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INTRODUCTION

ALL the passages in this anthology have been written in the present century. Each passage has been chosen in the first place because it is a good example of current English writing, and in the second because it reflects the special interests which have been engaging the attention of mankind in the present century. The anthology endeavours to be a reflection of current thought at its best on the questions which have concerned mankind most in our century.

English is the most widely used language in the world today for international communication. People in most countries speak it and read it. A few people in most countries can write it well. But the standard is set by native writers. The present century has been an age of prose and the number of English writers who have written their language competently on all subjects has been great. The anthologist's task would therefore appear to be easy. I have never found it so.

The main difficulty in making an anthology is to decide the pattern. In this case, there seemed to be no choice but to reflect the problems which men of liberal intelligence have found it necessary to face in the rapidly developing social arrangements in our century. One of the great problems in the century has been the increase in material comfort in industrial countries. The common people in the great industrial countries are incomparably better off in material comforts than they were fifty years ago, and for the first time in human society it is possible for all mankind to be healthy, well-fed and well-housed. These are important things, but they only prepare the

way for the most important things. It is one of the sad paradoxes in human affairs that instead of leading men to the most important things, which are the great social and personal virtues, they seem to dull men's faculties and encourage moral and spiritual weaknesses.

The most dangerous social weakness is selfishness and a selfish desire for power. Man as he progresses is always in danger of slipping back to the jungle laws of more primitive societies. That is one of the themes touched on again and again in this selection. New powers require an increased sense of responsibility to rule with restraint. If this restraint is lacking, progress and order itself are under threat.

Another great problem is the struggle of the individual against the increasingly complicated organization of society. It was thought in nineteenth century Europe that it was recognized for all time that individual man was the most important entity in the world. During the twentieth century another doctrine has been put into practice, the doctrine that the state is the important thing and that individuals are of no account. This is a doctrine for insects and there is much that we can admire in it when we see it in action among the ants and bees. When the doctrine is applied to the government of human communities, men of liberal intelligence regard it as the greatest of social evils. Every time the lust for power is mentioned in the following pages, it is in relation to this doctrine, which has given the rulers of modern states more power than any men have ever had before. Power is not itself an evil but a good thing, necessary in human society. But when it is exerted for the few at the expense of the many, it is bad. When it is sought and exerted irresponsibly for its own sake, it is dark with evil.

Human society sustains itself on a series of delicate balances, and whenever one balance is lost another must be found. In a time of great material progress it is immensely difficult to keep all the checks and balances operating so that human society remains sane and healthy. Sanity and health in human society means in the end the greatest possible freedom of development for the individual. This in the end is simply because society develops by the efforts of individuals. It all depends on each one of us helping to make things a little better for us all. That is another theme of this selection and it is chosen because it is the most important theme in human affairs today. So much for the matter. Now for the manner.

The anthologist is responsible for offering examples only of the best writing so that the student can acquire a standard in the language he is studying. Language is a difficult instrument to use and only a finely trained mind can use it well. Current English is especially difficult to manage, as Somerset Maugham says again and again. 'I have long resigned myself to writing as plainly as I can,' he says in the passage quoted here. His ideal is to write 'as briefly and baldly as if I were writing a telegram'. He was sixty and a recognized master of the language when he wrote the book from which these words are taken. Nearly twenty years later, in a lecture in London, he said: 'However experienced you are, however competent, you can never entirely conquer the difficulties of technique.' Again and again this great master of the contemporary plain way of writing English insists that 'there is no language more difficult to write than English'.

This is the respect of a master for his medium and it was of this very experienced craftsman that Orwell wrote: 'I believe the modern writer who has influenced

me most is Somerset Maugham, whom I admire immensely for his power of telling a story straightforwardly and without frills.' So our prose writers have their families, handing on their craft from generation to generation. Another fascinating family is the one to which Lowes Dickinson and E. M. Forster belong. At the very beginning of the century there was a brilliant group of young men at King's College, Cambridge, who came under the influence of Lowes Dickinson. Forster was among them. Bertrand Russell was already tutoring in another college. It was the thinking of these men, as much as anyone else or any other group, which has carried forward the liberal traditions which are so clearly evident in the prose passages in this selection.

We shall meet in this selection members of two generations of another great Cambridge family, Sir James Jeans and Fred Hoyle. The scientific families in Cambridge have been great and famous for centuries and not least among them have been the astronomers and their attendant mathematicians. While Lowes Dickinson and Bertrand Russell and E. M. Forster sustain and carry on the liberal traditions of English thought, the astronomers persistently remind us of the littleness of man. This need not dash liberal hopes. It is only the way of the West teaching itself what the East has always known; that man has his brief day and passes by and in the scheme of things he cannot appear important. Therefore, and this is the heart of the matter, he can afford to aspire to greatness with courage and fortitude. Being so unimportant, he can afford to brave fate and the universe.

This problem of finding a scale of values by which to regulate our lives is one that each of us must face. Those who go to universities expect to be ahead of popular thought and often it becomes their function to influence

the mass of the people. There is a discussion on these matters in this selection from one of the greatest books on the subject in English, *Instincts of the Herd*. It is a just though cynical account of how mankind too often seeks its leaders. The author does not leave the argument where the passage quoted here breaks off but proceeds to a positive conclusion. In the following chapter he names the virtue which coheres human society and argues convincingly that human society will develop on the basis of that virtue. He calls it altruism, and he says: 'Throughout the incalculable ages of man's existence as a social animal, Nature has been hinting to him in less and less ambiguous terms that altruism must become the ultimate sanction of his moral code.' He calls it a 'supreme moral law' and describes it as sympathy first with another individual and presently with groups and eventually with all mankind and with the whole of nature. 'Hence tends to appear a sense of international justice, a vague feeling of being responsibly concerned in all human affairs.' Peace and progress for all human societies depend upon this virtue.

This is precisely the conclusion reached by Sir Charles Sherrington at the end of his famous series of lectures on *Man and his Nature*. 'Altruism, charity, is a duty incumbent upon thinking life,' he says, just before our passage begins. When he says 'altruism has to grow' he points out that 'it allots to human life a place supreme among lives' and argues that this virtue will 'open out a higher self'. Man, this implies, is not at the end of his evolution. He can still develop. Today it is very clear that man must develop as a social animal if he is going to survive. The splendid promise offered by these two men of science, Trotter the surgeon and Sherrington the biologist, is that man will develop the virtue by which survival will be possible.

The anthologist, to be fair, must offer a statement of the opposing case. In contrast to this splendid optimism, Aldous Huxley opens his essay on the *Nature of the Modern State* with a frank acknowledgement of the way states are held together. Yet he also decides in the end that progress is possible and will be achieved 'through acts of free will on the part of the morally enlightened, intelligent, well-informed and determined individuals, acting in concert'.

The other side of the picture is shown also by Bertrand Russell who, in his book on *Power*, offers us another look at the dangers which are always present in human societies. Man can only exist by combining, and as material civilization develops he depends more and more on the work of other men. A family in a modern city depends on many people every day, shopkeepers and those who supply their shops, water and electrical engineers, public health authorities and a host of other people. Everything tends to require more and more organization in a modern state and so the central authority, responsible for organization, becomes more powerful. It has to make rules so that the machine will work and the humble people who carry out the rules dare not adjust them or break them to meet individual cases. In this way the state becomes inhuman and the individual tends to be forgotten in the necessity for making elaborate arrangements for whole communities. At the same time, as the state acquires power, those who run it are in danger of desiring more power. As a result, today, as Bertrand Russell says, power is desired more than wealth. 'Both individuals and communities will desire power more than wealth. . . . the fundamental concept in social science is Power.' So the desire for power is seen to be the greatest danger in modern communities and the only

defence against this power, which would crush all freedom if it were not curbed, is on the one hand altruism and on the other the voice of the individual who dares to criticize.

George Orwell is an outstanding example of the man who stands aside from all organizations and observes and criticizes. In a fine essay called *Lear, Tolstoy and the Fool*, he demonstrates with the simplicity of genius how men come to be at the mercy of the desire for power. The leader naturally thinks he is in the right and 'the more you are in the right, the more natural that everyone else should be bullied into thinking likewise'. In the same essay he has a comment on a false idea of altruism: 'If you live for others, you must live *for others*, and not as a roundabout way of getting an advantage for yourself.' He was also acutely conscious of the dangers in the vast organization of the modern state. Things go wrong because people do not think clearly enough. As a writer, he felt that one way to improve this was to encourage carefulness in the use of words. E. M. Forster wrote of him 'He was passionate over the purity of prose. . . . He was unique in being immensely serious and in connecting good prose with liberty.' That is why his essay is included in this selection. It reminds us that the hope of retaining liberty not merely for ourselves but for us all is the individual voice, effectively used.

It is the horrible pattern of life which industrialism has brought to the common man which has stirred so many English writers in the present century to the defence of individuality. Mr Forster's essay is a notable defence. He has been teaching the importance of personal relationships between free individuals for the greater part of this century. His aristocracy of 'the sensitive, the considerate and the plucky' are the writers of this selection.

At the heart of the teaching of these Cambridge men is a quiet scepticism which is in strong contrast to the easy optimism of the vulgar world. Lowes Dickinson reminds us that: 'A man who has never experienced, nay, I will say who is not constantly reiterating the process of criticism, is a man who has no right to his enthusiasm.'

All the writers in this selection have a right to their enthusiasm. The reader is bound to share it and in doing so he need not criticize himself too much, for he will be sharing the enthusiasm of some of the finest spirits of our century.

