its geographical environment—rivers, mountains, seas, and natural resources—the state of its tools and industries, the occupations of the people, and the organization of society for the direction of industry. Civilization, therefore, is not a garment that can be put on or off by intellectuals at pleasure, transferred from a Frenchman or an Englishman to a Matabele or Zulu over night. Except for some of the minor decorative arts, a civilization cannot be borrowed without reproducing the accompanying economic order. And economic orders are not arrangements which nations can take on or discard at will without reference to their geographical situation or the competition of their neighbors. Japan, for example, if she is to survive, has no choice but the extensive adoption of the machinery and science employed by her rivals, and with that adoption go its social and artistic habiliments.

If this pattern of thought conforms with the facts, then the classification of civilizations by mere reference to longitude or to chronology is hardly short of absurd. The cultural status of a people is not determined by the element of time or by its position east or west of Greenwich. Many primitive societies have remained in substantially the same condition for thousands of years; where the modes of acquiring a living remain practically static, civilization preserves the same social designs. In the backward places of Europe are to be found numerous village communities which have carried forward into the twentieth century the whole cultural outfit of the middle ages. Hence the distinction between modern and mediæval civilizations, considered as the simple products of time, is intrinsically without meaning.

Nor is the geographical case much better—making astronomy rather than time the basis of calculation. In origin, the terms East and West are mere references to the dawning sun and its dusky resting place. Realistically considered, China and Japan, when compared with Europe of the fourteenth or fifteenth century, reveal more similarities than contrasts. Indeed early Christian missionaries in the Orient were so struck by the resemblance between Buddhist religious ceremonies and their own that they ascribed the former to the devices of the Devil. No doubt a meticulous scholar can discover many fine points of distinction between the feudalism of Japan and that of mediæval Europe, but for practical purposes the substance of the two orders was the same; the fighting men held the same supremacy in both geographical areas. There were differences between the lines and colors of the castle at Osaka and the castle at Warwick but they were both built of stone, their purposes were fundamentally the same, and the mode of life of their inhabitants strangely alike.

Proceeding from the definition given above and the argument thus sketched, it seems to follow that civilizations, apart from tribal and nomadic orders, when considered intrinsically, fall into three general types:

Agricultural-slave, feudal, peasant, or freehold.
Pre-machine urban-handicraft, mercantile, and political capitals.
Mechanical and scientific.

If it be urged that this is merely an economic classification which leaves out of account arts, religion, and learning, the reply is that these things are themselves bent to the order in which they thrive and have meaning and vitality only in relation to their economic substructure. Traces of previous orders no doubt survive or thrust themselves upward into new orders, but they thrive only in so far as they carry with them the soil that originally nourished them. Certainly there are more fundamental resemblances between the culture of a peasant in a remote village in Spain and that of a peasant in a remote village of Japan than between the culture of a Christian priest of the upper Pyrenees and that of a Baptist clergyman in a thriving manufacturing town in Illinois. A Buddhist monk from Horiugi would feel perfectly at home with a Catholic monk from Ravena; but neither of them would enjoy the hospitality or approve the religion of a Methodist parson in Zenith.

What is called Western or modern civilization by way of contrast with the civilization of the Orient or mediæval times is at bottom a civilization that rests upon machinery and science as distinguished from one founded on agriculture or handicraft commerce. It is in reality a technological civilization. It is only about two hundred years old, and, far from shrinking in its influence, is steadily extending its area into agriculture as well as handicrafts. If the records of patent offices, the statistics of production, and the reports of laboratories furnish evidence worthy of credence, technological civilization, instead of showing signs of contraction, threatens to overcome and transform the whole globe.

Considered with respect to its intrinsic nature, technological civilization presents certain precise characteristics. It rests fundamentally on power-driven machinery which transcends the physical limits of its human directors, multiplying indefinitely the capacity for the production of goods. Science in all its branches—physics, chemistry, biology, and psychology—is the servant and upholder of this system. The day of crude invention being almost over, continuous research in the natural sciences is absolutely necessary to the extension of the machine and its market, thus forcing continuously the creation of new goods, new processes, and new modes of life. As the money for learning comes in increasing proportions from taxes on industry and gifts by captains of capitalism, a steady growth in scientific endowments is to be expected, and the scientific curiosity thus aroused and stimulated will hardly fail to expand—and to invade all fields of thought with a technique of ever-refining subtlety. Affording the demand for the output of industry are the vast populations of the globe; hence mass production and marketing are inevitable concomitants of the machine routine.

For the present, machine civilization is associated with capitalism, under which large-scale production has risen to its present stage, but machine civilization is by no means synonymous with capitalism—that ever-changing scheme of exploitation. While the acquisitive instinct of the capitalist who builds factories and starts mass production is particularly emphasized by economists and is, no doubt, a factor of immense moment, it must not be forgotten that the acquisitive passion of the earth's multitudes for the goods, the comforts, and the securities of the classes is an equal, if not a more important, force, and in any case is likely to survive capitalism as we know it. Few choose nakedness when they can be clothed, the frosts of winter when they can be warm, or the misery of bacterial diseases when sanitation is offered to them. In fact, the ascetics and flagellants of the world belong nowhere in the main stream of civilization—and are of dubious utility and service in any civilization.

Though machine civilization has here been treated as if it were an order, it in fact differs from all others in that it is highly dynamic, containing within itself the seeds

of constant reconstruction. Everywhere agricultural civilizations of the pre-machine age have changed only slowly with the fluctuations of markets, the fortunes of governments, and the vicissitudes of knowledge, keeping their basic institutions intact from century to century. Pre-machine urban civilizations have likewise retained their essential characteristics through long lapses of time. But machine civilization based on technology, science, invention, and expanding markets must of necessity change—and rapidly. The order of steam is hardly established before electricity invades it; electricity hardly gains a fair start before the internal combustion engine overtakes it. There has never been anywhere in the world any order comparable with it, and all analogies drawn from the middle ages, classical antiquity, and the Orient are utterly inapplicable to its potentialities, offering no revelations as to its future.

Granted that these essential characteristics of so-called Western civilization, namely, its mechanical and scientific foundations, are realistic, is it a mere "flash in the pan," a historical accident destined to give way to some other order based upon entirely different modes of life, lifting mankind "above the rudeness of the savage"? Now, if the term "decline" in this connection means anything concrete, it signifies the gradual or rapid abandonment of the material modes of production prevailing in any particular age and the habits and arts associated with them. Conceivably the Prussianism of the Hohenzollerns described so well in Spengler's "Prussianism and Socialism," may decline—is declining. It is highly probable that the petty tenure system of the French peasantry, the now sadly diluted aristocracy inherited from the eighteenth century, the church of little mysteries and miracles may decline, but these things are not the peculiar characteristics of the West. They are the remnants of the agricultural complex which the machine is everywhere steadily subduing. The real question is this: can and will machine society "decline"?

It is generally agreed among historians that the decay of agriculture, owing to the lack of scientific management and fertilization, was one of the chief causes for the breakdown of the Roman state. Is it to be supposed that the drive of the masses of mankind for machine-made goods will fail, that large-scale production will be abandoned, that the huge literature of natural science will disappear in the same fashion as most of the literature of ancient Egypt, that the ranks of scientific men will cease in time to be recruited, that the scientific power to meet new situations will fail? An affirmative answer requires a great deal of hardihood. The scientific order is not recruited from a class, such as the patricians of ancient Rome; nor is scientific knowledge the monopoly of a caste likely to dissolve. Unless all visible signs deceive us, there is no reason for supposing that either machinery or science will disappear or even dwindle to insignificance. And they are the basis of the modern civilization.

If Western civilization does not break down from such internal causes, is there good reason for supposing that any of the races now inhabiting Asia or Africa could overcome the machine order of the West by any process, peaceful or warlike, without themselves adopting the technical apparatus of that order? No doubt, some of them are already borrowing various features of machine society, but slowly and with indifferent success. The most efficient of them, the Japanese, still rely largely upon the West for a substantial part of their mechanical outfit—for inventiveness and creative mechanical skill. Unless there is a material decline in Western technology—and no evidence of such a slump is now in sight—then it may be safely contended that none of the agricultural civilizations of Asia or Africa will ever catch up with the scientific development of the West. As things stand at present, none of them gives any promise of being able to overrun the West as the conquerors of Rome overran the provinces of that Empire. Certainly there is not likely to be, in any future that we can foresee, such an equality of

armaments as existed between the best of the Roman legions and the forces of their conquerors. Hence the downfall of the West through conquest may fairly be ruled out of the possibilities of the coming centuries. If, in due time, the East smashes the West on the battlefield, it will be because the East has completely taken over the technology of the West, gone it one better, and thus become Western in civilization. In that case machine civilization will not disappear but will make geographical shift.

Defining civilization narrowly in terms of letters and art, are the probabilities of a "decline" more numerous? Here we approach a more debatable, more intangible, topic. With reference to letters, taking into account the evidence of the last fifty years, there is no sign of a decay—at all events, a decay like that which occurred between the first and the sixth centuries in Roman history. Indeed, there are many cautious critics who tell us that the writers of the past hundred years, with the machine system at a high pitch, may be compared in number, competence, and power without fear with the writers of any century since the appearance of the Roman grand style. Granted that we have no Horace, Shakespeare, or Goethe, we may reasonably answer that literature of their manner has little meaning for a civilization founded on a different basis. Considered in relation to their environment rather than some fictitious absolute, the best of modern writers, it may well be argued, rank with the best of the middle ages and antiquity. If poetry sinks in the scale and tragedy becomes comical, it may be because the mythology upon which they fed is simply foreign to the spirit of the machine age—not because there has been a dissolution of inherited mental powers. The imagination of an Einstein, a Bohr, or a Millikan may well transcend that of a Milton or a Virgil. Who is to decide?

The case of the arts is on a similar footing. For the sake of the argument, it may be conceded that the machine age has produced nothing comparable with the best of the painting, sculpture, and architecture of antiquity and the middle ages. What does that signify? Anything more than a decline in the arts appropriate to an agricultural and market-city era? The machine age is young. As yet it can hardly be said to have created an art of its own, although there are signs of great competence, if not genius, about us —signs of a new art appropriate to speed, mechanics, motion, railway stations, factories, office buildings, and public institutions. Using the lowest common denominator in the reckoning, there is no evidence of a decay in artistic power such as appears in the contrast between the Pantheon of Agrippa and the rude churches of Saxon England. To say that the modern age has produced no ecclesiastical architecture comparable with that of the middle ages is to utter a judgment as relevant to our situation as a statement that the mediæval times can show no aqueducts or baths equal to the noblest structures of pagan Rome. It may be that the machine age will finally prove to be poor in artistic genius—a debatable point—but it can hardly be said that it has produced its typical art, from which a decline may be expected.

Passing to a more tangible subject, is it possible that machine civilization may be destroyed by internal revolutions or civil wars such as have often wrecked great states in the past? That such disturbances will probably arise in the future from time to time cannot be denied, and the recent Bolshevik revolution in Russia is often cited as a warning to contemporary statesmen. If the revolutions of antiquity be taken as illustrations, it must be pointed out that the analogies are to be used with extreme care in all applications to the machine age. When the worst has been said about the condition of the industrial proletariat, it must be conceded that as regards material welfare, knowledge, social consideration, and political power, it is far removed from the proletariat of Rome or the slaves of a more remote antiquity. The kind of servile revolt that was so often ruinous in Greece and Rome is hardly possible in a machine civilization, even if economic distress were to pass anything yet experienced since the eighteeenth century. The most radical of the modern proletariat

want more of the good things of civilization —not a destruction of technology. If the example of Russia be pressed as relevant, the reply is that Russia possessed not a machine, but an agricultural civilization of the crudest sort; peasant soldiers supplied the storm troops of the November revolution, and the Bolsheviki are straining every nerve to maintain their position by promising the peasants and urban dwellers that the benefits of a machine order will surely come. There will be upheavals in machine civilizations, no doubt, and occasional dictatorships like that in the United States between 1861 and 1865, but the triumph of a party dedicated to a deliberate return to pre-machine agriculture with its low standards of life, its diseases, and its illiteracy is beyond the imagination.

Finally, we must face the assertion that wars among the various nations of machine civilization may destroy the whole order. Probably terrible wars will arise and prove costly in blood and treasure, but it is a strain upon the speculative faculties to conceive of any conflict that could destroy the population and mechanical equipment of the Western world so extensively that human vitality and science could not restore economic prosperity and even improve upon the previous order. According to J. S. Mill, the whole mechanical outfit of a capitalistic country can be reproduced in about ten years. Hence the prospect of repeated and costly wars in the future need not lead us to the pessimistic view that suicide is to be the fate of machine civilization. We may admit the reality of the perils ahead without adopting the counsel of despair. If Europe and America were absolutely devastated, Japan with her present equipment in libraries, laboratories, and technology could begin the work of occupying the vacant areas, using the machine process in the operation.

For the reasons thus adduced it may be inferred: that modern civilization founded on science and the machine will not decline after the fashion of older agricultural civilizations; that analogies drawn from ages previous to technology are inapplicable; that according to signs on every hand technology promises to extend its area and intensify its characteristics; that it will afford the substance with which all who expect to lead and teach in the future must reckon.

Such appears to be the promise of the long future, if not the grand destiny of what we call modern civilization—the flexible framework in which the human spirit must operate during the coming centuries. Yet this view by no means precludes the idea that the machine system, as tested by its present results, presents shocking evils and indeed terrible menaces to the noblest faculties of the human race. By the use of material standards for measuring achievement, it is in danger of developing a kind of ignorant complacency that would make Phidias, Sophocles, Horace, St. Augustine, Dante, Michelangelo, Shakespeare, Lord Bacon, Newton, Goethe, Ruskin, and Emerson appear to be mere trifling parasites as compared with Lord Beaverbrook, Hugo Stinnes, John Pierpont Morgan, and Henry Ford. To deny the peril that lies in any such numerical morality would be a work of supererogation. More perilous still is the concentration on the production of goods that will sell quickly at the best price the traffic will bear and fall to pieces quickly—mass production of cheap goods—rather than concentration on the manufacture and exchange of commodities with the finest intrinsic values capable of indefinite endurance. What the creed of "give as little as you can for as much as you can get" will do to the common honesty of mankind, if followed blindly for centuries, can readily be imagined. Finally, it must be admitted that the dedication of the engines of state, supported by a passionate and uninformed chauvinism, to the promotion and sale of machine-made goods is creating zones of international rivalry likely to flame up in wars more vast and destructive than any yet witnessed.

To consider for the moment merely the domestic aspects of the question, the machine civilization is particularly open to attack from three sides.

On æsthetic grounds, it has been assailed for nearly a hundred years, England, the

classical home of the industrial revolution, being naturally enough the mother of the severest critics—Ruskin, Carlyle, Kingsley, and Matthew Arnold. The chief article in their indictment, perhaps, is the contention that men who work with machinery are not creative, joyous, or free, but are slaves to the monotonous routine of the inexorable wheel. In a sense it is true that, in the pre-machine age, each craftsman had a certain leeway in shaping his materials with his tools and that many a common artisan produced articles of great beauty.

Yet the point can be easily overworked. Doubtless the vast majority of mediæval artisans merely followed designs made by master workmen. This is certainly true of artisans in the Orient today. With respect to the mass of mankind, it is safe to assume that the level of monotony on which labor is conducted under the machine régime is by and large not lower but higher than in the handicraft, servile, or slave systems of the past. Let anyone who has doubts on this matter compare the life of laborers on the latifundia of Rome or in the cities of modern China with that of the workers in by far the major portion of machine industries. Those who are prepared to sacrifice the standard of living for the millions to provide conditions presumably favorable to the creative arts must assume a responsibility of the first magnitude.

Indeed, it is not certain, so primitive as yet are the beginnings of machine civilization, that there can be no substitute for the handicrafts as æsthetic stimulants, assuming that mechanical industry is not favorable to the creative life. The machine régime does not do away with the necessity for designing or reduce the opportunities for the practice of that craft: it transfers the operation from the shop to the laboratory; and it remains to be seen whether great æsthetic powers will not flourish after the first storm of capitalism has passed. In any case, it must be admitted that the "cheap and nasty" character of machine-made goods, so marked everywhere, may really be due to the profit-making lust and the desire of the multitude to have imitations of the gewgaws loved by the patricians, not to the inherent nature of machine industry. Possibly what is lost in the merits of individual objects of beauty may be more than offset by city and community planning, realizing new types of æsthetic ideals on a vast, democratic basis. Certainly the worst of the æsthetic offences created by the machine—the hideous factory town—can be avoided by intelligent co-operative action, as the garden-city movement faintly foreshadows. In a hundred years the coal-consuming engine may be as obsolete as the Dodo, and the Birminghams, Pittsburghs, and Essens of the modern world live only in the records of the historians. However this may be, the æsthetes of the future will have to work within the limitations and opportunities created by science and the machine, directed, it may be hoped, by a more intelligent economy and nobler concepts of human values.

Frequently affiliated with æsthetic criticism of the machine and science is the religious attack. With endless reiteration, the charge is made that industrial civilization is materialistic. In reply, the scornful might say, "Well, what of it?" But the issue deserves consideration on its merits, in spite of its illusive nature. As generally used, the term "materialistic" has some of the qualities of moonshine; it is difficult to grasp. It is the fashion of certain Catholic writers to call Protestantism materialistic, on account of its emphasis on thrift and business enterprise—a fashion which some radicals have adopted: Max Weber in Germany and R. H. Tawney in England, for example. With something akin to the same discrimination, Oswald Spengler calls all England materialistic, governed by pecuniary standards—as contrasted with old Prussia where "duty," "honor," and "simple piety" reigned supreme. More recently, André Siegfried, following a hundred English critics, with Matthew Arnold in the lead, has found materialism to be one of the chief characteristics of the United States, as contrasted with the richer and older civilizations of Europe, particularly France. And Gandhi consigns every one of them—England, Prussia, France, and America—to the same bottomless pit of industrial materialism.

When all this verbiage is sifted, it usually means that the charge arises from emotions that have little or no relation to religion or philosophy—from the quarrels of races, sects, and nations.

If religion is taken in a crude, anthropomorphic sense, filling the universe with gods, spirits, and miraculous feats, then beyond question the machine and science are the foes of religion. If it is materialistic to disclose the influence of technology and environment in general upon humanity, then perhaps the machine and science are materialistic. But it is one of the ironies of history that science has shown the shallowness of the old battle between materialist and spiritist and through the mouths of physicists has confessed that it does not know what matter and force are. Matter is motion; motion is matter; both elude us, we are told. Doubtless science does make short shrift of a thousand little mysteries once deemed as essential to Christianity as were the thousand minor gods to the religion of old Japan, but for these little mysteries it has substituted a higher and sublimer mystery.

To descend to the concrete, is the prevention of disease by sanitation more materialistic than curing it by touching saints' bones? Is feeding the multitude by mass production more materialistic than feeding it by a miracle? Is the elimination of famines by a better distribution of goods more materialistic than prevention by the placation of the rain gods? At any rate, it is not likely that science and machinery will be abandoned because the theologian (who seldom refuses to partake of their benefits) wrings his hands and cries out against materialism. After all, how can he consistently maintain that Omnipotent God ruled the world wisely and well until the dawn of the modern age and abandoned it to the Evil One because Henry VIII or Martin Luther quarrelled with the Pope and James Watt invented the steam engine?

Arising, perhaps, from the same emotional source as æsthetic and religious criticisms, is the attack on the machine civilization as lacking in humanitarianism. Without commenting on man's inhumanity to man as an essential characteristic of the race, we may fairly ask on what grounds can anyone argue that the masses were more humanely treated in the agricultural civilization of antiquity or the middle ages than in the machine order of modern times. Tested by the mildness of its laws (brutal as many of them are), by its institutions of care and benevolence, by its death rate (that tell-tale measurement of human welfare), by its standards of life, and by every conceivable measure of human values, machine civilization, even in its present primitive stage, need fear no comparison with any other order on the score of general well-being.

Under the machine and science, the love of beauty, the sense of mystery, and the motive of compassion—sources of æsthetics, religion, and humanism—are not destroyed. They remain essential parts of our nature. But the conditions under which they must operate, the channels they must take, the potentialities of their action are all changed. These ancient forces will become powerful in the modern age just in the proportion that men and women accept the inevitability of science and the machine, understand the nature of the civilization in which they must work, and turn their faces resolutely to the future.

The Future of Man as an Inhabitant of the Earth[1]

KIRTLEY F. MATHER

DURING the first decade or two of the current century, geologists, astronomers, and physicists engaged in many discussions concerning the future of the earth as an abode for life. Some believed that "the end of the world" was relatively close at hand; others, that the prospect for the future was to be measured in terms of hundreds of thousands if not of millions of years. As usual in scientific circles, there has emerged from the conflict of ideas during the years of discussion a general unanimity of opinion, and today the geologic outlook for the future of the earth is quite clear.

Since the turn of the century new methods of measuring the length of geologic time have been discovered and applied. New concepts of the nature and sources of energy have been proposed and tested. New data concerning astronomic space and the distribution of the stars have been obtained. Innumerable details of earth history have been deciphered to give a trustworthy record of the changes that the earth and its inhabitants have undergone in the past. The key to unlock the secrets of the future is now available in this knowledge of the past, and with our present understanding of the processes of nature that key may be intelligently used. All the evidence combines to lead us unmistakably to the conclusion that for many scores, if not for hundreds of millions of years to come, the earth will continue to be a comfortably habitable abode for creatures like ourselves.

Surface temperatures of the earth, the most important item in any consideration of its long-range habitability, are determined by the receipt of solar energy distributed through atmospheric agencies. For any given area of land the annual contribution of heat from the earth's interior, hot though it may be, is just about equal to the warmth received from the sun in 20 minutes by an equal area in equatorial latitudes under a clear sky at midday. The nineteenth-century picture of an earth, initially fiery hot but progressively cooling so that yesterday it displayed a glacial climate and tomorrow it will be too frigid to support life, may now be thrown into the discard. The earth will "grow old and die" only as a result of failure to receive adequate supplies of radiant energy from the sun. The prospect that the sun will "burn itself out" in a decrepit old age is so remote as to baffle all attempts to date that untoward event even by those who are expert in manipulating astronomic figures. Nor is there any likelihood that the space relations between earth and sun will change appreciably within scores of millions of years and put the earth either too close to the sun or too distant from it for comfort.

The lurid pictures of a sudden catastrophic debacle resulting from collision with some other heavenly body—comet, planet, star, or what you will—are products of a vivid imagination wholly without foundation in astronomic fact or theory.

The only plausible alternative to the conclusion that earth and sun will continue the even tenor of their ways for an inconceivably long period of time is that the sun will some day imitate the supernovae occasionally detected among the stars and terminate the existence of the entire solar system by a gigantic explosion. Precisely one such supernova has been observed within the galaxy

[1] Originally published simultaneously in the *Sigma Xi Quarterly*, Vol. 28, No. 1, Spring, 1940, and in *Scientific Monthly*, Vol. 50, March, 1940. Reprinted by the kind permission of the author and publishers.

of the Milky Way and several such in all the other galaxies of stars during the past few decades. The astronomers could, therefore, calculate for us the chances on a statistical basis that any individual star—the sun, for example—would suffer such a fate within any given period of time. The result would be a figure so infinitesimal as to set at rest the mind of even the most jittery of questioners. Pending the discovery of the kind of premonitory symptoms displayed by stars about to blow themselves to atoms, the best that can be done is to rest content in history. Since the earliest records of living creatures were left as fossils, if not indeed since the earliest sedimentary rocks were formed, the sun has faithfully maintained its energy output within a fairly narrow range and has given no evidence of any fluctuations that might suggest any significant change in its behavior.

The geologist may, therefore, turn with confidence from the long perspective of geologic past with its 1½ to 2 billion years of recorded earth history to a similarly long prospect for the future. Time is one of the most overwhelming resources of our universe.

It should not be inferred, however, that the earth will continue in the future to display the same environmental conditions as those which we enjoy today. The history of mankind thus far has been enacted against a background that in the full perspective of earth history is truly extraordinary. The geologic period in which we live is a time of unusually rugged and extensive lands, with notably varied climate ranging from the glacial cold of Greenland and Antarctica to the oppressive warmth and humidity of certain equatorial regions. Such conditions have apparently recurred many times at long-spaced intervals since the oldest known rocks were formed, but added together the time thus represented cannot be as much as a fourth of geologic time. Much more characteristic of earth history as a whole have been the conditions illustrated by those periods when corals thrived in shallow seas occupying the site of Baffin Land and North Greenland, and coal-forming plants flourished on Antarctica. The probability is strong that eventually, say in 5 or 10 million years, the earth will display again the physical conditions of many past geologic periods that were characterized by broad low lands, wide shallow seas, and uniform genial climate.

But most of us have a greater interest in the next few centuries than in the subsequent millions of years. Minor changes in climate will doubtless occur just as they have in the last few thousand years. Unfortunately, or perhaps fortunately, there is no basis for prediction concerning their nature, whether for better or for worse. There is really no good reason for referring to the present as "a post-glacial epoch"; it may prove to be an interglacial epoch. But our ancestors weathered ice ages in the past, and presumably we are better equipped for such contingencies than they were. Should the average annual temperature of the earth as a whole be reduced something like 10° F. and remain at that lower level for a few millennia, it is likely that once more the greater part of Canada, the northern United States, and the Scandinavian countries would be buried beneath great ice sheets. But in consequence of the removal of water from the sea as vapor to form the snow to produce the glacial ice, considerable areas now shallowly submerged along the coast lines in middle and equatorial latitudes would emerge as dry land. Indeed, it is likely that the area of land suitable for human abode would be nearly or quite as great at the climax of a glacial period as it is today.

By the same token, the disappearance of existing bodies of glacial ice as a result of rapid amelioration of climate in the not-distant future would, if it occurred, be a decidedly mixed blessing. Return to the sea the water now imprisoned in the ice on the Arctic islands, Greenland and Antarctica without any compensating changes in crustal elevation, and sea level would be raised 150 to 160 feet the world around. Considering the number of people who now work or sleep in buildings in metropolitan communities not over 150 feet above sea level, the importance of such a change is readily apparent. But from the geologists' point of view these are

relatively trivial matters. With due deference to the nature of the climatic variations and geologic changes which are certain to occur in the next few thousand years, there is nothing to be expected from such sources that would seriously deter the human species from maintaining a comfortable existence on the surface of the earth for an indefinitely long period of time—a period to be measured in millions rather than in mere thousands of years.

2

At last, it is generally understood that man is a part of nature. He may be something more than an animal (that depends largely upon definition), but he is none the less truly a part of the animal world. Like the other inhabitants of the earth, man is a product of evolutionary processes operating on this particular planet.

We may be the latest product of the creative forces displaying themselves in the organic development taking place in this particular portion of the cosmos, but we have no reason to assume that we are the last achievement of those forces. Nor does the fact that man has arisen from a lowly origin through processes of evolution validate the optimistic inference that he will necessarily continue his progress to ever higher levels of activity. Evolution does not guarantee progress; it merely guarantees change. The change may be for the better or the worse, depending upon the conditions of time and place and the vitality of the individuals concerned.

The pages of Mother Earth's diary reveal an amazing and thought-provoking record of the progress of living creatures throughout the long eras of earth history. Again and again, in the procession of the living, dynasties of animals or plants have arisen from a humble origin to a position of world supremacy, maintained for a comparatively brief period and then lost forever. Some have disappeared entirely as their paths have led them off into blind alleys. Others have sunk to a low level and have continued a degenerate existence to the present day. A few have given rise to other and more efficient forms of life that superseded their predecessors as leaders in the procession. Gradually we are discovering some of the reasons for success and failure along the path of life. Beyond question, man may profit from these experiences of the past, if he uses the intellectual and moral resources which are available for him.

From the point of view attained through knowledge of geologic life development, man has today a unique opportunity to gain continuing security for himself and his progeny on the face of the earth, but whether or not he takes advantage of that opportunity is to be determined largely by himself. So far as we can tell, man is the first animal possessing the power to determine his own evolutionary destiny, but there is nothing in the record which guarantees that he will use that power wisely.

The animal species that in the past have been able to maintain their existence for more than 2 or 3 million years are relatively few in number. Most of them were comparatively simple types belonging to the less highly organized branches or phyla of the animal kingdom. Many were inhabitants of the sea where environmental conditions were remarkably stable throughout long periods of time. Among placental mammals, the major subdivision of the vertebrates to which man belongs, there is no similar record of longevity. Except under extraordinary conditions of geographic isolation, no species of placental mammal has persisted more than 2 or 3 million years. No matter how successful it may have been temporarily in multiplying and spreading over the face of the earth, each has become extinct in a geologically brief span of time. Perhaps a half million years might appropriately be taken as the average "life" of a species in this group of highly organized and notably complex creatures.

But extinction does not necessarily mean failure; it has frequently indicated the acme of achievement. For example, some of the now extinct three-toed horses and four-toed camels passed on "the torch of progress" to

their descendants, the one-toed horses and two-toed camels, and thus gained long-continuing security for their kind.

What then does the future hold for mankind? Genus *Homo* has already existed for 3 or 4 hundred thousand years; the species *Homo sapiens* has about 50 thousand years to its credit. If the average applies, we may expect nearly or quite a half million years more of existence for our kind and then either oblivion as we reach the end of a blind alley or progressive development into some type of descendant better adjusted than we to the total environmental factors of the time.

3

But does the average apply? Must man exit from the scene through either of the doors, that which closed behind the dinosaurs and titanotheres or that which opened before the three-toed horses and notharctines?

Most creatures have gained security by specializing in adjustment of structure and habit to particular environmental conditions, whereas man is a specialist in adjustability of structures and habits to a variety of environments. No other vertebrate can live as can he on Antarctic ice cap, in Amazonian jungle, beneath the surface of the sea, or high in the air.

Furthermore, man is the world's foremost specialist in transforming environments to bring them within the range of his powers. Far more efficient than the beaver or the mound-building ant, he drains the swamp, irrigates the desert, tunnels the mountain, bridges the river, digs the canal, conditions the air in home, factory, and office.

As a matter of fact, adjustability to environment is accomplished more by controlling surroundings than by modifying internal organs or essential functions of the body. When we ascend with Major Stevens into the stratosphere, or dive with Dr. Beebe 500 fathoms deep off Bermuda, or live with Admiral Byrd through the long night of Little America, we take along with us a sample of sea-level atmosphere and temperate climate that is our real environment in a situation otherwise unbearable. Fur-lined parkas and tropical linen suits are but a medium for ensuring an immediate environment as nearly as possible like that of middle latitudes when living in polar or equatorial surroundings.

But regardless of interpretation of procedure, the result is clear. Man has placed himself in control of external conditions to an extent immeasurably greater than any other creature. He has practically "drawn the teeth" of environment.

Although we know little of the details, it is certain that most of the creatures of the past, who "have had their day and ceased to be," were forced into extinction by changes of one sort or another in their environment, changes which came with such relative speed that they were unable to make adjustment to them in time. Man need have no fear on that score.

4

It is, however, immediately apparent that man's conquest of his surroundings has resulted from his clever use of things. Unless there is a ceaseless flow of cotton, flax, and wool, of coal, iron, and petroleum, of copper, lead, and tin, from ground to processing plant to consumer, he becomes a puny weakling. It is because he uses certain resources provided by his environment that he is freed from slavery to his environment. Are these resources adequate to keep him supplied with what he needs to maintain indefinitely the sort of existence to which he has accustomed himself?

There are two fundamental sources of the goods and the energy that man uses in the grim business of obtaining the sort of living that he apparently desires. On the one hand there is the farm and the waterfall, on the other there is the mine and the quarry. Things which grow in the field or forest, and power produced by falling water are in the category of annual income. Now that scientific research has made available the limitless quantity of nitrogen in the air for use as fertilizer, the resources of the plant and animal kingdoms are renewable; we use them,

but we need never use them up. In startling contrast, the resources of the mineral kingdom are nonrenewable; they are in the category of accumulated capital. Petroleum and coal, copper and iron, lead and vanadium, these and many other prerequisites of modern civilization have been accumulated by nature through hundreds of millions of years of geologic activity. Thanks to scientific research, man is exhausting that store of mineral wealth in a few hundred, or at most a few thousand, years. That inescapable fact is at rock bottom one of the most fundamental causes of economic distress, of war between nations, and of strife between classes.