L. B.

The Universe Around Us

BY SIR JAMES JEANS

THE UNIVERSE AROUND US is one of the great popular scientific expositions of our century. Discovery in astronomy has been so rapid in recent times that heavy revisions have been necessary. In the revision which appeared in 1944 the author remarks that 'astronomy has continued its triumphal progress' and states the very interesting truth that 'the sensational discoveries in our century in fact have been made by looking through telescopes and microscopes'. In this passage Sir James Jeans faces the difficult problem of making scientific discovery intelligible to the ordinary reader. The challenge is to give us some idea of the distances between stars in space. Mr Hoyle faces the same problem in the next passage and it is interesting to compare the two attempts. In addition, Sir James touches on that most exciting scientific subject, the atom.

THE earth, travelling 1,000 times faster than an express train, makes a Journey of 600 million miles around the sun every year. Let us represent this Journey by a pin-head $\frac{1}{16}$ of an inch in diameter. This fixes the scale of our model; the sun has shrunk to a minute speck of dust $\frac{1}{9400}$ of an inch in diameter, while the earth is a still more minute speck which is too small to be seen at all even in the most powerful of microscopes. On this scale the nearest star in the sky, Proxima Centauri, must be placed about 225 yards away, and to contain even the hundred stars nearest to our sun in space, the model must be a mile high, a mile long and a mile wide.

Let us go on building the model. We may think of stars indiscriminately as specks of dust, because their

sizes vary about as much as the sizes of specks of dust. In the vicinity of the sun we must place specks of dust at average distances of about a quarter of a mile apart; in many other regions of space they are even farther apart. We go on building the model for hundreds of miles in every direction, and then, if we are building in a direction well away from the galactic plane, the specks of dust begin to thin out; we are approaching the confines of the galaxy. In the galactic plane itself we build out for perhaps 5,000 miles before we come to the farthest globular cluster, and we are still inside the galactic system. With our earth's long yearly journey round the sun as a pin-head, the whole galactic system is considerably larger than the continent of Asia. It may be well to pause and try to visualize the relative sizes of a pin-head and a continent before we go on with our mental model-building.

After we have finished the galactic system, we must travel about 20,000 miles before we begin to set up the next bit of our model, at any rate if we are keeping it to scale. At this distance, we place the next family of stars, a family which may be somewhat smaller and more compact than our own galactic family, but is comparable with it both in size and in numbers. So we go on building our model—a family of thousands of millions of stars every 30,000 miles or so—until we have two million such families. The model now stretches for about three million miles in every direction. This represents as far as we can see into space with our present telescopes. Beyond this we imagine the model going on in all directions, although perhaps not indefinitely; a journey of some hundreds of millions of miles in the model might bring us back to our starting point.

In this model, the sun is a very tiny speck of dust indeed—a speck less than a three-thousandth of an inch

in diameter—while the other stars are other specks of dust, some larger, some smaller. The total number of specks of dust in our model is about comparable with the total number of specks of dust in the whole of London or New York—actually it is the number of dust particles in 3 cubic miles of air, with particles occurring at the rate of a million to the cubic inch. Think of the sun as something less than a single speck of dust in a vast city, of the earth as less than a millionth part of such a speck of dust, and we have perhaps as vivid a picture as the mind can really grasp of the relation of our home in space to the rest of the universe.

An alternative procedure would have been to construct our scale-model by taking all the specks of dust in London and spreading them out to the right distances to represent the various stars in space. The average actual distances between specks of dust in London is a quite small fraction of an inch; to get our model to correct scale, this distance must be increased to about a quarter of a mile, even when we are building the part which represents the crowded part of space round the sun. If we build our model in this way, we obtain a vivid picture of the emptiness of space. Empty Waterloo Station of everything except six specks of dust, and it is still far more crowded with dust than space is with stars. This is true even of the comparatively crowded region inside the galactic system; it takes no account of the immense empty stretches between one system of stars and the next. On averaging throughout the whole of the model, the mean distance of a speck of dust from its nearest neighbour proves to be something like 80 miles. The universe consists in the main not of stars but of desolate emptiness—inconceivably vast stretches of desert space in which the presence of a star is a rare and exceptional event.

Let us in imagination take up a position in space somewhere near the sun, and watch the stars moving past with speeds about 1,000 times that of an express train. If space were really crowded with stars, our position would be as unenviable as if we sat down in the middle of Regent Street to watch the traffic go by—our life, though thrilling, would be brief. Yet, as exact calculation shows, the stellar traffic is so little crowded that we should have to wait about a million million million years before a star ran into us. Put in another form, the calculation shows that any one star may expect to move for something of the order of a million million million years before colliding with a second star. The stars move blindly through space, and the players in the stellar blind-man's-buff are so few and far between that the chance of encountering another star is almost negligible. This not only applies to direct collisions but also to near approaches; with things as they now are, a star would probably move through space for about a hundred million million years before it came to within ten diameters distance of another star.

As far back as the fifth century before Christ, Greek philosophy was greatly exercised by the question of whether in the last resort the ultimate substance of the universe was continuous or discontinuous. We stand on the sea-shore, and all around us see stretches of sand which appear at first to be continuous in structure, but which a closer examination shows to consist of separate hard particles or grains. In front rolls the ocean, which also appears at first to be continuous in structure, and this we find we cannot divide into grains or particles, no matter how we try. We can divide it into drops, but then each drop can be subdivided into smaller drops, and there seems to be no reason, on the face of things, why this process of subdivision should not be continued for ever.

The question which agitated the Greek philosophers was, in effect, whether the water of the ocean or the sand of the sea-shore gave the truer picture of the ultimate structure of the substance of the universe.

The 'atomic' school, founded by Democritus, Leucippus and Lucretius, believed in the ultimate discontinuity of matter; they taught that any substance, after it had been subdivided a sufficient number of times, would be found to consist of hard discrete particles which did not admit of further subdivision. For them the sand gave a better picture of ultimate structure than the water, because they thought that sufficient subdivision would cause the water to display the granular properties of sand. And this intuitional conjecture is amply confirmed by modern science.

The question is, in effect, settled as soon as a thin layer of a substance is found to show qualities essentially different from those of a slightly thicker layer. A layer of yellow sand swept uniformly over a red floor will make the whole floor appear yellow, if there is enough sand to make a layer at least one grain thick. If, however, there is only half this much sand, the redness of the floor inevitably shows through; it is impossible to spread sand in a uniform layer only half a grain thick. This abrupt change in the properties of a layer of sand is of course a consequence of the granular structure of sand.

Similar changes are found to occur in the properties of thin layers of liquid. A teaspoonful of soup will cover the bottom of a soup plate, but a single drop of soup will only make an untidy splash. It is sometimes possible to measure the exact thickness of layer at which the properties of liquids begin to change. In 1890 Lord Rayleigh found that thin films of olive oil floating on water changed their properties as soon as the thickness of the film was

reduced to less than a millionth of a millimetre (or a 25,000,000th part of an inch). The obvious interpretation, which is confirmed in innumerable ways, is that olive oil consists of discrete particles—analogueous to the ‘grains’ in a pile of sand—each having a diameter somewhere in the neighbourhood of a 25,000,000th part of an inch.

Every substance consists of such ‘grains’; they are called molecules. The familiar properties of matter are those of layers many molecules thick; the properties of layers less than a single molecule thick are known only to the physicist in his laboratory.

How are we to break up a piece of substance into its ultimate grains, or molecules? It is easy for the scientist to say that, by subdividing water for long enough, we shall come to grains which cannot be subdivided any farther; the plain man would like to see it done.

Fortunately the process is one of extreme simplicity. Take a glass of water, apply gentle heat underneath, and the water begins to evaporate. What does this mean? It means that the water is being broken up into its separate ultimate grains or molecules. If the glass of water could be placed on a sufficiently sensitive spring balance, we should see that the process of evaporation does not proceed continuously, layer after layer, but jerkily, molecule by molecule. We should find the weight of the water changing by jumps, and each jump would represent the weight of a single molecule. The glass may contain any integral number of molecules but never fractional numbers—if fractions of a molecule exist, at any rate they do not come into play in the evaporation of a glass of water.

Is it possible to break up the molecules still further? Lucretius and his predecessors would, of course, have said ‘No’. A simple experiment, which, however, was

quite beyond their range, will speedily show that they were wrong.

On sliding the two wires of an ordinary electric bell circuit into a tumbler of water, down opposite sides, bubbles of gas will be found to collect on the wires, and chemical examination shows that the two lots of gas have entirely different properties. They cannot, then, both be water-vapour, and in point of fact neither of them is; one proves to be hydrogen and the other oxygen. There is found to be twice as much hydrogen as oxygen, whence we conclude that the electric current has broken up each molecule of water into two parts of hydrogen and one of oxygen. These smaller units into which a molecule is broken are called 'atoms'. Each molecule of water consists of two atoms of hydrogen (H) and one atom of oxygen (O); this is expressed in its chemical formula H_2O .

A substance which consists solely of atoms of one single kind is described as an element, while one which contains more than one kind of atom is described as a compound. For example, hydrogen and oxygen are elements but water, which is a chemical blend of the two, is a compound.

All the innumerable substances which occur on earth—shoes, ships, sealing-wax, cabbages, kings, carpenters, walruses, oysters, everything we can think of—can be analysed into their constituent atoms, either in this or in other ways. It might be thought that a quite incredible number of different kinds of atoms would emerge from the rich variety of substances we find on earth. Actually the number is quite small. The same atoms turn up again and again, and the great variety of substances we find on earth results, not from any great variety of atoms entering into their composition, but from the great variety of ways in which a few types of atoms can be combined—just as

in a colour-print three colours can be combined so as to form almost all the colours we meet in nature, not to mention other weird hues such as never were on land or sea.

Analysis of all known terrestrial substances has, so far, revealed only 92 essentially different kinds of atoms. And even of these 92, the majority are exceedingly rare, most common substances being formed out of the combinations of only about 14 different atoms, say hydrogen (H), carbon (C), nitrogen (N), oxygen (O), sodium (Na), magnesium (Mg), aluminium (Al), silicon (Si), phosphorus (P), sulphur (S), chlorine (Cl), potassium (K), calcium (Ca), and iron (Fe).