Fairly accurate estimates of the world stores of many nonrenewable resources are now available. Take petroleum as an illustration. The known available reserves of petroleum beneath the surface of the United States total at present approximately 17 billion barrels. Experts differ in their guesses as to the quantity of petroleum that may be discovered in the future in areas that have not yet been adequately explored with the drill, or in known fields by discovery of deeper reservoirs not yet reached by the deepest wells in those fields. There are also many varying shades of optimism and pessimism concerning the possibility of increasing materially the percentage of recovery of the oil present in a reservoir rock when penetrated by drilling operations. Estimates of the quantity to be added to our petroleum reserves from those two sources range from 7 or 8 billion barrels to 15 or 20 billion. I would incline toward the larger figures, considering them as maxima that are extremely unlikely to be exceeded. On that basis, the present store of available petroleum beneath the surface of the United States is 25 to 35 billion barrels. That is only about 30 times the annual domestic consumption of petroleum in recent years. The average annual production of petroleum in the United Staes during the 5 years from 1934 through 1938 was almost 1 billion 100 million barrels, and the 1939 production exceeds 1¼ billion barrels. At the present rate of withdrawal, the domestic stores of this essential raw material would, therefore, be exhausted in less than a third of a century.

Data are not nearly so precise for the majority of foreign countries as for the United States. It is, however, fairly safe to conclude that the world stores of petroleum will last only something like 75 years at the present rate of withdrawal. With the possible exception of Mexico, no other country has been as successful as the United States in the attempt to exhaust its petroleum resources in the shortest possible period of time, but rapid progress toward that result is now being made in many regions.

Lest we become too pessimistic in response to such unwelcome figures, we should promptly note that substitutes for petroleum are already known. Gasoline, fuel oil, and lubricating oil can now be manufactured from coal and other rocks rich in carbon, by processes of hydrogenation and polymerization. These are expensive processes and their products cannot now compete with the products from petroleum even in countries far removed, both geographically and psychologically, from the more productive oil fields. They will, however, come into use more and more in the next few decades.

Enough bituminous and subbituminous coal is known to be available within the United States to meet the present annual demand for coal, plus enough to manufacture gasoline and fuel oil in sufficient quantity to meet current demands for at least 2,000 years. In addition there is enough oil shale—a rock rich in carbon but containing little or no oil—to meet present needs for petroleum products for at least 3,000 or 4,000 years.

Although petroleum affords an excellent illustration of the relation of nonrenewable resources to the activities of man, it is by no means typical of the items comprising nature's accumulated capital. For nearly all of the important nonrenewable resources, the known world stores are thousands of times as great as the annual world consumption instead of less than a hundred times. But for the few which like petroleum are not known to be available in such vast quantities, the story is much the same. Substitutes are

already known, or potential sources of alternative supply are already at hand, in quantities adequate to meet our current needs for at least 2,000 or 3,000 years. There is, therefore, no prospect of the imminent exhaustion of any of the essential raw materials, so far as the world as a whole is concerned, provided our demands for them are not multiplied rapidly in the future.

That, of course, raises another question. Will the demand for nonrenewable resources increase materially in the future and thus hasten their exhaustion? Recalling the fact that the human population of the earth has increased almost fivefold in number in the last 300 years, we might well be fearful on that score. The study of current population trends, however, makes it readily apparent that the next few hundred years will by no means duplicate that record of the past. If present trends continue, the all-time maximum population of the United States will be attained about the year 1970 and will total little more than 150 million souls. Thereafter, except for possible influx of immigrants from other countries, no further increase in numbers is to be expected.

Accurate figures are available for only a few other countries, such as England, France, and Germany, but there is a strong probability that the all-time maximum for the white races will be reached during the last third of the twentieth century and for the entire population of the earth before the end of the twenty-first century. Although the human family has doubled its numbers since 1860, it is extremely unlikely that it will ever reach twice its present number of approximately 2 billion. The pressure of demand for nonrenewable resources will not, therefore, become acute because of the increase in population in the near future. Mother Earth is a very wealthy benefactress, and our heritage of physical resources is far greater than ordinarily supposed.

There is, however, another reason why current consumption of nonrenewable resources cannot be taken as the basis for computing the "life" of such stores of basic materials. The demand for automobiles, telephones, radios, airplanes, and zippers, is today very unevenly distributed. Only a small fraction of the human population uses such things in any large amount. Other peoples are beginning to demand them and will do so increasingly as they become acquainted with the "benefits of civilization." In a few decades, unless we return to savagery, the world demand for many nonrenewable resources will be twice or thrice that of today.

Taking all these things into consideration, it would appear that world stores of needed natural resources are adequate to supply a basis for the comfortable existence of every human being who is likely to dwell anywhere on the face of the earth for something like a thousand years to come.

Even so, there may be found here an excuse for the policy of "grabbing while the grabbing is good" which motivates many individuals and nations at the present time. That excuse might, of course, be offset by the suggestion that there is no need to take thought for a morrow a thousand years hence, if we have any respect for the ingenuity of our remote offspring. There is, however, another phase of current trends in human history that should not be overlooked in this connection.

One hundred years ago, something like 80 per cent of all the things man used had their source on farms; most of the energy used to do the work of the world came from the muscles of living beings and from falling water. Today only about 30 per cent of the things man uses come from things that grow; most of the energy with which work is done comes from petroleum and coal. For a century or more, the policy has been to use relatively less of the annual income and more of the stored capital.

Now comes the change. Automobile steering wheels are made from soy beans; piano keys from cottage cheese; innumerable articles fashioned of plastics are produced in part from corncobs and alfalfa; multitudinous metal and rubber substitutes are synthesized from various farm crops. Energy is transmitted at high voltages for hundreds of miles from hydro-electric turbines. A considerable

portion of the annual budget for research is being devoted to progress in the direction of using more of the renewable resources—man's annual income, and less of the nonrenewable resources—nature's stored capital.

What this new policy will mean is readily apparent. With progress along such lines, the pressure for political control of metalliferous ore deposits, coal fields, and oil pools is lessened. Much of the physical basis for international jealousy is liquidated. At last the intelligence of science may make it truly practical to beat our "swords into ploughshares, our spears into pruning hooks."

Again comes the insistent question from the pessimistic critic. Is there land enough? Is there sufficient fertile soil to provide adequate food and in addition the plant materials for the ever-expanding chemical industries? And again we hear the same reply. Yes, there is enough and to spare. J. D. Bernal computes from apparently valid data that the cultivation of 2 billion acres of land by the methods now in vogue in Great Britain would provide an optimum food supply for the entire population of the earth. "Two billion acres is less than half the present cultivated area of 4 billion 200 million acres, itself hardly 12 per cent of the land surface of the earth." And in this calculation no account is taken of the increased yields that may confidently be expected from the continuing research of agronomists, plant breeders, and experts in animal husbandry, not to mention recent developments in the new science of the soilless growth of plants. Evidently, the predictions of Malthus notwithstanding, mankind need have no fear that increasing populations will place an impossible burden upon the available sources of food. Human ingenuity, intelligent use of renewable resources, wise adjustment of structures and habits to environmental conditions, seem competent to dispel that dread shadow.

But these optimistic conclusions concerning the relation of man to the nonrenewable and renewable resources essential for comfortable existence are based upon world statistics. Obviously they do not apply with equal force to the economy of individual nations. No nation, not even the Soviet Union, Brazil, or the United States of America, embraces within its political frontiers a sufficient variety of geologic structures to give it adequate supplies of all the various metalliferous ores necessary as raw materials for modern industrial operations. The United States, for example, must import nickel, tin, antimony, chromium, and platinum if American manufacturers are to use those metals in the fabrication of articles essential to what we are pleased to call the civilized way of life. Likewise, no nation enjoys a sufficient variety of climatic conditions to permit all kinds of foodstuffs to be grown on its farms and fields or gathered from its forests, and to allow the growth of all the various plants contributing raw materials to industry. The United States, again the most significant example for us, is forced to import all the bananas, coffee, tea, camphor, coconuts, flax, jute, quinine, rubber, and shellac consumed in this country, either from foreign countries or its own overseas possessions. It is entirely possible that, within a few decades, substitutes of domestic origin may be available to take the place of many, or even all, of such commodities or that plant breeders and agronomists may find a practical way of extending the geographical limits of some of the plants whose products are considered essential so that any nation occupying a large fraction of any continent may actually be self-sufficient. But for the present and probably for a long time to come it is evident that every nation is dependent upon many other nations for the raw materials that it needs for its own industrial prosperity.

Perhaps the most important fact concerning the life of man today is this fact of interdependence. No nation, community, or individual can gain any lasting measure of security without taking that fact into consideration. The resources that man must utilize, if he wishes to escape the fate of his less intelligent relatives now known only by their fossil remains, are unevenly distributed and locally concentrated. The techniques of discovering and utilizing them are now fairly

well known, but satisfactory procedures for making them and their products available to all members of the human family are not close at hand.

The very solution of the physical problems which man encounters in his attempt to maintain his foothold upon the earth brings him all the more forcefully into bruising contact with physical and spiritual problems that must also be solved if he is to continue his existence on this planet. The critical question for the twentieth century is: How can 2 or 3 billion human beings be satisfactorily organized for the wise use and equitable distribution of resources that are abundant enough for all, but are unevenly scattered over the face of the earth? Clearly, the future of man depends upon finding and applying the correct answer to the specific but far-reaching question.

Man is not only a specialist in the art of coordinated activity, but the trend toward organization is recognizable in the entire development of cosmic administration. Electrons, neutrons, and protons are organized into atoms, atoms into molecules, molecules into compounds. Some of the compounds prove to be cells, and these are organized to form individual plants and animals. Latest of all in the history of creative evolution certain individuals have been organized into societies. Transcending all that has gone before is the development of human society, obviously the most difficult, but at the same time potentially the most glorious organization yet attempted.

Two antagonistic alternatives present themselves as possible bases for this organization. The issue between the two has never before been so clearly drawn as it is today. The social group, whether it be the family, the industrial or commercial company, or the political unit, may be organized on the principle of regimentation, or it may be developed according to democratic principles. Both methods are being tried under a variety of conditions, and each has something to be said in its favor. But both cannot be equally conducive to the continuing existence of mankind. One or the other must be selected as the basis for the future security of man.

If regimentation be the choice, then the great mass of humankind must be trained for obedience—blind, unquestioning, but superbly skillful obedience. The educator becomes the intellectual and spiritual counterpart of the drill sergeant in the army. This is no menial task, nor is its objective a mean one. Skill is a commodity of which there is never likely to be an oversupply. On the other hand, if democracy be the choice, the great mass of humankind must be trained for wise, self-determined cooperation. Precisely those qualities of mind and heart which have long been extolled in Christian doctrine must be developed to the fullest possible extent. Not only skill but also the ability to govern oneself, the eternal prerequisite for freedom, must be developed in each member of the group.

Insofar as physical existence is concerned, there would seem to be little or no choice between these alternatives. Human nature being what it is today, perhaps the regimentation of society may temporarily be the more efficient method. But the full circle of organic law embraces more than mere existence. From the continuity of the evolutionary process, there has emerged a creature who is aware of vivid values in life that may be found beyond the goods necessary for comfortable existence. Ideas and ideals are powerful determining factors in the world today, and among them the ideal of freedom for the individual in the midst of social restraint is the most vital and compelling of all. Though it baffle our scientific tools for measurement, it is nonetheless a reality.

It is in the yearning for freedom, the love of beauty, the search for truth, the recognition of moral law and in the awareness of spiritual forces that human nature is distinguished from all other sorts of nature. Man shares with other animals the need for satisfactory economics, for adequate food and shelter, for the goods essential to existence, but his needs transcend these physical factors because his nature differs from theirs. Probably nine-tenths of all the words that

have been used since the dawn of speech in reference to "human nature" have referred to those elements in the nature of man that are shared with other animals rather than to those that are man's unique possession. It would be far better to concentrate upon the latter and thus to distinguish human nature from animal nature.

Regimentation may be good for man as an animal; through that type of social organization his need for goods may be efficiently supplied. But regimentation is certainly not good for human nature as thus distinguished. Experience verifies what wisdom foresees; regimentation stultifies the spirit, destroys personality, standardizes thought and action. Worst of all, regimentation means stagnation of the creative process and, as we have seen, stagnation among the more complexly organized vertebrates has led inevitably to extinction. If man attempts to live by bread alone, mankind commits collective suicide. Apparently the best and perhaps the only chance for mankind to succeed in the quest for security is through progress in the art of living on a high spiritual plane rather than through exclusive attention to the science of existence on a purely physical level.

5

To put this same thought in more specific terms, it means that coordinated activity directed toward efficient organization of individuals must become cooperative activity directed toward the enrichment of personality within an efficiently organized society. This requires both intelligence and good will.

Fortunately, these characteristics are uniquely developed in the species of placental mammal with which we are pre-eminently concerned. Man is a specialist in the use of both. The trend of the past 5,000 years may well continue, despite numerous temporary setbacks, throughout the next few centuries at least.

It is sometimes suggested that because man has specialized in brains, brains may cause his downfall, just as presumably the overspecialization in external armament contributed to the downfall of certain herbivorous dinosaurs. That argument by analogy is, however, heavily punctuated with fallacies. There is as yet no evidence that mankind is weighted down with a superabundance of intelligence. On the contrary, it is failure to act intelligently that endangers individuals and groups in the midst of competition. To see in advance the remote consequences of contemplated action is an ability that ought to be increasingly cultivated rather than scouted as a menace.

There seems to be no good reason why a sound mind should not be accompanied by a sound body. If the number of psychopathic individuals is increasing in this high-speed, technologic age, it is a challenge to be met not by bemoaning the imminent collapse of civilization but by intelligent adjustment of habits and activities to the new demands of the new times.

Once the commitment is made to the belief that the cooperative way of life offers the best chance for the future security of man as an inhabitant of the earth, the need is greater for intelligence to be used as a guide for good will, rather than for good will to be applied as a brake on any possible increase in intelligence.

The roots of self-centered individualism may be traced backward for at least 600 million years in the record of geologic life development, whereas our heritage of social consciousness dates from a time only about 60 million years ago when gregarious instincts became clearly evident among placental mammals. That trend is, however, especially apparent in the group from which mankind has stemmed.

Man is still in the stage of specific youth. His golden age, if any, is in the future rather than in the past. Human nature is still sufficiently plastic and pliable to permit considerable change, notably in this important area of attitudes and relationships wherein the increase of good will as a motive for action seems most likely to result in beneficial adjustments to the new factors in the environment.

In thus seeking a satisfactory coordination

of intelligence and good will, it becomes necessary for research scientists to give more thought than has been customary in the past to the social consequences of their work. They share with statesmen, politicians, educators, and all molders of public opinion the responsibility for determining the uses to which the new tools provided by scientific research are put. As scientists, they should continue to seek truth regardless of its consequences and to increase human efficiency in every possible way, but as members of society, as individual representatives of a species seeking future security as inhabitants of the earth, they must also do their utmost to ensure wise use of knowledge and constructive application of energy.

There is a real difference between the so-called social sciences and the natural and physical science that has an important bearing here. It is not that there is anything unnatural about the social sciences. Man is a part of nature, and the study of human society is just as truly natural science in the real sense of the term as any other study. The difference arises from the peculiar factors and particular functions pertaining to the cooperative way of life. Whereas the scientific use of things may be achieved through the efforts of a very small minority of the citizens, provided with adequate facilities for research, the scientific organization of society in a democracy can be achieved only when the majority of its citizens have the scientific attitude toward social problems and act in accordance with that attitude of mind. In other words, only a few physicists, chemists, and technologists are required for the mastery of our physical environment, but for victory in the struggle with ourselves every man must be his own sociologist.

Although this places upon the forces of education a Herculean task, it is not nearly so impossible an assignment as at a first glance it might appear to be. In the first place, the responsibility upon the individual citizen is rarely that of designing a new social structure or charting a new program for society. Almost invariably it is his duty merely to select from many plans, programs, or proposals the one that seems to him most likely to produce the most desirable results for all concerned. In the second place, scientific habits of mind have already been developed to a greater extent than is ordinarily recognized. The garage mechanic attacks the problem of a balky automobile in a truly scientific manner. The salesman uses psychology in planning his approach to a difficult prospect. The housewife thinks scientifically when about to concoct a new dessert or redecorate the living room. In most cases, it is only necessary to apply in the area of social relationships the same habits of mind that have been followed in the area of individual behavior.

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In conclusion, the outlook for the future of man as an inhabitant of the earth is far from pessimistic. If certain tendencies already developing are encouraged and certain resources already available are capitalized to the full, there is good reason to expect that mankind will maintain existence and even live happily for an indefinitely long period of time. The opportunity is his to demonstrate the intrinsic worth of biologic phenomena and thus to justify the vast expenditure of time and energy involved in organic evolution. With greater emphasis upon the development of intelligence and good will, he may achieve that which the temporarily triumphant dynasties of the past have failed to achieve. Thus the geologist may turn from the long perspective of geologic history to the enticing vista of the geologic future of earth and man with high hope and even with confident assurance.

Palamedes [1]

ALEXANDER WEINSTEIN

THE ADVANCE OF SCIENCE, which formerly inspired mankind with confidence, has in recent years resulted in diffidence and even despair. In ancient times Archimedes could boast, "Give me where to stand and I will move the earth"; at the beginning of the modern era Francis Bacon took the whole world for his province. Newton's discoveries (so Halley said) raised man to the level of the gods; and subsequent discoveries raised him above divinity. Laplace found God an unnecessary hypothesis in astronomy, Lyell in geology, Darwin in biology. Thus the drama of Eden was reenacted on a larger stage and with the roles reversed: God was banished from both heaven and earth, while Huxley remarked in a satanic and audible aside that man had created God in his own image, and Swinburne sang like an archangel:

Glory to Man in the Highest! for Man is the master of things.

There was, toward the end of the nineteenth century, a general impression that through science man had indeed conquered the external world and laid down its laws once and for all. There seemed nothing more to do but to turn science inward on ourselves; and that was what Galton proposed in his program of eugenics. The human species had outstripped all others in the evolutionary race; could it not go still farther? Could not men

> rise on stepping stones
> of their dead selves to higher things?

Somehow this boasting is out of tune with the temper of today. The external world appears much more complicated than it did in the last century; and the foundations on which it rested securely are everywhere giving way beneath it. No longer do we stand firmly on the earth and raise our heads proudly among the stars; rather we totter precariously on shifting sands and peer tremulously into the darkness. Whether or not one shares this attitude, one cannot help realizing its prevalence.

To the loss of self-confidence there have been three different reactions. One is an attempt to turn away from science and go back to a prescientific mode of living. This has been the program of the romanticists and the advocates of a simple life; of Samuel Butler in his proposal to abolish machines and of his numerous successors who cry out against the machine age today. The suggestion has even been put forward that for a time we suspend research and take a holiday from science. This revolt against civilization has often been inspired by a love of nature, and there is something in it that would appeal to a society of naturalists; but on the whole it is of course an avoidance of the problem rather than a solution. A second proposal is to continue the scientific transformation of the environment to the utmost, and so make the world a better place to live in. This is the solution most generally advocated, particularly by scientists, who have already done so much to transform the world. But even those who realize its necessity are beginning to doubt whether such a transformation is a sufficient solution of the problem. The human race, or at any rate a large part of it, seems incapable of coping with the complexities of the civilization which it has itself devised; how will it control a civilization still more complicated? There seems to be a real need for an increase in man's inborn capacities. Thus a third proposal is to adopt the program

[1] From *The American Naturalist*, Vol. 67, 1933, reprinted by permission of The Science Press, publishers.

of eugenics; and even to those who are not entirely convinced of its necessity, the improvement of future generations has a moral and an esthetic appeal.

If we are to make a better breed of men, we must first decide what we mean by "better" and by "good." Thus scientists found themselves confronted with a problem in ethics; this, too, at a time when they had been congratulating themselves on having finally and irrevocably banished from their outlook the moral considerations so common in ancient and medieval science. Moreover, the scientist could not, like the philosopher, approach the problem in leisurely fashion; he had to take it in his stride and solve it quickly as a mere preliminary to a problem of his own. A way out of the difficulty seemed to be indicated by a suggestion of Galton's: could we not discover the direction in which evolution is tending and accelerate its progress? It appeared obvious that as evolution had transformed amoeba into man, so it would transform man into superman. To many it seemed obvious also that within the human species the victor in the evolutionary struggle was the white race: "Better fifty years of Europe than a cycle of Cathay." And within the white race the most successful were obviously the upper classes. If we selected from these we should be helping evolution along—giving the inevitable a shove in the right direction.

But the inevitable refused to be shoved. The upper classes, far from supplanting the others, were themselves found to be dying out because of their low birth rate. It was even said that the very existence of the white race was threatened by the prolificity of others; and while politicians spoke of the yellow peril there was talk in biological circles of the rising tide of color. The logical conclusion from all this was of course that the white race and particularly its upper classes are not the fittest in an evolutionary sense; but this conclusion was distasteful to the eugenists, who were themselves largely upper-class whites. They decided instead that the law of the survival of the fittest was being broken and began to cry aloud for its-enforcement: they wanted conditions made such that the existence of the upper classes would be guaranteed.

Whatever we may think of such a procedure, its justification is no longer in evolution but in our own preferences; and if our preferences are to have any objective validity, we must be certain first that race and class differences are genetic, and second that the qualities we prefer are really superior.

The hypothesis that all race and class differences are genetic is often based on views attributed to Galton; it is commonly believed that as a result of his researches he came to the conclusion that nature prevails enormously over nurture. Most biologists would probably consider it a travesty to say what Galton proved was that differences in heredity are more potent than differences in environment when the differences in environment are not too great; and that is the meaning of Galton's own summaries of his results. "The evidence was overwhelming that the power of nature was far stronger than that of nurture, when the nurtures of the persons compared were not exceedingly different." "There is no escape from the conclusion that nature prevails enormously over nurture when the differences of nurture do not exceed what is commonly to be found among persons of the same rank of society and in the same country." Obviously this does not mean that environmental differences between races or classes can be neglected.

Galton himself believed that the environment affects many traits:

> Different aspects of the multifarious character of man respond to different calls from without, so that the same individual, and, much more, the same race, may behave very differently at different epochs. There may have been no fundamental change of character, but a different phase or mood of it may have been evoked by special circumstances, or those persons in whom that mood is naturally dominant may through some accident have the opportunity of acting for the time as representatives of the race . . . Sudden eras of great intellectual progress can not be

due to any alteration in the natural faculties of the race, because there has not been time for that, but to their being directed in productive channels.

It is often said that savages differ fundamentally from civilized peoples in being conservative and unenterprising. Even this difference Galton explained environmentally. To a civilized man, he said, change is easy because of the abundance of his material resources; whereas to a savage, whose resources are small, change is difficult so that "he is perforce taught to be conservative, his ideas are fixed, and he becomes scandalized even at the suggestion of change."

Differences within the same race and social class were also attributed by Galton to environment. He thought that it was "owing to the favourable conditions of their early training, that an unusually large proportion of the sons of the most gifted men of science become distinguished in the same career." He ascribed the choice of a scientific or of a church career to the influence of the mother in early childhood. Galton held such strong views on the persistence of childhood impressions that it is surprising he has not been adopted by the Freudians.

> The furniture of a man's mind [he wrote] chiefly consists of his recollections and the bonds that unite them. As all this is the fruit of experience, it must differ greatly in different minds according to their individual experiences. I have endeavoured to take stock of my own mental furniture in the way described in the next chapter, in which it will be seen how large a part consists of childish recollections, testifying to the permanent effect of many of the results of early education. The same fact has been strongly brought out by the replies from correspondents whom I had questioned on their mental imagery. It was frequently stated that the mental image invariably evoked by certain words was some event of childish experience or fancy. . . .
>
> Our abstract ideas being mostly drawn from external experiences, their character also must depend upon the events of our individual histories. . . . The character of our abstract ideas, therefore, depends, to a considerable degree, on our nurture.

I have quoted Galton in some detail because he is generally misrepresented, and because his views, while not necessarily correct, were based on a careful and penetrating examination of much evidence. Occasionally, it is true, his words can be interpreted to mean that the power of heredity is overwhelming and the influence of environment negligible; but only, I think, because he has neglected to say explicitly that he is speaking not of environment in general, but of "Nurture within the limited range that I have been careful to assign to the latter."

Galton's successors, the biometricians, have found that the extent to which a character is correlated with the same character in related individuals is often greater than the extent to which it is correlated with some aspect of the environment. These correlations however do not necessarily measure the strength of heredity and of environment respectively. On the one hand, the similarity of related individuals may be due to environment, as in language or in infectious or nutritional diseases. On the other hand, the fact that a character is independent of some aspects of the environment does not demonstrate its independence of other aspects. Moreover, the correlations worked out were not very numerous, certainly not numerous enough to warrant a generalization as to the stability of all characters.

The last difficulty was apparently met by Mendelian studies; for of the numerous traits found to be inherited in Mendelian fashion, relatively few were influenced by environment. The traits studied however, although numerous, are not representative: they are used as indicators of the presence of genes; and traits that vary with environment, being poor indicators, are discarded as bad characters. It is because geneticists have concerned themselves mostly with constant traits that the traits they have studied have turned out to be constant. This is not the first time that scientists have mistaken limitation arbitrarily imposed by themselves for laws of nature.

Despite the unrepresentative character of the material, many Mendelian traits have been found which are affected by environ-

ment as much as by heredity, or even more; a result borne out by the differences observed by Professor Muller and Professor Newman in identical twins reared apart. Physiologists also have discovered many differences in growth, development and behavior produced by small and hitherto unsuspected differences in food, air or sunlight. Professor Pavlov found his experimental animals sensitive to minute stimuli. The "slightest movements [of the experimenter]—blinking of the eyelids or movement of the eyes, posture, respiration and so on—all acted as stimuli which, falling upon the dog, were sufficient to vitiate the experiments by making exact interpretation of the results extremely difficult . . . the experimenter . . had to be stationed outside the room in which the dog was placed, and even this precaution proved unsuccessful in laboratories not specially designed for the study of these particular reflexes. . . To get over all these disturbing factors a special laboratory was built. . . ."

Such precautions are taken as a matter of course in experiments with animals. Yet, although man's behavior is known to be more modifiable than that of other species, it is often assumed to be unaffected by the conditions under which different races or classes live. A prominent psychologist who tried to test the ingenuity of cats by using hunger as a stimulus was criticized for basing conclusions about cats in general on hungry specimens. Many eugenists, however, write as if the educability of poor children is not influenced by lack of food.

There is a wide-spread belief that races differ greatly in mental capacity and that the differences are genetic. Both of these propositions are open to serious doubt. It is true that peoples may be very dissimilar in what they attend to or how they express themselves or how they behave; but when the thought processes underlying these diverse activities are examined, they are found to be essentially alike. The general impression that savages are unreasonable is due to a lack of acquaintance with their motives; for the civilized men who visit savages or live among them are generally ignorant of their language and customs. It is notorious that travelers often give very erroneous impressions of the customs and ideas even of civilized nations closely related to their own.

Even knowledge, however, is not a guaranty against prejudice; and it is well to remember the words written by Herodotus some 2,400 years ago:

> If it were proposed to all nations to choose which seemed best of all customs, each, after examination made, would place its own first; so well is each persuaded that its own are by far the best.

Galton, despite his realization of the importance of environment, nevertheless attributed to heredity many racial differences in mentality; and he argued for the superiority of the white over savage races. He adduced however no cogent evidence for these views, and sometimes his statements are curiously naive. "It is seldom," he wrote, "that we hear of a white traveller meeting with a black chief whom he feels to be the better man." Travelers are not noted for any tendency to admit their inferiority to the people among whom they travel, and they would scarcely be likely to make an exception in favor of savages. Moreover, a traveler who is not a better man than the chiefs he visits might never return to tell any tale at all.

So similar are the essential thought processes of savages and civilized peoples that anthropological accounts often read like traversties of civilized customs; this in fact explains much of the charm of anthropological literature and why among laymen anthropology is one of the most popular sciences. And (to put the shoe on the other foot) satirists have never had any difficulty in rendering civilization ludicrous by merely describing without comment the actions of civilized nations.

It is sometimes said that savage races would have achieved civilization if they had been capable of it. To substantiate such an argument, however, we should have to know

why they did not achieve it and why we did; and this would require a far greater knowledge of the processes of cultural history than we possess. It is significant in this connection that even races often considered savage have made great cultural achievements (for example the Maya Indians, who developed a system of writing and a calendar superior to the European calendar of the time); that races once civilized have sunk to a lower stage of culture; and that the relative cultural standing of peoples has often changed in the course of history.

Comparisons have also been made between different races living together; for example, Negroes and whites in the United States. But these races are far from having the same environment. The housing and hygienic conditions and the educational facilities of the Negroes are much inferior to those of the whites; and there are besides the dissimilarities in tradition and the effects of race prejudice. To disregard environment in such comparisons is to shut one's eyes to plain facts. Some psychologists have attempted to devise mental tests that would measure only genetic traits; but attempts of this kind are futile, for no traits are purely genetic and mental traits in particular are susceptible to environmental influences. Professor Garth, who says that "his first investigations in the field of race psychology were accompanied by a silent conviction that he would find clear cut racial differences in mental processes," finally concluded, on the basis of his own work and that of others, that "we have never, with all our searching, found indisputable evidence for belief in mental differences which are essentially racial."

It might be considered unlikely that evolution should have produced morphological racial differences without having produced psychological ones as well. It is true that the observed structural racial differences are not known to influence mentality; but, it might be said, there must be others that do. The argument, however, overlooks an essential distinction. Physical traits, if unimportant, will varv at random, unchecked by natural selection; and if important will vary by becoming adapted to different environments through natural selection. Mentality, however, being important, will not vary at random; in all environments it will tend, through natural selection, to become rational and hence uniform; for logic is logic from China to Peru and from Greenland's icy mountains to India's coral strand.

Even if evolution in the past had separated out diverse mental types, we should scarcely expect to find such differences characterizing large groups to-day; for throughout history there has been a continual mixture of races. In the oldest civilization known, that of Egypt, there was in the nineteenth century B. C. a royal edict against the coming of Negroes down the Nile. Wherever there is a prohibition there must be something to prohibit; and we can draw the conclusion that Negroes must have entered Egypt before the edict and probably after. In fact the very Pharaoh who issued the law boasted in another inscription that he had raided the lands of the Negroes and carried off their women. In the next oldest civilization known, that of Mesopotamia, we find at the opening of history at least two different races and probably more. The same is true of China, of Greece and of Italy. Early in her history Rome was invaded by barbarians from the north; and this continued with relatively slight intermissions until her fall. Even when there were no invasions, there was a continual importation of slaves from many lands. In prehistoric times and throughout history migrations and wars, exploration, commerce and slavery have transported large numbers of people and often entire nations across all natural barriers. In view of facts like these, claims to racial purity on the part of nations are without genetic value. So-called national characteristics are much more likely to have their origin in environment or tradition than in hereditary constitution; they are perhaps still more likely to be inventions of historians.

The decline of nations is often attributed to an influx of alien blood. This argument has been applied particularly to Rome; but as a

matter of fact much of Rome's greatness was due to foreigners. Her earliest writers were Greek slaves; her last great writer, Claudian, an Egyptian. Terence was a Carthaginian slave; Catullus and Livy came from Cisalpine Gaul; Seneca, Lucan, Martial from Spain. Of Roman poets perhaps the most typical were Virgil and Horace. Yet Virgil is not known to have had any Roman blood: he came from beyond the Po and was legally a Gaul until after he had attained manhood, when his province was enfranchised. Horace was not of Roman ancestry at all, as he was born in southern Italy, the son of an emancipated slave. When all roads lead to Rome, the able and ambitious tend to congregate there. Smaller communities also owe much to foreigners. Galton wrote: "It is very remarkable how large a proportion of the eminent men of all countries bear foreign names, and are the children of political refugees,—men well qualified to introduce a valuable strain of blood." It would, I think, be nearer the truth to ascribe the greatness of nations rather than their decline to foreigners

These facts militate strongly against the oft-repeated assertion that race mixture in itself produces degeneration. Such a result would be expected on genetic theory only in special cases; race mixture in general should produce new combinations of genes, some doubtless worse but others even better than the original ones.

Differences between classes are not so great as those between races; but they have been more minutely studied because they are of great practical importance. There are many persons, such as society leaders, editors of society columns, butlers, footmen, hotel clerks, and shopkeepers, who are as expert at distinguishing classes as anthropologists are at distinguishing races. Class distinctions, moreover, have been popularized by novelists. The aristocrat is proverbially tall, thin, and handsome. In England he used to have a dark complexion—a mark of his Norman blood; but this may now be altered by the popularity of the Nordic theory. He is well-dressed and has a characteristic manner; he is more sensitive than other people; he is interested in war and hunting. I am not aware that these distinctions have ever been studied statistically but they are generally supposed to be valid.

It used to be widely believed that a person of gentle blood could be recognized as such even if unaware of his ancestry and brought up among peasants and slaves. Herodotus tells such a story about Cyrus, king of the Persians; and many romances have turned on the same theme. I know of no experimental evidence that the distinctions are really genetic, unless we accept Hans Christian Andersen's account of the princess who was recognized as of royal blood because she was sensitive enough to feel a pea through a thickness of twenty mattresses and twenty featherbeds. There is, however, evidence against the genetic view of class distinctions. In Tudor England the costume of every social class, from nobility to laborers, was regulated by law; and in colonial America the lower classes were sometime forbidden to dress too well, presumably lest they be mistaken for gentry. We know now that physical traits can be affected by nutrition and hygiene, and behavior by governesses and finishing schools; and our dictionaries define "breeding" as "the result of training." Nevertheless, the belief in the genetic nature of class distinctions has been held even by scientific men; and a German gynecologist has asserted that while the sexual impulse is instinctive in women of the lower classes it is acquired in those of the upper classes.

Such beliefs have waned with the spread of democracy; but even in democratic countries it is still said that the upper classes are abler and more intelligent than the lower, that they alone know how to govern, that from their ranks come the great artists and writers and scientists. If a poor man becomes famous, the genealogists immediately begin to look for forgotten or illegitimate ancestors; a familiar instance is the attempt to trace Lincoln's pedigree to Chief Justice Marshall. What used to be considered romance now passes for eugenics.

It is of course true that the richer classes

have contributed proportionally a greater number of eminent men than have the poor. But this is due in part at least to their better opportunities and there is no evidence that it is due to anything else. In a country like ours, where we hear equality spoken of so often, we come to believe that rich and poor have essentially the same chance of success. The belief is facilitated by the fact that rich and poor rarely know each other's life with any intimacy; hence the rich do not realize the obstacles confronting a poor man who would undertake an intellectual career, and the poor do not realize the extent to which these obstacles would disappear in an environment of wealth. The misunderstanding is increased by the fact that very few people of any class have an adequate comprehension of the psychology of creative intellectual work. There is a wide-spread notion that great ideas come as inspirations and that their coming can not be controlled or even predicted. It is true that great ideas often come an unexpected moments; but I doubt whether they ever come without preparation. They are the result of long intensive work, of complete absorption in a subject. Often the idea does not come until after the worker has rested from his labor; and this inactive period is probably the source of the opinion that labor is unnecessary. Now, obviously, complete absorption in a subject is possible only where there is leisure; and this means that it is all but impossible for a really poor man, who has no leisure, to do great creative work. The sciences are now so complicated that years of preparation are required even to understand the important problems, and often years more of steady work for any solution.

In the arts the situation is often considered different. But although poets are born they must also be made, or at least they must not be unmade. Let me quote in this connection a passage from Sir Arthur Quiller-Couch:

> What are the great poetical names of the last hundred year or so? Coleridge, Wordsworth, Byron, Shelley, Landor, Keats, Tennyson, Browning, Arnold, Morris, Rossetti, Swinburne—we may stop there. Of these, all but Keats, Browning, Rossetti were university men; and of these three Keats, who died young, cut off in his prime, was the only one not fairly well-to-do. It may seem a brutal thing to say, and it is a sad thing to say; but, as a matter of hard fact, the theory that poetical genius bloweth where it listeth, and equally in poor and rich, holds little truth. As a matter of hard fact, nine out of those twelve were university men; which means that somehow or other they procured the means to get the best education England can give. As a matter of hard fact, of the remaining three you know that Browning was well-to-do, and I challenge you that, if he had not been well-to-do, he would no more have attained to writing *Saul* or *The Ring and the Book* than Ruskin would have attained to writing *Modern Painters* if his father had not dealt prosperously in business. Rossetti had a small private income; and, moreover, he painted. There remains but Keats; whom Atropos slew young, as she slew John Clare in a madhouse, and James Thompson by the laudanum he took to drug disappointment. These are dreadful facts, but let us face them. It is—however dishonouring to us as a nation—certain that, by some fault in our commonwealth, the poor poet has not in these days, nor has had for two hundred years, a dog's chance. Believe me—and I have spent a great part of the last ten years in watching some 320 elementary schools—we may prate of democracy, but actually a poor child in England has little more hope than had the son of an Athenian slave to be emancipated into that intellectual freedom of which great writings are born.

This is the statement not of a politician or a propagandist but of the King Edward VII professor of English literature at the University of Cambridge.

There is a wide-spread notion that the really able will succeed, despite all obstacles. This involves a statistical fallacy: it might under certain circumstances be true if our lives were indefinitely long, but it does not apply to finite lifetimes. There is also a confusion between the fate of an idea and of its advocates. A true idea is perhaps bound to survive; but so far is this from applying to its discoverers or supporters that the best way to insure the survival of an idea is to undergo martyrdom for its sake.

Another common belief, expressed by Galton and others, is that the best strains of the lower classes have been drained into the upper classes. This involves two separate propositions: (1) that people have risen in the social scale, (2) that those who have risen are the most desirable. The first proposition is true, although it must not be forgotten that in the past the surmounting of class barriers has often been difficult or impossible. The second proposition is usually treated as self-evident; to most people it seems obvious that economic success depends upon intellectual ability. Thus a well-known eugenist said twenty years ago that good working men do not lose their jobs, that only incompetent men are unemployed. This showed a lack of historical knowledge, for economic conditions have in the past caused wide-spread unemployment. Only recently, however, another prominent eugenist said that the present depression would have a good effect by weeding out the unfit.

Now in spite of the fact that in times like the present the economic system picks largely at random, it may well be that at other times the people who became rich were selected to some extent at least on the basis of genetic traits. But are these traits the desirable ones? They have not always been so considered. The aristocratic classes have always looked down on those who become wealthy through their own efforts. The Catholic Church, in the middle ages and during the reformation, objected to the ordinary practices involved in business, such as lending money at interest; so, too, did Luther and other Protestant leaders. Modern liberals and radicals echo these objections, or carry them to their logical conclusion as in Proudhon's statement that "property is theft." Such views have received some support from Francis Galton, who in his "Memories" expressed a fear that marriages of English peers with daughters of millionaires might result in a lowering of the standards of commercial probity of the House of Lords in future generations. He might have added that many of the newer peerages have been conferred for success in business and many older peerages for services that can not be considered honest.

Francis Bacon, who was a man of wide experience and neither a visionary nor a radical, said that "there is rarely any rising but by a commixture of good and evil arts"; a very mild opinion in comparison with that of Machiavelli, who had already explained how to rise without recourse to good arts at all. Machiavelli's ideas have been denounced ever since they were published, but only, I think, because they gave away the game; they have never been refuted, and the 'Prince" is still the best handbook for getting along in the world. Plato and Machiavelli are not usually bracketed together; but a passage in the "Republic" says that if there should ever be a perfectly just man, he would be crucified; while a perfectly unjust man would be successful in all his affairs, would be able to marry his children to whomever he pleased, and through his great riches could even propitiate heaven with splendid sacrifices, so that a better provision is made by both gods and men for the life of the unjust than for the life of the just. This passage reads as if it had been inspired by the fate of Socrates The spectacle of Truth forever on the scaffold, Wrong forever on the throne has brought about the widely prevalent sympathy with martyrdom and has been a powerful influence in the spread of Christianity.

Some eugenists, admitting that success often results from non-conformity to accepted moral standards, have concluded that the standards should be changed. They have advocated selfishness and ruthlessness, have justified war, and have proposed to breed a race devoid of kindness and sympathy. Such a code is not debatable if it is put forward as good in itself. If however the code is advocated as a means to ends which are generally considered good, then I think the arguments for it can be shown to be incorrect; if indeed a logical demonstration is still needed when the results of selfishness are evident all about us. Among eugenists the usual justification of selfish competition is that it has been responsible for evolutionary progress. But we are not bound by evolu-

tionary precedents; and if there is anything that evolution teaches it is the possibility of new modes of behavior. Kindness and cooperation, however, are not new: they were developed (as Darwin pointed out) in the struggle for existence and helped man to survive and advance in prehistoric times. Some eugenists base their codes on the behavior of other species; but even if we agreed to imitate other organisms, we could still justify almost any code we pleased by selecting the proper model: we could go to the ant, or consider the lilies of the field.

Many who admit that success does not imply ethical conduct maintain nevertheless that it does imply intelligence. For example, Mr. Edgar Schuster, who was the first research fellow of the Galton Eugenics Laboratory, wrote:

> It may be that the opportunities sometimes favour moral attributes of an anti-social kind, but they never favour a weak intellect; the predatory millionaire is perhaps ethically of the same standing as the burglar, but intellectually he far surpasses him.

If the intelligent and the dishonest have both been rising to the upper classes, the resulting intermarriages between them must have produced a tendency for the two traits to be associated. This would explain many of the ills of society. But it is doubtful whether the tendency is general, because the amount of intelligence required for rising in the social scale is not necessarily great, and in many situations too much intelligence is an impediment. At a convention of business men some years ago an executive said that although every one laments the lack of able assistants, yet any man who turns out to be unusually intelligent is certain to be discharged because his superiors are afraid of being supplanted by him. In politics, too, intelligence (beyond a certain modicum) is a drawback. The best-known example is the American presidency. It has been often remarked that a first-rate man rarely obtains his party's nomination and that presidential candidates are usually selected from among the less able contenders. The intelligent are always looked at askance; it is no compliment to a man to say that he lives by his wits.

The aristocracy have often been undoubtedly inferior to many members of the lower classes. In ancient Rome many of the slaves had been men of high social standing in their original homes and were better educated than their masters; in fact the earliest Roman intelligentsia was composed very largely of Greek slaves. The medieval barons looked down on those who could read and write.

Class distinctions have in fact been based largely on irrational grounds. The social esteem in which traits are held is often in inverse proportion to their intrinsic or social value. Manual labor is almost universally despised; and this has been carried so far that even scientific experimentation and artistic activity have been considered degrading. Plato objected to the introduction of mechanical methods into geometry; Archimedes considered his mechanical inventions unworthy of a scientist; and Lucian complained that even great sculptors were held in scorn.

> You may turn out a Pheidias or a Polycleitus, to be sure, and create a number of wonderful works; but even so, though your art will be generally commended, no sensible observer will be found to wish himself like you; whatever your real qualities, you will always rank as a common craftsman who makes his living with his hands.

Nor have class distinctions always been consistent. In ancient Greece actors might enjoy high social status, take an important part in the politics of their communities, and associate with kings. Shakespeare, as an actor, had in the eyes of the law the choice of becoming a retainer to a nobleman or being classed as a rogue and vagabond. Molière as an actor was not eligible for Christian burial. To-day actors may be knighted and actresses may marry noblemen or millionaires. When, in addition, we consider how much change in social position has resulted from causes beyond the control of single individuals (enslavement of pris-

oners of war, economic changes, etc.) it would be strange if class lines corresponded to genetic distinctions.

The strengthening of class barriers, which has been advocated by many eugenists, would therefore be eugenically useless and even harmful. For in so far as class distinctions are environmental, they make genetic differences harder to recognize; and in so far as they are genetic, the best qualities are not necessarily in the upper classes and there is even evidence that the reverse may be the case. It is a curious episode in the history of science that eugenists should have defended class distinctions; it is still more curious that they should have done so in the name of Galton. For Galton stated very emphatically the anti-eugenic effects of inherited wealth:

> The sickly children of a wealthy family have a better chance of living and rearing offspring than the stalwart children of a poor one. As with the body, so with the mind. Poverty is more adverse to early marriages than is natural bad temper, or inferiority of intellect. In civilized society, money interposes her aegis between the law of natural selection and very many of its rightful victims. Scrofula and madness are naturalized among us by tendencies of body or mind that might accumulate in a land where the law of primogeniture was general, and where riches were more esteemed than personal qualities.
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> The best form of civilization in respect to the improvement of the race, would be one in which society was not costly; where incomes were chiefly derived from professional sources, and not much through inheritance; where every lad had a chance of showing his abilities, and, if highly gifted, was enabled to achieve a first-class education and entrance into professional life, by the liberal help of the exhibitions and scholarships which he had gained in his early youth.

Darwin and Huxley realized that wealth might suspend or reverse natural selection. In Plato's eugenic commonwealth there was to be neither excessive riches nor poverty for ordinary citizens, and for superior individuals no private property at all. A still earlier eugenist, Theognis of Megara, who was like Plato of aristocratic family, explained that poverty led to race-degeneration by forcing people to marry for money instead of for good genetic qualities.

Even professed egalitarians do not always realize how thorough an equality of opportunity is required as a basis for eugenics. It is not enough (in the words of Anatole France) to "forbid rich and poor alike to slip under the bridges." There must be freedom of opportunity for all, and that too at all ages; because desirable qualities may manifest themselves at various periods of life. Even apart from any eugenic application, this is the only way in which man's genetic qualities can be studied; and geneticists should have the less hesitation in advocating it because they can shift the actual execution onto the shoulders of economists. All this, however, is only preliminary; there remains a much more difficult question: who is to recognize the superior individuals and select them for propagation?

This question has never been properly answered. Some have envisaged a system of eugenic committees elected democratically; but the failure of democracies to pick superior individuals would make this worse than useless. Many eugenists have turned to aristocracy. It should not be forgotten, however, that aristocracy has had its opportunity and failed more miserably than democracy. If we consider the politicians of the past whom we might be tempted to entrust with a scientific task, we can scarcely select one more enlightened than Francis Bacon. He was a scholar and a philosopher, and advocate of the experimental method and of the founding of scientific societies. In his time the greatest scientific advances were those connected with astronomy; yet he did not appreciate the work of Kepler or Galileo, who were his contemporaries, or even of Copernicus, who lived two generations earlier. William Harvey, who was his personal physician, said Bacon wrote science like a lord chancellor; and I am afraid that any future lord chancellor is likely to write it in the same way.

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tionary precedents; and if there is anything that evolution teaches it is the possibility of new modes of behavior. Kindness and cooperation, however, are not new: they were developed (as Darwin pointed out) in the struggle for existence and helped man to survive and advance in prehistoric times. Some eugenists base their codes on the behavior of other species; but even if we agreed to imitate other organisms, we could still justify almost any code we pleased by selecting the proper model: we could go to the ant, or consider the lilies of the field.

Many who admit that success does not imply ethical conduct maintain nevertheless that it does imply intelligence. For example, Mr. Edgar Schuster, who was the first research fellow of the Galton Eugenics Laboratory, wrote:

> It may be that the opportunities sometimes favour moral attributes of an anti-social kind, but they never favour a weak intellect; the predatory millionaire is perhaps ethically of the same standing as the burglar, but intellectually he far surpasses him.

If the intelligent and the dishonest have both been rising to the upper classes, the resulting intermarriages between them must have produced a tendency for the two traits to be associated. This would explain many of the ills of society. But it is doubtful whether the tendency is general, because the amount of intelligence required for rising in the social scale is not necessarily great, and in many situations too much intelligence is an impediment. At a convention of business men some years ago an executive said that although every one laments the lack of able assistants, yet any man who turns out to be unusually intelligent is certain to be discharged because his superiors are afraid of being supplanted by him. In politics, too, intelligence (beyond a certain modicum) is a drawback. The best-known example is the American presidency. It has been often remarked that a first-rate man rarely obtains his party's nomination and that presidential candidates are usually selected from among the less able contenders. The intelligent are always looked at askance; it is no compliment to a man to say that he lives by his wits.

The aristocracy have often been undoubtedly inferior to many members of the lower classes. In ancient Rome many of the slaves had been men of high social standing in their original homes and were better educated than their masters; in fact the earliest Roman intelligentsia was composed very largely of Greek slaves. The medieval barons looked down on those who could read and write.

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to turn to non-political intellectuals. We have such a body in the electors of the Hall of Fame, who are entrusted with the task of drawing up a roll of honor of the country's most illustrious dead. Their decisions show the same preference for mediocrity: Willard Gibbs, generally accounted America's greatest scientist, has never been elected; Edgar Allan Poe, generally regarded as America's greatest man of letters, was not chosen until after many inferior writers.

But (you will say) it would be too much to expect all the electors to be well versed in thermodynamics or even in the principles of literary criticism; why not have experts in each field pick their own geniuses? That too has been tried. Perhaps the most famous body of experts among intellectuals is the Academie Française. I will refrain from reading you a list of the mediocrities whom it has honored with membership; but among those who have failed of election are Descartes, Pascal, Molière, LeSage, Diderot, Rousseau, Beaumarchais, André Chénier, Comte, Balzac, Stendhal, Dumas père, Gautier, Michelet, Flaubert, Maupassant, Daudet, Zola, Verlaine, Baudelaire, and many others. The Academy has excluded France's greatest philosophers, her greatest novelists, her greatest dramatist, and some of her greatest historians and poets. In artistic and literary competitions the prize is usually awarded to mediocre work; a fact so well known that it led eminent literary men to object to a recent proposal that the League of Nations establish prizes for the encouragement of young writers and artists.

The great scientific societies, which were originally founded to help the active prosecution of research, have come to confine themselves largely to honoring men who no longer do research. How far out of touch they are with important scientific developments is sometimes shown strikingly as in the rejection of Joule's paper by the Royal Society.

The record of universities is no better. After Plato's death the headship of the Academy fell not to Aristotle or to Heracleides of Pontus, but to mediocre men—Speusippus and Xenocrates. It is interesting in this connection that while Aristotle wrote, "Plato is dear but truth is dearer," Speusippus (who was Plato's nephew) spread the story that Plato was the son not of a mortal father but of Apollo. Modern universities were not hospitable to science when it began the advances that have transformed civilization; this is why scientific societies were founded. "Neither Copernicus, nor Bacon, nor Boyle, nor Huygens, nor Leeuwenhoek, nor Swammerdam, nor Van Helmont, nor Kepler, nor Guericke, nor Fermat, nor Napier, nor Stevin, nor Pascal, nor Descartes ever taught at any school or university." The universities have not even pretended to encourage literature. In Shakespeare's day, Oxford had so low an opinion of contemporary drama that the university authorities regularly paid visiting dramatic companies to depart without presenting any plays. When the third folio of Shakespeare's works was published, the Bodleian library at Oxford sold its only copy of the first folio, with other superfluous books, for £24, to repurchase it in 1905 for £3000. Shakespeare of course was not an Oxford man; but Oxford has had two great poets among her students. Of these Shelley was expelled; and Swinburne was quietly asked to leave, escaping expulsion only because his college feared to make itself ridiculous by a repetition of the Shelley episode.

To-day also unusual ability and originality fail to obtain recognition at universities; sometimes despite the most careful and conscientious attempts to discover them. This is illustrated by the wranglerships at Cambridge. Until recently all graduating students in mathematics were arranged in order of their success in the examinations, and it has been noticed that while the top man (Senior Wrangler) rarely became a great scientist, the Second Wranglers have contributed many of Cambridge's greatest mathematicians and physicists. It is obvious that the examiners did not know how to test for great originality. Whatever the reason, it is a well-known fact that most teachers prefer students who merely follow in their footsteps to those who

strike out new paths. It is rare for a university appointment to go to the logical candidate; usually the choice falls on some one less able. It is the fashion to blame this state of affairs on the autocratic interference of university presidents and trustees; but the great majority of selections are made by the faculty themselves and by the department concerned.

This regression toward inferiority is brought about by several causes. There is an economic factor. An associate or subordinate is often a competitor or a potential competitor for position or patronage, and to raise up an able rival involves an unnecessary risk. Sometimes the rivalry is personal. People wish to tower above their fellows; and if they can do it in no other way they can at least stand out because of the flatness of the surrounding country. This fact is very important because the great majority of people are lacking in altruism. A third cause is the difficulty of recognizing great achievements. We judge people by what intellectual standards we have; but the greatest men are those who transcend or overthrow old standards and set up new ones. They can not be judged until after their standards have been accepted; hence as long as there is intellectual advance the leaders of it will be misunderstood or not understood at all. A fourth cause is that great men may fail to accomplish anything commensurate with their ability. They attempt more tasks and greater tasks and on a grander scale. On the other hand, a mediocre man who merely follows in the footsteps of others is fairly certain to accomplish something and to be appreciated. Those who have undertaken great quests have often met with frustration; while many a man who has started out to seek his father's asses has found a kingdom.

The regularity and inevitability with which these forces work is not usually realized by those unfamiliar with the history of thought. Let us consider, for example, our own science of genetics, limiting ourselves, for obvious reasons, to geneticists of the past. Of these, none have contributed more than Mendel, Darwin, Galton, and Bateson. Mendel discovered the laws of heredity when they were being sought by many of the world's greatest biologists: but no one paid any attention to his discovery. He corresponded with Naegeli, one of the foremost authorities on the subject, and sent him seeds; yet Naegeli, although he wrote a treatise on heredity, did not so much as mention Mendel's work. Mendel failed even to obtain a regular teaching position at a gymnasium, although his students have testified that he was an unusually good teacher.

Darwin did not distinguish himself at school, or at the Universities of Edinburgh and Cambridge, Britain's foremost medical and scientific institutions. Neither he nor Galton, who also went to Cambridge, took a degree with honors, which a moderately clever undergraduate can do; and according to Galton some of the ablest undergraduates of his time failed to take honors. It is an interesting speculation what would have happened to Darwin and Galton if they had not been rich, or to Bateson if his father had not been master of St. John's College at Cambridge; for the headmaster of Bateson's school wrote to his father: "It is very doubtful whether so vague and aimless a boy will profit by University life." I think we may safely conclude that it takes a genius to catch a genius.

But, as I have said, genius is not enough. What is needed is not only intelligence but goodness as well; and unfortunately there is no evidence that the two are positively correlated. In some situations, in fact, the correlation is negative: an intelligent judge is more likely to recognize ability in others, but for this very reason is more likely to be jealous.

If those entrusted with a eugenic program are not good, it is better that they should not be intelligent either; for if they are intelligent they can recognize merit more easily and weed it out more certainly. Eugenics therefore is driven to a conclusion reached by all the great moralists: that the immediate need of the world is good men. Moralists, however, have made two great mistakes: they have attempted to base moral-

ity on theological sanctions, and they have tried to inculcate it by teaching. The first error has been often exposed; but the possibility of teaching virtue is still almost universally believed in, although I doubt whether history records a single instance of a real alteration in a person's moral quality. The constancy of moral traits may appear incompatible with the modifiability of other mental traits by environmental influences. I do not, however, claim that moral traits will remain constant under all circumstances whatsoever; it may be that some day goodness will be induced by vaccination or by injection. But the incentives to a moral life have not been essentially altered by social and economic changes in the past, and they are not likely to be altered by any changes that have been proposed for the future. If private property is abolished, men will still want power; if power is abolished (but that will be difficult) men will still want the approbation and esteem of their fellows. Even the greatest men have lapsed from honesty in order to enhance their reputations still further. So strong is the urge, that in order to be considered wise, men will act stupidly; and in order to be considered good, they will break every principle of morality.

Galton thought that eugenics might succeed if it became a religion; but the history of religious institutions reveals the same tendency to suppress merit as is found elsewhere. In the elections of popes, as in the nominations of American presidents, the leading candidate is rarely chosen. Religion has encouraged hypocrisy and has persecuted, imprisoned, tortured and killed men of independent mind; and Galton himself pointed out that in this way the genetic qualities of the human race have been greatly impaired.

The religion advocated by Galton was not theology, but a sense of obligation to one's fellow-men combined with an emotional fervor. Such an attitude is found in some types of patriotism (though not in all). Yet even when a nation is in danger, politicians and military men continue their usual intrigues, often in accentuated form; while in ordinary individuals a national crisis such as war evokes the worst instincts.

It might be objected that in patriotism there is an irrational factor that would be absent in a scientific gospel. Let us therefore examine science itself, which often inspires a feeling of duty to mankind, including future generations. Despite this, scientists are not (except in the minds of innocent laymen) unselfish individuals; it is a very exceptional scientist who will not sacrifice the future of science to his own personal interests.

The betrayal of science is facilitated by the very faith it inspires; any setback it receives is regarded as temporary because of the wide-spread notion that in the end truth will prevail. A setback for eugenics, however, involving the extinction of valuable strains, might be irreparable. For this reason, and because it deals with man and what may be considered man's essential nature—his genetic constitution—eugenics might be expected to inspire a more intense devotion. The eugenic movement has in fact taken on a religious fervor, as Galton hoped; but I can not believe that he would have approved either the ideals or the methods advocated by most eugenists. He stood for intellectual and moral enlightenment and for social justice; he looked upon eugenics as a method of doing away with the cruelty of natural selection. Many of those who speak in his name have advocated racial and religious prejudice and economic and political oppression. They have sought to furnish a quasi-scientific foundation for political reaction, especially in Germany; and in the United States their pronouncements are not easily distinguishable from those of the Ku Klux Klan.

There remains Galton's other suggestion, already alluded to, that we ascertain whither evolution is going and hasten its progress. This is tantamount to a deification of evolution, at any rate if God is defined (in the words of Matthew Arnold) as "a force, not ourselves, making for righteousness." Evolutionary theology has sometimes been ex-

tended by the conjuring up of an anti-evolutionary devil, as in Tennyson's lines:

Evolution always striving toward some ideal good,
And Reversion always dragging Evolution in the mud.

All this is, however, mere confusion of thought. Properly speaking evolution does not necessarily make for good, nor is it going anywhere in particular. Selection will alter the human race, but the direction of the change depends on the social environment, and this is fashioned by ourselves. The evolutionary God, like so many others, has been created in man's own image.

This is the crux of the eugenic problem. There is almost no limit to what man might make of himself by altering his genetic constitution; but these possibilities can be realized only if he first becomes more altruistic and intelligent, and he is not sufficiently altruistic or intelligent to take this first step. Hence an attempt to put eugenics into practice would defeat its own ends. Any group likely to be entrusted with a eugenic program would be too unintelligent to recognize merit and too selfish to select any merit they might recognize. They would pick out for propagation individuals of mediocre ability and of less than mediocre morality; that is, those stupid enough to have no independent ideas and those dishonest enough to pretend to have none. Shelley was deprived of his children by a court of law; a eugenic tribunal would have sterilized him. Barabbas is always preferred to Jesus, at any rate before Jesus is crucified.

Such reverse selection must have been going on throughout man's existence. It was remarked long ago that the race is not to the swift, nor the battle to the strong, neither yet bread to the wise, nor yet riches to men of understanding, nor yet favor to men of skill; and since the writer of those words said that there is nothing new under the sun, the survival of undesirable traits must have been an old phenomenon in his day. Even in prehistoric times, as Darwin pointed out, the bravest and most unselfish individuals of a tribe were less likely to survive and to leave offspring. All this would help to account for the fact that there has been, so far as we can tell, no improvement in the innate mental qualities of mankind throughout history, or for that matter since the end of the Cro-Magnon period. This lack of advance must be due also to the fact that man no longer divided into small isolated groups; for the larger the population, the more difficult it is for a new trait to establish itself, especially if it is a trait like unselfishness.

There are even indications that a decline may have occurred: the Cro-Magnons were in many respects superior to the Neolithic men who succeeded them, and Galton rated the ancient Athenians above the modern English. It is possible that the conditions of civilization put too great a handicap on original and independent thinkers; that the best-adapted type is one with a less inquiring mentality, willing to abide by tradition and to follow routine without question.

The evidence for a genetic decline, particularly in the historic period, is not, however, conclusive. The selection making for a decline has not been rigorous, because of the large element played by chance in human affairs; and it has also been spurious to the extent that it has been based on non-genetic traits. Even where the qualities selected have been genetic, they have not always been perpetuated; for (1) successful individuals are likely to come of infertile strains since in these the families are smaller and the children get a better start in life; (2) even if the successful individual is not infertile he often marries an heiress who, being an only child, comes of an infertile stock and leaves few offspring; (3) successful individuals (the upper classes) limit their families more than the unsuccessful (the lower classes).

Thus there has been a protective mechanism by which the self-seeking and ruthless have been isolated in an upper class and sterilized; while desirable individuals have been kept in the lower classes where they were more likely to reproduce. In this way good genes and combinations of genes have

been preserved; but so they would have been if they had been propagated in tissue cultures. Man can not live by genes alone: life is the interaction of genes with the environment.

The extension of opportunity would allow good genotypes to express themselves; but it would not in itself solve the eugenic problem. The mechanism by which the self-seeking have been weeded out would no longer exist; and any attempt at deliberate eugenics would be more dangerous than under the present system since the superior individuals, being more easily recognizable, would be all the more certain to be eliminated. It would be tragic indeed if the human race should fail just when it had become aware of its possibilities, and in the very attempt to realize them.

There is perhaps one way out. Whatever may be true of the huge majority of mankind, there are a few whose instincts are good. If these banded together into a voluntary eugenic comradeship, they could ultimately supplant the others. Provided of course that the others would allow them. We may however be certain that such a project would not be tolerated and that those attempting it would be executed or sterilized. If it were done at all, it would have to be done secretly; there would have to be a eugenic conspiracy. Probably some day such a conspiracy will be organized; but there is no guaranty that it will be the only one. Other groups are just as likely to form similar conspiracies to insure the perpetuation of their traits; and we can not predict that intellect and good will triumph over intellect and evil—or over stupidity if the odds are too great.

I have been asked who Palamedes was and why this paper is entitled with his name. The question is a good illustration of my theme. Palamedes was the greatest of the Greeks who fought before Troy. He was a scientist and an engineer. He devised a system of writing and methods of arithmetic computation. He traced the movements of the heavenly bodies and used them for making the hours and for guidance in navigation. He fashioned weights and measures. He built the fortifications of the Greek camp. He even invented checkers and dice to keep the soldiers occupied when they were not fighting. Yet his name is unknown except to classical scholars, while every schoolboy is familiar with Agamemnon, who was only the titular commander-in-chief, and Achilles, who though brave and handsome was a good deal of a brute. And if any one is asked who was the wisest of the Greeks, he will say Nestor or Odysseus. Nestor, however, was wise only in the sense that being very old he could remember many things; and Odysseus was not wise at all but merely unscrupulous. Palamedes and Odysseus once measured wits against each other when Palamedes had been sent to persuade Odysseus to come to the war. Odysseus, unwilling to go, feigned madness and ploughed with an ox and an ass yoked together; but Palamedes placed Odysseus' infant son, Telemachus, before the plough, and Odysseus swerved aside, showing that he was not as mad as that. Odysseus accompanied the Greeks; but when he arrived before Troy he forged letters from the enemy, hid them in Palamedes' tent, and accused him of treason. The letters were found, and Palamedes was stoned to death.

It may be said that this is not a fair parable; that Palamedes displayed a want of intelligence in allowing such a plot to succeed. If he could foretell the movements of the stars, why could he not foresee the actions of Odysseus? The objection might be valid if the men had been older, for with experience we learn what our fellows are like; but when we are young each interprets others by himself, since he attributes to others the impulses he himself feels. Odysseus gauged others correctly not because he was wise but because he was evil and it so happened that in this respect most men resembled him. In a better world it is Palamedes who would have been the better judge of men. If we are to make a better world, we must breed people like Palamedes; the danger is that we shall breed people like Odysseus instead.

The Real Problem Is in the Hearts of Men[1]

ALBERT EINSTEIN

MANY PERSONS have inquired concerning a recent message of mine that "a new type of thinking is essential if mankind is to survive and move to higher levels."

Often in evolutionary processes a species must adapt to new conditions in order to survive. Today the atomic bomb has altered profoundly the nature of the world as we knew it, and the human race consequently finds itself in a new habitat to which it must adapt its thinking.

In the light of new knowledge, a world authority and an eventual world state are not just *desirable* in the name of brotherhood, they are *necessary* for survival. In previous ages a nation's life and culture could be protected to some extent by the growth of armies in national competition. Today we must abandon competition and secure cooperation. This must be the central fact in all our considerations of international affairs; otherwise we face certain disaster. Past thinking and methods did not prevent world wars. Future thinking *must* prevent wars.

Modern war, the bomb, and other discoveries or inventions present us with revolutionary circumstances. Never before was it possible for one nation to make war on another without sending armies across borders. Now with rockets and atomic bombs no center of population on the earth's surface is secure from surprise destruction in a single attack.

America has a temporary superiority in armament, but it is certain that we have no lasting secret. What nature tells one group of men, she will tell in time to any other group interested and patient enough in asking the questions. But our temporary superiority gives this nation the tremendous responsibility of leading mankind's effort to surmount the crisis.

Being an ingenious people, Americans find it hard to believe there is no foreseeable defense against atomic bombs. But this is a basic fact. Scientists do not even know of any field which promises us any hope of adequate defense. The military-minded cling to old methods of thinking and one Army department has been surveying possibilities of going underground, and in wartime placing factories in places like Mammoth Cave. Others speak of dispersing our population centers into "linear" or "ribbon" cities.

Reasonable men with these new facts to consider refuse to contemplate a future in which our culture would attempt to survive in ribbons or in underground tombs. Neither is there reassurance in proposals to keep a hundred thousand men alert along the coasts scanning the sky with radar. There is no radar defense against the V-2, and should a "defense" be developed after years of research, it is not humanly possible for any defense to be perfect. Should one rocket with atomic warhead strike Minneapolis, that city would look almost exactly like Nagasaki. Rifle bullets kill men, but atomic bombs kill cities. A tank is a defense against a bullet, but there is no defense in science against the weapon which can destroy civilization.