In this way, the whole earth, with its endless diversity of substances, is found to be a building built of standard bricks—the atoms. And of these only a few types, about 14, occur at all abundantly in the structure, the others appearing but rarely.

We have already seen how the spectrum of the light received from a star informs us as to the composition of the star's atmosphere. With a few quite unimportant exceptions, every line in the spectra of the stars can be identified as originating in some type of atom known on earth, so that the whole universe appears to be built of the same 92 kinds of atoms as are known on earth, although it must be remembered that we have no direct evidence as to the kinds of atoms existing in stellar interiors.

We shall see that the various kinds of atoms occur in much the same relative proportions in the stars as on earth. Thus twelve of the fourteen elements which are abundant on earth are abundant also in the stars. This is not surprising if we consider that the earth probably came into being as a condensation of the gases in the atmosphere

of one particular star—namely, the sun. Hydrogen and helium are less abundant on earth than in stellar atmospheres, but there is a reason for this also. When the earth was still a diffuse ball of hot gas, its gravitational power would not be adequate to hold down the rapidly moving atoms of these substances so that these would rapidly diffuse away and be lost to the earth for ever. Thus very little helium remains on earth, while hydrogen is found only in combination with other atoms or other substances.

Until quite recently, atoms were regarded as the permanent bricks of which the whole universe was built. All the changes of the universe were supposed to amount to nothing more drastic than a re-arrangement of permanent indestructible atoms; like a child's box of bricks, these built many buildings in turn. The story of twentieth-century physics is primarily the story of the shattering of this concept.

It was towards the end of the last century that Crookes, Lenard and, above all, Sir J. J. Thomson first began to break up the atom. The structures which had been deemed the unbreakable bricks of the universe for more than 2,000 years were suddenly shown to be very susceptible to having fragments chipped off. A mile-stone was reached in 1897, when Thomson showed that these fragments were identical, no matter what type of atom they came from; they were of equal weight and they carried equal charges of negative electricity. On account of this last property they were called 'electrons'. The atom cannot, however, be built up of electrons and nothing else, for as each electron carries a negative charge of electricity, a structure which consisted of nothing but electrons would also carry a negative charge. Two negative charges of electricity repel one another, as also do two positive charges, while two charges, one of positive

and one of negative electricity, attract one another. This makes it easy to determine whether any body or structure carries a positive or a negative charge of electricity, or no charge at all. Observation shows that a complete atom carries no charge at all, so that somewhere in the atom there must be a positive charge of electricity, of amount just sufficient to neutralise the combined negative charges of all the electrons.

In 1911 experiments by Lord Rutherford and others revealed the architecture of the atom, in its main lines at least. We shall see below how nature herself provides an endless supply of small particles charged with positive electricity, and moving with very high speeds, in the x-particles shot off from radio-active substances. Rutherford's method was in brief to fire these into atoms and observe the result. And the surprising result he obtained was that the vast majority of these bullets passed straight through the atom as though it simply did not exist. It was like shooting at a ghost.

Yet the atom was not all ghostly. A tiny fraction—perhaps one in 10,000—of the bullets were deflected from their courses as if they had met something very substantial indeed. A mathematical calculation showed that these obstacles could only be the missing positive charges of the atoms.

A detailed study of the paths of these projectiles proved that the whole positive charge of an atom must be concentrated in a single very small space, having dimensions of the order of only a millionth of a millionth of an inch. In this way, Rutherford was led to propound the view of atomic structure which is generally associated with his name. He supposed the chemical properties and nature of the atom to reside in a weighty, but excessively minute, central 'nucleus' carrying a positive charge of electricity,

around which a number of negatively charged electrons described orbits. He had to suppose that the electrons were in motion in the atom, otherwise the attraction of positive for negative electricity would immediately draw them into the central nucleus—just as gravitational attraction would cause the earth to fall into the sun, were it not for the earth's orbital motion. In brief, Rutherford supposed the atom to be constructed like the solar system, the heavy central nucleus playing the part of the sun and the electrons acting the parts of the planets.

We have already noticed that science cannot hope ever to discover the true nature of the ingredients of the material universe; from the nature of things, this lies for ever beyond our ken. The most we can aspire to is a model or picture which shall explain and account for some of the observed properties of matter; where this fails, we must supplement it with some other model or picture, which will in its turn fail with other properties of matter, and so on.

Rutherford's picture of the atom does not account for all of the observed properties of matter, but it accounts for a great number, and these happen to include those properties which are important for our present discussion. For this reason we shall continue to describe the atom in terms of Rutherford's picture, and its subsequent extension by Bohr and others.

According to this picture, the electrons are supposed to move round the nucleus with just such speeds as are necessary to save them from being drawn into it. These speeds prove to be terrific, the average electron revolving around its nucleus several thousand million million times every second, with a speed of hundreds of miles a second. Thus the smallness of their orbits does not prevent the electrons moving with higher orbital speeds than the planets, or even the stars themselves.

We have already commented on the extreme emptiness of astronomical space. Choose a point in space at random, and the odds against its being occupied by a star are enormous. Even the solar system consists overwhelmingly of empty space; choose a spot inside the solar system at random, and there are still immense odds against its being occupied by a planet or even by a comet, meteorite or smaller body. And now we see that this emptiness extends also to the space of physics. Even inside the atom we choose a point at random, and the odds against there being anything there are immense; they are of the order of at least millions of millions to one. We saw how six specks of dust inside Waterloo Station represented—or rather over-represented—the extent to which space was crowded with stars. In the same way a few wasps—six for the atom of carbon—flying around in Waterloo Station will represent the extent to which the atom is crowded with electrons—all the rest is emptiness. As we pass the whole structure of the universe under review, from the giant nebulae and the vast interstellar and internebular spaces down to the tiny structure of the atom, little but vacant space passes before our mental gaze. We live in a gossamer universe; pattern, plan and design are there in abundance, but solid substance is rare.

The Expanding Universe

BY FRED HOYLE

A FEW years ago the B.B.C. asked Mr Hoyle 'to describe the changes that have taken place in cosmology since the work of Jeans and Eddington', the two great Cambridge astronomers of a generation ago. Mr Hoyle at the beginning of his lectures says that 'it has become increasingly plain that the stage is being set for the next cosmological revolution in our way of thinking. The popularity of the well-known books of Eddington and Jeans was an obvious sign of reawakening interest in the relation of man to the universe as a whole.' The passage which follows comes from the last lecture, in which he develops a tremendous impression of the size of our Universe both in space and time. These two eloquent passages by Jeans and Hoyle give a dramatic setting for the discussion of contemporary human problems which follows.

LOOK out at the heavens on a clear night; if you want a really impressive sight do so from a steep mountain-side or from a ship at sea. As I have said before, by looking at any part of the sky that is distant from the Milky Way you can see right out of the disk that forms our Galaxy. What lies out there? Not just scattered stars by themselves, but in every direction space is strewn with whole galaxies, each one like our own. Most of these other galaxies are too faint to be seen with the naked eye, but vast numbers of them can be observed with a powerful telescope. When I say that these other galaxies are similar to our Galaxy I do not mean that they are exactly alike. Some are much smaller than ours, others are not disk-shaped but nearly spherical in form. The basic

similarity is that they are all enormous clouds of gas and stars, each one with anything from 100,000,000 to 10,000,000,000 or so members.

Although most of the other galaxies are different from ours, it is important to realize that some of them are indeed very like our Galaxy even so far as details are concerned. By good fortune one of the nearest of them, only about 700,000 light years away, seems to be practically a twin of our Galaxy. You can see it for yourself by looking in the constellation of Andromeda. With the naked eye it appears as a vague blur, but with a powerful telescope it shows up as one of the most impressive of all astronomical objects. On a good photograph of it you can easily pick out places where there are great clouds of dust. These clouds are just the sort of thing that in our own Galaxy produces the troublesome fog I mentioned in earlier talks. It is this fog that stops us seeing more than a small bit of our own Galaxy. If you want to get an idea of what our Galaxy would look like if it were seen from outside, the best way is to study this other one in Andromeda. If the truth be known I expect that there are plenty of places there where living creatures are looking out across space at our Galaxy, and who are seeing much the same spectacle as we see when we look at their galaxy.

How many of these gigantic galaxies are there? Well, they are strewn through space as far as we can see with the most powerful telescopes. Spaced apart at an average distance of rather more than 1,000,000 light years, they certainly continue out to the fantastic distance of 1,000,000,000 light years. Our telescopes fail to penetrate further than that, so we cannot be certain that the galaxies extend still deeper into space, but we feel pretty sure that they do. One of the questions we shall have to

consider later is what lies beyond the range of our most powerful instruments. But even within the range of observation there are about 100,000,000 galaxies. With upwards of 1,000,000 planetary systems per galaxy the combined total for the parts of the Universe that we can see comes out at more than a hundred million million.

We now come to the important question of where this great swarm of galaxies has come from. Perhaps I should first remind you of what we said when we were discussing the origin of the stars. We saw that in the space between the stars of our Galaxy there is a tenuous gas, the interstellar gas. At one time our Galaxy was a whirling disk of gas with no stars in it. Out of the gas, clouds condensed, and then in each cloud further condensations were formed. This goes on until finally stars are born. Stars are formed in the other galaxies in exactly the same way. Not only this, but we can go further and extend the condensation idea to include the origin of the galaxies themselves. Just as the basic step in explaining the origin of the stars is the recognition that a tenuous gas pervades the space within a galaxy, so the basic step in explaining the origin of the galaxies is the recognition that a still more tenuous gas fills the *whole of space*. It is out of this general background material, as I shall call it, that the galaxies have condensed.