Our defense is not in armaments, nor in science, nor in going underground. Our defense is in law and order

Henceforth, every nation's foreign policy must be judged at every point by one consideration: does it lead us to a world of law and order or does it lead us back toward

[1] Reprinted by permission of the *New York Times Magazine*, June 23, 1946, and of the author.

anarchy and death? I do not believe that we can prepare for war and at the same time prepare for a world community. When humanity holds in its hand the weapon with which it can commit suicide, I believe that to put more power into the gun is to increase the probability of disaster.

Remembering that our main consideration is to avoid this disaster, let us briefly consider international relations in the world today, and start with America. The war which began with Germany using weapons of unprecedented frightfulness against women and children ended with the United States using a supreme weapon killing thousands at one blow.

Many persons in other countries now look on America with great suspicion, not only for the bomb but because they fear she will become imperialistic. Before the recent turn in our policy I was sometimes not quite free from such fears myself.

Others might not fear Americans if they knew us as we know one another, honest and sober and neighbors. But in other countries they know that a sober nation can become drunk with victory. If Germany had not won a victory in 1870, what tragedy for the human race might have been averted!

We are now making bombs and the bombs are making hate and suspicion. We are keeping secrets and secrets breed distrust. I do not say we should now turn the secret of the bomb loose in the world, but are we ardently seeking a world in which there will be no need for bombs or secrets, a world in which science and men will be free?

While we distrust Russia's secrecy and she distrusts ours, we walk together to certain doom.

The basic principles of the Acheson-Lilienthal Report are scientifically sound and technically ingenious, but as Mr. Baruch wisely said, it is a problem not of physics but of ethics. There has been too much emphasis on legalisms and procedure; it is easier to denature plutonium than it is to denature the evil spirit of man.

The United Nations is the only instrument we have to work with in our struggle to achieve something better. But we have used U. N. and U. N. form and procedure to outvote the Russians on some occasions when the Russians were right. Yes, I do not think it is possible for any nation to be right all the time or wrong all the time. In all negotiations, whether over Spain, Argentina, Palestine, food or atomic energy, so long as we rely on procedure and keep the threat of military power, we are attempting to use old methods in a world which is changed forever.

No one gainsays that the United Nations Organization at times gives great evidence of eventually justifying the desperate hope that millions have in it. But time is not given to us in solving the problems science and war have brought. Powerful forces in the political world are moving swiftly toward crisis. When we look back to the end of the war it does not seem ten months—it seems ten years ago! Many leaders express well the need for world authority and an eventual world government, but actual planning and action to this end have been appallingly slow.

Private organizations anticipate the future, but government agencies seem to live in the past. In working away from nationalism toward a supra-nationalism, for example, it is obvious that the national spirit will survive longer in armies than anywhere else. This might be tempered in the United Nations military forces by mixing the various units together, but certainly not by keeping a Russian unit intact side by side with an intact American unit, with the usual inter-unit competition added to the national spirit of the soldiers in this world enforcement army. But if the military staffs of the U. N. are working out concrete proposals along these lines, for a true internationally minded force, I have yet to read of it.

Similarly, we are plagued in the present world councils over the question of representation. It does not seem fair to some, for example, that each small Latin-American nation should have a vote while much larger

nations are also limited to one vote. On the other hand, representation on a population basis may seem unfair to the highly developed states, because surely great masses of ignorant, backward peoples should not carry as much voice in the complicated technology of our world as those with greater experience.

Fremont Rider in an excellent book, "The Great Dilemma of World Organizations," discusses the idea of representation on the basis of education and literacy—number of teachers, physicians, and so on. Backward nations looking forward to greater power in the councils of men would be told, "To get more votes you must *earn* them."

These and a hundred other questions concerning the desirable evolution of the world seem to be getting very little attention. Meanwhile, men high in government propose defense or war measures which would not only compel us to live in a universal atmosphere of fear but would cost untold billions of dollars and ultimately destroy our American free way of life—even before a war.

To retain even a temporary total security in an age of total war, government will have to secure total control. Restrictive measures will be required by the necessities of the situation, not through the conspiracy of wilful men. Starting with the fantastic guardianship now imposed on innocent physics professors, outmoded thinkers will insidiously change men's lives more completely than did Hitler, for the forces behind them will be more compelling.

Before the raid on Hiroshima, leading physicists urged the War Department not to use the bomb against defenseless women and children. The war could have been won without it. The decision was made in consideration of possible future loss of American lives —and now we have to consider possible loss in future atomic bombings of *millions of lives*. The American decision may have been a fatal error, for men accustom themselves to thinking a weapon which was used once can be used again.

Had we shown other nations the test explosion at Alamogordo, New Mexico, we could have used it as an education for new ideas. It would have been an impressive and favorable moment to make considered proposals for world order to end war. Our renunciation of this weapon as too terrible to use would have carried great weight in negotiations and made convincing our sincerity in asking other nations for a binding partnership to develop these newly unleashed powers for good.

The old type of thinking can raise a thousand objections of "realism" against this simplicity. But such thought ignores the *psychological realities*. All men fear atomic war. All men hope for benefits from these new powers. Between the realities of man's true desires and the realities of man's danger, what are the obsolete "realities" of protocol and military protection?

During the war many persons fell out of the habit of doing their own thinking, for many had to do simply what they were told to do. Today lack of interest would be a great error, for there is much the average man can do about this danger.

This nation held a great debate concerning the menace of the Axis, and again today we need a great chain reaction of awareness and communication. Current proposals should be discussed in the light of the basic facts, in every newspaper, in schools, churches, in town meetings, in private conversations, and neighbor to neighbor. Merely reading about the bomb promotes knowledge in the mind, but only talk between men promotes feeling in the heart.

Not even scientists completely understand atomic energy, for each man's knowledge is incomplete. Few men have ever seen the bomb. But all men if told a few facts can understand that this bomb and the danger of war is a very real thing, and not something far away. It directly concerns every person in the civilized world. We cannot leave it to generals, Senators, and diplomats to work out a solution over a period of generations. Perhaps five years from now several nations will

have made bombs and it will be too late to avoid disaster.

Ignoring the realities of faith, good will, and honesty in seeking a solution, we place too much faith in legalisms, treaties, and mechanisms. We must begin through the U. N. Atomic Energy Commission to work for binding agreement, but America's decision will not be made over a table in the United Nations. Our representatives in New York, in Paris, or in Moscow depend ultimately on decisions made in the village square.

To the village square we must carry the facts of atomic energy. From there must come America's voice.

This belief of physicists promoted our formation of the Emergency Committee of Atomic Scientists, with headquarters at Princeton, N. J., to make possible a great national campaign for education on these issues, through the National Committee on Atomic Information. Detailed planning for world security will be easier when negotiators are assured of public understanding of our dilemmas.

Then our American proposals will be not merely documents about machinery, the dull, dry statements of a government to other governments, but the embodiment of a message to humanity from a nation of human beings.

Science has brought forth this danger, but the real problem is in the minds and hearts of men. We will not change the hearts of other men by mechanisms, but by changing *our* hearts and speaking bravely.

We must be generous in giving to the world the knowledge we have of the forces of nature, after establishing safeguards against abuse.

We must not be merely willing but actively eager to submit ourselves to binding authority necessary for world security.

We must realize we cannot simultaneously plan for war and peace.

When we are clear in heart and mind—only then shall we find courage to surmount the fear which haunts the world.

Hiroshima [1]

JOHN HERSEY

I. A NOISELESS FLASH

AT EXACTLY fifteen minutes past eight in the morning, on August 6, 1945, Japanese time, at the moment when the atomic bomb flashed above Hiroshima, Miss Toshiko Sasaki, a clerk in the personnel department of the East Asia Tin Works, had just sat down at her place in the plant office and was turning her head to speak to the girl at the next desk. At that same moment, Dr. Masakazu Fujii was settling down cross-legged to read the Osaka *Asahi* on the porch of his private hospital, overhanging one of the seven deltaic rivers which divide Hiroshima; Mrs. Hatsuyo Nakamura, a tailor's widow, stood by the window of her kitchen, watching a neighbor tearing down his house because it lay in the path of an air-raid-defense fire lane; Father Wilhelm Kleinsorge, a German priest of the Society of Jesus, reclined in his underwear on a cot on the top floor of his order's three-story mission house, reading a Jesuit magazine, *Stimmen der Zeit;* Dr. Terufumi Sasaki, a young member of the surgical staff of the city's large, modern Red Cross Hospital, walked along one of the hospital corridors with a blood specimen for a Wassermann test in his hand; and the Reverend

[1] Reprinted from *Hiroshima* by John Hersey by permission of Alfred A. Knopf, Inc. Copyright 1946 by John Hersey.

Mr. Kiyoshi Tanimoto, pastor of the Hiroshima Methodist Church, paused at the door of a rich man's house in Koi, the city's western suburb, and prepared to unload a handcart full of things he had evacuated from town in fear of the massive B-29 raid which everyone expected Hiroshima to suffer. A hundred thousand people were killed by the atomic bomb, and these six were among the survivors. They still wonder why they lived when so many others died. Each of them counts many small items of chance or volition—a step taken in time, a decision to go indoors, catching one streetcar instead of the next—that spared him. And now each knows that in the act of survival he lived a dozen lives and saw more death than he ever thought he would see. At the time, none of them knew anything.

The Reverend Mr. Tanimoto got up at five o'clock that morning. He was alone in the parsonage, because for some time his wife had been commuting with their year-old baby to spend nights with a friend in Ushida, a suburb to the north. Of all the important cities of Japan, only two, Kyoto and Hiroshima, had not been visited in strength by *B-san*, or Mr. B, as the Japanese, with a mixture of respect and unhappy familiarity, called the B-29; and Mr. Tanimoto, like all his neighbors and friends, was almost sick with anxiety. He had heard uncomfortably detailed accounts of mass raids on Kure, Iwakuni, Tokuyama, and other nearby towns; he was sure Hiroshima's turn would come soon. He had slept badly the night before, because there had been several air-raid warnings. Hiroshima had been getting such warnings almost every night for weeks, for at that time the B-29s were using Lake Biwa, northeast of Hiroshima, as a rendezvous point, and no matter what city the Americans planned to hit, the Superfortresses streamed in over the coast near Hiroshima. The frequency of the warnings and the continued abstinence of Mr. B with respect to Hiroshima had made its citizens jittery; a rumor was going around that the Americans were saving something special for the city.

Mr. Tanimoto is a small man, quick to talk, laugh, and cry. He wears his black hair parted in the middle and rather long; the prominence of the frontal bones just above his eyebrows and the smallness of his mustache, mouth, and chin give him a strange, old-young look, boyish and yet wise, weak and yet fiery. He moves nervously and fast, but with a restraint which suggests that he is a cautious, thoughtful man. He showed, indeed, just those qualities in the uneasy days before the bomb fell. Besides having his wife spend the nights in Ushida, Mr. Tanimoto had been carrying all the portable things from his church, in the close-packed residential district called Nagaragawa, to a house that belonged to a rayon manufacturer in Koi, two miles from the center of town. The rayon man, a Mr. Matsui, had opened his then unoccupied estate to a large number of his friends and acquaintances, so that they might evacuate whatever they wished to a safe distance from the probable target area. Mr. Tanimoto had had no difficulty in moving chairs, hymnals, Bibles, altar gear, and church records by pushcart himself, but the organ console and an upright piano required some aid. A friend of his named Matsuo had, the day before, helped him get the piano out to Koi; in return, he had promised this day to assist Mr. Matsuo in hauling out a daughter's belongings. That is why he had risen so early.

Mr. Tanimoto cooked his own breakfast. He felt awfully tired. The effort of moving the piano the day before, a sleepless night, weeks of worry and unbalanced diet, the cares of his parish—all combined to make him feel hardly adequate to the new day's work. There was another thing, too: Mr. Tanimoto had studied theology at Emory College, in Atlanta, Georgia; he had graduated in 1940; he spoke excellent English; he dressed in American clothes; he had corresponded with many American friends right up to the time the war began; and among a people obsessed with a fear of being spied upon—perhaps almost obsessed himself—he found himself growing increasingly uneasy.

The police had questioned him several times, and just a few days before, he had heard that an influential acquaintance, a Mr. Tanaka, a retired officer of the Toyo Kisen Kaisha steamship line, an anti-Christian, a man famous in Hiroshima for his showy philanthropies and notorious for his personal tyrannies, had been telling people that Tanimoto should not be trusted. In compensation, to show himself publicly a good Japanese, Mr. Tanimoto had taken on the chairmanship of his local *tonarigumi,* or Neighborhood Association, and to his other duties and concerns this position had added the business of organizing air-raid defense for about twenty families.

Before six o'clock that morning, Mr. Tanimoto started for Mr. Matsuo's house. There he found that their burden was to be a *tansu,* a large Japanese cabinet, full of clothing and household goods. The two men set out. The morning was perfectly clear and so warm that the day promised to be uncomfortable. A few minutes after they started, the air-raid siren went off—a minute-long blast that warned of approaching planes but indicated to the people of Hiroshima only a slight degree of danger, since it sounded every morning at this time, when an American weather plane came over. The two men pulled and pushed the handcart through the city streets. Hiroshima was a fan-shaped city, lying mostly on the six islands formed by the seven estuarial rivers that branch out from the Ota River; its main commercial and residential districts, covering about four square miles in the center of the city, contained three-quarters of its population, which had been reduced by several evacuation programs from a wartime peak of 380,000 to about 245,000. Factories and other residential districts, or suburbs, lay compactly around the edges of the city. To the south were the docks, an airport, and the island-studded Inland Sea. A rim of mountains runs around the other three sides of the delta. Mr. Tanimoto and Mr. Matsuo took their way through the shopping center, already full of people, and across two of the rivers to the sloping streets of Koi, and up them to the outskirts and foothills. As they started up a valley away from the tight-ranked houses, the all-clear sounded. (The Japanese radar operators, detecting only three planes, supposed that they comprised a reconnaissance.) Pushing the handcart up to the rayon man's house was tiring, and the men, after they had maneuvered their load into the driveway and to the front steps, paused to rest awhile. They stood with a wing of the house between them and the city. Like most homes in this part of Japan, the house consisted of a wooden frame and wooden walls supporting a heavy tile roof. Its front hall, packed with rolls of bedding and clothing, looked like a cool cave full of fat cushions. Opposite the house, to the right of the front door, there was a large, finicky rock garden. There was no sound of planes. The morning was still; the place was cool and pleasant.

Then a tremendous flash of light cut across the sky. Mr. Tanimoto has a distinct recollection that it travelled from east to west, from the city toward the hills. It seemed a sheet of sun. Both he and Mr. Matsuo reacted in terror—and both had time to react (for they were 3,500 yards, or two miles, from the center of the explosion). Mr. Matsuo dashed up the front steps into the house and dived among the bedrolls and buried himself there. Mr. Tanimoto took four or five steps and threw himself between two big rocks in the garden. He bellied up very hard against one of them. As his face was against the stone, he did not see what happened. He felt a sudden pressure, and then splinters and pieces of board and fragments of tile fell on him. He heard no roar. (Almost no one in Hiroshima recalls hearing any noise of the bomb. But a fisherman in his sampan on the Inland Sea near Tsuzu, the man with whom Mr. Tanimoto's mother-in-law and sister-in-law were living, saw the flash and heard a tremendous explosion; he was nearly twenty miles from Hiroshima, but the thunder was greater than when the B-29s hit Iwakuni, only five miles away.)

When he dared, Mr. Tanimoto raised his head and saw that the rayon man's house

had collapsed. He thought a bomb had fallen directly on it. Such clouds of dust had risen that there was a sort of twilight around. In panic, not thinking for the moment of Mr. Matsuo under the ruins, he dashed out into the street. He noticed as he ran that the concrete wall of the estate had fallen over—toward the house rather than away from it. In the street, the first thing he saw was a squad of soldiers who had been burrowing into the hillside opposite, making one of the thousands of dugouts in which the Japanese apparently intended to resist invasion, hill by hill, life for life; the soldiers were coming out of the hole, where they should have been safe, and blood was running from their heads, chests, and backs. They were silent and dazed. Under what seemed to be a local dust cloud, the day grew darker and darker.

At nearly midnight, the night before the bomb was dropped, an announcer on the city's radio station said that about two hundred B-29s were approaching southern Honshu and advised the population of Hiroshima to evacuate to their designated "safe areas." Mrs. Hatsuyo Nakamura, the tailor's widow, who lived in the section called Nobori-cho and who had long had a habit of doing as she was told, got her three children—a ten-year-old boy, Toshio, an eight-year-old girl, Yaeko, and a five-year-old girl, Myeko—out of bed and dressed them and walked with them to the military area known as the East Parade Ground, on the northeast edge of the city. There she unrolled some mats and the children lay down on them. They slept until about two, when they were awakened by the roar of the planes going over Hiroshima.

As soon as the planes had passed, Mrs. Nakamura started back with her children. They reached home a little after two-thirty and she immediately turned on the radio, which, to her distress, was just then broadcasting a fresh warning. When she looked at the children and saw how tired they were, and when she thought of the number of trips they had made in past weeks, all to no purpose, to the East Parade Ground, she decided that in spite of the instructions on the radio, she simply could not face starting out all over again. She put the children in their bedrolls on the floor, lay down herself at three o'clock, and fell asleep at once, so soundly that when planes passed over later, she did not waken to their sound.

The siren jarred her awake at about seven. She arose, dressed quickly, and hurried to the house of Mr. Nakamoto, the head of her Neighborhood Association, and asked him what she should do. He said that she should remain at home unless an urgent warning —a series of intermittent blasts of the siren —was sounded. She returned home, lit the stove in the kitchen, set some rice to cook, and sat down to read that morning's Hiroshima *Chugoku*. To her relief, the all-clear sounded at eight o'clock. She heard the children stirring, so she went and gave each of them a handful of peanuts and told them to stay on their bedrolls, because they were tired from the night's walk. She had hoped that they would go back to sleep, but the man in the house directly to the south began to make a terrible hullabaloo of hammering, wedging, ripping, and splitting. The prefectural government, convinced, as everyone in Hiroshima was, that the city would be attacked soon, had begun to press with threats and warnings for the completion of wide fire lanes, which, it was hoped, might act in conjunction with the rivers to localize any fires started by an incendiary raid; and the neighbor was reluctantly sacrificing his home to the city's safety. Just the day before, the prefecture had ordered all able-bodied girls from the secondary schools to spend a few days helping to clear these lanes, and they started work soon after the all-clear sounded.

Mrs. Nakamura went back to the kitchen, looked at the rice, and began watching the man next door. At first, she was annoyed with him for making so much noise, but then she was moved almost to tears by pity. Her emotion was specifically directed toward her neighbor, tearing down

his home, board by board, at a time when there was so much unavoidable destruction, but undoubtedly she also felt a generalized, community pity, to say nothing of self-pity. She had not had an easy time. Her husband, Isawa, had gone into the Army just after Myeko was born, and she had heard nothing from or of him for a long time, until, on March 5, 1942, she received a seven-word telegram: "Isawa died an honorable death at Singapore." She learned later that he had died on February 15th, the day Singapore fell, and that he had been a corporal. Isawa had been a not particularly prosperous tailor, and his only capital was a Sankoku sewing machine. After his death, when his allotments stopped coming, Mrs. Nakamura got out the machine and began to take in piecework herself, and since then had supported the children, but poorly, by sewing.

As Mrs. Nakamura stood watching her neighbor, everything flashed whiter than any white she had ever seen. She did not notice what happened to the man next door; the reflex of a mother set her in motion toward her children. She had taken a single step (the house was 1,350 yards, or three-quarters of a mile, from the center of the explosion) when something picked her up and she seemed to fly into the next room over the raised sleeping platform, pursued by parts of her house.

Timbers fell around her as she landed, and a shower of tiles pommelled her; everything became dark, for she was buried. The debris did not cover her deeply. She rose up and freed herself. She heard a child cry, "Mother, help me!," and saw her youngest—Myeko, the five-year-old—buried up to her breast and unable to move. As Mrs. Nakamura started frantically to claw her way toward the baby, she could see or hear nothing of her other children.

In the days right before the bombing, Dr. Masakazu Fujii, being prosperous, hedonistic, and at the time not too busy, had been allowing himself the luxury of sleeping until nine or nine-thirty, but fortunately he had to get up early the morning the bomb was dropped to see a house guest off on a train. He rose at six, and half an hour later walked with his friend to the station, not far away, across two of the rivers. He was back home by seven, just as the siren sounded its sustained warning. He ate breakfast and then, because the morning was already hot, undressed down to his underwear and went out on the porch to read the paper. This porch—in fact, the whole building—was curiously constructed. Dr. Fujii was the proprietor of a peculiarly Japanese institution: a private, single-doctor hospital. This building, perched beside and over the water of the Kyo River, and next to the bridge of the same name, contained thirty rooms for thirty patients and their kinfolk—for, according to Japanese custom, when a person falls sick and goes to a hospital, one or more members of his family go and live there with him, to cook for him, bathe, massage, and read to him, and to offer incessant familial sympathy, without which a Japanese patient would be miserable indeed. Dr. Fujii had no beds—only straw mats—for his patients. He did, however, have all sorts of modern equipment: an X-ray machine, diathermy apparatus, and a fine tiled laboratory. The structure rested two-thirds on the land, one-third on piles over the tidal waters of the Kyo. This overhang, the part of the building where Dr. Fujii lived, was queer-looking, but it was cool in summer and from the porch, which faced away from the center of the city, the prospect of the river, with pleasure boats drifting up and down it, was always refreshing. Dr. Fujii had occasionally had anxious moments when the Ota and its mouth branches rose to flood, but the piling was apparently firm enough and the house had always held.

Dr. Fujii had been relatively idle for about a month because in July, as the number of untouched cities in Japan dwindled and as Hiroshima seemed more and more inevitably a target, he began turning patients away, on the ground that in case of a fire raid he would not be able to evacuate them. Now he had only two patients left—a woman from

Yano, injured in the shoulder, and a young man of twenty-five recovering from burns he had suffered when the steel factory near Hiroshima in which he worked had been hit. Dr. Fujii had six nurses to tend his patients. His wife and children were safe; his wife and one son were living outside Osaka, and another son and two daughters were in the country on Kyushu. A niece was living with him, and a maid and a manservant. He had little to do and did not mind, for he had saved some money. At fifty, he was healthy, convivial, and calm, and he was pleased to pass the evenings drinking whiskey with friends, always sensibly and for the sake of conversation. Before the war, he had affected brands imported from Scotland and America; now he was perfectly satisfied with the best Japanese brand, Suntory.

Dr. Fujii sat down cross-legged in his underwear on the spotless matting of the porch, put on his glasses, and started reading the Osaka *Asahi*. He liked to read the Osaka news because his wife was there. He saw the flash. To him—faced away from the center and looking at his paper—it seemed a brilliant yellow. Startled, he began to rise to his feet. In that moment (he was 1,550 yards from the center), the hospital leaned behind his rising and, with a terrible ripping noise, toppled into the river. The Doctor, still in the act of getting to his feet, was thrown forward and around and over; he was buffeted and gripped; he lost track of everything, because things were so speeded up; he felt the water.

Dr. Fujii hardly had time to think that he was dying before he realized that he was alive, squeezed tightly by two long timbers in a V across his chest, like a morsel suspended between two huge chopsticks—held upright, so that he could not move, with his head miraculously above water and his torso and legs in it. The remains of his hospital were all around him in a mad assortment of splintered lumber and materials for the relief of pain. His left shoulder hurt terribly. His glasses were gone.

Father Wilhelm Kleinsorge, of the Society of Jesus, was, on the morning of the explosion, in rather frail condition. The Japanese wartime diet had not sustained him, and he felt the strain of being a foreigner in an increasingly xenophobic Japan; even a German, since the defeat of the Fatherland, was unpopular. Father Kleinsorge had, at thirty-eight, the look of a boy growing too fast—thin in the face, with a prominent Adam's apple, a hollow chest, dangling hands, big feet. He walked clumsily, leaning forward a little. He was tired all the time. To make matters worse, he had suffered for two days, along with Father Cieslik, a fellow-priest, from a rather painful and urgent diarrhea, which they blamed on the beans and black ration bread they were obliged to eat. Two other priests then living in the mission compound, which was in the Nobori-cho section—Father Superior LaSalle and Father Schiffer—had happily escaped this affliction.

Father Kleinsorge woke up about six the morning the bomb was dropped, and half an hour later—he was a bit tardy because of his sickness—he began to read Mass in the mission chapel, a small Japanese-style wooden building which was without pews, since its worshippers knelt on the usual Japanese matted floor, facing an altar graced with splendid silks, brass, silver, and heavy embroideries. This morning, a Monday, the only worshippers were Mr. Takemoto, a theological student living in the mission house; Mr. Fukai, the secretary of the diocese; Mrs. Murata, the mission's devoutly Christian housekeeper; and his fellow-priests. After Mass, while Father Kleinsorge was reading the Prayers of Thanksgiving, the siren sounded. He stopped the service and the missionaries retired across the compound to the bigger building. There, in his room on the ground floor, to the right of the front door, Father Kleinsorge changed into a military uniform which he had acquired when he was teaching at the Rokko Middle School in Kobe and which he wore during air-raid alerts.

After an alarm, Father Kleinsorge always went out and scanned the sky, and in this

instance, when he stepped outside, he was glad to see only the single weather plane that flew over Hiroshima each day about this time. Satisfied that nothing would happen, he went in and breakfasted with the other Fathers on substitute coffee and ration bread, which, under the circumstances, was especially repugnant to him. The Fathers sat and talked awhile, until, at eight, they heard the all-clear. They went then to various parts of the building. Father Schiffer retired to his room to do some writing. Father Cieslik sat in his room in a straight chair with a pillow over his stomach to ease his pain, and read. Father Superior LaSalle stood at the window of his room, thinking. Father Kleinsorge went up to a room on the third floor, took off all his clothes except his underwear, and stretched out on his right side on a cot and began reading his *Stimmen der Zeit.*

After the terrible flash—which, Father Kleinsorge later realized, reminded him of something he had read as a boy about a large meteor colliding with the earth—he had time (since he was 1,400 yards from the center) for one thought: A bomb has fallen directly on us. Then, for a few seconds or minutes, he went out of his mind.

Father Kleinsorge never knew how he got out of the house. The next things he was conscious of were that he was wandering around in the mission's vegetable garden in his underwear, bleeding slightly from small cuts along his left flank; that all the buildings round about had fallen down except the Jesuits' mission house, which had long before been braced and double-braced by a priest named Gropper, who was terrified of earthquakes; that the day had turned dark; and that Murata-*san*, the housekeeper, was nearby, crying over and over, "*Shu Jesusu, awaremi tamai!* Our Lord Jesus, have pity on us!"

On the train on the way into Hiroshima from the country, where he lived with his mother, Dr. Terufumi Sasaki, the Red Cross Hospital surgeon, thought over an unpleasant nightmare he had had the night before. His mother's home was in Mukaihara, thirty miles from the city, and it took him two hours by train and tram to reach the hospital. He had slept uneasily all night and had wakened an hour earlier than usual, and, feeling sluggish and slightly feverish, had debated whether to go to the hospital at all; his sense of duty finally forced him to go, and he had started out on an earlier train than he took most mornings. The dream had particularly frightened him because it was so closely associated, on the surface at least, with a disturbing actuality. He was only twenty-five years old and had just completed his training at the Eastern Medical University, in Tsingtao, China. He was something of an idealist and was much distressed by the inadequacy of medical facilities in the country town where his mother lived. Quite on his own, and without a permit, he had begun visiting a few sick people out there in the evenings, after his eight hours at the hospital and four hours' commuting. He had recently learned that the penalty for practicing without a permit was severe; a fellow-doctor whom he had asked about it had given him a serious scolding. Nevertheless, he had continued to practice. In his dream, he had been at the bedside of a country patient when the police and the doctor he had consulted burst into the room, seized him, dragged him outside, and beat him up cruelly. On the train, he just about decided to give up the work in Mukaihara, since he felt it would be impossible to get a permit, because the authorities would hold that it would conflict with his duties at the Red Cross Hospital.

At the terminus, he caught a streetcar at once. (He later calculated that if he had taken his customary train that morning, and if he had had to wait a few minutes for the streetcar, as often happened, he would have been close to the center at the time of the explosion and would surely have perished.) He arrived at the hospital at seven-forty and reported to the chief surgeon. A few minutes later, he went to a room on the first floor and drew blood from the arm of a man in order to perform a

Wassermann test. The laboratory containing the incubators for the test was on the third floor. With the blood specimen in his left hand, walking in a kind of distraction he had felt all morning, probably because of the dream and his restless night, he started along the main corridor on his way toward the stairs. He was one step beyond an open window when the light of the bomb was reflected, like a gigantic photographic flash, in the corridor. He ducked down on one knee and said to himself, as only a Japanese would, "Sasaki, *gambare!* Be brave!" Just then (the building was 1,650 yards from the center), the blast ripped through the hospital. The glasses he was wearing flew off his face; the bottle of blood crashed against one wall; his Japanese slippers zipped out from under his feet—but otherwise, thanks to where he stood, he was untouched.

Dr. Sasaki shouted the name of the chief surgeon and rushed around to the man's office and found him terribly cut by glass. The hospital was in horrible confusion: heavy partitions and ceilings had fallen on patients, beds had overturned, windows had blown in and cut people, blood was spattered on the walls and floors, instruments were everywhere, many of the patients were running about screaming, many more lay dead. (A colleague working in the laboratory to which Dr. Sasaki had been walking was dead; Dr. Sasaki's patient, whom he had just left and who a few moments before had been dreadfully afraid of syphilis, was also dead.) Dr. Sasaki found himself the only doctor in the hospital who was unhurt.

Dr. Sasaki, who believed that the enemy had hit only the building he was in, got bandages and began to bind the wounds of those inside the hospital; while outside, all over Hiroshima, maimed and dying citizens turned their unsteady steps toward the Red Cross Hospital to begin an invasion that was to make Dr. Sasaki forget his private nightmare for a long, long time.

Miss Toshiko Sasaki, the East Asia Tin Works clerk, who is not related to Dr. Sasaki, got up at three o'clock in the morning on the day the bomb fell. There was extra housework to do. Her eleven-month-old brother, Akio, had come down the day before with a serious stomach upset; her mother had taken him to the Tamura Pediatric Hospital and was staying there with him. Miss Sasaki, who was about twenty, had to cook breakfast for her father, a brother, a sister, and herself, and—since the hospital, because of the war, was unable to provide food—to prepare a whole day's meals for her mother and the baby, in time for her father, who worked in a factory making rubber earplugs for artillery crews, to take the food by on his way to the plant. When she had finished and had cleaned and put away the cooking things, it was nearly seven. The family lived in Koi, and she had a forty-five-minute trip to the tin works, in the section of town called Kannonmachi. She was in charge of the personnel records in the factory. She left Koi at seven, and as soon as she reached the plant, she went with some of the other girls from the personnel department to the factory auditorium. A prominent local Navy man, a former employee, had committed suicide the day before by throwing himself under a train—a death considered honorable enough to warrant a memorial service, which was to be held at the tin works at ten o'clock that morning. In the large hall, Miss Sasaki and the others made suitable preparations for the meeting. This work took about twenty minutes

Miss Sasaki went back to her office and sat down at her desk. She was quite far from the windows, which were off to her left, and behind her were a couple of tall bookcases containing all the books of the factory library, which the personnel department had organized. She settled herself at her desk, put some things in a drawer, and shifted papers. She thought that before she began to make entries in her lists of new employees, discharges, and departures for the Army, she would chat for a moment with the girl at her right. Just as she turned her head away from the windows, the room was filled with a blinding light. She was para-

lyzed by fear, fixed still in her chair for a long moment (the plant was 1,600 yards from the center).

Everything fell, and Miss Sasaki lost consciousness. The ceiling dropped suddenly and the wooden floor above collapsed in splinters and the people up there came down and the roof above them gave way; but principally and first of all, the bookcases right behind her swooped forward and the contents threw her down, with her left leg horribly twisted and breaking underneath her. There, in the tin factory, in the first moment of the atomic age, a human being was crushed by books.

II. The Fire

Immediately after the explosion, the Reverend Mr. Kiyoshi Tanimoto, having run wildly out of the Matsui estate and having looked in wonderment at the bloody soldiers at the mouth of the dugout they had been digging, attached himself sympathetically to an old lady who was walking along in a daze, holding her head with her left hand, supporting a small boy of three or four on her back with her right, and crying, "I'm hurt! I'm hurt! I'm hurt!" Mr. Tanimoto transferred the child to his own back and led the woman by the hand down the street, which was darkened by what seemed to be a local column of dust. He took the woman to a grammar school not far away that had previously been designated for use as a temporary hospital in case of emergency. By this solicitous behavior, Mr. Tanimoto at once got rid of his terror. At the school, he was much surprised to see glass all over the floor and fifty or sixy injured people already waiting to be treated. He reflected that, although the all-clear had sounded and he had heard no planes, several bombs must have been dropped. He thought of a hillock in the rayon man's garden from which he could get a view of the whole of Koi—of the whole of Hiroshima, for that matter—and he ran back up to the estate.

From the mound, Mr. Tanimoto saw an astonishing panorama. Not just a patch of Koi, as he had expected, but as much of Hiroshima as he could see through the clouded air was giving off a thick, dreadful miasma. Clumps of smoke, near and far, had begun to push up through the general dust. He wondered how such extensive damage could have been dealt out of a silent sky; even a few planes, far up, would have been audible. Houses nearby were burning, and when huge drops of water the size of marbles began to fall, he half thought that they must be coming from the hoses of firemen fighting the blazes. (They were actually drops of condensed moisture falling from the turbulent tower of dust, heat, and fission fragments that had already risen miles into the sky above Hiroshima.)

Mr. Tanimoto turned away from the sight when he heard Mr. Matsuo call out to ask whether he was all right. Mr. Matsuo had been safely cushioned within the falling house by the bedding stored in the front hall and had worked his way out. Mr. Tanimoto scarcely answered. He had thought of his wife and baby, his church, his home, his parishioners, all of them down in that awful murk. Once more he began to run in fear—toward the city.

Mrs. Hatsuyo Nakamura, the tailor's widow, having struggled up from under the ruins of her house after the explosion, and seeing Myeko, the youngest of her three children, buried breast-deep and unable to move, crawled across the debris, hauled at timbers, and flung tiles aside, in a hurried effort to free the child. Then, from what seemed to be caverns far below, she heard two small voices crying, "*Tasukete! Tasukete!* Help! Help!"

She called the names of her ten-year-old son and eight-year-old daughter: "Toshio! Yaeko!"

The voices from below answered.

Mrs. Nakamura abandoned Myeko, who at least could breathe, and in a frenzy made the wreckage fly above the crying voices. The children had been sleeping nearly ten feet apart, but now their voices seemed to come from the same place. Toshio, the boy, apparently had some freedom to move, be-

cause she could feel him undermining the pile of wood and tiles as she worked from above. At last she saw his head, and she hastily pulled him out by it. A mosquito net was wound intricately, as if it had been carefully wrapped, around his feet. He said he had been blown right across the room and had been on top of his sister Yaeko under the wreckage. She now said, from underneath, that she could not move, because there was something on her legs. With a bit more digging, Mrs. Nakamura cleared a hole above the child and began to pull her arm. "*Itai!* It hurts!" Yaeko cried. Mrs. Nakamura shouted, "There's no time now to say whether it hurts or not," and yanked her whimpering daughter up. Then she freed Myeko. The children were filthy and bruised, but none of them had a single cut or scratch.

Mrs. Nakamura took the children out into the street. They had nothing on but underpants, and although the day was very hot, she worried rather confusedly about their being cold, so she went back into the wreckage and burrowed underneath and found a bundle of clothes she had packed for an emergency, and she dressed them in pants, blouses, shoes, padded-cotton air-raid helmets called *bokuzuki,* and even, irrationally, overcoats. The children were silent, except for the five-year-old Myeko, who kept asking questions: "Why is it night already? Why did our house fall down? What happened?" Mrs. Nakamura, who did not know what had happened (had not the all-clear sounded?), looked around and saw through the darkness that all the houses in her neighborhood had collapsed. The house next door, which its owner had been tearing down to make way for a fire lane, was now very thoroughly, if crudely, torn down; its owner, who had been sacrificing his home for the community's safety, lay dead. Mrs. Nakamoto, wife of the head of the local air-raid-defense Neighborhood Association, came across the street with her head all bloody, and said that her baby was badly cut; did Mrs. Nakamura have any bandage? Mrs. Nakamura did not, but she crawled into the remains of her house again and pulled out some white cloth that she had been using in her work as a seamstress, ripped it into strips, and gave it to Mrs. Nakamoto. While fetching the cloth, she noticed her sewing machine; she went back in for it and dragged it out. Obviously, she could not carry it with her, so she unthinkingly plunged her symbol of livelihood into the receptacle which for weeks had been her symbol of safety—the cement tank of water in front of her house, of the type every household had been ordered to construct against a possible fire raid.

A nervous neighbor, Mrs. Hataya, called to Mrs. Nakamura to run away with her to the woods in Asano Park—an estate, by the Kyo River not far off, belonging to the wealthy Asano family, who once owned the Toyo Kisen Kaisha steamship line. The park had been designated as an evacuation area for their neighborhood. Seeing fire breaking out in a nearby ruin (except at the very center, where the bomb itself ignited some fires, most of Hiroshima's citywide conflagration was caused by inflammable wreckage falling on cookstoves and live wires), Mrs. Nakamura suggested going over to fight it. Mrs. Hataya said, "Don't be foolish. What if planes come and drop more bombs?" So Mrs. Nakamura started out for Asano Park with her children and Mrs. Hataya, and she carried her rucksack of emergency clothing, a blanket, an umbrella, and a suitcase of things she had cached in her air-raid shelter. Under many ruins, as they hurried along, they heard muffled screams for help. The only building they saw standing on their way to Asano Park was the Jesuit mission house, alongside the Catholic kindergarten to which Mrs. Nakamura had sent Myeko for a time. As they passed it, she saw Father Kleinsorge, in bloody underwear, running out of the house with a small suitcase in his hand.

Right after the explosion, while Father Wilhelm Kleinsorge, S. J., was wandering around in his underwear in the vegetable garden, Father Superior LaSalle came around the corner of the building in the darkness. His body, especially his back, was bloody;

the flash had made him twist away from his window, and tiny pieces of glass had flown at him. Father Kleinsorge, still bewildered, managed to ask, "Where are the rest?" Just then, the two other priests living in the mission house appeared—Father Cieslik, unhurt, supporting Father Schiffer, who was covered with blood that spurted from a cut above his left ear and who was very pale. Father Cieslik was rather pleased with himself, for after the flash he had dived into a doorway, which he had previously reckoned to be the safest place inside the building, and when the blast came, he was not injured. Father LaSalle told Father Cieslik to take Father Schiffer to a doctor before he bled to death, and suggested either Dr. Kanda, who lived on the next corner, or Dr. Fujii, about six blocks away. The two men went out of the compound and up the street.

The daughter of Mr. Hoshijima, the mission catechist, ran up to Father Kleinsorge and said that her mother and sister were buried under the ruins of their house, which was at the back of the Jesuit compound, and at the same time the priests noticed that the house of the Catholic-kindergarten teacher at the front of the compound had collapsed on her. While Father LaSalle and Mrs. Murata, the mission housekeeper, dug the teacher out, Father Kleinsorge went to the catechist's fallen house and began lifting things off the top of the pile. There was not a sound underneath; he was sure the Hoshijima women had been killed. At last, under what had been a corner of the kitchen, he saw Mrs. Hoshijima's head. Believing her dead, he began to haul her out by the hair, but suddenly she screamed, "*Itai! Itai!* It hurts! It hurts!" He dug some more and lifted her out. He managed, too, to find her daughter in the rubble and free her. Neither was badly hurt.

A public bath next door to the mission house had caught fire, but since there the wind was southerly, the priests thought their house would be spared. Nevertheless, as a precaution. Father Kleinsorge went inside to fetch some things he wanted to save. He found his room in a state of weird and illogical confusion. A first-aid kit was hanging undisturbed on a hook on the wall, but his clothes, which had been on other hooks nearby, were nowhere to be seen. His desk was in splinters all over the room, but a mere papier-mâché suitcase, which he had hidden under the desk, stood handle-side up, without a scratch on it, in the doorway of the room, where he could not miss it. Father Kleinsorge later came to regard this as a bit of Providential interference, inasmuch as the suitcase contained his breviary, the account books for the whole diocese, and a considerable amount of paper money belonging to the mission, for which he was responsible. He ran out of the house and deposited the suitcase in the mission air-raid shelter.

At about this time, Father Cieslik and Father Schiffer, who was still spurting blood, came back and said that Dr. Kanda's house was ruined and that fire blocked them from getting out of what they supposed to be the local circle of destruction to Dr. Fujii's private hospital, on the bank of the Kyo River.

Dr. Masakazu Fujii's hospital was no longer on the bank of the Kyo River; it was in the river. After the overturn, Dr. Fujii was so stupefied and so tightly squeezed by the beams gripping his chest that he was unable to move at first, and he hung there about twenty minutes in the darkened morning. Then a thought which came to him—that soon the tide would be running in through the estuaries and his head would be submerged—inspired him to fearful activity; he wriggled and turned and exerted what strength he could (though his left arm, because of the pain in his shoulder, was useless), and before long he had freed himself from the vise. After a few moments' rest, he climbed onto the pile of timbers and, finding a long one that slanted up to the river-bank, he painfully shinnied up it.

Dr. Fujii, who was in his underwear, was now soaking and dirty. His undershirt was torn, and blood ran down it from bad cuts on his chin and back. In this disarray, he

walked out onto Kyo Bridge, beside which his hospital had stood. The bridge had not collapsed. He could see only fuzzily without his glasses, but he could see enough to be amazed at the number of houses that were down all around. On the bridge, he encountered a friend, a doctor named Machii, and asked in bewilderment, "What do you think it was?"

Dr. Machii said, "It must have been a *Molotoffano hanakago*"—a Molotov flower basket, the delicate Japanese name for the "bread basket," or self-scattering cluster of bombs.

At first, Dr. Fujii could see only two fires, one across the river from his hospital site and one quite far to the south. But at the same time, he and his friend observed something that puzzled them, and which, as doctors, they discussed: although there were as yet very few fires, wounded people were hurrying across the bridge in an endless parade of misery, and many of them exhibited terrible burns on their faces and arms. "Why do you suppose it is?" Dr. Fujii asked. Even a theory was comforting that day, and Dr. Machii stuck to his. "Perhaps because it was a Molotov flower basket," he said.

There had been no breeze earlier in the morning when Dr. Fujii had walked to the railroad station to see his friend off, but now brisk winds were blowing every which way; here on the bridge the wind was easterly. New fires were leaping up, and they spread quickly, and in a very short time terrible blasts of hot air and showers of cinders made it impossible to stand on the bridge any more. Dr. Machii ran to the far side of the river and along a still unkindled street. Dr. Fujii went down into the water under the bridge, where a score of people had already taken refuge, among them his servants who had extricated themselves from the wreckage. From there, Dr. Fujii saw a nurse hanging in the timbers of his hospital by her legs, and then another painfully pinned across the breast. He enlisted the help of some of the others under the bridge and freed both of them. He thought he heard the voice of his niece for a moment, but he could not find her; he never saw her again. Four of his nurses and the two patients in the hospital died, too. Dr. Fujii went back into the water of the river and waited for the fire to subside.

The lot of Drs. Fujii, Kanda, and Machii right after the explosion—and, as these three were typical, that of the majority of the physicians and surgeons of Hiroshima—with their offices and hospitals destroyed, their equipment scattered, their own bodies incapacitated in varying degrees, explained why so many citizens who were hurt went untended and why so many who might have lived died. Of a hundred and fifty doctors in the city, sixty-five were already dead and most of the rest were wounded. Of 1,780 nurses, 1,654 were dead or too badly hurt to work. In the biggest hospital, that of the Red Cross, only six doctors out of thirty were able to function, and only ten nurses out of more than two hundred. The sole uninjured doctor on the Red Cross Hospital staff was Dr. Sasaki. After the explosion, he hurried to a storeroom to fetch bandages. This room, like everything he had seen as he ran through the hospital, was chaotic—bottles of medicines thrown off shelves and broken, salves spattered on the walls, instruments strewn everywhere. He grabbed up some bandages and an unbroken bottle of mercurochrome, hurried back to the chief surgeon, and bandaged his cuts. Then he went out into the corridor and began patching up the wounded patients and the doctors and nurses there. He blundered so without his glasses that he took a pair off the face of a wounded nurse, and although they only approximately compensated for the errors of his vision, they were better than nothing. (He was to depend of them for more than a month.)

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began to find dreadful burns. He realized then that casualties were pouring in from outdoors. There were so many that he began to pass up the lightly wounded; he decided that all he could hope to do was to stop people from bleeding to death. Before long, patients lay and crouched on the floors of the wards and the laboratories and all the other rooms, and in the corridors, and on the stairs, and in the front hall, and under the portecochère, and on the stone front steps, and in the driveway and courtyard, and for blocks each way in the streets outside. Wounded people supported maimed people; disfigured families leaned together. Many people were vomiting. A tremendous number of school-girls—some of those who had been taken from their classrooms to work outdoors, clearing fire lanes—crept into the hospital. In a city of two hundred and forty-five thousand, nearly a hundred thousand people had been killed or doomed at one blow; a hundred thousand more were hurt. At least ten thousand of the wounded made their way to the best hospital in town, which was altogether unequal to such a trampling, since it had only six hundred beds, and they had all been occupied. The people in the suffocating crowd inside the hospital wept and cried, for Dr. Sasaki to hear, "*Sensei!* Doctor!," and the less seriously wounded came and pulled at his sleeve and begged him to go to the aid of the worse wounded. Tugged here and there in his stockinged feet, bewildered by the numbers, staggered by so much raw flesh, Dr. Sasaki lost all sense of profession and stopped working as a skillful surgeon and a sympathetic man; he became an automaton, mechanically wiping, daubing, winding, wiping, daubing, winding.

Some of the wounded in Hiroshima were unable to enjoy the questionable luxury of hospitalization. In what had been the personnel office of the East Asia Tin Works, Miss Sasaki lay doubled over, unconscious, under the tremendous pile of books and plaster and wood and corrugated iron. She was wholly unconscious (she later estimated) for about three hours. Her first sensation was of dreadful pain in her left leg. It was so black under the books and debris that the borderline between awareness and unconsciousness was fine; she apparently crossed it several times, for the pain seemed to come and go. At the moments when it was sharpest, she felt that her leg had been cut off somewhere below the knee. Later, she heard someone walking on top of the wreckage above her, and anguished voices spoke up, evidently from within the mess around her: "Please help! Get us out!"

Father Kleinsorge stemmed Father Schiffer's spurting cut as well as he could with some bandage that Dr. Fujii had given the priests a few days before. When he finished, he ran into the mission house again and found the jacket of his military uniform and an old pair of gray trousers. He put them on and went outside. A woman from next door ran up to him and shouted that her husband was buried under her house and the house was on fire; Father Kleinsorge must come and save him.

Father Kleinsorge, already growing apathetic and dazed in the presence of the cumulative distress, said, "We haven't much time." Houses all around were burning, and the wind was now blowing hard. "Do you know exactly which part of the house he is under?" he asked.

"Yes, yes," she said. "Come quickly."

They went around to the house, the remains of which blazed violently, but when they got there, it turned out that the woman had no idea where her husband was. Father Kleinsorge shouted several times, "Is anyone there?" There was no answer. Father Kleinsorge said to the woman. "We must get away or we will all die." He went back to the Catholic compound and told the Father Superior that the fire was coming closer on the wind, which had swung around and was now from the north; it was time for everybody to go.

Just then, the kindergarten teacher pointed out to the priests Mr. Fukai, the secretary of

the diocese, who was standing in his window on the second floor of the mission house, facing in the direction of the explosion, weeping. Father Cieslik, because he thought the stairs unusable, ran around to the back of the mission house to look for a ladder. There he heard people crying for help under a nearby fallen roof. He called to passers-by running away in the street to help him lift it, but nobody paid any attention, and he had to leave the buried ones to die. Father Kleinsorge ran inside the mission house and scrambled up the stairs, which were awry and piled with plaster and lathing, and called to Mr. Fukai from the doorway of his room.

Mr. Fukai, a very short man of about fifty, turned around slowly, with a queer look, and said, "Leave me here."

Father Kleinsorge went into the room and took Mr. Fukai by the collar of his coat and said, "Come with me or you'll die."

Mr. Fukai said, "Leave me here to die."

Father Kleinsorge began to shove and haul Mr. Fukai out of the room. Then the theological student came up and grabbed Mr. Fukai's feet, and Father Kleinsorge took his shoulders, and together they carried him downstairs and outdoors. "I can't walk!" Mr. Fukai cried. "Leave me here!" Father Kleinsorge got his paper suitcase with the money in it and took Mr. Fukai up pickaback, and the party started for the East Parade Ground, their district's "safe area." As they went out of the gate, Mr. Fukai, quite childlike now, beat on Father Kleinsorge's shoulders and said, "I won't leave. I won't leave." Irrelevantly, Father Kleinsorge turned to Father LaSalle and said, "We have lost all our possessions but not our sense of humor."

The street was cluttered with parts of houses that had slid into it, and with fallen telephone poles and wires. From every second or third house came the voices of people buried and abandoned who invariably screamed, with formal politeness, "*Tasukete kure!* Help, if you please!" The priests recognized several ruins from which these cries came as the homes of friends, but because of the fire it was too late to help. All the way, Mr. Fukai whimpered, "Let me stay." The party turned right when they came to a block of fallen houses that was one flame. At Sakai Bridge, which would take them across to the East Parade Ground, they saw that the whole community on the opposite side of the river was a sheet of fire; they dared not cross and decided to take refuge in Asano Park, off to their left. Father Kleinsorge, who had been weakened for a couple of days by his bad case of diarrhea, began to stagger under his protesting burden, and as he tried to climb up over the wreckage of several houses that blocked their way to the park, he stumbled, dropped Mr. Fukai, and plunged down, head over heels, to the edge of the river. When he picked himself up, he saw Mr. Fukai running away. Father Kleinsorge shouted to a dozen soldiers, who were standing by the bridge, to stop him. As Father Kleinsorge started back to get Mr. Fukai, Father LaSalle called out, "Hurry! Don't waste time!" So Father Kleinsorge just requested the soldiers to take care of Mr. Fukai. They said they would, but the little, broken man got away from them, and the last the priests could see of him, he was running back toward the fire.

Mr. Tanimoto, fearful for his family and church, at first ran toward them by the shortest route, along Koi Highway. He was the only person making his way into the city; he met hundreds and hundreds who were fleeing, and every one of them seemed to be hurt in some way. The eyebrows of some were burned off and skin hung from their faces and hands. Others, because of pain, held their arms up as if carrying something in both hands. Some were vomiting as they walked. Many were naked or in shreds of clothing. On some undressed bodies, the burns had made patterns – of undershirt straps and suspenders and, on the skin of some women (since white repelled the heat from the bomb and dark clothes absorbed it and conducted it to the skin), the shapes of flowers they had had on their kimonos. Many, although injured themselves, sup

ported relatives who were worse off. Almost all had their heads bowed, looked straight ahead, were silent, and showed no expression whatever.

After crossing Koi Bridge and Kannon Bridge, having run the whole way, Mr. Tanimoto saw, as he approached the center, that all the houses had been crushed and many were afire. Here the trees were bare and their trunks were charred. He tried at several points to penetrate the ruins, but the flames always stopped him. Under many houses, people screamed for help, but no one helped; in general, survivors that day assisted only their relatives or immediate neighbors, for they could not comprehend or tolerate a wider circle of misery. The wounded limped past the screams, and Mr. Tanimoto ran past them. As a Christian he was filled with compassion for those who were trapped, and as a Japanese he was overwhelmed by the shame of being unhurt, and he prayed as he ran, "God help them and take them out of the fire."

He thought he would skirt the fire, to the left. He ran back to Kannon Bridge and followed for a distance one of the rivers. He tried several cross streets, but all were blocked, so he turned far left and ran out of Yokogawa, a station on a railroad line that detoured the city in a wide semicircle, and he followed the rails until he came to a burning train. So impressed was he by this time by the extent of the damage that he ran north two miles to Gion, a suburb in the foothills. All the way, he overtook dreadfully burned and lacerated people, and in his guilt he turned to right and left as he hurried and said to some of them, "Excuse me for having no burden like yours." Near Gion, he began to meet country people going toward the city to help, and when they saw him, several exclaimed, "Look! There is one who is not wounded." At Gion, he bore toward the right bank of the main river, the Ota, and ran down it until he reached fire again. There was no fire on the other side of the river, so he threw off his shirt and shoes and plunged into it. In midstream, where the current was fairly strong, exhaustion and fear finally caught up with him—he had run nearly seven miles—and he became limp and drifted in the water. He prayed, "Please, God, help me to cross. It would be nonsense for me to be drowned when I am the only uninjured one." He managed a few more strokes and fetched up on a spit downstream.

Mr. Tanimoto climbed up the bank and ran along it until, near a large Shinto shrine, he came to more fire, and as he turned left to get around it, he met, by incredible luck, his wife. She was carrying their infant son. Mr. Tanimoto was now so emotionally worn out that nothing could surprise him. He did not embrace his wife; he simply said, "Oh, you are safe." She told him that she had got home from her night in Ushida just in time for the explosion; she had been buried under the parsonage with the baby in her arms. She told how the wreckage had pressed down on her, how the baby had cried. She saw a chink of light, and by reaching up with a hand, she worked the hole bigger, bit by bit. After about half an hour, she heard the crackling noise of wood burning. At last the opening was big enough for her to push the baby out, and afterward she crawled out herself. She said she was now going out to Ushida again. Mr. Tanimoto said he wanted to see his church and take care of the people of his Neighborhood Association. They parted as casually—as bewildered—as they had met.

Mr. Tanimoto's way around the fire took him across the East Parade Ground, which, being an evacuation area, was now the scene of a gruesome review: rank on rank of the burned and bleeding. Those who were burned moaned, "*Mizu, mizu!* Water, water!" Mr. Tanimoto found a basin in a nearby street and located a water tap that still worked in the crushed shell of a house, and he began carrying water to the suffering strangers. When he had given drink to about thirty of them, he realized he was taking too much time. "Excuse me," he said loudly to those nearby who were reaching out their hands to him and crying their thirst. "I have many people to take care of." Then he ran

away. He went to the river again, the basin in his hand, and jumped down onto a sandspit. There he saw hundreds of people so badly wounded that they could not get up to go farther from the burning city. When they saw a man erect and unhurt, the chant began again: "*Mizu, mizu, mizu.*" Mr. Tanimoto could not resist them; he carried them water from the river—a mistake, since it was tidal and brackish. Two or three small boats were ferrying hurt people across the river from Asano Park, and when one touched the spit, Mr. Tanimoto again made his loud, apologetic speech and jumped into the boat. It took him across to the park. There, in the underbrush, he found some of his charges of the Neighborhood Association, who had come there by his previous instructions, and saw many acquaintances, among them Father Kleinsorge and the other Catholics. But he missed Fukai, who had been a close friend. "Where is Fukai-*san*?" he asked.

"He didn't want to come with us," Father Kleinsorge said. "He ran back."

When Miss Sasaki heard the voices of the people caught along with her in the dilapidation at the tin factory, she began speaking to them. Her nearest neighbor, she discovered, was a high-school girl who had been drafted for factory work, and who said her back was broken. Miss Sasaki replied, "I am lying here and I can't move. My left leg is cut off."

Some time later, she again heard somebody walk overhead and then move off to one side, and whoever it was began burrowing. The digger released several people, and when he had uncovered the high-school girl, she found that her back was not broken, after all, and she crawled out. Miss Sasaki spoke to the rescuer, and he worked toward her. He pulled away a great number of books, until he had made a tunnel to her. She could see his perspiring face as he said, "Come out, Miss." She tried. "I can't move," she said. The man excavated some more and told her to try with all her strength to get out. But books were heavy on her hips, and the man finally saw that a bookcase was leaning on the books and that a heavy beam pressed down on the bookcase. "Wait," he said. "I'll get a crowbar."

The man was gone a long time, and when he came back, he was ill-tempered, as if her plight were all her fault. "We have no men to help you!" he shouted in through the tunnel. "You'll have to get out by yourself."

"That's impossible," she said. "My left leg . . ." The man went away.

Much later, several men came and dragged Miss Sasaki out. Her left leg was not severed, but it was badly broken and cut and it hung askew below the knee. They took her out into a courtyard. It was raining. She sat on the ground in the rain. When the downpour increased, someone directed all the wounded people to take cover in the factory's air-raid shelters. "Come along," a torn-up woman said to her. "You can hop." But Miss Sasaki could not move, and she just waited in the rain. Then a man propped up a large sheet of corrugated iron as a kind of lean-to, and took her in his arms and carried her to it. She was grateful until he brought two horribly wounded people—a woman with a whole breast sheared off and a man whose face was all raw from a burn—to share the simple shed with her. No one came back. The rain cleared and the cloudy afternoon was hot; before nightfall the three grotesques under the slanting piece of twisted iron began to smell quite bad.

The former head of the Nobori-cho Neighborhood Association to which the Catholic priests belonged was an energetic man named Yoshida. He had boasted, when he was in charge of the district air-raid defenses, that fire might eat away all of Hiroshima but it would never come to Nobori-cho. The bomb blew down his house, and a joist pinned him by the legs, in full view of the Jesuit mission house across the way and of the people hurrying along the street. In their confusion as they hurried past, Mrs. Nakamura, with her children, and Father Kleinsorge, with Mr. Fukai on his back, hardly saw him; he was just part of the general blur of misery through which they moved. His cries for

help brought no response from them; there were so many people shouting for help that they could not hear him separately. They and all the others went along. Nobori-cho became absolutely deserted, and the fire swept through it. Mr. Yoshida saw the wooden mission house—the only erect building in the area—go up in a lick of flame, and the heat was terrific on his face. Then flames came along his side of the street and entered his house. In a paroxysm of terrified strength, he freed himself and ran down the alleys of Nobori-cho, hemmed in by the fire he had said would never come. He began at once to behave like an old man; two months later his hair was white.

As Dr. Fujii stood in the river up to his neck to avoid the heat of the fire, the wind blew stronger and stronger, and soon, even though the expanse of water was small, the waves grew so high that the people under the bridge could no longer keep their footing. Dr. Fujii went close to the shore, crouched down, and embraced a large stone with his usable arm. Later it became possible to wade along the very edge of the river, and Dr. Fujii and his two surviving nurses moved about two hundred yards upstream, to a sandspit near Asano Park. Many wounded were lying on the sand. Dr. Machii was there with his family; his daughter, who has been outdoors when the bomb burst, was badly burned on her hands and legs but fortunately not on her face. Although Dr. Fujii's shoulder was by now terribly painful, he examined the girl's burns curiously. Then he lay down. In spite of the misery all around, he was ashamed of his appearance, and he remarked to Dr. Machii that he looked like a beggar, dressed as he was in nothing but torn and bloody underwear. Later in the afternoon, when the fire began to subside, he decided to go to his parental house, in the suburb of Nagatsuka. He asked Dr. Machii to join him, but the Doctor answered that he and his family were going to spend the night on the spit, because of his daughter's injuries. Dr. Fujii, together with his nurses, walked first to Ushida, where, in the partially damaged house of some relatives, he found first-aid materials he had stored there. The two nurses bandaged him and he them. They went on. Now not many people walked in the streets, but a great number sat and lay on the pavement, vomited, waited for death, and died. The number of corpses on the way to Nagatsuka was more and more puzzling. The Doctor wondered: Could a Molotov flower basket have done all this?

Dr. Fujii reached his family's house in the evening. It was five miles from the center of town, but its roof had fallen in and the windows were all broken.

All day, people poured into Asano Park. This private estate was far enough away from the explosion so that its bamboos, pines, laurel, and maples were still alive, and the green place invited refugees—partly because they believed that if the Americans came back, they would bomb only buildings; partly because the foliage seemed a center of coolness and life, and the estate's exquisitely precise rock gardens, with their quiet pools and arching bridges, were very Japanese, normal, secure; and also partly (according to some who were there) because of an irresistible, atavistic urge to hide under leaves. Mrs. Nakamura and her children were among the first to arrive, and they settled in the bamboo grove near the river. They all felt terribly thirsty, and they drank from the river. At once they were nauseated and began vomiting, and they retched the whole day. Others were also nauseated; they all thought (probably because of the strong odor of ionization, an "electric smell" given off by the bomb's fission) that they were sick from a gas the Americans had dropped. When Father Kleinsorge and the other priests came into the park, nodding to their friends as they passed, the Nakamuras were all sick and prostrate. A woman named Iwasaki, who lived in the neighborhood of the mission and who was sitting near the Nakamuras, got up and asked the priests if she should stay where she was or go with them. Father Kleinsorge said, "I hardly know where the

safest place is." She stayed there, and later in the day, though she had no visible wounds or burns, she died. The priests went farther along the river and settled down in some underbrush. Father LaSalle lay down and went right to sleep. The theological student, who was wearing slippers, had carried with him a bundle of clothes, in which he had packed two pairs of leather shoes. When he sat down with the others, he found that the bundle had broken open and a couple of shoes had fallen out and now he had only two lefts. He retraced his steps and found one right. When he rejoined the priests, he said, "It's funny, but things don't matter any more. Yesterday, my shoes were my most important possessions. Today, I don't care. One pair is enough."

Father Cieslik said, "I know. I started to bring my books along, and then I thought, 'This is no time for books.' "

When Mr. Tanimoto, with his basin still in his hand, reached the park, it was very crowded, and to distinguish the living from the dead was not easy, for most of the people lay still, with their eyes open. To Father Kleinsorge, an Occidental, the silence in the grove by the river, where hundreds of gruesomely wounded suffered together, was one of the most dreadful and awesome phenomena of his whole experience. The hurt ones were quiet; no one wept, much less screamed in pain; no one complained; none of the many who died did so noisily; not even the children cried; very few people even spoke. And when Father Kleinsorge gave water to some whose faces had been almost blotted out by flash burns, they took their share and then raised themselves a little and bowed to him, in thanks.

Mr. Tanimoto greeted the priests and then looked around for other friends. He saw Mrs. Matsumoto, wife of the director of the Methodist School, and asked her if she was thirsty. She was, so he went to one of the pools in the Asanos' rock gardens and got water for her in his basin. Then he decided to try to get back to his church. He went into Nobori-cho by the way the priests had taken as they escaped, but he did not get far; the fire along the streets was so fierce that he had to turn back. He walked to the riverbank and began to look for a boat in which he might carry some of the most severely injured across the river from Asano Park and away from the spreading fire. Soon he found a good-sized pleasure punt drawn up on the bank, but in and around it was an awful tableau—five dead men, nearly naked, badly burned, who must have expired more or less all at once, for they were in attitudes which suggested that they had been working together to push the boat down into the river. Mr. Tanimoto lifted them away from the boat, and as he did so, he experienced such horror at disturbing the dead—preventing them, he momentarily felt, from launching their craft and going on their ghostly way—that he said out loud, "Please forgive me for taking this boat. I must use it for others, who are alive." The punt was heavy, but he managed to slide it into the water. There were no oars, and all he could find for propulsion was a thick bamboo pole. He worked the boat upstream to the most crowded part of the park and began to ferry the wounded. He could pack ten or twelve into the boat for each crossing, but as the river was too deep in the center to pole his way across, he had to paddle with the bamboo, and consequently each trip took a very long time. He worked several hours that way.

Early in the afternoon, the fire swept into the woods of Asano Park. The first Mr. Tanimoto knew of it was when, returning in his boat, he saw that a great number of people had moved toward the riverside. On touching the bank, he went up to investigate, and when he saw the fire, he shouted, "All the young men who are not badly hurt come with me!" Father Kleinsorge moved Father Schiffer and Father LaSalle close to the edge of the river and asked people there to get them across if the fire came too near, and then joined Tanimoto's volunteers. Mr. Tanimoto sent some to look for buckets and basins and told others to beat the burning underbrush with their clothes; when utensils were at

hand, he formed a bucket chain from one of the pools in the rock gardens. The team fought the fire for more than two hours, and gradually defeated the flames. As Mr. Tanimoto's men worked, the frightened people in the park pressed closer and closer to the river, and finally the mob began to force some of the unfortunates who were on the very bank into the water. Among those driven into the river and drowned were Mrs. Matsumoto, of the Methodist School, and her daughter.

When Father Kleinsorge got back after fighting the fire, he found Father Schiffer still bleeding and terribly pale. Some Japanese stood around and stared at him, and Father Schiffer whispered, with a weak smile, "It is as if I were already dead." "Not yet," Father Kleinsorge said. He had brought Dr. Fujii's first-aid kit with him, and he had noticed Dr. Kanda in the crowd, so he sought him out and asked him if he would dress Father Schiffer's bad cuts. Dr. Kanda had seen his wife and daughter dead in the ruins of his hospital; he sat now with his head in his hands. "I can't do anything," he said. Father Kleinsorge bound more bandage around Father Schiffer's head, moved him to a steep place, and settled him so that his head was high, and soon the bleeding diminished.

The roar of approaching planes was heard about this time. Someone in the crowd near the Nakamura family shouted, "It's some Grummans coming to strafe us!" A baker named Nakashima stood up and commanded, "Everyone who is wearing anything white, take it off." Mrs. Nakamura took the blouses off her children, and opened her umbrella and made them get under it. A great number of people, even badly burned ones, crawled into bushes and stayed there until the hum, evidently of a reconnaissance or weather run, died away.