Here now is a question that is important for our cosmology. What is the present density of the background material? The average density is so low that a match-box would contain only about one atom. But small as this is, the total amount of the background material exceeds about a thousandfold the combined quantity of material in all the galaxies put together. This may seem surprising but it is a consequence of the fact that the galaxies occupy only a very small fraction

of the whole of space. You see here the characteristic signature of the New Cosmology. We have seen that inside our Galaxy the interstellar gas outweighs the material in all the stars put together. Now we see that the background material outweighs by a large margin all the galaxies put together. And just as it is the interstellar gas that controls the situation inside our Galaxy, so it is the background material that controls the Universe as a whole.

The degree to which the background material has to be compressed to form a galaxy is not at all comparable with the tremendous compression necessary to produce a star. This you can see by thinking of a model in which our Galaxy is represented by a penny. Then the blob of background material out of which our Galaxy condensed would be only about a foot in diameter. This incidentally is the right way to think about the Universe as a whole. If in your mind's eye you take an average galaxy to be about the size of a bee, our Galaxy, which is a good deal larger than the average, would be roughly represented in shape and size by a penny, and the average spacing of the galaxies would be about three yards, and the range of telescopic vision about a mile. So sit back and imagine a swarm of bees spaced about three yards apart and stretching away from you in all directions for a distance of about a mile. Now for each bee substitute the vast bulk of a galaxy and you have an idea of the Universe that has been revealed by the large American telescopes.

It is now time for us to consider the question as to what lies beyond the observable part of the Universe. In the first place, does this question have any meaning? According to the theory it does. Theory requires the galaxies to go on for ever, even though we cannot see them. That is to say, the galaxies are expanding out into an infinite

space. There is no end to it all. And what is more, apart from the possibility of there being a few freak galaxies, one bit of this infinite space will behave in the same way as any other bit.

The same thing applies to time. Let us suppose that a film is made from any space position in the Universe. To make the film let a still picture be taken at each instant of time. This, by the way, is what we are doing in our astronomical observations. We are actually taking the picture of the Universe at one instant in time—the present. Next, let all the stills be run together so as to form a continuous film. What would the film look like? Well, galaxies would be observed to be continually condensing out of the background material. The general expansion of the whole system would be clear, but though the galaxies seemed to be moving away from us there would be a curious sameness about the film. It would be only in the details of each galaxy that changes would be seen. The overall picture would stay the same because of the compensation whereby the galaxies that were constantly disappearing through the expansion of the Universe were replaced by newly forming galaxies. A casual observer who went to sleep during the showing of the film would find it difficult to see much change when he awoke. How long would our film show go on? It would go on for ever.

There is a complement to this result that we can see by running our film backwards. Then new galaxies would appear at the outer fringes of our picture as faint objects that come gradually closer to us. For if the film were run backwards the Universe would appear to contract. The galaxies would come closer and closer to us until they evaporated before our eyes. First the stars of a galaxy would evaporate back into the gas from which they were

formed. Then the gas in the galaxy would evaporate back into the general background from which it had condensed. The background material itself would stay of constant density, not through matter being created, but through matter disappearing. How far could we run our hypothetical film back into the past? Again according to the theory, for ever. After we had run backwards for about 5,000,000,000 years our Galaxy itself would disappear before our eyes. But although important details like this would no doubt be of great interest to us there would again be a general sameness about the whole proceeding. Whether we run the film backwards or forwards the large-scale features of the Universe remain unchanged.

So we see that no large-scale changes in the Universe can be expected to take place in the future. But individual galaxies will change. What is the history of our own Galaxy going to be? This issue cannot be decided by observation because none of the galaxies that we observe can be more than about 10,000,000,000 years old. The reason for this is that a new galaxy condensing close by our Galaxy moves away from us and will pass out of the observable region of space in only about 10,000,000,000 years. So we have to decide the ultimate fate of our Galaxy again from theory. It will become steadily more massive as more and more of the background material gets pulled into it. After about 10,000,000,000 years it is likely that our Galaxy will have succeeded in gathering quite a cloud of gas and satellite bodies. Where this will ultimately lead is difficult to say with any precision. The distant future of the Galaxy is to some extent bound up with an investigation made about thirty years ago which found that very strange things happen when a body grows particularly massive. It becomes difficult, for

instance, for light emitted by the body ever to get out into surrounding space. When this stage is reached further growth is likely to be strongly inhibited. Just what it would then be like to live in our Galaxy I should very much like to know.

I should like to stress that so far as the Universe as a whole is concerned the essential difference made by the idea of continuous creation of matter is this. Without continuous creation the Universe must evolve towards a dead state in which all the matter is condensed into a vast number of dead stars. The details of the way this happens are different in the different theories that have been put forward, but the outcome is always the same. With continuous creation, on the other hand, the Universe has an infinite future in which all its present very large-scale features will be preserved.

My Philosophy of Life

BY PROFESSOR J. B. S. HALDANE

THIS is the text of a broadcast talk delivered in 1929 as part of a series on 'My Philosophy of Life' which included talks by Lowes Dickinson and Bernard Shaw. Broadcasting has affected English prose a good deal. It has helped in turning everyone towards the easy informal conversational manner which is used with such fine effect by Shaw, Forster, Maugham, Orwell and others in this selection. Scientists have used this way of writing to explain their discoveries and the outlook these discoveries have given them, as we have seen in the two previous passages. Professor J. B. S. Haldane has been prominent among scientific expositors. In this talk he speaks of great human social problems which could easily be solved with the power mankind has at its disposal if men would apply their intelligence, knowledge and commonsense to urgent matters and were not so much a prey to emotions more suitable to the lower animals than the high estate of man.

I AM a biologist, that is to say, I study the nature of living creatures, and I naturally look at things from a biological point of view. I feel at home in the world because I know that the other animals, and the plants too, are my blood relations. Even the inert matter has mostly been alive in the past. When I look at a limestone mountain I realize that, grim and lifeless as it appears, it was made by countless billions of my microscopic fellow-creatures. What is more surprising, I think that I can even have some very dim inkling of what it feels like to be limestone. We know material objects in general from the outside. We know our own bodies from the inside. Just as everyone

knows what it feels like to be hot, so I know from my own personal experience what it feels like to consist of an abnormally large or small amount of calcium carbonate, of which the limestone mountain is built. In this concrete and detailed way I feel my relationship to the world around me.

I am a part of nature, and, like other natural objects, from a lightning flash to a mountain range, I shall last out my time and then finish. This prospect does not worry me, because some of my work will not die when I do so.

As a biologist I am interested in my body. Most people are only interested in anything below their skins when they are ill. I like to study the performance of mine as my friends do that of their motor-cycles or receiving sets. It amuses me to know what my heart does when I run upstairs, or how quickly my finger-nails grow. To a biologist even a toothache can be interesting. Naturally I regard health as extremely important, far more so than wealth, and I shall regard my life as well spent if I can do a little, by research and education, to make my fellow-creatures healthier. There is still an immense amount to be learnt about health, but if what is at present known to a few were part of the general knowledge, the average expectation of life in this country could probably be increased by about ten years. Two difficulties lie in the way: ignorance and the dissemination of falsehood. To take a simple example of the latter. Enormous sums are spent in disseminating lies about health in order to advertise medicines and 'health foods' which are generally useless and often dangerous. A widely advertised vitamin preparation contains, besides vitamins, a substance definitely poisonous to children. Under the law of the land I might have to pay thousands of pounds in

damages if I mentioned the preparation in question, even if my statement could be proved to be true. On the other hand, I am at liberty to say publicly that diphtheria antitoxin is useless, which is a plain lie.

Now for an example of the prevailing ignorance. When a father advises his son on a choice of occupation, he is generally guided mainly by economic, and partly by ethical considerations. He wants his son to avoid bad wages and bad company. He does not think about bad health, though he may be impressed by the risk of violent death. Yet the health of different occupations differs to an extraordinary extent, and the average man knows very little about the risks of even his own job, let alone his neighbour's. Otherwise no sane man would take up such an occupation as that of metal grinder or barman, with a mortality double that of the average man, when he might become a carpenter or a railwayman, and thus enjoy an expectation of life above the average. Our rulers are equally ignorant of these matters. Protective duties and subsidies are granted quite impartially to healthy occupations like agriculture, and unhealthy ones such as the cutlery trade. When this policy is opposed it is opposed on economic grounds, and never because, by encouraging an unhealthy trade, you are condemning some of your fellow-countrymen to death. All parties agree in putting economic considerations before biological; wealth before health. I could give you plenty more examples of this ignorance if time permitted.

Even a healthy man or woman is incomplete. For a large number of men the main interest in life, the main object of their desires, the main source of their satisfaction, is Woman. For me the fascination of woman is only second to that of science. In most cases man's interest in woman culminates in marriage. Provided it

does not then cease, the marriage is generally a success. Successful marriage requires a certain effort by both husband and wife. But, speaking as a happily married man, I can assure you that no other effort is so amply rewarded. Marriage has a biological basis, and would be far more often a success if its biology were generally understood and the knowledge acted on. But you can only study the physiology of marriage against a background of general human physiology. If you do so the facts fit into their proper places. If not, you get a distorted and unhealthy view of them.

The psychological, even the intellectual, benefits of marriage, seem to me to be enormous. If a man has lived for some years in the closest intimacy with a woman, he learns to look at life from her point of view as well as his own. A man who cannot do this is like a man blind in one eye. He does not appreciate the solidity and depth of the world before him. The ideas I am putting before you here are largely my wife's, or at any rate, family ideas, rather than my own private productions. The unmarried woman is perhaps even worse off than the unmarried man; and few women seem to me to be psychologically complete till they have become mothers. During the Middle Ages Europe was far too much influenced by celibate men. Today much too big a part in public life is played by the celibate woman, and too little by mothers. I find few ideas more genuinely disgusting than that held by many education authorities that a woman ceases to be suitable as a teacher when she becomes a mother. Because I have so high an opinion of marriage at its best, I think that it should be possible to end it if it fails for any of a number of reasons, instead of, as now, for one only. This is called 'undermining the sanctity of marriage'.