It began to rain. Mrs. Nakamura kept her children under the umbrella. The drops grew abnormally large, and someone shouted, "The Americans are dropping gasoline. They're going to set fire to us!" (This alarm stemmed from one of the theories being passed through the park as to why so much of Hiroshima had burned: it was that a single plane had sprayed gasoline on the city and then somehow set fire to it in one flashing moment.) But the drops were palpably water, and as they fell, the wind grew stronger and stronger, and suddenly—probably because of the tremendous convection set up by the blazing city—a whirlwind ripped through the park. Huge trees crashed down; small ones were uprooted and flew into the air. Higher, a wild array of flat things revolved in the twisting funnel—pieces of iron roofing, papers, doors, strips of matting. Father Kleinsorge put a piece of cloth over Father Schiffer's eyes, so that the feeble man would not think he was going crazy. The gale blew Mrs. Murata, the mission housekeeper, who was sitting close by the river, down the embankment at a shallow, rocky place, and she came out with her bare feet bloody. The vortex moved out onto the river, where it sucked up a waterspout and eventually spent itself.

After the storm, Mr. Tanimoto began ferrying people again, and Father Kleinsorge asked the theological student to go across and make his way out to the Jesuit Novitiate at Nagatsuka, about three miles from the center of town, and to request the priests there to come with help for Fathers Schiffer and LaSalle. The student got into Mr. Tanimoto's boat and went off with him. Father Kleinsorge asked Mrs. Nakamura if she would like to go out to Nagatsuka with the priests when they came. She said she had some luggage and her children were sick—they were still vomiting from time to time, and so, for that matter, was she—and therefore she feared she could not. He said he thought the fathers from the Novitiate could come back the next day with a pushcart to get her.

Late in the afternoon, when he went ashore for a while, Mr. Tanimoto, upon whose energy and initiative many had come to depend, heard people begging for food. He consulted Father Kleinsorge, and they decided to go back into town to get some rice from Mr. Tanimoto's Neighborhood As-

sociation shelter and from the mission shelter. Father Cieslik and two or three others went with them. At first, when they got among the rows of prostrate houses, they did not know where they were; the change was too sudden, from a busy city of two hundred and forty-five thousand that morning to a mere pattern of residue in the afternoon. The asphalt of the streets was still so soft and hot from the fires that walking was uncomfortable. They encountered only one person, a woman, who said to them as they passed, "My husband is in those ashes." At the mission, where Mr. Tanimoto left the party, Father Kleinsorge was dismayed to see the building razed. In the garden, on the way to the shelter, he noticed a pumpkin roasted on the vine. He and Father Cieslik tasted it and it was good. They were surprised at their hunger, and they ate quite a bit. They got out several bags of rice and gathered up several other cooked pumpkins and dug up some potatoes that were nicely baked under the ground, and started back. Mr. Tanimoto rejoined them on the way. One of the people with him had some cooking utensils. In the park, Mr. Tanimoto organized the lightly wounded women of his neighborhood to cook. Father Kleinsorge offered the Nakamura family some pumpkin, and they tried it, but they could not keep it on their stomachs. Altogether, the rice was enough to feed nearly a hundred people.

Just before dark, Mr. Tanimoto came across a twenty-year-old girl, Mrs. Kamai, the Tanimoto's next-door neighbor. She was crouching on the ground with the body of her infant daughter in her arms. The baby had evidently been dead all day. Mrs. Kamai jumped up when she saw Mr. Tanimoto and said, "Would you please try to locate my husband?"

Mr. Tanimoto knew that her husband had been inducted into the Army just the day before; he and Mrs. Tanimoto had entertained Mrs. Kamai in the afternoon, to make her forget. Kamai had reported to the Chugoku Regional Army Headquarters—near the ancient castle in the middle of town—where some four thousand troops were stationed. Judging by the many maimed soldiers Mr. Tanimoto had seen during the day, he surmised that the barracks had been badly damaged by whatever it was that had hit Hiroshima. He knew he hadn't a chance of finding Mrs. Kamai's husband, even if he searched, but he wanted to humor her. "I'll try," he said.

"You've got to find him," she said. "He loved our baby so much. I want him to see her once more."

III. Details Are Being Investigated

Early in the evening of the day the bomb exploded, a Japanese naval launch moved slowly up and down the seven rivers of Hiroshima. It stopped here and there to make an announcement—alongside the crowded sandspits, on which hundreds of crowded lay; at the bridges, on which others were crowded; and eventually, as twilight fell, opposite Asano Park. A young officer stood up in the launch and shouted through a megaphone, "Be patient! A naval hospital ship is coming to take care of you!" The sight of the shipshape launch against the background of the havoc across the river; the unruffled young man in his neat uniform; above all, the promise of medical help—the first word of possible succor anyone had heard in nearly twelve awful hours—cheered the people in the park tremendously. Mrs. Nakamura settled her family for the night with the assurance that a doctor would come and stop their retching. Mr. Tanimoto resumed ferrying the wounded across the river. Father Kleinsorge lay down and said the Lord's Prayer and a Hail Mary to himself, and fell right asleep; but no sooner had he dropped off than Mrs. Murata, the conscientious mission housekeeper, shook him and said, "Father Kleinsorge! Did you remember to repeat your evening prayers?" He answered rather grumpily, "Of course," and he tried to go back to sleep but could not. This, apparently, was just what Mrs. Murata wanted. She began to chat with the exhausted priest. One of the questions she

raised was when he thought the priests from the Novitiate, for whom he had sent a messenger in midafternoon, would arrive to evacuate Father Superior LaSalle and Father Schiffer.

The messenger Father Kleinsorge had sent—the theological student who had been living at the mission house—had arrived at the Novitiate, in the hills about three miles out, at half past four. The sixteen priests there had been doing rescue work in the outskirts; they had worried about their colleagues in the city but had not known how or where to look for them. Now they hastily made two litters out of poles and boards, and the student led half a dozen of them back into the devastated area. They worked their way along the Ota above the city; twice the heat of the fire forced them into the river. At Misasa Bridge, they encountered a long line of soldiers making a bizarre forced march away from the Chugoku Regional Army Headquarters in the center of the town. All were grotesquely burned, and they supported themselves with staves or leaned on one another. Sick, burned horses, hanging their heads, stood on the bridge. When the rescue party reached the park, it was after dark, and progress was made extremely difficult by the tangle of fallen trees of all sizes that had been knocked down by the whirlwind that afternoon. At last—not long after Mrs. Murata asked her question—they reached their friends, and gave them wine and strong tea.

The priests discussed how to get Father Schiffer and Father LaSalle out to the Novitiate. They were afraid that blundering through the park with them would jar them too much on the wooden litters, and that the wounded men would lose too much blood. Father Kleinsorge thought of Mr. Tanimoto and his boat, and called out to him on the river. When Mr. Tanimoto reached the bank, he said he would be glad to take the injured priests and their bearers upstream to where they could find a clear roadway. The rescuers put Father Schiffer onto one of the stretchers and lowered it into the boat, and two of them went aboard with it. Mr. Tanimoto, who still had no oars, poled the punt upstream.

About half an hour later, Mr Tanimoto came back and excitedly asked the remaining priests to help him rescue two children he had seen standing up to their shoulders in the river. A group went out and picked them up—two young girls who had lost their family and were both badly burned. The priests stretched them on the ground next to Father Kleinsorge and then embarked Father LaSalle. Father Cieslik thought he could make it out to the Novitiate on foot, so he went aboard with the others. Father Kleinsorge was too feeble; he decided to wait in the park until the next day. He asked the men to come back with a hand-cart, so that they could take Mrs. Nakamura and her sick children to the Novitiate.

Mr. Tanimoto shoved off again. As the boatload of priests moved slowly upstream, they heard weak cries for help. A woman's voice stood out especially: "There are people here about to be drowned! Help us! The water is rising!" The sounds came from one of the sandspits, and those in the punt could see, in the reflected light of the still-burning fires, a number of wounded people lying at the edge of the river, already partly covered by the flooding tide. Mr. Tanimoto wanted to help them, but the priests were afraid that Father Schiffer would die if they didn't hurry, and they urged their ferryman along. He dropped them where he had put Father Schiffer down and then started back alone toward the sandspit.

The night was hot, and it seemed even hotter because of the fires against the sky, but the younger of the two girls Mr. Tanimoto and the priests had rescued complained to Father Kleinsorge that she was cold. He covered her with his jacket. She and her older sister had been in the salt water of the river for a couple of hours before being rescued. The younger one had huge, raw flash burns on her body; the salt

water must have been excruciatingly painful to her. She began to shiver heavily, and again said it was cold. Father Kleinsorge borrowed a blanket from someone nearby and wrapped her up, but she shook more and more, and said again, "I am so cold," and then she suddenly stopped shivering and was dead.

Mr. Tanimoto found about twenty men and women on the sandspit. He drove the boat onto the bank and urged them to get aboard. They did not move and he realized that they were too weak to lift themselves. He reached down and took a woman by the hands, but her skin slipped off in huge, glove-like pieces. He was so sickened by this that he had to sit down for a moment. Then he got out into the water and, though a small man, lifted several of the men and women, who were naked, into his boat. Their backs and breasts were clammy, and he remembered uneasily what the great burns he had seen during the day had been like: yellow at first, then red and swollen, with the skin sloughed off, and finally in the evening, suppurated and smelly. With the tide risen, his bamboo pole was now too short and he had to paddle most of the way across with it. On the other side, at a higher spit, he lifted the slimy living bodies out and carried them up the slope away from the tide. He had to keep consciously repeating to himself, "These are human beings." It took him three trips to get them all across the river. When he had finished, he decided he had to have a rest, and he went back to the park.

As Mr. Tanimoto stepped up the dark bank, he tripped over someone, and someone else said angrily, "Look out! That's my hand." Mr. Tanimoto, ashamed of hurting wounded people, embarrassed at being able to walk upright, suddenly thought of the naval hospital ship, which had not come (it never did), and he had for a moment a feeling of blind, murderous rage at the crew of the ship, and then at all doctors. Why didn't they come to help these people?

Dr. Fujii lay in dreadful pain throughout the night on the floor of his family's roofless house on the edge of the city. By the light of a lantern, he had examined himself and found: left clavicle fractured; multiple abrasions and lacerations of face and body, including deep cuts on the chin, back, and legs; extensive contusions on chest and trunk; a couple of ribs possibly fractured. Had he not been so badly hurt, he might have been at Asano Park, assisting the wounded.

By nightfall, ten thousand victims of the explosion had invaded the Red Cross Hospital, and Dr. Sasaki, worn out, was moving aimlessly and dully up and down the stinking corridors with wads of bandage and bottles of mercurochrome, still wearing the glasses he had taken from the wounded nurse, binding up the worst cuts as he came to them. Other doctors were putting compresses of saline solution on the worst burns. That was all they could do. After dark, they worked by the light of the city's fires and by candles the ten remaining nurses held for them. Dr. Sasaki had not looked outside the hospital all day; the scene inside was so terrible and so compelling that it had not occurred to him to ask any questions about what had happened beyond the windows and doors. Ceilings and partitions had fallen; plaster, dust, blood, and vomit were everywhere. Patients were dying by the hundreds, but there was nobody to carry away the corpses. Some of the hospital staff distributed biscuits and rice balls, but the charnel-house smell was so strong that few were hungry. By three o'clock the next morning, after nineteen straight hours of his gruesome work, Dr. Sasaki was incapable of dressing another wound. He and some other survivors of the hospital staff got straw mats and went outdoors—thousands of patients and hundreds of dead were in the yard and on the driveway—and hurried around behind the hospital and lay down in hiding to snatch some sleep. But within an hour wounded people had found them; a complaining circle formed around them: "Doctors! Help us! How can you sleep?" Dr. Sasaki got up again

and went back to work. Early in the day, he thought for the first time of his mother, at their country home in Mukaihara, thirty miles from town. He usually went home every night. He was afraid she would think he was dead.

Near the spot upriver to which Mr. Tanimoto had transported the priests, there sat a large case of rice cakes which a rescue party had evidently brought for the wounded lying thereabouts but hadn't distributed. Before evacuating the wounded priests, the others passed the cakes around and helped themselves. A few minutes later, a band of soldiers came up, and an officer, hearing the priests speaking a foreign language, drew his sword and hysterically asked who they were. One of the priests calmed him down and explained that they were Germans—allies. The officer apologized and said that there were reports going around that American parachutists had landed.

The priests decided that they should take Father Schiffer first. As they prepared to leave, Father Superior LaSalle said he felt awfully cold. One of the Jesuits gave up his coat, another his shirt; they were glad to wear less in the muggy night. The stretcher bearers started out. The theological student led the way and tried to warn the others of obstacles, but one of the priests got a foot tangled in some telephone wire and tripped and dropped his corner of the litter. Father Schiffer rolled off, lost consciousness, came to, and then vomited. The bearers picked him up and went on with him to the edge of the city, where they had arranged to meet a relay of other priests, left him with them, and turned back and got the Father Superior.

The wooden litter must have been terribly painful for Father LaSalle, in whose back scores of tiny particles of window glass were embedded. Near the edge of town, the group had to walk around an automobile burned and squatting on the narrow road, and the bearers on one side, unable to see their way in the darkness, fell into a deep ditch. Father LaSalle was thrown onto the ground and the litter broke in two. One priest went ahead to get a handcart from the Novitiate, but he soon found one beside an empty house and wheeled it back. The priests lifted Father LaSalle into the cart and pushed him over the bumpy road the rest of the way. The rector of the Novitiate, who had been a doctor before he entered the religious order, cleaned the wounds of the two priests and put them to bed between clean sheets, and they thanked God for the care they had received.

Thousands of people had nobody to help them. Miss Sasaki was one of them. Abandoned and helpless, under the crude lean-to in the courtyard of the tin factory, beside the woman who had lost a breast and the man whose burned face was scarcely a face any more, she suffered awfully that night from the pain in her broken leg. She did not sleep at all; neither did she converse with her sleepless companions.

In the park, Mrs. Murata kept Father Kleinsorge awake all night by talking to him. None of the Nakamura family were able to sleep, either; the children, in spite of being very sick, were interested in everything that happened. They were delighted when one of the city's gas-storage tanks went up in a tremendous burst of flame. Toshio, the boy, shouted to the others to look at the reflection in the river. Mr. Tanimoto, after his long run and his many hours of rescue work, dozed uneasily. When he awoke, in the first light of dawn, he looked across the river and saw that he had not carried the festered, limp bodies high enough on the sandspit the night before. The tide had risen above where he had put them; they had not had the strength to move; they must have drowned. He saw a number of bodies floating in the river.

Early that day, August 7th, the Japanese radio broadcast for the first time a succinct announcement that very few, if any, of the people most concerned with its content, the survivors in Hiroshima, happened to hear:

"Hiroshima suffered considerable damage as the result of an attack by a few B-29s. It is believed that a new type of bomb was used. The details are being investigated." Nor is it probable that any of the survivors happened to be tuned in on a short-wave rebroadcast of an extraordinary announcement by the President of the United States, which identified the new bomb as atomic: "That bomb had more power than twenty, thousand tons of TNT. It had more than two thousand times the blast power of the British Grand Slam, which is the largest bomb ever yet used in the history of warfare." Those victims who were able to worry at all about what had happened thought of it and discussed it in more primitive, childish terms—gasoline sprinkled from an airplane, maybe, or some combustible gas, or a big cluster of incendiaries, or the work of parachutists; but, even if they had known the truth, most of them were too busy or too weary or too badly hurt to care that they were the objects of the first great experiment in the use of atomic power, which (as the voices on the short wave shouted) no country except the United States, with its industrial know-how, its willingness to throw two billion gold dollars into an important wartime gamble, could possibly have developed.

Mr. Tanimoto was still angry at doctors. He decided that he would personally bring one to Asano Park—by the scruff of the neck, if necessary. He crossed the river, went past the Shinto shrine where he had met his wife for a brief moment the day before, and walked to the East Parade Ground. Since this had long before been designated as an evacuation area, he thought he would find an aid station there. He did find one, operated by an Army medical unit, but he also saw that its doctors were hopelessly overburdened, with thousands of patients sprawled among corpses across the field in front of it. Nevertheless, he went up to one of the Army doctors and said, as reproachfully as he could, "Why have you not come to Asano Park? You are badly needed there."

Without even looking up from his work, the doctor said in a tired voice, "This is my station."

"But there are many dying on the riverbank over there."

"The first duty," the doctor said, "is to take care of the slightly wounded."

"Why—when there are many who are heavily wounded on the riverbank?"

The doctor moved to another patient. "In an emergency like this," he said, as if he were reciting from a manual, "the first task is to help as many as possible—to save as many lives as possible. There is no hope for the heavily wounded. They will die. We can't bother with them."

"That may be right from a medical standpoint—" Mr. Tanimoto began, but then he looked out across the field, where the many dead lay close and intimate with those who were still living, and he turned away without finishing his sentence, angry now with himself. He didn't know what to do; he had promised some of the dying people in the park that he would bring them medical aid. They might die feeling cheated. He saw a ration stand at one side of the field, and he went to it and begged some rice cakes and biscuits, and he took them back, in lieu of doctors, to the people in the park.

The morning, again, was hot. Father Kleinsorge went to fetch water for the wounded in a bottle and a teapot he had borrowed. He had heard that it was possible to get fresh tap water outside Asano Park. Going through the rock gardens, he had to climb over and crawl under the trunks of fallen pine trees; he found he was weak There were many dead in the gardens. At a beautiful moon bridge, he passed a naked, living woman who seemed to have been burned from head to toe and was red all over. Near the entrance to the park, an Army doctor was working, but the only medicine he had was iodine, which he painted over cuts, bruises, slimy burns, everything—and by now everything that he painted had pus on it. Outside the gate of the park, Father Kleinsorge found a faucet that still worked—part of the plumb-

ing of a vanished house—and he filled his vessels and returned. When he had given the wounded the water, he made a second trip. This time, the woman by the bridge was dead. On his way back with the water, he got lost on a detour around a fallen tree, and as he looked for his way through the woods, he heard a voice ask from the underbrush, "Have you anything to drink?" He saw a uniform. Thinking there was just one soldier, he approached with the water. When he had penetrated the bushes, he saw there were about twenty men, and they were all in exactly the same nightmarish state: their faces were wholly burned, their eyesockets were hollow, the fluid from their melted eyes had run down their cheeks. (They must have had their faces upturned when the bomb went off; perhaps they were anti-aircraft personnel.) Their mouths were mere swollen, pus-covered wounds, which they could not bear to stretch enough to admit the spout of the teapot. So Father Kleinsorge got a large piece of grass and drew out the stem so as to make a straw, and gave them all water to drink that way. One of them said, "I can't see anything." Father Kleinsorge answered, as cheerfully as he could, "There's a doctor at the entrance to the park. He's busy now, but he'll come soon and fix your eyes, I hope."

Since that day, Father Kleinsorge has thought back to how queasy he had once been at the sight of pain, how someone else's cut finger used to make him turn faint. Yet there in the park he was so benumbed that immediately after leaving this horrible sight he stopped on a path by one of the pools and discussed with a lightly wounded man whether it would be safe to eat the fat, two-foot carp that floated dead on the surface of the water. They decided, after some consideration, that it would be unwise.

Father Kleinsorge filled the containers a third time and went back to the riverbank. There, amid the dead and dying, he saw a young woman with a needle and thread mending her kimono, which had been slightly torn. Father Kleinsorge joshed her. "My, but you're a dandy!" he said. She laughed.

He felt tired and lay down. He began to talk with two engaging children whose acquaintance he had made the afternoon before. He learned that their name was Kataoka; the girl was thirteen, the boy five. The girl had been just about to set out for a barbershop when the bomb fell. As the family started for Asano Park, their mother decided to turn back for some food and extra clothing; they became separated from her in the crowd of fleeing people, and they had not seen her since. Occasionally they stopped suddenly in their perfectly cheerful playing and began to cry for their mother.

It was difficult for all the children in the park to sustain the sense of tragedy. Toshio Nakamura got quite excited when he saw his friend Seichi Sato riding up the river in a boat with his family, and he ran to the bank and waved and shouted, "Sato! Sato!"

The boy turned his head and shouted, "Who's that?"

"Nakamura."

"Hello, Toshio!"

"Are you all safe?"

"Yes. What about you?"

"Yes, we're all right. My sisters are vomiting, but I'm fine."

Father Kleinsorge began to be thirsty in the dreadful heat, and he did not feel strong enough to go for water again. A little before noon, he saw a Japanese woman handing something out. Soon she came to him and said in a kindly voice, "These are tea leaves. Chew them, young man, and you won't feel thirsty." The woman's gentleness made Father Kleinsorge suddenly want to cry. For weeks, he had been feeling oppressed by the hatred of foreigners that the Japanese seemed increasingly to show, and he had been uneasy even with his Japanese friends. This stranger's gesture made him a little hysterical.

Around noon, the priests arrived from the Novitiate with the handcart. They had been to the site of the mission house in the city and had retrieved some suitcases that had been stored in the air-raid shelter and had also picked up the remains of melted holy vessels in the ashes of the chapel. They now

packed Father Kleinsorge's papier-mâché suitcase and the things belonging to Mrs. Murata and the Nakamuras into the cart, put the two Nakamura girls aboard, and prepared to start out. Then one of the Jesuits who had a practical turn of mind remembered that they had been notified some time before that if they suffered property damage at the hands of the enemy, they could enter a claim for compensation with the prefectural police. The holy men discussed this matter there in the park, with the wounded as silent as the dead around them, and decided that Father Kleinsorge, as a former resident of the destroyed mission, was the one to enter the claim. So, as the others went off with the handcart, Father Kleinsorge said goodbye to the Kataoka children and trudged to a police station. Fresh, clean-uniformed policemen from another town were in charge, and a crowd of dirty and disarrayed citizens crowded around them, mostly asking after lost relatives. Father Kleinsorge filled out a claim form and started walking through the center of the town on his way to Nagatsuka. It was then that he first realized the extent of the damage; he passed block after block of ruins, and even after all he had seen in the park, his breath was taken away. By the time he reached the Novitiate, he was sick with exhaustion. The last thing he did as he fell into bed was request that someone go back for the motherless Kataoka children.

Altogether, Miss Sasaki was left two days and two nights under the piece of propped-up roofing with her crushed leg and her two unpleasant comrades. Her only diversion was when men came to the factory air-raid shelters, which she could see from under one corner of her shelter, and hauled corpses up out of them with ropes. Her leg became discolored, swollen, and putrid. All that time, she went without food and water. On the third day, August 8th, some friends who supposed she was dead came to look for her body and found her. They told her that her mother, father, and baby brother, who at the time of the explosion were in the Tamura Pediatric Hospital, where the baby was a patient, had all been given up as certainly dead, since the hospital was totally destroyed. Her friends then left her to think that piece of news over. Later, some men picked her up by the arms and legs and carried her quite a distance to a truck. For about an hour, the truck moved over a bumpy road, and Miss Sasaki, who had become convinced that she was dulled to pain, discovered that she was not. The men lifted her out at a relief station in the section of Inokuchi, where two Army doctors looked at her. The moment one of them touched her wound, she fainted. She came to in time to hear them discuss whether or not to cut off her leg; one said there was gas gangrene in the lips of the wound and predicted she would die unless they amputated, and the other said that was too bad, because they had no equipment with which to do the job. She fainted again. When she recovered consciousness, she was being carried somewhere on a stretcher. She was put aboard a launch, which went to the nearby island of Ninoshima, and she was taken to a military hospital there. Another doctor examined her and said that she did not have gas gangrene, though she did have a fairly ugly compound fracture. He said quite coldly that he was sorry, but this was a hospital for operative surgical cases only, and because she had no gangrene, she would have to return to Hiroshima that night. But then the doctor took her temperature, and what he saw on the thermometer made him decide to let her stay.

That day, August 8th, Father Cieslik went into the city to look for Mr. Fukai, the Japanese secretary of the diocese, who had ridden unwillingly out of the flaming city on Father Kleinsorge's back and then had run back crazily into it. Father Cieslik started hunting in the neighborhood of the Sakai Bridge, where the Jesuits had last seen Mr. Fukai; he went to the East Parade Ground, the evacuation area to which the secretary might have gone, and looked for him among

the wounded and dead there; he went to the prefectural police and made inquiries. He could not find any trace of the man. Back at the Novitiate that evening, the theological student, who had been rooming with Mr. Fukai at the mission house, told the priests that the secretary had remarked to him, during an air-raid alarm one day not long before the bombing, "Japan is dying. If there is a real air raid here in Hiroshima, I want to die with our country." The priests concluded that Mr. Fukai had run back to immolate himself in the flames. They never saw him again.

At the Red Cross Hospital, Dr. Sasaki worked for three straight days with only one hour's sleep. On the second day, he began to sew up the worst cuts, and right through the following night and all the next day he stitched. Many of the wounds were festered. Fortunately, someone had found intact a supply of *narucopon*, a Japanese sedative, and he gave it to many who were in pain. Word went around among the staff that there must have been something peculiar about the great bomb, because on the second day the vice-chief of the hospital went down in the basement to the vault where the X-ray plates were stored and found the whole stock exposed as they lay. That day, a fresh doctor and ten nurses came in from the city of Yamaguchi with extra bandages and antiseptics, and the third day another physician and a dozen more nurses arrived from Matsue—yet there were still only eight doctors for ten thousand patients. In the afternoon of the third day, exhausted from his foul tailoring, Dr. Sasaki became obsessed with the idea that his mother thought he was dead. He got permission to go to Mukaihara. He walked out to the first suburbs, beyond which the electric train service was still functioning, and reached home late in the evening. His mother said she had known he was all right all along; a wounded nurse had stopped by to tell her. He went to bed and slept for seventeen hours.

Before dawn on August 8th, someone entered the room at the Novitiate where Father Kleinsorge was in bed, reached up to the hanging light bulb, and switched it on. The sudden flood of light, pouring in on Father Kleinsorge's half sleep, brought him leaping out of bed, braced for a new concussion. When he realized what had happened, he laughed confusedly and went back to bed. He stayed there all day.

On August 9th, Father Kleinsorge was still tired. The rector looked at his cuts and said they were not even worth dressing, and if Father Kleinsorge kept them clean, they would heal in three or four days. Father Kleinsorge felt uneasy; he could not yet comprehend what he had been through; as if he were guilty of something awful, he felt he had to go back to the scene of the violence he had experienced. He got up out of bed and walked into the city. He scratched for a while in the ruins of the mission house, but he found nothing. He went to the sites of a couple of schools and asked after people he knew. He looked for some of the city's Japanese Catholics, but he found only fallen houses. He walked back to the Novitiate, stupefied and without any new understanding.

At two minutes after eleven o'clock on the morning of August 9th, the second atomic bomb was dropped, on Nagasaki. It was several days before the survivors of Hiroshima knew they had company, because the Japanese radio and newspapers were being extremely cautious on the subject of the strange weapon.

On August 9th, Mr. Tanimoto was still working in the park. He went to the suburb of Ushida, where his wife was staying with friends, and got a tent which he had stored there before the bombing. He now took it to the park and set it up as a shelter for some of the wounded who could not move or be moved. Whatever he did in the park, he felt he was being watched by the twenty-year-old girl, Mrs. Kamai, his former

neighbor, whom he had seen on the day the bomb exploded, with her dead baby daughter in her arms. She kept the small corpse in her arms for four days, even though it began smelling bad on the second day. Once, Mr. Tanimoto sat with her for a while, and she told him that the bomb had buried her under their house with the baby strapped to her back, and that when she had dug herself free, she had discovered that the baby was choking, its mouth full of dirt. With her little finger, she had carefully cleaned out the infant's mouth, and for a time the child had breathed normally and seemed all right; then suddenly it had died. Mrs. Kamai also talked about what a fine man her husband was, and again urged Mr. Tanimoto to search for him. Since Mr. Tanimoto had been all through the city the first day and had seen terribly burned soldiers from Kamai's post, the Chugoku Regional Army Headquarters, everywhere, he knew it would be impossible to find Kamai, even if he were living, but of course he didn't tell her that. Every time she saw Mr. Tanimoto, she asked whether he had found her husband. Once, he tried to suggest that perhaps it was time to cremate the baby, but Mrs. Kamai only held it tighter. He began to keep away from her, but whenever he looked at her, she was staring at him and her eyes asked the same question. He tried to escape her glance by keeping his back turned to her as much as possible.

The Jesuits took about fifty refugees into the exquisite chapel of the Novitiate. The rector gave them what medical care he could—mostly just the cleaning away of pus. Each of the Nakamuras was provided with a blanket and a mosquito net. Mrs. Nakamura and her younger daughter had no appetite and ate nothing; her son and other daughter ate, and lost, each meal they were offered. On August 10th, a friend, Mrs. Osaki, came to see them and told them that her son Hideo had been burned alive in the factory where he worked. This Hideo had been a kind of hero to Toshio, who had often gone to the plant to watch him run his machine. That night, Toshio woke up screaming. He had dreamed that he had seen Mrs. Osaki coming out of an opening in the ground with her family, and then he saw Hideo at his machine, a big one with a revolving belt, and he himself was standing beside Hideo, and for some reason this was terrifying.

On August 10th, Father Kleinsorge, having heard from someone that Dr. Fujii had been injured and that he had eventually gone to the summer house of a friend of his named Okuma, in the village of Fukawa, asked Father Cieslik if he would go and see how Dr. Fujii was. Father Cieslik went to Misasa station, outside Hiroshima, rode for twenty minutes on an electric train, and then walked for an hour and a half in a terribly hot sun to Mr. Okuma's house, which was beside the Ota River at the foot of a mountain. He found Dr. Fujii sitting in a chair in a kimono, applying compresses to his broken collarbone. The Doctor told Father Cieslik about having lost his glasses and said that his eyes bothered him. He showed the priest huge blue and green stripes where beams had bruised him. He offered the Jesuit first a cigarette and then whiskey, though it was only eleven in the morning. Father Cieslik thought it would please Dr. Fujii if he took a little, so he said yes. A servant brought some Suntory whiskey, and the Jesuit, the Doctor, and the host had a very pleasant chat. Mr. Okuma had lived in Hawaii, and he told some things about Americans. Dr. Fujii talked a bit about the disaster. He said that Mr. Okuma and a nurse had gone into the ruins of his hospital and brought back a small safe which he had moved into his air-raid shelter. This contained some surgical instruments, and Dr. Fujii gave Father Cieslik a few pairs of scissors and tweezers for the rector at the Novitiate. Father Cieslik was bursting with some inside dope he had, but he waited until the conversation turned naturally to the mystery of the bomb. Then he said he knew what kind of bomb it was; he had the secret on the best

authority—that of a Japanese newspaperman who had dropped in at the Novitiate. The bomb was not a bomb at all; it was a kind of fine magnesium powder sprayed over the whole city by a single plane, and it exploded when it came into contact with the live wires of the city power system. "That means," said Dr. Fujii, perfectly satisfied, since after all the information came from a newspaperman, "that it can only be dropped on big cities and only in the daytime, when the tram lines and so forth are in operation."

After five days of ministering to the wounded in the park, Mr. Tanimoto returned, on August 11th, to his parsonage and dug around in the ruins. He retrieved some diaries and church records that had been kept in books and were only charred around the edges, as well as some cooking utensils and pottery. While he was at work, a Miss Tanaka came and said that her father had been asking for him. Mr. Tanimoto had reason to hate her father, the retired shipping-company official who, though he made a great show of his charity, was notoriously selfish and cruel, and who, just a few days before the bombing, had said openly to several people that Mr. Tanimoto was a spy for the Americans. Several times he had derided Christianity and called it un-Japanese. At the moment of the bombing, Mr. Tanaka had been walking in the street in front of the city's radio station. He received serious flash burns, but he was able to walk home. He took refuge in his Neighborhood Association shelter and from there tried hard to get medical aid. He expected all the doctors of Hiroshima to come to him, because he was so rich and so famous for giving his money away. When none of them came, he angrily set out to look for them; leaning on his daughter's arm, he walked from private hospital to private hospital, but all were in ruins, and he went back and lay down in the shelter again. Now he was very weak and knew he was going to die. He was willing to be comforted by any religion.

Mr. Tanimoto went to help him. He descended into the tomblike shelter and, when his eyes were adjusted to the darkness, saw Mr. Tanaka, his face and arms puffed up and covered with pus and blood, and his eyes swollen shut. The old man smelled very bad, and he moaned constantly. He seemed to recognize Mr. Tanimoto's voice. Standing at the shelter stairway to get light, Mr. Tanimoto read loudly from a Japanese-language pocket Bible: "For a thousand years in Thy sight are but as yesterday when it is past, and as a watch in the night. Thou carriest the children of men away as with a flood; they are as a sleep; in the morning they are like grass which groweth up. In the morning it flourisheth and groweth up; in the evening it is cut down, and withereth. For we are consumed by Thine anger and by Thy wrath are we troubled. Thou hast set our iniquities before Thee, our secret sins in the light of Thy countenance. For all our days are passed away in Thy wrath: we spend our years as a tale that is told. . . ."