Marriage generally brings children. Everyone will agree that it would be an evil if the birth-rate of this country were halved, in which case the population would rapidly fall; or doubled, in which case it would increase too quickly. But they will disagree whether too many or too few children are born at present. I do not know myself, though I am clear that too many children are born in the slums, too few in the well-to-do suburbs. But we shall not arrive at a sensible solution of the population problem till we realize that it is a question of numbers, like the design of a motor-car or the framing of a budget, and cannot be settled by an appeal to abstract principles alone.

Our present educational system is unjust to children because the majority of them do not get a fair chance, and practically none are taught the truths of science from a human point of view. Science teaching should begin, not with a mythical body in rest or uniform motion, but with the human body. Mine did so begin at the age of three.

Between different men and women there are immense inborn differences which no amount of education can overcome. I do not believe that any training could have made Ramsay MacDonald into Jack Hobbs, or *vice versa*. The ideal society would enable every man and woman to make the best of their inborn possibilities. Hence it must have two characteristics. First, liberty, which would allow people to develop along their individual lines, and not attempt to force all into one mould, however admirable. Second, equality of opportunity, which would mean that, as far as is humanly possible, every man and woman would be able to obtain the position in society for which they were best suited by nature. The waste of human beings under our present system is a far worse evil than

any merely economic waste. I believe in democracy because equality of opportunity is impossible where inherited rank or wealth is important, but for no other reason. I do not know what would be the ideal form of government in a community where that equality had been achieved. Democracy appeals to me, not as an end in itself, but as the most hopeful route, at least for England, to a classless society. In a classless society far-reaching eugenic measures could be enforced by the State with little injustice. Today this would not be possible. We do not know, in most cases, how far social failure and success are due to heredity, and how far to environment. And environment is the easier of the two to improve.

I am a citizen of the British Empire, which includes the great Dominions. My highbrow friends complain that the Dominions have produced little great art or literature. I answer that at least they have done something unique. Before the war the average expectation of life of a baby born in New Zealand was sixty years, in Australia fifty-seven years, in Denmark, the next healthiest country, fifty-six years. England also ran. Since then other countries have caught up to a large extent, but New Zealand and Australia still seem to be leading. I am proud to belong to a Commonwealth which has won the first and second places in the great race against death.

I am also a European, and proud of it. Europe is sick today, but it is at least making some attempt to cure that sickness by a federal union of its States. And it still leads the world in science, literature, art, and music. In methods of production the United States are ahead of us, and many Europeans think that we should copy them. Dean Inge believes that the working class in the United States is better off than our own. His opinion is shared in unexpected quarters. When my wife and I were

in Moscow last year at a great scientific congress we only saw two propaganda films. One was against alcohol; the other showed the manufacture of Ford cars as an argument for American industrial methods. I take a different view for the following reasons. Though they are still reducing their infantile mortality, since 1921 the death-rate of Americans at every age from thirty upwards has been increasing steadily. Whether as the result of hustle, prohibition, or the spread of medical cults, such as 'Christian Science' and osteopathy, which reject the results of science, America is at present heading for death, and not life.

Some of you probably think I have laid too much emphasis on death-rates; I have talked about them for two reasons. Firstly, they are the only means we have of comparing the health of two trades or two nations; and I think that there is a very close connexion between health and happiness. Secondly, otherwise well-informed people are ignorant of the facts concerning them.

I am an Englishman, and, what is more remarkable, though of Scottish origin, I believe in England. At the present moment our country counts for less in international politics than during the last century. Nevertheless some of our ideas and practices are at present conquering the world. In Moscow, which has rejected the great British invention of Parliament, there was a word which I constantly noticed on posters. It was not 'soviet', nor 'red', nor yet 'revolution', but 'phutbol'. The same is happening all over the world. Spanish bull-fighters are becoming centre-forwards. German students are taking to football instead of slashing one another's faces. And with British sport goes the ethical code called Sportsmanship, which future historians may perhaps consider a British invention as important as Parliament and Rail-

ways. I hope to see British sport conquer most of the world. But I am no narrow patriot, and would welcome a French invasion of the British kitchen.

England is only likely to regain her former pre-eminence if we can be ten years ahead of the rest of the world in industry, as we were a century ago. We should, of course, reorganize our industries, but other countries have already done so. We shall not regain our place by doing that. We have probably no great undeveloped mineral resources. But we have undeveloped human resources, especially among the children of the skilled artisan class. Our best hope for the future lies in giving them a chance to become Watts and Stephensons.

Finally, I am a human being, a citizen of the world which applied science is daily unifying. My own profession of scientific research knows no frontiers and no colour bars. Japanese, Indians, and Chinese, as well as Europeans and Americans, are, or have been, among my colleagues. I am naturally in favour of any measures tending to unify humanity and prevent war. But my views as to the best methods of achieving these aims are not informed by sufficient knowledge to be worth stating. For the same reason I am saying nothing about economics.

I am glad that I live today and not at any time in the past. In the 4,000 years before about A.D. 1800 civilization had spread over a gradually widening area, but its quality had not greatly improved. A century ago in England children were hanged for theft, and a married woman could own no property. Neither of these evils existed in Ur of the Chaldees 4,200 years earlier. In the nineteenth century we doubled our average expectation of life, quadrupled our average real wage, and vastly improved our education and morals. This was made possible, in the main, by the application of science. Today

the whole form of civilization is changing. We are trying unheard-of experiments. The great experiment of Socialism is being tried in Russia and will doubtless be tried elsewhere. We meet with huge and unexpected accidents like the Great War. We shall go on having such accidents so long as our rulers are not merely ignorant of science, but think on pre-scientific lines. (You will remember how the Kaiser talked of the war in terms of 'shining armour', and Mr Asquith of 'unsheathed swords'.) We have got to learn to think scientifically, not only about inanimate things, but about ourselves and one another. It is possible to do this. A single mind can acquire a fair knowledge of the whole field of science, and find plenty of time to spare for ordinary human affairs. Not many people take the trouble to do so. But without a knowledge of science one cannot understand current events. That is why modern literature and art are mostly so unreal.

We live in a dangerous age, but an extraordinarily interesting one. History is being made on a vaster and quicker scale than ever before. For humanity as a whole I am hopeful. For England I am only moderately hopeful, though I believe that if we are willing to adapt ourselves to the new conditions of life, we may yet be as great a nation as ever. But even if I am blown to pieces in the destruction of London during the next war, or starved to death during the next British revolution, I hope that I shall find time to think as I die, 'I am glad that I lived when and where I did. It was a good show.'

Politics and The English Language

BY GEORGE ORWELL

ORWELL is one of the English writers who, like Thackeray and Kipling, was born in India. After his death, some of his greatest contemporaries celebrated his work. Bertrand Russell said that whether we like it or not we are living in a political age and that is why so clear and fine a mind as Orwell's gave so much thought to political writing. This essay is here because it says things which we shall all find useful in our use of language, whether English or any other. It is one of the fine pieces which Orwell wrote in his last years at the height of his development and it is one of the most useful contemporary statements on the use of language. He leads up to his six rules which are worth memorizing for constant use.

MOST people who bother with the matter at all would admit that the English language is in a bad way, but it is generally assumed that we cannot by conscious action do anything about it. Our civilization is decadent and our language—so the argument runs—must inevitably share in the general collapse. It follows that any struggle against the abuse of language is a sentimental archaism, like preferring candles to electric light or hansom cabs to aeroplanes. Underneath this lies the half-conscious belief that language is a natural growth and not an instrument which we shape for our own purposes.

Now, it is clear that the decline of a language must ultimately have political and economic causes: it is not due simply to the bad influence of this or that individual writer. But an effect can become a cause, reinforcing the

original cause and producing the same effect in an intensified form, and so on indefinitely. A man may take to drink because he feels himself to be a failure, and then fail all the more completely because he drinks. It is rather the same thing that is happening to the English language. It becomes ugly and inaccurate because our thoughts are foolish, but the slovenliness of our language makes it easier for us to have foolish thoughts. The point is that the process is reversible. Modern English, especially written English, is full of bad habits which spread by imitation and which can be avoided if one is willing to take the necessary trouble. If one gets rid of these habits one can think more clearly, and to think clearly is a necessary first step towards political regeneration: so that the fight against bad English is not frivolous and is not the exclusive concern of professional writers. I will come back to this presently, and I hope that by that time the meaning of what I have said here will have become clearer. Meanwhile, here are five specimens of the English language as it is now habitually written.

These five passages have not been picked out because they are especially bad—I could have quoted far worse if I had chosen—but because they illustrate various of the mental vices from which we now suffer. They are a little below the average, but are fairly representative samples. I number them so that I can refer back to them when necessary:

(1) I am not, indeed, sure whether it is not true to say that the Milton who once seemed not unlike a seventeenth-century Shelley had not become, out of an experience ever more bitter in each year, more alien [*sic*] to the founder of that Jesuit sect which nothing could induce him to tolerate.

Professor Harold Laski (*Essay in Freedom of Expression*).

(2) Above all, we cannot play ducks and drakes with a native battery of idioms which prescribes such egregious collocations of vocables as the Basic *put up with* for *tolerate* or *put at a loss* for *bewilder*.

Professor Lancelot Hogben (*Interglossa*).

(3) On the one side we have the free personality: by definition it is not neurotic, for it has neither conflict nor dream. Its desires, such as they are, are transparent, for they are just what institutional approval keeps in the forefront of consciousness; another institutional pattern would alter their number and intensity; there is little in them that is natural, irreducible, or culturally dangerous. But *on the other side*, the social bond itself is nothing but the mutual reflection of these self-secure integrities. Recall the definition of love. Is not this the very picture of a small academic? Where is there a place in this hall of mirrors for either personality or fraternity?

Essay on psychology in *Politics* (New York).

(4) All the 'best people' from the gentlemen's clubs, and all the frantic fascist captains, united in common hatred of Socialism and bestial horror of the rising tide of the mass revolutionary movement, have turned to acts of provocation, to foul incendiarism, to medieval legends of poisoned wells, to legalize their own destruction of proletarian organizations, and rouse the agitated petty-bourgeoisie to chauvinistic fervour on behalf of the fight against the revolutionary way out of the crisis.

Communist pamphlet.

(5) If a new spirit *is* to be infused into this old country, there is *one* thorny and contentious reform which must be tackled, and that is the humanization and galvanization of the B.B.C. Timidity here will bespeak canker and atrophy of the soul. The heart of Britain may be sound and of strong beat, for instance, but the British lion's roar at present is like that of Bottom in Shakespeare's *Midsummer Night's Dream*—as gentle as any sucking dove. A virile new Britain cannot continue indefinitely to be traduced in the eyes or rather ears, of the world by the effete languors of Langham Place, brazenly masquerading as 'standard

English'. When the Voice of Britain is heard at nine o'clock, better far and infinitely less ludicrous to hear aitches honestly dropped than the present priggish, inflated, inhibited, school-ma'amish arch braying of blameless bashful mewling maidens!

Letter in *Tribune*.

Each of these passages has faults of its own, but, quite apart from avoidable ugliness, two qualities are common to all of them. The first is staleness of imagery: the other is lack of precision. The writer either has a meaning and cannot express it, or he inadvertently says something else, or he is almost indifferent as to whether his words mean anything or not. This mixture of vagueness and sheer incompetence is the most marked characteristic of modern English prose, and especially of any kind of political writing. As soon as certain topics are raised, the concrete melts into the abstract and no one seems able to think of turns of speech that are not hackneyed: prose consists less and less of words chosen for the sake of their meaning, and more and more of *phrases* tacked together like the sections of a prefabricated hen-house.

Professor Laski (1) uses five negatives in fifty-three words. One of these is superfluous, making nonsense of the whole passage, and in addition there is the slip *alien* for akin, making further nonsense, and several avoidable pieces of clumsiness which increase the general vagueness. Professor Hogben (2) plays ducks and drakes with a battery which is able to write prescriptions, and, while disapproving of the everyday phrase *put up with*, is unwilling to look *egregious* up in the dictionary and see what it means. (3), if one takes an uncharitable attitude towards it, is simply meaningless: probably one could work out its intended meaning by reading the whole of the article in which it occurs. In (4), the writer knows more or less what he wants to say, but an accumulation

of stale phrases chokes him like tea leaves blocking a sink. In (5), words and meaning have almost parted company. People who write in this manner usually have a general emotional meaning—they dislike one thing and want to express solidarity with another—but they are not interested in the detail of what they are saying. A scrupulous writer, in every sentence that he writes, will ask himself at least four questions, thus: What am I trying to say? What words will express it? What image or idiom will make it clearer? Is this image fresh enough to have an effect? And he will probably ask himself two more: Could I put it more shortly? Have I said anything that is avoidably ugly? But you are not obliged to go to all this trouble. You can shirk it by simply throwing your mind open and letting the ready-made phrases come crowding in. They will construct your sentences for you—even think your thoughts for you, to a certain extent—and at need they will perform the important service of partially concealing your meaning even from yourself. It is at this point that the special connexion between politics and the debasement of language becomes clear.

In our time it is broadly true that political writing is bad writing. Where it is not true, it will generally be found that the writer is some kind of rebel, expressing his private opinions and not a 'party line'. Orthodoxy, of whatever colour, seems to demand a lifeless, imitative style. The political dialects to be found in pamphlets, leading articles, manifestos, White Papers and the speeches of under-secretaries do, of course, vary from party to party, but they are all alike in that one almost never finds in them a fresh, vivid, home-made turn of speech. When one watches some tired hack on the platform mechanically repeating the familiar phrases—*bestial atrocities, iron heel, bloodstained tyranny, free peoples*

of the world, stand shoulder to shoulder—one often has a curious feeling that one is not watching a live human being but some kind of dummy: a feeling which suddenly becomes stronger at moments when the light catches the speaker's spectacles and turns them into blank discs which seem to have no eyes behind them. And this is not altogether fanciful. A speaker who uses that kind of phrasology has gone some distance towards turning himself into a machine. The appropriate noises are coming out of his larynx, but his brain is not involved as it would be if he were choosing his words for himself. If the speech he is making is one that he is accustomed to make over and over again, he may be almost unconscious of what he is saying, as one is when one utters the responses in church. And this reduced state of consciousness, if not indispensable, is at any rate favourable to political conformity.

In our time, political speech and writing are largely the defence of the indefensible. Things like the continuance of British rule in India, the Russian purges and deportations, the dropping of the atom bombs on Japan, can indeed be defended, but only by arguments which are too brutal for most people to face, and which do not square with the professed aims of political parties. Thus political language has to consist largely of euphemism, question-begging and sheer cloudy vagueness. Defenceless villages are bombarded from the air, the inhabitants driven out into the countryside, the cattle machine-gunned, the huts set on fire with incendiary bullets: this is called *pacification*. Millions of peasants are robbed of their farms and sent trudging along the roads with no more than they can carry: this is called *transfer of population* or *rectification of frontiers*. People are imprisoned for years without trial, or shot in the back of the neck or sent to die of scurvy in Arctic lumber camps: this is called

elimination of unreliable elements. Such phraseology is needed if one wants to name things without calling up mental pictures of them. Consider for instance some comfortable English professor defending Russian totalitarianism. He cannot say outright, 'I believe in killing off your opponents when you can get good results by doing so.' Probably, therefore, he will say something like this:

'While freely conceding that the Soviet regime exhibits certain features which the humanitarian may be inclined to deplore, we must, I think, agree that a certain curtailment of the right to political opposition is an unavoidable concomitant of transitional periods, and that the rigours which the Russian people have been called upon to undergo have been amply justified in the sphere of concrete achievement.'

The inflated style is itself a kind of euphemism. A mass of Latin words falls upon the facts like soft snow, blurring the outlines and covering up all the details. The great enemy of clear language is insincerity. When there is a gap between one's real and one's declared aims, one turns as it were instinctively to long words and exhausted idioms, like a cuttlefish squirting out ink. In our age there is no such thing as 'keeping out of politics'. All issues are political issues, and politics itself is a mass of lies, evasions, folly, hatred and schizophrenia. When the general atmosphere is bad, language must suffer. I should expect to find—this is a guess which I have not sufficient knowledge to verify—that the German, Russian and Italian languages have all deteriorated in the last ten or fifteen years, as a result of dictatorship.

But if thought corrupts language, language can also corrupt thought. A bad usage can spread by tradition and imitation, even among people who should and do know better. The debased language that I have been discussing

is in some ways very convenient. Phrases like, *a not unjustifiable assumption, leaves much to be desired, would serve no good purpose, a consideration which we should do well to bear in mind*, are a continuous temptation, a packet of aspirins always at one's elbow. Look back through this essay, and for certain you will find that I have again and again committed the very faults I am protesting against. By this morning's post I have received a pamphlet dealing with conditions in Germany. The author tells me that he 'felt impelled' to write it. I open it at random, and here is almost the first sentence that I see: '(The Allies) have an opportunity not only of achieving a radical transformation of Germany's social and political structure in such a way as to avoid a nationalistic reaction in Germany itself, but at the same time of laying the foundations of a co-operative and unified Europe.' You see, he 'feels impelled' to write—feels, presumably, that he has something new to say—and yet his words, like cavalry horses answering the bugle, group themselves automatically into the familiar dreary pattern. This invasion of one's mind by ready-made phrases (*lay the foundations, achieve a radical transformation*) can only be prevented if one is constantly on guard against them, and every such phrase anaesthetizes a portion of one's brain.

I said earlier that the decadence of our language is probably curable. Those who deny this would argue, if they produced an argument at all, that language merely reflects existing social conditions, and that we cannot influence its development by any direct tinkering with words and constructions. So far as the general tone or spirit of a language goes, this may be true, but it is not true in detail. Silly words and expressions have often disappeared, not through any evolutionary process but owing to the conscious action of a minority. Two recent

examples were *explore every avenue* and *leave no stone unturned*, which were killed by the jeers of a few journalists. There is a long list of flyblown metaphors which could similarly be got rid of if enough people would interest themselves in the job; and it should also be possible to laugh the *not un-*formation out of existence,¹ to reduce the amount of Latin and Greek in the average sentence, to drive out foreign phrases and strayed scientific words, and, in general, to make pretentiousness unfashionable. But all these are minor points. The defence of the English language implies more than this, and perhaps it is best to start by saying what it does *not* imply.