Mr. Tanaka died as Mr. Tanimoto read the psalm.

On August 11th, word came to the Ninoshima Military Hospital that a large number of military casualties from the Chugoku Regional Army Headquarters were to arrive on the island that day, and it was deemed necessary to evacuate all civilian patients. Miss Sasaki, still running an alarmingly high fever, was put on a large ship. She lay out on deck, with a pillow under her leg. There were awnings over the deck, but the vessel's course put her in the sunlight. She felt as if she were under a magnifying glass in the sun. Pus oozed out of her wound, and soon the whole pillow was covered with it. She was taken ashore at Hatsukaichi, a town several miles to the southwest of Hiroshima, and put in the Goddess of Mercy Primary School, which had been turned into a hospital. She lay there for several days before a specialist on fractures came from Kobe. By then her leg was red and swollen up to her hip. The doc-

tor decided he could not set the breaks. He made an incision and put in a rubber pipe to drain off the putrescence.

At the Novitiate, the motherless Kataoka children were inconsolable. Father Cieslik worked hard to keep them distracted. He put riddles to them. He asked, "What is the cleverest animal in the world?," and after the thirteen-year-old girl had guessed the ape, the elephant, the horse, he said, "No, it must be the hippopotamus," because in Japanese that animal is *kaba,* the reverse of *baka,* stupid. He told Bible stories, beginning, in the order of things, with the Creation. He showed them a scrapbook of snapshots taken in Europe. Nevertheless, they cried most of the time for their mother.

Several days later, Father Cieslik started hunting for the children's family. First, he learned through the police that an uncle had been to the authorities in Kure, a city not far away, to inquire for the children. After that, he heard that an older brother had been trying to trace them through the post office in Ujina, a suburb of Hiroshima. Still later, he heard that the mother was alive and was on Goto Island, off Nagasaki. And at last, by keeping a check on the Ujina post office, he got in touch with the brother and returned the children to their mother.

About a week after the bomb dropped, a vague, incomprehensible rumor reached Hiroshima—that the city had been destroyed by the energy released when atoms were somehow split in two. The weapon was referred to in this word-of-mouth report as *genshi bakudan*—the root characters of which can be translated as "original child bomb." No one understood the idea or put any more credence in it than in the powdered magnesium and such things. Newspapers were being brought in from other cities, but they were still confining themselves to extremely general statements, such at Domei's assertion on August 12th: "There is nothing to do but admit the tremendous power of this inhuman bomb." Already, Japanese physicists had entered the city with Lauritsen electroscopes and Neher electrometers; they understood the idea all too well.

On August 12th, the Nakamuras, all of them still rather sick, went to the nearby town of Kabe and moved in with Mrs. Nakamura's sister-in-law. The next day, Mrs. Nakamura, although she was too ill to walk much, returned to Hiroshima alone, by electric car to the outskirts, by foot from there. All week, at the Novitiate, she had worried about her mother, brother, and older sister, who had lived in the part of town called Fukuro, and besides, she felt drawn by some fascination, just as Father Kleinsorge had been. She discovered that her family were all dead. She went back to Kabe so amazed and depressed by what she had seen and learned in the city that she could not speak that evening.

A comparative orderliness, at least, began to be established at the Red Cross Hospital. Dr. Sasaki, back from his rest, undertook to classify his patients (who were still scattered everywhere, even on the stairways). The staff gradually swept up the debris. Best of all, the nurses and attendants started to remove the corpses. Disposal of the dead, by decent cremation and enshrinement, is a greater moral responsibility to the Japanese than adequate care of the living. Relatives identified most of the first day's dead in and around the hospital. Beginning on the second day, whenever a patient appeared to be moribund, a piece of paper with his name on it was fastened to his clothing. The corpse detail carried the bodies to a clearing outside, placed them on pyres of wood from ruined houses, burned them, put some of the ashes in envelopes intended for exposed X-ray plates, marked the envelopes with the names of the deceased, and piled them, neatly and respectfully, in stacks in the main office. In a few days, the envelopes filled one whole side of the impromptu shrine

In Kabe, on the morning of August 15th, ten-year-old Toshio Nakamura heard an airplane overhead. He ran outdoors and identified it with a professional eye as a B-29. "There goes Mr. B!" he shouted.

One of his relatives called out to him, "Haven't you had enough of Mr. B?"

The question had a kind of symbolism. At almost that very moment, the dull, dispirited voice of Hirohito, the Emperor Tenno, was speaking for the first time in history over the radio: "After pondering deeply the general trends of the world and the actual conditions obtaining in Our Empire today, We have decided to effect a settlement of the present situation by resorting to an extraordinary measure. . . ."

Mrs. Nakamura had gone to the city again, to dig up some rice she had buried in her Neighborhood Association air-raid shelter. She got it and started back for Kabe. On the electric car, quite by chance, she ran into her younger sister, who had not been in Hiroshima the day of the bombing. "Have you heard the news?" her sister asked.

"What news?"

"The war is over."

"Don't say such a foolish thing, sister."

"But I heard it over the radio myself." And then, in a whisper, "It was the Emperor's voice."

"Oh," Mrs. Nakamura said (she needed nothing more to make her give up thinking, in spite of the atomic bomb, that Japan still had a chance to win the war), "in that case . . ."

Some time later, in a letter to an American, Mr. Tanimoto described the events of that morning. "At the time of the Post-War, the marvelous thing in our history happened. Our Emperor broadcasted his own voice through radio directly to us, common people of Japan. Aug. 15th we were told that some news of great importance could be heard & all of us should hear it. So I went to Hiroshima railway station. There set a loudspeaker in the ruins of the station. Many civilians, all of them were in boundage, some being helped by shoulder of their daughters, some sustaining their injured feet by sticks, they listened to the broadcast and when they came to realize the fact that it was the Emperor, they cried with full tears in their eyes, 'What a wonderful blessing it is that Tenno himself call on us and we can hear his own voice in person. We are thoroughly satisfied in such a great sacrifice.' When they came to know the war was ended—that is, Japan was defeated, they, of course, were deeply disappointed, but followed after their Emperor's commandment in calm spirit, making whole-hearted sacrifice for the everlasting peace of the world—and Japan started her new way."

IV. Panic Grass and Feverfew

On August 18th, twelve days after the bomb burst, Father Kleinsorge set out on foot for Hiroshima from the Novitiate with his papier-mâché suitcase in his hand. He had begun to think that this bag, in which he kept his valuables, had a talismanic quality, because of the way he had found it after the explosion, standing handle-side up in the doorway of his room, while the desk under which he had previously hidden it was in splinters all over the floor. Now he was using it to carry the yen belonging to the Society of Jesus to the Hiroshima branch of the Yokohama Specie Bank, already reopened in its half-ruined building. On the whole, he felt quite well that morning. It is true that the minor cuts he had received had not healed in three or four days, as the rector of the Novitiate, who had examined them, had positively promised they would, but Father Kleinsorge had rested well for a week and considered that he was again ready for hard work. By now he was accustomed to the terrible scene through which he walked on his way into the city: the large rice field near the Novitiate, streaked with brown; the houses on the outskirts of the city, standing but decrepit, with broken windows and dishevelled tiles; and then, quite suddenly, the beginning of the four square miles of reddish-brown scar, where nearly everything had been buffeted

down and burned; range on range of collapsed city blocks, with here and there a crude sign erected on a pile of ashes and tiles ("Sister, where are you?" or "All safe and we live at Toyosaka"); naked trees and canted telephone poles; the few standing, gutted buildings only accentuating the horizontality of everything else (the Museum of Science and Industry, with its dome stripped to its steel frame, as if for an autopsy; the modern Chamber of Commerce Building, its tower as cold, rigid, and unassailable after the blow as before; the row of dowdy banks, huge, low-lying, camouflaged city hall; caricaturing a shaken economic system); and in the streets a macabre traffic —hundreds of crumpled bicycles, shells of streetcars and automobiles, all halted in midmotion. The whole way, Father Kleinsorge was oppressed by the thought that all the damage he saw had been done in one instant by one bomb. By the time he reached the center of town, the day had become very hot. He walked to the Yokohama Bank, which was doing business in a temporary wooden stall on the ground floor of its building, deposited the money, went by the mission compound just to have another look at the wreckage, and then started back to the Novitiate. About halfway there, he began to have peculiar sensations. The more or less magical suitcase, now empty, suddenly seemed terribly heavy. His knees grew weak. He felt excruciatingly tired. With a considerable expenditure of spirit, he managed to reach the Novitiate. He did not think his weakness was worth mentioning to the other Jesuits. But a couple of days later, while attempting to say Mass, he had an onset of faintness and even after three attempts was unable to go through with the service, and the next morning the rector, who had examined Father Kleinsorge's apparently negligible but unhealed cuts daily, asked in surprise, "What have you done to your wounds?" They had suddenly opened wider and were swollen and inflamed.

As she dressed on the morning of August 20th, in the home of her sister-in-law in Kabe, not far from Nagatsuka, Mrs Nakamura, who had suffered no cuts or burns at all, though she had been rather nauseated all through the week she and her children had spent as guests of Father Kleinsorge and the other Catholics at the Novitiate, began fixing her hair and noticed, after one stroke, that her comb carried with it a whole handful of hair; the second time, the same thing happened, so she stopped combing at once. But in the next three or four days, her hair kept falling out of its own accord, until she was quite bald. She began living indoors, practically in hiding. On August 26th, both she and her younger daughter, Myeko, woke up feeling extremely weak and tired, and they stayed on their bedrolls. Her son and other daughter, who had shared every experience with her during and after the bombing, felt fine.

At about the same time—he lost track of the days, so hard was he working to set up a temporary place of worship in a private house he had rented in the outskirts—Mr. Tanimoto felt suddenly ill with a general malaise, weariness, and feverishness, and he, too, took to his bedroll on the floor of the half-wrecked house of a friend in the suburb of Ushida.

These four did not realize it, but they were coming down with the strange, capricious disease which came later to be known as radiation sickness.

Miss Sasaki lay in steady pain in the Goddess of Mercy Primary School, at Hatsukaichi, the fourth station to the southwest of Hiroshima on the electric train. An internal infection still prevented the proper setting of the compound fracture of her lower left leg. A young man who was in the same hospital and who seemed to have grown fond of her in spite of her unremitting preoccupation with her suffering, or else just pitied her because of it, lent her a Japanese translation of de Maupassant, and she tried to read the stories, but she could concentrate for only four or five minutes at a time.

The hospitals and aid stations around Hiroshima were so crowded in the first weeks after the bombing, and their staffs were so

variable, depending on their health and on the unpredictable arrival of outside help, that patients had to be constantly shifted from place to place. Miss Sasaki, who had already been moved three times, twice by ship, was taken at the end of August to an engineering school, also at Hatsukaichi. Because her leg did not improve but swelled more and more, the doctors at the school bound it with crude splints and took her by car, on September 9th, to the Red Cross Hospital in Hiroshima. This was the first chance she had had to look at the ruins of Hiroshima; the last time she had been carried through the city's streets, she had been hovering on the edge of unconsciousness. Even though the wreckage had been described to her, and though she was still in pain, the sight horrified and amazed her, and there was something she noticed about it that particularly gave her the creeps. Over everything—up through the wreckage of the city, in gutters, along the riverbanks, tangled among tiles and tin roofing, climbing on charred tree trunks—with a blanket of fresh, vivid, lush, optimistic green; the verdancy rose even from the foundations of ruined houses. Weeds already hid the ashes, and wild flowers were in bloom among the city's bones. The bomb had not only left the underground organs of plants intact; it had stimulated them. Everywhere were bluets and Spanish bayonets, goosefoot, morning glories and day lilies, the hairy-fruited bean, purslane and clotbur and sesame and panic grass and feverfew. Especially in a circle at the center, sickle senna grew in extraordinary regeneration, not only standing among the charred remnants of the same plant but pushing up in new places, among bricks and through cracks in the asphalt. It actually seemed as if a load of sickle-senna seed had been dropped along with the bomb.

At the Red Cross Hospital, Miss Sasaki was put under the care of Dr. Sasaki. Now, a month after the explosion, something like order had been reëstablished in the hospital; which is to say that the patients who still lay in the corridors at least had mats to sleep on and that the supply of medicines, which had given out in the first few days, had been replaced, though inadequately, by contributions from other cities. Dr. Sasaki, who had had one seventeen-hour sleep at his home on the third night, had ever since then rested only about six hours a night, on a mat at the hospital; he had lost twenty pounds from his very small body; he still wore the borrowed glasses.

Since Miss Sasaki was a woman and was so sick (and perhaps, he afterward admitted, just a little bit because she was named Sasaki), Dr. Sasaki put her on a mat in a semi-private room, which at that time had only eight people in it. He questioned her and put down on her record card, in the correct, scrunched-up German in which he wrote all his records: "*Mittelgrosse Patientin in gutem Ernährungszustand. Faktur am linken Unterschenkelknochen mit Wunde; Anschwellung in der linken Unterschenkelgegend. Haut und sichtbare Schleimhäute mässig durchblutet und kein Oedema,*" noting that she was a medium-sized female patient in good general health; that she had a compound fracture of the left tibia, with swelling of the left lower leg; that her skin and visible mucous membranes were heavily spotted with *petechiae,* which are hemorrhages about the size of grains of rice, or even as big as soybeans; and, in addition, that her head, eyes, throat, lungs, and heart were apparently normal; and that she had a fever. He wanted to set her fracture and put her leg in a cast, but he had run out of plaster of Paris long since, so he just stretched her out on a mat and prescribed aspirin for her fever, and glucose intravenously and diastase orally for her undernourishment (which he had not entered on her record because everyone suffered from it). She exhibited only one of the queer symptoms so many of his patients were just then beginning to show—the spot hemorrhages.

Dr. Fujii was still pursued by bad luck, which still was connected with rivers. Now he was living in the summer house of Mr. Okuma, in Fukawa. This house clung to

the steep banks of the Ota River. Here his injuries seemed to make good progress, and he even began to treat refugees who came to him from the neighborhood, using medical supplies he had retrieved from a cache in the suburbs. He noticed in some of his patients a curious syndrome of symptoms that cropped out in the third and fourth weeks, but he was not able to do much more than swathe cuts and burns. Early in September, it began to rain, steadily and heavily. The river rose. On September 17th, there came a cloudburst and then a typhoon, and the water crept higher and higher up the bank. Mr. Okuma and Dr. Fujii became alarmed and scrambled up the mountain to a peasant's house. (Down in Hiroshima, the flood took up where the bomb had left off—swept away bridges that had survived the blast, washed out streets, undermined foundations of buildings that still stood—and ten miles to the west, the Ono Army Hospital, where a team of experts from Kyoto Imperial University was studying the delayed affliction of the patients, suddenly slid down a beautiful, pine-dark mountainside into the Inland Sea and drowned most of the investigators and their mysteriously diseased patients alike.) After the storm, Dr. Fujii and Mr. Okuma went down to the river and found that the Okuma house had been washed altogether away.

Because so many people were suddenly feeling sick nearly a month after the atomic bomb was dropped, an unpleasant rumor began to move around, and eventually it made its way to the house in Kabe where Mrs. Nakamura lay bald and ill. It was that the atomic bomb had deposited some sort of poison on Hiroshima which would give off deadly emanations for seven years; nobody could go there all that time. This especially upset Mrs. Nakamura, who remembered that in a moment of confusion on the morning of the explosion she had literally sunk her entire means of livelihood, her Sankoku sewing machine, in the small cement water tank in front of what was left of her house; now no one would be able to go and fish it out. Up to this time, Mrs. Nakamura and her relatives had been quite resigned and passive about the moral issue of the atomic bomb, but this rumor suddenly aroused them to more hatred and resentment of America than they had felt all through the war.

Japanese physicists, who knew a great deal about atomic fission (one of them owned a cyclotron), worried about lingering radiation at Hiroshima, and in mid-August, not many days after President Truman's disclosure of the type of bomb that had been dropped, they entered the city to make investigations. The first thing they did was roughly to determine a center by observing the side on which telephone poles all around the heart of the town were scorched; they settled on the torii gateway to the Gokoku Shrine, right next to the parade ground of the Chugoku Regional Army Headquarters. From there, they worked north and south with Lauritsen electroscopes, which are sensitive to both beta particles and gamma rays. These indicated that the highest intensity of radioactivity, near the torii, was 4.2 times the average natural "leak" of ultra-short waves for the earth of that area. The scientists noticed that the flash of the bomb had discolored concrete to a light reddish tint, had scaled off the surface of granite, and had scorched certain other types of building material, and that consequently the bomb had, in some places, left prints of the shadows that had been cast by its light. The experts found, for instance, a permanent shadow thrown on the roof of the Chamber of Commerce Building (220 yards from the rough center) by the structure's rectangular tower; several others in the lookout post on top of the Hypothec Bank (2,050 yards); another in the tower of the Chugoku Electric Supply Building (800 yards); another projected by the handle of a gas pump (2,630 yards); and several on granite tombstones in the Gokoku Shrine (385 yards). By triangulating these and other such shadows with the objects that formed them, the scientists determined that the exact center was a spot a hundred and fifty yards south of

the torii and a few yards southeast of the pile of ruins that had once been the Shima Hospital. (A few vague human silhouettes were found, and these gave rise to stories that eventually included fancy and precise details. One story told how a painter on a ladder was monumentalized in a kind of bas-relief on the stone façade of a bank building on which he was at work, in the act of dipping his brush into his paint can; another, how a man and his cart on the bridge near the Museum of Science and Industry, almost under the center of the explosion, were cast down in an embossed shadow which made it clear that the man was about to whip his horse.) Starting east and west from the actual center, the scientists, in early September, made new measurements, and the highest radiation they found this time was 3.9 times the natural "leak." Since radiation of at least a thousand times the natural "leak" would be required to cause serious effects on the human body, the scientists announced that people could enter Hiroshima without any peril at all.

As soon as this reassurance reached the household in which Mrs. Nakamura was concealing herself—or, at any rate, within a short time, after her hair had started growing back again—her whole family relaxed their extreme hatred of America, and Mrs. Nakamura sent her brother-in-law to look for the sewing machine. It was still submerged in the water tank, and when he brought it home, she saw, to her dismay, that it was all rusted and useless.

By the end of the first week in September, Father Kleinsorge was in bed at the Novitiate with a fever of 102.2, and since he seemed to be getting worse, his colleagues decided to send him to the Catholic International Hospital in Tokyo. Father Cieslik and the rector took him as far as Kobe and a Jesuit from that city took him the rest of the way, with a message from a Kobe doctor to the Mother Superior of the International Hospital: "Think twice before you give this man blood transfusions, because with atomic-bomb patients we aren't at all sure that if you stick needles in them, they'll stop bleeding."

When Father Kleinsorge arrived at the hospital, he was terribly pale and very shaky. He complained that the bomb had upset his digestion and given him abdominal pains. His white blood count was three thousand (five to seven thousand is normal), he was seriously anemic, and his temperature was 104. A doctor who did not know much about these strange manifestations—Father Kleinsorge was one of a handful of atomic patients who had reached Tokyo—came to see him, and to the patient's face he was most encouraging. "You'll be out of here in two weeks," he said. But when the doctor got out in the corridor, he said to the Mother Superior, "He'll die. All these bomb people die—you'll see. They go along for a couple of weeks and then they die."

The doctor prescribed suralimentation for Father Kleinsorge. Every three hours, they forced some eggs or beef juice into him, and they fed him all the sugar he could stand. They gave him vitamins, and iron pills and arsenic (in Fowler's solution) for his anemia. He confounded both the doctor's predictions; he neither died nor got up in a fortnight. Despite the fact that the message from the Kobe doctor deprived him of transfusions, which would have been the most useful therapy of all, his fever and his digestive troubles cleared up fairly quickly. His white count went up for a while, but early in October it dropped again, to 3,600; then, in ten days, it suddenly climbed above normal, to 8,800; and it finally settled at 5,800. His ridiculous scratches puzzled everyone. For a few days, they would mend, and then, when he moved around, they would open up again. As soon as he began to feel well, he enjoyed himself tremendously. In Hiroshima he had been one of thousands of sufferers; in Tokyo he was a curiosity. American Army doctors came by the dozen to observe him. Japanese experts questioned him. A newspaper interviewed him. And once, the confused doctor came and shook his head and said, "Baffling cases, these atomic-bomb people."

Mrs. Nakamura lay indoors with Myeko. They both continued sick, and though Mrs. Nakamura vaguely sensed that their trouble was caused by the bomb, she was too poor to see a doctor and so never knew exactly what the matter was. Without any treatment at all, but merely resting, they began gradually to feel better. Some of Myeko's hair fell out, and she had a tiny burn on her arm which took months to heal. The boy, Toshio, and the older girl, Yaeko, seemed well enough, though they, too, lost some hair and occasionally had bad headaches. Toshio was still having nightmares, always about the nineteen-year-old mechanic, Hideo Osaki, his hero, who had been killed by the bomb.

On his back with a fever of 104, Mr. Tanimoto worried about all the funerals he ought to be conducting for the deceased of his church. He thought he was just overtired from the hard work he had done since the bombing, but after the fever had persisted for a few days, he sent for a doctor. The doctor was too busy to visit him in Ushida, but he dispatched a nurse, who recognized his symptoms as those of mild radiation disease and came back from time to time to give him injections of Vitamin B_1. A Buddhist priest with whom Mr. Tanimoto was acquainted called on him and suggested that moxibustion might give him relief; the priest showed the pastor how to give himself the ancient Japanese treatment, by setting fire to a twist of the stimulant herb moxa placed on the wrist pulse. Mr. Tanimoto found that each moxa treatment temporarily reduced his fever one degree. The nurse had told him to eat as much as possible, and every few days his mother-in-law brought him vegetables and fish from Tsuzu, twenty miles away, where she lived. He spent a month in bed, and then went ten hours by train to his father's home in Shikoku. There he rested another month.

Dr. Sasaki and his colleagues at the Red Cross Hospital watched the unprecedented disease unfold and at last evolved a theory about its nature. It had, they decided, three stages. The first stage had been all over before the doctors even knew they were dealing with a new sickness; it was the direct reaction to the bombardment of the body, at the moment when the bomb went off, by neutrons, beta particles, and gamma rays. The apparently uninjured people who had died so mysteriously in the first few hours or days had succumbed in this first stage. It killed ninety-five per cent of the people within a half mile of the center, and many thousands who were farther away. The doctors realized in retrospect that even though most of these dead had also suffered from burns and blast effects, they had absorbed enough radiation to kill them. The rays simply destroyed body cells—caused their nuclei to degenerate and broke their walls. Many people who did not die right away came down with nausea, headache, diarrhea, malaise, and fever, which lasted several days. Doctors could not be certain whether some of these symptoms were the result of radiation or nervous shock. The second stage set in ten or fifteen days after the bombing. Its first symptom was falling hair. Diarrhea and fever, which in some cases went as high as 106, came next. Twenty-five to thirty days after the explosion, blood disorders appeared: gums bled, the white-blood-cell count dropped sharply, and *petechiae* appeared on the skin and mucous membranes. The drop in the number of white blood corpuscles reduced the patient's capacity to resist infection, so open wounds were usually slow in healing and many of the sick developed sore throats and mouths. The two key symptoms, on which the doctors came to base their prognosis, were fever and the lowered white-corpuscle count. If fever remained steady and high, the patient's chances for survival were poor. The white count almost always dropped below four thousand; a patient whose count fell below one thousand had little hope of living. Toward the end of the second stage, if the patient survived, anemia, or a drop in the red blood count, also set in. The third stage was the reaction that came when the body struggled

to compensate for its ills—when, for instance, the white count not only returned to normal but increased to much higher than normal levels. In this stage, many patients died of complications, such as infections in the chest cavity. Most burns healed with deep layers of pink, rubbery scar tissue, known as keloid tumors. The duration of the disease varied, depending on the patient's constitution and the amount of radiation he had received. Some victims recovered in a week; with others the disease dragged on for months.

As the symptoms revealed themselves, it became clear that many of them resembled the effects of overdoses of X-ray, and the doctors based their therapy on that likeness. They gave victims liver extract, blood transfusions, and vitamins, especially B_1. The shortage of supplies and instruments hampered them. Allied doctors who came in after the surrender found plasma and penicillin very effective. Since the blood disorders were, in the long run, the predominant factor in the disease, some of the Japanese doctors evolved a theory as to the seat of the delayed sickness. They thought that perhaps gamma rays, entering the body at the time of the explosion, made the phosphorus in the victims' bones radioactive, and that they in turn emitted beta particles, which, though they could not penetrate far through flesh, could enter the bone marrow, where blood is manufactured, and gradually tear it down. Whatever its source, the disease had some baffling quirks. Not all the patients exhibited all the main symptoms. People who suffered flash burns were protected, to a considerable extent, from radiation sickness. Those who had lain quietly for days or even hours after the bombing were much less liable to get sick than those who had been active. Gray hair seldom fell out. And, as if nature were protecting man against his own ingenuity, the reproductive processes were affected for a time; men became sterile, women had miscarriages, menstruation stopped.

For ten days after the flood, Dr. Fujii lived in the peasant's house on the mountain above the Ota. Then he heard about a vacant private clinic in Kaitaichi, a suburb to the east of Hiroshima. He bought it at once, moved there, and hung out a sign inscribed in English, in honor of the conquerors:

M. FUJII, M.D.
MEDICAL & VENEREAL

Quite recovered from his wounds, he soon built up a strong practice, and he was delighted, in the evenings, to receive members of the occuping forces, on whom he lavished whiskey and practiced English.

Giving Miss Sasaki a local anaesthetic of procain, Dr. Sasaki made an incision in her leg on October 23rd, to drain the infection, which still lingered on eleven weeks after the injury. In the following days, so much pus formed that he had to dress the opening each morning and evening. A week later, she complained of great pain, so he made another incision; he cut still a third, on November 9th, and enlarged it on the twenty-sixth. All this time, Miss Sasaki grew weaker and weaker, and her spirits fell low. One day, the young man who had lent her his translation of de Maupassant at Hatsukaichi came to visit her; he told her that he was going to Kyushu but that when he came back, he would like to see her again. She didn't care. Her leg had been so swollen and painful all along that the doctor had not even tried to set the fractures, and though an X-ray taken in November showed that the bones were mending, she could see under the sheet that her left leg was nearly three inches shorter than her right and that her left foot was turning inward. She thought often of the man to whom she had been engaged. Someone told her he was back from overseas. She wondered what he had heard about her injuries that made him stay away.

Father Kleinsorge was discharged from the hospital in Tokyo on December 19th and took a train home. On the way, two days later, at Yokogawa, a stop just before

Hiroshima, Dr. Fujii boarded the train. It was the first time the two men had met since before the bombing. They sat together. Dr. Fujii said he was going to the annual gathering of his family, on the anniversary of his father's death. When they started talking about their experiences, the Doctor was quite entertaining as he told how his places of residence kept falling into rivers. Then he asked Father Kleinsorge how he was, and the Jesuit talked about his stay in the hospital. "The doctors told me to be cautious," he said. "They ordered me to have a two-hour nap every afternoon."

Dr. Fujii said, "It's hard to be cautious in Hiroshima these days. Everyone seems to be so busy."

A new municipal government, set up under Allied Military Government direction, had gone to work at last in the city hall. Citizens who had recovered from various degrees of radiation sickness were coming back by the thousand—by November 1st, the population, mostly crowded into the outskirts, was already 137,000, more than a third of the wartime peak—and the government set in motion all kinds of projects to put them to work rebuilding the city. It hired men to clear the streets, and others to gather scrap iron, which they sorted and piled in mountains opposite the city hall. Some returning residents were putting up their own shanties and huts, and planting small squares of winter wheat beside them, but the city also authorized and built four hundred one-family "barracks." Utilities were repaired—electric lights shone again, trams started running, and employees of the waterworks fixed seventy thousand leaks in mains and plumbing. A Planning Conference, with an enthusiastic young Military Government officer, Lieutenant John D. Montgomery, of Kalamazoo, as its adviser, began to consider what sort of city the new Hiroshima should be. The ruined city had flourished—and had been an inviting target—mainly because it had been one of the most important military-command and communications centers in Japan, and would have become the Imperial headquarters had the islands been invaded and Tokyo been captured. Now there would be no huge military establishments to help revive the city. The Planning Conference, at a loss as to just what importance Hiroshima could have, fell back on rather vague cultural and paving projects. It drew maps with avenues a hundred yards wide and thought seriously of erecting a group of buildings as a monument to the disaster, and naming them the Institute of International Amity. Statistical workers gathered what figures they could on the effects of the bomb. They reported that 78,150 people had been killed, 13,983 were missing, and 37,425 had been injured. No one in the city government pretended that these figures were accurate—though the Americans accepted them as official—and as the months went by and more and more hundreds of corpses were dug up from the ruins, and as the number of unclaimed urns of ashes at the Zempoji Temple in Koi rose into the thousands, the statisticians began to say that at least a hundred thousand people had lost their lives in the bombing. Since many people died of a combination of causes, it was impossible to figure exactly how many were killed by each cause, but the statisticians calculated that about twenty-five per cent had died of direct burns from the bomb, about fifty per cent from other injuries, and about twenty per cent as a result of radiation effects. The statisticians' figures on property damage were more reliable: sixty-two thousands out of ninety thousand buildings destroyed, and six thousand more damaged beyond repair. In the heart of the city, they found only five modern buildings that could be used again without major repairs. This small number was by no means the fault of flimsy Japanese construction. In fact, since the 1923 earthquake, Japanese building regulations had required that the roof of each large building be able to bear a minimum load of seventy pounds per square foot, whereas American regulations do not normally specify more than forty pounds per square foot.

Scientists swarmed into the city. Some of them measured the force that had been

necessary to shift marble gravestones in the cemeteries, to knock over twenty-two of the forty-seven railroad cars in the yards at Hiroshima station, to lift and move the concrete roadway on one of the bridges, and to perform other noteworthy acts of strength, and concluded that the pressure exerted by the explosion varied from 5.3 to 8.0 tons per square yard. Others found that mica, of which the melting point is 900° C., had fused on granite gravestones three hundred and eighty yards from the center; that telephone poles of *Cryptomeria japonica,* whose carbonization temperature is 240° C., had been charred at forty-four hundred yards from the center; and that the surface of gray clay tiles of the type used in Hiroshima, whose melting point is 1,300° C., had dissolved at six hundred yards; and, after examining other significant ashes and melted bits, they concluded that the bomb's heat on the ground at the center must have been 6,000° C. And from further measurements of radiation, which involved, among other things, the scraping up of fission fragments from roof troughs and drainpipes as far away as the suburb of Takasu, thirty-three hundred yards from the center, they learned some far more important facts about the nature of the bomb. General MacArthur's headquarters systematically censored all mention of the bomb in Japanese scientific publications, but soon the fruit of the scientists' calculations became common knowledge among Japanese physicists, doctors, chemists, journalists, professors, and, no doubt, those statesmen and military men who were still in circulation. Long before the American public had been told, most of the scientists and lots of non-scientists in Japan knew—from the calculations of Japanese nuclear physicists—that a uranium bomb had exploded at Hiroshima and a more powerful one, of plutonium, at Nagasaki. They also knew that theoretically one ten times as powerful—or twenty—could be developed. The Japanese scientists thought they knew the exact height at which the bomb at Hiroshima was exploded and the approximate weight of the uranium used. They estimated that, even with the primitive bomb used at Hiroshima, it would require a shelter of concrete fifty inches thick to protect a human being entirely from radiation sickness. The scientists had these and other details which remained subject to security in the United States printed and mimeographed and bound into little books. The Americans knew of the existence of these, but tracing them and seeing that they did not fall into the wrong hands would have obliged the occupying authorities to set up, for this one purpose alone, an enormous police system in Japan. Altogether, the Japanese scientists were somewhat amused at the efforts of their conquerors to keep security on atomic fission.

Late in February, 1946, a friend of Miss Sasaki's called on Father Kleinsorge and asked him to visit her in the hospital. She had been growing more and more depressed and morbid; she seemed little interested in living. Father Kleinsorge went to see her several times. On his first visit, he kept the conversation general, formal, and yet vaguely sympathetic, and did not mention religion. Miss Sasaki herself brought it up the second time he dropped in on her. Evidently she had had some talks with a Catholic. She asked bluntly, "If your God is so good and kind, how can he let people suffer like this?" She made a gesture which took in her shrunken leg, the other patients in her room, and Hiroshima as a whole.

"My child," Father Kleinsorge said, "man is not now in the condition God intended. He has fallen from grace through sin." And he went on to explain all the reasons for everything.