To begin with it has nothing to do with archaism, with the salvaging of obsolete words and turns of speech, or with the setting up of a 'standard English' which must never be departed from. On the contrary, it is especially concerned with the scrapping of every word or idiom which has outworn its usefulness. It has nothing to do with correct grammar and syntax, which are of no importance so long as one makes one's meaning clear, or with the avoidance of Americanisms, or with having what is called a 'good prose style'. On the other hand it is not concerned with fake simplicity and the attempt to make written English colloquial. Nor does it even imply in every case preferring the Saxon word to the Latin one, though it does imply using the fewest and shortest words that will cover one's meaning. What is above all needed is to let the meaning choose the word, and not the other way about. In prose, the worst thing one can do with words is to surrender to them. When you think of a concrete object, you think wordlessly, and then, if

¹ One can cure oneself of the *not un-*formation by memorizing this sentence: *A not unblack dog was chasing a not unsmall rabbit across a not ungreen field.*

you want to describe the thing you have been visualizing you probably hunt about till you find the exact words that seem to fit in. When you think of something abstract you are more inclined to use words from the start, and unless you make a conscious effort to prevent it, the existing dialect will come rushing in and do the job for you, at the expense of blurring or even changing your meaning. Probably it is better to put off using words as long as possible and get one's meaning as clear as one can through pictures or sensations. Afterwards one can choose—not simply *accept*—the phrases that will best cover the meaning, and then switch round and decide what impression one's words are likely to make on another person. This last effort of the mind cuts out all stale or mixed images, all prefabricated phrases, needless repetitions, and humbug and vagueness generally. But one can often be in doubt about the effect of a word or a phrase, and one needs rules that one can rely on when instinct fails. I think the following rules will cover most cases:

(i) Never use a metaphor, simile or other figure of speech which you are used to seeing in print.

(ii) Never use a long word where a short one will do.

(iii) If it is possible to cut a word out, always cut it out.

(iv) Never use the passive where you can use the active.

(v) Never use a foreign phrase, a scientific word or a jargon word if you can think of an everyday English equivalent.

(vi) Break any of these rules sooner than say anything outright barbarous.

These rules sound elementary, and so they are, but they demand a deep change of attitude in anyone who has

grown used to writing in the style now fashionable. One could keep all of them and still write bad English, but one could not write the kind of stuff that I quoted in those five specimens at the beginning of this article.

I have not here been considering the literary use of language, but merely language as an instrument for expressing, and not for concealing or preventing thought. Stuart Chase and others have come near to claiming that all abstract words are meaningless, and have used this as a pretext for advocating a kind of political quietism. Since you don't know what Fascism is, how can you struggle against Fascism? One need not swallow such absurdities as this, but one ought to recognize that the present political chaos is connected with the decay of language, and that one can probably bring about some improvement by starting at the verbal end. If you simplify your English, you are freed from the worst follies of orthodoxy. You cannot speak any of the necessary dialects, and when you make a stupid remark its stupidity will be obvious, even to yourself. Political language—and with variations this is true of all political parties, from Conservatives to Anarchists—is designed to make lies sound truthful and murder respectable, and to give an appearance of solidity to pure wind. One cannot change this all in a moment, but one can at least change one's own habits, and from time to time one can even, if one jeers loudly enough, send some worn-out and useless phrase—some *jackboot*, *Achilles' heel*, *hotbed*, *melting pot*, *acid test*, *veritable inferno* or other lump of verbal refuse—into the dustbin where it belongs.

An Eastern Journey

BY W. SOMERSET MAUGHAM

SOMERSET Maugham is known throughout the world as a novelist, playwright and short-story teller. He has excelled in them all. He has travelled widely in search of material suitable for tales and plots and on one occasion he travelled from Burma to Siam. He wrote a book about this journey because, as he says, 'I think it is very well for a novelist to give himself a rest now and then from writing fiction.' He had another reason. He is passionately interested in the art of writing prose and, he says, 'Every work an author produces should be a record of a spiritual adventure of his own.' A good travel book, then, is not so much a record of places as a record of the thoughts and feelings of the traveller. In this passage therefore the most interesting thing is the reaction of a cultivated European to the immemorial greatness of Eastern places and people.

ONE thing that makes a visit to Angkor an event of unusual significance—preparing you to enter into the state of mind proper to such an experience—is the immense difficulty of getting there. For once you have reached Phnom-Penh—itsself a place sufficiently off the beaten track—you must take a steamer and go a long way up a dull and sluggish river, a tributary of the Mekong, till you reach a wide lake; you change into another steamer, flat-bottomed, for there is no great depth, and in this you travel all night; then you pass through a narrow defile and come to another great stretch of placid water. It is night again when you reach the end of it. Then you get into a sampan and are rowed

among clumps of mangroves up a tortuous channel. The moon is full and the trees on the banks are sharply outlined against the night and you seem to traverse not a real country but the fantastic land of the silhouettist. At last you come to a bedraggled little village of watermen, whose dwellings are houseboats, and landing you drive down by the river side through plantations of cocoanut, betel and plantain, and the river is now a shallow little stream (like the country stream in which on Sundays in your childhood you used to catch minnows and put them in a jam-pot) till at length, looming gigantic and black in the moonshine, you see the great towers of Angkor Wat.

But now that I come to this part of my book I am seized with dismay. I have never seen anything in the world more wonderful than the temples of Angkor, but I do not know how on earth I am going to set down in black and white such an account of them as will give even the most sensitive reader more than a confused and shadowy impression of their grandeur. Of course to the artist in words, who takes pleasure in the sound of them and their look on the page, it would be an opportunity in a thousand. What a chance for prose pompous and sensual, varied, solemn and harmonious; and what a delight to such a one it would be to reproduce in his long phrases the long lines of the buildings, in the balance of his paragraphs to express their symmetry, and in the opulence of his vocabulary their rich decoration! It would be enchanting to find the apt word and by putting it in its right place give the same rhythm to the sentence as he had seen in the massed grey stones; and it would be a triumph to hit upon the unusual, the revealing epithet that translated into another beauty the colour, the form and the strangeness of what he alone had had the gift to see.

Alas, I have not the smallest talent for this sort of thing, and—doubtless because I cannot do it myself—I do not very much like it in others. A little of it goes a long way with me. I can read a page of Ruskin with enjoyment, but ten only with weariness; and when I have finished an essay by Walter Pater I know how a trout feels when you have taken him off the hook and he lies on the bank flapping his tail in the grass. I admire the ingenuity with which, little piece of glass by little piece of glass, Pater fitted together the mosaic of his style, but it bores me. His prose is like one of those period houses, all Genoese velvet and carved wood, that they used to have in America twenty years ago, and you looked round desperately for a corner on which to put down your empty glass. I can bear it better when this kind of stately writing is done by our forefathers. The grand style became them. I am awed by the magnificence of Sir Thomas Browne; it is like staying in a great Palladian palace with frescoes by Veronese on the ceilings and tapestries on the walls. It is impressive rather than homely. You cannot see yourself doing your daily dozen in those august surroundings.

When I was young I took much trouble to acquire a style; I used to go to the British Museum and note down the names of rare jewels so that I might give my prose magnificence, and I used to go to the Zoo and observe the way an eagle looked or linger on a cab-rank to see how a horse champed so that I might on occasion use a nice metaphor; I made lists of unusual adjectives so that I might put them in unexpected places. But it was not a bit of good. I found I had no bent for anything of the kind; we do not write as we want to but as we can, and though I have the greatest respect for those authors who are blessed with a happy gift of phrase I have long

resigned myself to writing as plainly as I can. I have a very small vocabulary and I manage to make do with it, I am afraid, only because I see things with no great subtlety. I think perhaps I see them with a certain passion and it interests me to translate into words not the look of them, but the emotion they have given me. But I am content if I can put this down as briefly and baldly as if I were writing a telegram.

On my journey up the river and across the lake I read the *Travels in Indo-China* of Henri Mouhot, a French naturalist, who was the first European to give a detailed description of the ruins of Angkor. His book is pleasant to read. It is a painstaking and straightforward account very characteristic of the period when the traveller had still the ingenuous belief that people who did not dress, eat, talk and think as he did were very odd, and not quite human; and M. Mouhot narrated many things that would scarcely excite the astonishment of the more sophisticated and also more modest traveller of our day. But apparently he was not always accurate and my copy of his book had been at some time annotated in pencil by a later pilgrim. The corrections were neatly written in a hand that looked determined, but whether this *not so*, this *far from it*, this *quite wrong*, this *a palpable error* were due to a disinterested desire for truth, a wish to guide future readers, or merely to a sense of superiority, I had no means of telling. Perhaps, however, poor Mouhot may justly claim a certain indulgence, for, dying before he completed his journey, he had no opportunity to correct and explain his notes.

Here are the last two entries in his diary:

19th—Attacked by fever.

29th—Have pity on me, oh my God . . . !

And here is the beginning of a letter he wrote a little while before he died :

*Louang Prabang (Laos),
23rd July, 1861.*

Now, my dear Jenny, let us converse together. Do you know of what I often think when every one around me is asleep, and I, lying wrapped in my mosquito-curtains, let my thoughts wander back to all the members of my family? Then I seem to hear again the charming voice of my little Jenny, and to be listening once more to 'La Traviata,' 'The Death of Nelson,' or some other of the airs that I loved so much to hear you sing. I then feel regret, mingled with joy, at the souvenir of the happy—oh, how happy!—past. Then I open the gauze curtains, light my pipe, and gaze out upon the stars, humming softly the 'Pâtre' of Béranger, or the 'Old Sergeant' . . .

By the portraits of him he was a man of an open countenance, with a full curly beard and a long moustache, and his thinning curly hair gave him a noble brow. In a frock coat he looked a respectable rather than a romantic figure, but in a *béret* with a long tassel there was in his mien something dashing and naively ferocious. He might then very well have passed for a corsair in a drama of the sixties.