It came to Mrs. Nakamura's attention that a carpenter from Kabe was building a number of wooden shanties in Hiroshima which he rented for fifty yen a month—$3.33, at the fixed rate of exchange. Mrs. Nakamura had lost the certificates for her bonds and other war-time savings, but fortunately she had copied off all the numbers just a few days before the bombing and had taken the list to Kabe, and so, when her hair had grown in

enough for her to be presentable, she went to her bank in Hiroshima, and a clerk there told her that after checking her numbers against the records the bank would give her her money. As soon as she got it, she rented one of the carpenter's shacks. It was in Nobori-cho, near the site of her former house, and though its floor was dirt and it was dark inside, it was at least a home in Hiroshima, and she was no longer dependent on the charity of her in-laws. During the spring, she cleared away some nearby wreckage and planted a vegetable garden. She cooked with utensils and ate off plates she scavenged from the debris. She sent Myeko to the kindergarten which the Jesuits reopened, and the two older children attended Nobori-cho Primary School, which, for want of buildings, held classes out of doors. Toshio wanted to study to be a mechanic, like his hero, Hideo Osaki. Prices were high; by midsummer Mrs. Nakamura's savings were gone. She sold some of her clothes to get food. She had once had several expensive kimonos, but during the war one had been stolen, she had given one to a sister who had been bombed out in Tokuyama, she had lost a couple in the Hiroshima bombing, and now she sold her last one. It brought only a hundred yen, which did not last long. In June, she went to Father Kleinsorge for advice about how to get along, and in early August, she was still considering the two alternatives he suggested—taking work as a domestic for some of the Allied occupation forces, or borrowing from her relatives enough money, about five hundred yen, or a bit more than thirty dollars, to repair her rusty sewing machine and resume the work of a seamstress.

When Mr. Tanimoto returned from Shikoku, he draped a tent he owned over the roof of the badly damaged house he had rented in Ushida. The roof still leaked, but he conducted services in the damp living room. He began thinking about raising money to restore his church in the city. He became quite friendly with Father Kleinsorge and saw the Jesuits often. He envied them their Church's wealth; they seemed to be able to do anything they wanted. He had nothing to work with except his own energy, and that was not what it had been.

The Society of Jesus had been the first institution to build a relatively permanent shanty in the ruins of Hiroshima. That had been while Father Kleinsorge was in the hospital. As soon as he got back, he began living in the shack, and he and another priest, Father Laderman, who had joined him in the mission, arranged for the purchase of three of the standardized "barracks," which the city was selling at seven thousand yen apiece. They put two together, end to end, and made a pretty chapel of them; they ate in the third. When materials were available, they commissioned a contractor to build a three-story mission house exactly like the one that had been destroyed in the fire. In the compound, carpenters cut timbers, gouged mortises, shaped tenons, whittled scores of wooden pegs and bored holes for them, until all the parts for the house were in a neat pile; then, in three days, they put the whole thing together, like an Oriental puzzle, without any nails at all. Father Kleinsorge was finding it hard, as Dr. Fujii had suggested he would, to be cautious and to take his naps. He went out every day on foot to call on Japanese Catholics and prospective converts. As the months went by, he grew more and more tired. In June, he read an article in the Hiroshima *Chugoku* warning survivors against working too hard—but what could he do? By July, he was worn out, and early in August, almost exactly on the anniversary of the bombing, he went back to the Catholic International Hospital, in Tokyo, for a month's rest.

Whether or not Father Kleinsorge's answers to Miss Sasaki's questions about life were final and absolute truths, she seemed quickly to draw physical strength from them. Dr. Sasaki noticed it and congratulated Father Kleinsorge. By April 15th, her temperature and white count were normal and the infection in the wound was beginning

to clear up. On the twentieth, there was almost no pus, and for the first time she jerked along a corridor on crutches. Five days later, the wound had begun to heal, and on the last day of the month she was discharged.

During the early summer, she prepared herself for conversion to Catholicism. In that period she had ups and downs. Her depressions were deep. She knew she would always be a cripple. Her fiancé never came to see her. There was nothing for her to do except read and look out, from her house on a hillside in Koi, across the ruins of the city where her parents and brother died. She was nervous, and any sudden noise made her put her hands quickly to her throat. Her leg still hurt; she rubbed it often and patted it, as if to console it.

It took six months for the Red Cross Hospital, and even longer for Dr. Sasaki, to get back to normal. Until the city restored electric power, the hospital had to limp along with the aid of a Japanese Army generator in its back yard. Operating tables, X-ray machines, dentist chairs, everything complicated and essential came in a trickle of charity from other cities. In Japan, face is important even to institutions, and long before the Red Cross Hospital was back to par on basic medical equipment, its directors put up a new yellow brick veneer façade, so the hospital became the handsomest building in Hiroshima—from the street. For the first four months, Dr. Sasaki was the only surgeon on the staff and he almost never left the building; then, gradually, he began to take an interest in his own life again. He got married in March. He gained back some of the weight he lost, but his appetite remained only fair; before the bombing, he used to eat four rice balls at every meal, but a year after it he could manage only two. He felt tired all the time. "But I have to realize," he said, "that the whole community is tired."

A year after the bomb was dropped, Miss Sasaki was a cripple; Mrs. Nakamura was destitute; Father Kleinsorge was back in the hospital; Dr. Sasaki was not capable of the work he once could do; Dr. Fujii had lost the thirty-room hospital it took him many years to acquire, and had no prospects of rebuilding it; Mr. Tanimoto's church had been ruined and he no longer had his exceptional vitality. The lives of these six people, who were among the luckiest in Hiroshima, would never be the same. What they thought of their experiences and of the use of the atomic bomb was, of course, not unanimous. One feeling they did seem to share, however, was a curious kind of elated community spirit, something like that of the Londoners after their blitz—a pride in the way they and their fellow-survivors had stood up to a dreadful ordeal. Just before the anniversary, Mr. Tanimoto wrote in a letter to an American some words which expressed this feeling: "What a heartbreaking scene this was the first night! About midnight I landed on the riverbank. So many injured people lied on the ground that I made my way by striding over them. Repeating 'Excuse me,' I forwarded and carried a tub of water with me and gave a cup of water to each one of them. They raised their upper bodies slowly and accepted a cup of water with a bow and drunk quietly and, spilling any remnant, gave back a cup with hearty expression of their thankfulness, and said, 'I couldn't help my sister, who was buried under the house, because I had to take care of my mother who got a deep wound on her eye and our house soon set fire and we hardly escaped. Look, I lost my home, my family, and at last my-self bitterly injured. But now I have gotted my mind to dedicate what I have and to complete the war for our country's sake.' Thus they pledged to me, even women and children did the same. Being entirely tired I lied down on the ground among them, but couldn't sleep at all. Next morning I found many men and women dead, whom I gave water last night. But, to my great surprise, I never heard any one cried in disorder, even though they suffered in great agony. They died in si-

lence, with no grudge, setting their teeth to bear it. All for the country!

"Dr. Y. Hiraiwa, professor of Hiroshima University of Literature and Science, and one of my church members, was buried by the bomb under the two storied house with his son, a student of Tokyo University. Both of them could not move an inch under tremendously heavy presure. And the house already caught fire. His son said, 'Father, we can do nothing except make our mind up to consecrate our lives for the country. Let us give *Banzai* to our Emperor.' Then the father followed after his son, *'Tenno-heika, Banzai, Banzai, Banzai!'* In the result, Dr. Hiraiwa said, 'Strange to say, I felt calm and bright and peaceful spirit in my heart, when I chanted *Banzai* to Tenno.' Afterward his son got out and digged down and pulled out his father and thus they were saved. In thinking of their experience of that time Dr. Hiraiwa repeated, 'What a fortunate that we are Japanese! It was my first time I ever tasted such a beautiful spirit when I decided to die for our Emperor.'

"Miss Kayoko Nobutoki, a student of girl's high school, Hiroshima Jazabuin, and a daughter of my church member, was taking rest with her friends beside the heavy fence of the Buddhist Temple. At the moment the atomic bomb was dropped, the fence fell upon them. They could not move a bit under such a heavy fence and then smoke entered into even a crack and choked their breath. One of the girls begun to sing *Kimi ga yo,* national anthem, and others followed in chorus and died. Meanwhile one of them found a crack and struggled hard to get out. When she was taken in the Red Cross Hospital she told how her friends died, tracing back in her memory to singing in chorus our national anthem. They were just 13 years old.

"Yes, people of Hiroshima died manly in the atomic bombing, believing that it was for Emperor's sake."

A surprising number of the people of Hiroshima remained more or less indifferent about the ethics of using the bomb. Possibly they were too terrified by it to want to think about it at all. Not many of them even bothered to find out much about what it was like. Mrs. Nakamura's conception of it—and awe of it—was typical. "The atom bomb," she would say when asked about it, "is the size of a matchbox. The heat of it is six thousand times that of the sun. It exploded in the air. There is some radium in it. I don't know just how it works, but when the radium is put together, it explodes." As for the use of the bomb, she would say, "It was war and we had to expect it." And then she would add, *Shikata ga nai,*" a Japanese expression as common as, and corresponding to, the Russian word *"nichevo"*: "It can't be helped. Oh, well. Too bad." Dr. Fujii said approximately the same thing about the use of the bomb to Father Kleinsorge one evening, in German: *"Da ist nichts zu machen.* There's nothing to be done about it."

Many citizens of Hiroshima, however, continued to feel a hatred for Americans which nothing could possibly erase. "I see," Dr. Sasaki once said, "that they are holding a trial for war criminals in Tokyo just now. I think they ought to try the men who decided to use the bomb and they should hang them all."

Father Kleinsorge and the other German Jesuit priests, who, as foreigners, could be expected to take a relatively detached view, often discussed the ethics of using the bomb. One of them, Father Siemes, who was out at Nagatsuka at the time of the attack, wrote in a report to the Holy See in Rome: "Some of us consider the bomb in the same category as poison gas and were against its use on a civilian population. Others were of the opinion that in total war, as carried on in Japan, there was no difference between civilians and soldiers, and that the bomb itself was an effective force tending to end the bloodshed, warning Japan to surrender and thus to avoid total destruction. It seems logical that he who supports total war in principal cannot complain of a war against civilians. The crux of the matter is whether total war in its present form is justifiable,

even when it serves a just purpose. Does it not have material and spiritual evil as its consequences which far exceed whatever good might result? When will our moralists give us a clear answer to this question?"

It would be impossible to say what horrors were embedded in the minds of the children who lived through the day of the bombing in Hiroshima. On the surface, their recollections, months after the disaster, were of an exhilarating adventure. Toshio Nakamura, who was ten at the time of the bombing, was soon able to talk freely, even gaily, about the experience, and a few weeks before the anniversary he wrote the following matter-of-fact essay for his teacher at Noboricho Primary School: "The day before the bomb, I went for a swim. In the morning, I was eating peanuts. I saw a light. I was knocked to little sister's sleeping place. When we were saved, I could only see as far as the tram. My mother and I started to pack our things. The neighbors were walking around burned and bleeding. Hataya-*san* told me to run away with her. I said I wanted to wait for my mother. We went to the park. A whirlwind came. At night a gas tank burned and I saw the reflection in the river. We stayed in the park one night. Next day I went to Taiko Bridge and met my girl friends Kikuki and Murakami. They were looking for their mothers. But Kikuki's mother was wounded and Murakami's mother, alas, was dead."

About the Authors in This Book

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THE PURPOSE of these notes is to place our authors in space and time, to individualize them, by showing that they were educated in different ways, occupied themselves in a great variety of service other than writing, and to suggest that there are other books to find and read besides this one. These men and women are colorfully different from one another, and no two can be felt about the same way. For one the facts of education are important, for another political services, and for a third his native place. MacLeish's public life, but not Haldane's family tree; not necessarily Thomas Heggen's untimely death, but certainly John Erskine's music, though his piece in our book is on humor. One feels a surge of affection for Plato's Socrates, a great admiration for all that Jefferson did. One's imagination pictures all those once far separated in time, now in timelessness conversing, Ben Franklin with Sir Francis Bacon and Galileo; Booker T. Washington with Vanzetti and Thomas Paine and Thoreau; while across the floors of heaven Kittredge is asking Shakespeare those questions he had his own answers for.

The student too often finds the authors' names an exasperating additional fact he is required to remember, even an irrelevant fact, and is troubled by the instructor's natural habit of identifying the next day's assignments by authors' names. 'For tomorrow we will read," says the instructor, "the Huxley, Russell, and Whitehead." "Who are they? What page are they on?" thinks the student? They are great minds, are or once were men alive on the streets of the world, thinking their different thoughts, having their preferences in pleasure, having wives, children, houses. We have said in the foreword to this book that we believe the study of literature is the study of the human spirit. In order to focus more sharply on the human spirit as manifested in these several scores of human beings, we have provided herewith the sort of information necessary to come to know them, at first a little, then with much wider reading, as the individuals they are.

BACON, FRANCIS, was born at York House, London, in 1561, and is not Shakespeare. He became Lord Chancellor of England in 1618, and was the author of *Novum Organum*, *The Advancement of Learning*, and his own essays, some almost cynically practical, some in the best Elizabethan prose, like his piece on gardens. He confessed to bribery, lost public prestige, and kept on writing essays.

BEARD, CHARLES A. (1874-1948), first with his *Economic Interpretation of the Constitution*, 1913, interpreted American history in terms of a struggle among economic classes. His *Rise of American Civilization*, in collaboration with his wife, Mary A. Beard, which shows the Civil War as a second American Revolution, a war between the planting and the capitalistic classes, was the most provocative of his works. His later books dealt mainly with foreign policy and national planning.

BECKER CARL (1873-1945), was an important contemporary American historian, and taught at Cornell. He was the author of *The Heavenly City of the Eighteenth Century Philosophers*, 1932, "Everyman His Own Historian," and *Progress and Power*, among many other works. Warm, urbane, and witty, he was master of a distinguished prose style.

BEDE, ELBERT, is a journalist and writer with a strong affection for the far west. He is a

Knight Templar, Thirty-third degree, and is editor of the *Oregon Mason.*

BENCHLEY, ROBERT (1889-1945), was president of the Lampoon at Harvard, and dramatic critic for the old *Life,* and *The New Yorker.* His classic "Treasurer's Report" got him into the movies, where he played himself straight, to the delight of all. Some of his books are *My Ten Years in a Quandary and How It Grew,* 1936, and *Benchley Beside Himself,* 1943.

BENNETT, ARNOLD (1867-1931), had a high school education in England, was a law clerk, journalist, then suddenly a prolific writer. He said he wrote some eighty books, but really only four; of the latter, his novel, *The Old Wives' Tale,* is a modern classic. He owed much to French writers; he had remarkable grasp of the details of life; and great energy.

BENTON, THOMAS HART (1889-), studied in art schools in the U.S. and France, and traveled in this country, writing *An Artist in America* in 1937. He painted for the movies, and has murals in the Whitney Museum, the New School for Social Research, and in public buildings in Indiana and Missouri.

BINNS, ARCHIE (1889-), finds the setting for *The Land Is Bright,* which follows the Oregon Trail in the 1850's, and *Mighty Mountain,* a novel of the Washington pioneers, in the Northwest of the time of the pioneer penetration. He did his apprentice writing as a Washington correspondent for the Scripps-Howard newspapers.

BLOOM, EDWARD A. and LILLIAN D., are husband and wife, and teach English at Brown University and Rhode Island State College, respectively. Their interest in Willa Cather's art and thought has led them to prepare a second article, about her attitude toward materialism, which is to appear in the *Toronto Quarterly.*

BOURNE, RANDOLPH (1886-1918), was born in New Jersey, graduated from Columbia in 1912, and published *Youth and Life* the next year. He died at thirty-two; the last essay in his first book, "The Philosophy of Handicap," comes out of his own physical deformity — he was a hunchback with a cruelly stunted body. But his mind was brilliant, rich, and busy. He contributed to magazines, and wrote *Education and Living,* 1917, and *Untimely Papers,* 1920, the latter edited by James Oppenheim.

BROWN, ROLLO WALTER (1880-), came from the Ohio mine country to be a college professor, novelist, and essayist. He was educated at Ohio Northern U. and at Harvard, where he taught, but left teaching in 1924 to write. His summers at the MacDowell Colony brought about two of his distinguished biographical pieces, on his friends Mrs. MacDowell and the poet Edwin Arlington Robinson. Widely known as a lecturer to college audiences, he lives in Cambridge, Mass.

CALKINS, ERNEST ELMO (1868-), introduced methods into advertising which have become standard. He is a writer and lecturer on art, printing, recreation, town planning, and advertising, for distinguished service in the latter field receiving the Bok Medal in 1925.

CANBY, HENRY SEIDEL (1878-), born in Wilmington, Del., is a Quaker with the tastes of an Epicurean, he says. He studied and taught at Yale, helped Wilbur Cross found *The Yale Review* in 1911, joined the *Literary Review* of the New York *Evening Post* in 1920, and in 1924 converted it and its staff into *The Saturday Review of Literature.* His writing has been critical and editorial, except for his autobiography.

CAXTON, WILLIAM (1422?-1491), stepped into history at fifty-one by becoming the first printer in England, using wooden type for hand-set pages, so that he could produce books in greater quantities than the copiers by hand. But he had been acting governor of the English merchants in the Low Countries, had negotiated commercial treaties with the Dukes of Burgundy, and made translations of French romances that influenced 15th-century English prose style. He learned printing at Cologne, and himself printed some eighty books, 1477-91, at Westminster in England. Caxton's is a name powerful in meaning to all English literature, if only because in 1475 he printed Chaucer's *Canterbury Tales.*

CHASE, STUART (1888-), writer-economist, was educated at M. I. T. and Harvard, and a member of TVA and the National Resources Commission. Among his books are *Men and Machines,* 1929; *This We Fought,* 1946.

COFFIN, ROBERT P. TRISTRAM (1892-), Pierce professor of English at Bowdoin College, his alma mater, since 1934, was awarded the Pulitzer Prize for poetry in 1936: *Strange Holiness.* Those who know or think of him as poet

only will miss his mastery of the 17th century in England and many volumes like *Kennebec* and *Captain Abby and Captain John.*

COMMAGER, HENRY STEELE (1902-), Professor of history at Columbia University and commentator on current America and the world, is author of *The Story of the Second World War,* 1945. He is a member of the War Department's committee on the history of the war. In World War II he was an instructor in England for the Office of War Information and wrote articles, booklets, and broadcasts for that agency.

CRAVEN, AVERY O. (1886-), is a North Carolinian, and professor of American history at the University of Chicago. He has taught at the University of Sidney, Australia; reviewed books for the *New York Times* and *Herald-Tribune;* and written (1942) *The Coming of the Civil War.*

CROSS, WILBUR L. (1862-1948), for many years professor of English at Yale, and Dean of the Graduate School, served as Governor of Connecticut from 1931 to 1939. Author, editor of *The Yale Review,* and contributor to leading magazines, his writing gave American literature classic documents in the proclamations he issued as Governor.

DANA, RICHARD HENRY, was born in Cambridge, Mass., in 1815, and shipped out in 1834 as an ordinary seaman on a voyage to the Pacific, for his health. His experience is told in *Two Years Before the Mast,* 1840, an American classic. He was an eminent jurist and politician, and died in 1882, all the long latter part of his life being less important to history and literature than two years of his youth.

DEVOTO, BERNARD (1897-), was born in Ogden, Utah, educated at Harvard, and has been a member of several college faculties, editor of *The Saturday Review of Literature,* and a staff member of the Bread Loaf Writers' Conference. He is author of *The Crooked Mile,* 1924, *We Accept with Pleasure,* 1934, and *Year of Decision,* 1943. He occupies "The Editor's Easy Chair" in *Harper's Magazine.*

DOS PASSOS, JOHN, was born in Chicago in 1896. His novel *Three Soldiers,* 1921, is one of the best, and most terrifying, of World War I; nor will any who read it forget *Manhattan Transfer,* 1925, written in the same original technique of the large, then the small, focus he used for the trilogy, *U. S. A.* His scenes and sequences create an atmosphere of stress, realism, and hustle unlike any others in 20th-century novels, and are rich reading experience.

EINSTEIN, ALBERT (1879-), came to the United States in 1933, after a European education and a teaching career in Munich, Geneva, Oxford, and other great centers of learning; he was naturalized in 1940. In 1922 he had received the Nobel Prize. He first published his *Meaning of Relativity in* 1923 (the 1950 edition includes the new gravitational field theory). Since the early thirties he has been at Princeton, in the Institute for Advanced Study. He is one of the great scientific minds of all time.

EMERSON, RALPH WALDO, critic of his America, and believer in God in every man, was born in Boston, Mass., in 1803, and died in 1882. He said that the spirit of God radiates throughout Nature, and that man must go to Nature to find harmony with God's law. "Self-Reliance" and "The American Scholar" are his best-known essays. The old New England town of Concord is famous because he lived in it.

ERSKINE, JOHN (1879-), got his degrees and taught at Columbia, was president of the Juilliard School of Music, in New York, and a concert pianist. He has written *The Elizabethan Lyrics, The Delight of Great Books,* as well as *The Private Life of Helen of Troy,* 1925, and other popular novels in the same vein.

FLESCH, RUDOLPH (1911-), wrote *Marks of Readable Style,* 1943, for his Ph.D. at Columbia, and in 1946 rewrote it as *The Art of Plain Talk,* a plea for directness in writing; also, *The Art of Readable Writing* (1949).

FLYNN, EDWARD J. (1891-), obtained his law degree from Fordham University in 1909 at the age of eighteen, and was for 18 years Democratic boss of the Bronx. In 1940, on the insistence of President Roosevelt, he became chairman of the Democratic National Committee, a post he held during the campaigns for Roosevelt's third and fourth terms.

FORBES, ESTHER (1894-), lives in Worcester, Mass., has been an editor and the author of historical novels and studies, winning the Pulitzer Prize for history in 1942 for *Paul Revere and the World He Lived In,* the Newberry Medal in 1944 for *America's Paul Revere,* and wide popularity for *Johnny Tremain.*

FRANKLIN, BENJAMIN (1706-1790), famous and beloved and ingenious Philadelphian, world-citizen, printer, inventor, was born in Boston

approach can harm him, and *Moby Dick* is read as the great symbol and sea-tale it will always be.

MILNE, LORUS J. (1910-), was born in Toronto, took his B.A. degree there with a gold medal, 1933, and came to Harvard. He has taught in Texas, Virginia, Pennsylvania, and now at the University of New Hampshire. A prolific writer of technical articles, he and his wife, MARGERY J. MILNE, have come to believe in popularization of their biological knowledge, earth- and water-wise.

MUMFORD, LEWIS (1895-), architectural and social critic, has lectured widely in American colleges and had a Guggenheim Fellowship in 1932. He has written *Herman Melville*, 1929; *The Culture of Cities*, 1938; and *The South in Architecture*, 1941. He is also known to *New Yorker* readers for his occasional articles criticising current New York City architecture and city planning.

NEWTON, SIR ISAAC (1642-1727), a mathematician and astronomer, had his degrees from Trinity College, Cambridge, and formulated the laws of gravitation and motion. He wrote *Mathematical Principles of Natural Philosophy*.

PAINE, THOMAS (1737-1809), an English-born Quaker, spent his life in America and France as a political writer. His *Common Sense* had great effect in bringing about the Declaration of Independence, and a series called *The American Crisis* supported American morale during the Revolution.

PARKMAN, FRANCIS (1823-1893). *The Oregon Trail*, which reports the author's journey along that route in 1846, was first published in serial form in 1847 and established Parkman's position as an historian. The works which followed dealt with the contest of two rival civilizations — Indian and Western European — for the control of the American continent.

PEPYS, SAMUEL, kept a diary in a secret shorthand for some ten years, beginning in 1659; its existence was discovered and deciphered in 1825 by the Rev. J. Smith, and later edited by Lord Braybrooke, and by H. B. Wheatley, the latter restoring certain passages Braybrooke had thought improper or too personal. We see through Pepys' tireless curiosity the actual Restoration, the life of the London theatres, streets, coffee-houses, and the King's court. In this decade Pepys rose in the Royal Navy, and was later to become Commissioner. As his insatiable appetite for the life around him seized on songs, clothes, pretty girls, and food, so it found the Great Fire of London a memorable event. It is the best and almost the only eye-witness account.

PHILLIPS, WENDELL (1811-1884), a Boston-born graduate of Harvard Law School, became associated in 1837 with William Lloyd Garrison, the famed anti-slavery editor. This resulted in Phillips' rise among the country's abolitionists. An orator of talent, he turned in the years following the Civil War to penal reforms, prohibition, woman's suffrage, regulation of corporations, and organization of labor.

PLATO (c. 428 B.C.-c. 348 B.C.) was the student of Socrates and the teacher of Aristotle. These Greek philosophers built a foundation for much of our thinking, Plato's dialogues being his greatest contribution, and a major part of world literature.

POOLE, ERNEST (1880-1949), was born in Chicago, and graduated from Princeton in 1902. He was a playwright, novelist, and foreign correspondent. Son of a wealthy family, he found material for *The Harbor*, one of his best-known novels, by living on the New York waterfront. He wrote twenty-three novels.

PRICE, LUCIEN (1883-), was graduated from Harvard in 1907, and was an editorial writer for the *Boston Globe*, 1914-47 — the literary, arts, and music essays on Sundays being unmistakably his. Music was his first and last love, writing somewhere next, style always. A number of essays on musicians, notably Sibelius, appeared in magazines, and in pamphlet form.

ROBINSON, JAMES HARVEY (1863-1936). A member of the faculty of Columbia University from 1892 through 1917, Robinson then resigned to organize the New School for Social Research, where he hoped to apply the principles of "New History," placing greater emphasis upon the importance of thought in world changes and minimizing the effects of politics and state rivalries. His historical writings include *An Introduction to the History of Western Europe* (1924-29) and, with Charles A. Beard, *The Development of Western Europe* (1929).

ROOSEVELT, FRANKLIN DELANO (1882-1945), was born at Hyde Park, New York, where he is buried; educated at Harvard, and began his career in 1913 as Assistant Secretary of the

Navy. He was twice governor of New York, and four times President of the United States, from 1932 to his sudden death in 1945. His ideas, which link democratic theory with limited economic planning, are found in his addresses and several books. Great leader, history-maker, and phrase-maker, he was known to a war-time generation as F.D.R.

RUSSELL, BERTRAND (1872-), was born in England, the son of Viscount Amberley, and is the author of *Principia Mathematica,* 1910, and *An Inquiry Into Meaning and Truth,* 1941, with an extraordinarily various activity in politics, education, and writing in the years between. He wrote his *Introduction to Mathematical Philosophy,* 1919, while in prison for his pacifist views. Russell is wiry, quizzical, and furrowed, apparently in looks as in mind, one of the troublesome, irregular, wise men of the world.

SMITH, LILLIAN (1897-), is a Southerner and a fighter for clarification of today's Negro problem. Beside *Strange Fruit* she has written *Julia, Give Us Tears* and *Killers of the Dream* (1949).

STEWART, GEORGE R., was born in Sewickley, Pa., in 1895. In 1942 he was a resident Fellow in Creative Writing at Princeton. The Commonwealth Club of California gave him its Silver Medal in 1936, and its Gold Medal in 1938. His successful novel, *Storm,* 1941, from which we have extracted the chapter-prefaces, was preceded by *Ordeal By Hunger,* 1936, and *Bret Harte,* 1931, whose stories and poems he had edited in 1928. Since *Storm* he has written other novels of contemporary interest on a high level.

TACITUS, CORNELIUS (c. 55-120), was the son-in-law of Julius Agricola; an eminent Roman lawyer; and an eye-witness of the reign of terror in the last years of the Emperor Domitian. His biographies and histories preserve his world, and his own name has become a word for brevity, or closeness of literary style.

THOREAU, HENRY DAVID, refused his Harvard diploma with the remark, "Let every sheep keep its own skin." A militant individualist, born in Concord, Mass., in 1817, he lived alone on the shores of Walden Pond, made a small-boat journey down the Concord and Merrimack rivers, and a walking tour on Cape Cod, and from these and his journals got several books, forever classics of transcendentalism, acute observation, and shrewd English prose.

THOULESS, ROBERT H. (1894-), has written *The Control of the Mind,* and *An Introduction to the Psychology of Religion* as well as *How to Think Straight,* the book from which our two selections were taken. He is a British psychologist.

THURBER, JAMES (1894-), grew up in Columbus, Ohio, and wandered through Ohio State University. Years later E. B White found in a wastebasket some drawings which established Thurber as a *New Yorker* artist. But he is a writer who sometimes draws pictures and never liked being known as a cartoonist who tried to write. His admirers like him both ways. His play, *The Male Animal;* his stories ("The Secret Life of Walter Mitty" became a movie with Danny Kaye); his helpless drawings, and his prose style in *My Life and Hard Times* show him as a great comic artist of our times.

TOWLE, CARROLL (1901-), was born in Maine, graduated in 1922 from Bowdoin College, and took his Ph.D. at Yale in 1933. He is a professor of English at the University of New Hampshire, where his students in creative writing have won wide recognition. Since 1938 he has been Director of the Writers' Conference held every summer at his university

VANZETTI, BARTOLEMEO (1888-1927) came to New York from Italy in 1908, was accused of having a part in a payroll robbery in 1920 at South Braintree Mass., and after several years was executed, a death being involved in the robbery. It was believed by most that he was unjustly sentenced; the case was international in its repercussions, and the literature deriving from it is extensive, including his own letters, plays by Maxwell Anderson and Nugent and Thurber, and poems by Millay and many more

WASHINGTON, BOOKER T. (1858-1915), son of a plantation slave and a white father worked after the Civil War in the mines to get himself an education, at Hampton, where he first taught. He founded Tuskegee, and traveled and spoke in the Negro cause, an able and honored man with honorary degrees from Harvard and Dartmouth. He wrote some dozen books and for these his educational work is marked as a great American

WEINSTEIN, ALEXANDER, born in Russia in 1893, is a geneticist and historian, educated at Columbia University (Ph.D., 1917) who has held fellowships, research appointments, and professorships at Minnesota, Johns Hopkins, Illinois,

Columbia, and C. C. N. Y. He is a member of leading scientific societies, and a writer on genetic factors.

WEMBRIDGE, ELEANOR ROWLAND (1882-), took three degrees at Radcliffe and taught psychology at Reed College, Oregon. She has been prominent for forty years in social work, and written several books.

WEST, REBECCA (Cicily Isabel Fairfield), was born in Edinburgh in 1892, and after a career as reviewer and political writer, published *The Strange Necessity*, 1928; *Black Lamb and Grey Falcon*, 1941; and did some of the best war reports from England for *The New Yorker*, out of which came her account of the treason trials of traitors, *The Meaning of Treason*.

WHIPPLE, FRED LAWRENCE (1906-), was born in Iowa and educated at the University of California An astronomer, he has been at the Harvard Observatory since 1931, a professor since 1945. For the discovery of six comets he was awarded the Donohue Medal.

WHITE, E B. (1899-), was educated at Cornell and became a reporter in 1921. He was later a free lance writer and contributing editor for *The New Yorker*. He wrote *The Lady is Cold*, poems (1929), *Is Sex Necessary?*, with James Thurber (1929), *Every Day is Saturday* (1934), *Quo Vadimus* (1939), *One Man's Meat* (1942) He is perhaps the greatest personal essayist of our time.

WHITE, WILLIAM ALLEN (1868-1944), edited *The Emporia Gazette*, from 1895 to 1944. His paper served a Kansas town of less than 15,000. yet was one of the most famous newspapers in the world — and its editor a figure whose influence in national affairs cannot be gauged by the number of his readers. He contributed to leading magazines and wrote several books, but is chiefly remembered for his editorials. Great among these are the tender piece he wrote about his 17-year-old daughter Mary Katherine, on her death in 1921, and his "What's Wrong with Kansas?" which Mark Hanna used to help McKinley become president in 1896.

WHITEHEAD, ALFRED NORTH (1861-), was born in Ramsgate, England, and received his degrees from Trinity College, Cambridge, where he became instructor in mathematics. From 1924-1936 he was professor of philosophy at Harvard. He is the author of *Aims of Education*, 1928, and *Science in the Modern World*, 1925, his best-known work.

WOOLF, VIRGINIA (1882-1941), English novelist and critic, one of the most sensitive women writers of her time, is the author of *The Common Reader*, 1925, and the *Second Common Reader*, gathered from her front page essays for the *London Times* Literary Supplement. For some, *Orlando*, or *Mrs Dalloway*, and for others *A Room of One's Own*, is her best.

WOOLLCOTT, ALEXANDER (1887-1943), critic, author, playwright, radio star, actor, lecturer and anthologist, wrote on the theater, books he liked and hated, restaurants, and metropolitan Americana, and so became a favorite with millions. His influence began in 1914 when he became dramatic critic of the *New York Times*. In the early twenties he emerged in his full metropolitan dress as member of that group of critics and humorists which included George F. Kaufman, F. P. Adams, and Heywood Broun. He observed American life with an eye both tender and penetrating.