But it was a very different Angkor Wat that met the intrepid gaze of Henri Mouhot from that which the tourist now can so conveniently visit. If indeed you are curious to know what this stupendous monument looked like before the restorer set to work upon it (it must be admitted unobtrusively), you can get a very good impression by taking a narrow path through the forest when you will come presently upon a huge grey gateway covered with lichen and moss. On the upper part of it, on the four sides, dimly emerging from ruined masonry is, four

times repeated, the impassive head of Siva. On each side of the gateway, half hidden by jungle, are the remains of a massive wall and in front of it, choked with weeds and water-plants, a broad moat. Entering, you find yourself in a vast courtyard, strewn with fragments of statues and green stones on which you vaguely discern sculpture; you walk softly on dead brown leaves and they squelch ever so faintly under your tread. Here grow enormous trees, towering above you, shrubs of all kinds and dank weeds; they grow among the crumbling masonry, forcing it apart, and their roots writhe like snakes upon the surface of the stony soil. The courtyard is surrounded by ruined corridors and you climb hazardously up steep, slippery and broken stairs, threading your way through passages and vaulted chambers dripping with wet and heavy with the stink of bats; the pedestals on which stood the gods are overturned and the gods are gone. And in the corridors and on the terraces the tropical vegetation grows fiercely. Here and there the great pieces of carved stone hang perilously. Here and there on a bas-relief still miraculously in place stand the dancing-girls veiled with lichen, mockingly, in their everlasting gestures of abandonment.

For centuries nature has waged its battle with the handiwork of man; it has covered, disfigured and transformed it, and now all these buildings that a multitude of slaves built with so much labour lie a confused tangle among the trees. Here lurk the cobras whose broken images you see on the stones around you. Hawks fly high overhead and the gibbons leap from branch to branch; but it is green and dark and you seem beneath that wanton leafage to wander at the bottom of the sea.

It chanced that one day towards dusk, when I was wandering about this temple, for in its ruin it offered

peculiar sensations that I found it curious to expose myself to, I was overtaken by a storm. I had seen the great dark clouds massed in the North-West and it had seemed to me that never again could the temple in the jungle be seen by me more mysteriously; but after a while I felt something strange in the air and looking up saw that the dark clouds were on a sudden charging down upon the forest. The rain came suddenly and then the thunder, not a single peal but roll upon roll reverberating down the sky, and lightning that blinded me, darting and slashing fiercely. I was deafened and confused by the noise, and the lightning startled me. The rain fell not as in our temperate zone, but with an angry vehemence, in sheets, storming down as though the heavens were emptying themselves of flooded lakes. It seemed to fall with no blind unconscious force, but with a purpose and a malignancy which were, alas, but too human. I stood in a doorway, not a little frightened, and as the lightning tore the darkness like a veil I saw the jungle stretching endlessly before me, and it seemed to me that these great temples and their gods were insignificant before the fierce might of nature. Its power there was so manifest, spoke with so stern and insistent a voice, that it was easy to understand how man had devised his gods and built great temples to house them to serve as a screen between himself and the force that terrified and crushed him. For nature is the most powerful of all the gods.

In case the reader is a trifle perplexed by all this commotion of the elements I will set down now for his edification a few facts of general interest. Angkor was a city of great extent, the capital of a powerful empire, and for ten miles around the jungle is dotted with the remains of the temples that adorned it. Angkor Wat is

but one of these and has claimed more than the rest the attentions of the archæologist, the restorer and the traveller, only because when discovered by the West it was in a less ruined state. No one knows why the city was abandoned so suddenly that they have found blocks of stones in the quarries ready to take their place in an unfinished temple, and the experts have in vain sought for a plausible explanation.

Some of the temples look as though they had been in great part wantonly destroyed; and the notion has been hazarded that when the rulers after some unfortunate battle fled the country, the wretched slaves who had spent their lives through so many generations to erect these massive buildings in vengeance overthrew what they had been obliged with blood and sweat to construct. This is conjecture. The only thing certain is that here was a city thriving and populous and now there remains nothing but a few ruined temples and the teeming forest. The houses were of wood, surrounded by their little compounds, like the houses I had so lately seen at Keng-Tung, and it would not have taken long for them to decay; the jungle, held in check for a while by the business of man, flowed back, an irresistible green sea, upon the scene of his futile activity. At the end of the thirteenth century it was one of the great cities of the East; two hundred years later it was the resort of wild beasts.

Angkor Wat is placed due east and west and the sun rises directly behind the five towers that surmount it. It is surrounded by a broad moat, which you cross by a great causeway paved with flagstones, and the trees are delicately reflected in the still water.

It is an impressive rather than a beautiful building and it needs the glow of sunset or the white brilliance of the moon to give it a loveliness that touches the heart. It is

grey veiled by a faint green, which is the colour of the moss and the mould of all the rainy seasons it has seen, but at sunset it is buff, pale and warm. At dawn when the country is bathed in a silver mist the towers have an aspect that is strangely unsubstantial; they have then an airy lightness which they lack in the hard white light of noon. Twice a day, when the sun rises and when it sets, a miracle is performed and they gain a beauty not their own. They are the mystic towers of the spirit's high citadel. The temple and its dependencies are built on a strictly formal plan. This part balances that and one side repeats the other. The architects exercised no great power of invention, but built on the pattern dictated to them by the rites of their religion. They had neither wanton fancy nor vivid imagination. They yielded to no sudden inspiration. They were deliberate. They gained their effects by regularity and by vastness. The modern eye, of course, has been distorted by the huge buildings that are now so easily constructed, mammoth hotel and enormous apartment house, so that the great size of Angkor Wat must be realised by an effort of the imagination; but to those for whom it was built it must have seemed stupendous. The very steep steps that lead from one storey to another give it a singular effect of height. They are not the broad and noble stairs of the West, fit for the pageantry of processions, but an arduous and hurried means of ascent to the presence of a secret and mysterious god. They render the divinity remote and enigmatic. On each storey, four to each, are large sunken basins in which was water for purification, and the water at those strange heights must have added strangely to the silence and the awe. It is a religion of which the temples are empty and the god lives alone except at stated periods when the devout bring gifts to appease him. It is the home now of innumerable bats

and the air is fetid with them; in each dark passage and sombre chamber you hear their twitterings.

This plainness of construction gave the sculptors ample occasion for decoration. Capitals, pilasters, pediments, doorways, windows are enriched with carving of an unimaginable variety. The themes are few, but on them they embroidered many beautiful inventions. Here they had a free hand and with a fury of creation crammed into these narrow limits all the adventures of their impetuous souls. It is interesting to note, as you go from temple to temple, how in the course of centuries these unknown craftsmen passed from rude strength to consummate grace; and how at first, regardless of the whole they made their decoration an end in itself, but at long last learnt to submit themselves to the general plan. What they lost in power they gained in taste; it is for each one to say which he prefers.

The galleries are adorned with bas-reliefs; they are interminable; they are world-famous; but to attempt to describe them would be as foolish as to attempt to describe the jungle. Here you have princes on elephants with the state umbrellas open over their heads making a progress among graceful trees; they form a pleasing pattern which is repeated along the length of a wall like the pattern of a paper. There you have long lines of soldiers marching into battle, and the gestures of their arms and the movements of their legs follow the same formal design as that of the dancers in a Cambodian dance. But they join battle and break into frenzied movement; even the dying and the dead are contorted into violent attitudes. Above them the chieftains advance on their elephants and in their chariots, brandishing swords and lances. And you get a feeling of unbridled action, of the turmoil and stress of battle, a breathlessness, an agitation and a disorder, which is infinitely curious. Every inch of the space is covered with

figures, horses, elephants and chariots, you can discern neither plan nor pattern, and only the chariot-wheels rest the eye in this chaos. You cannot discover a rhythm. For it was not beauty that the artists sought, but action; they cared little for elegance of gesture or purity of line; theirs was no emotion recollected in tranquillity, but a living passion that brooked no limits. Here is nothing of the harmony of the Greeks, but the rush of a torrential stream and the terrible, vehement life of the jungle. Yet there are not a few that are withal as lovely as the Elgin Marbles and when you look at them you would be dull indeed if you were not caught by the rapture that pure beauty affords. But alas, this excellence was produced only for a brief period; for the rest the drawing for the most part is poor and the patterns tedious. The sculptors seem to have been content to go on from generation to generation slavishly copying one another and you wonder that sheer boredom did not induce them now and again to break into a new design. The draughtsmen who make laborious drawings of them discern in the sameness many differences, but they are only such as you might find in a piece of prose copied by a hundred hands. The writing is different, but the sense remains the same. And as I wandered about looking disconsolately at so much that was dull I wished that I had by my side a philosopher who could explain to me why it is that man can never remain in one stay. Why is it, I wanted to ask him, that having known the best he should content himself so comfortably with the mediocre? Is it that circumstances—or is it genius, the genius of the individual?—raise him for a while to heights at which he cannot breathe easily so that he is content to make his way down again to the homely plain? Is man like water that can be forced to an artificial altitude, but that reverts as soon as the force is removed

to its own level? It looks as though his normal condition were the lowest state of civilization compatible with his environment and in this he can remain unchanged from age to age. Perhaps my philosopher would have told me that only a few races are capable of raising themselves above the dust, and then only for a little while; and even they are conscious that their state is extraordinary, and they fall back with relief to the condition that is only a little better than the beasts. But if he had, then I would have asked him if man were not perfectible. But I should have accepted it with humility if he had said: come along, don't stay there talking a lot of nonsense, let's go and have tiffin. I should have said to myself that perhaps he had varicose veins and to stand so long made his legs ache.

I came to the last day I could spend at Angkor. I was leaving it with a wrench, but I knew by now that it was the sort of place that, however long one stayed, it would always be a wrench to leave. I saw things that day that I had seen a dozen times, but never with such poignancy; and as I sauntered down those long grey passages and now and then caught sight of the forest through a doorway all I saw had a new beauty. The still courtyards had a mystery that made me wish to linger in them a little longer, for I had a notion that I was on the verge of discovering some strange and subtle secret; it was as though a melody trembled in the air, but so low that the ears could just not catch it. Silence seemed to dwell in these courts like a presence that you could see if you turned round and my last impression of Angkor was like my first, that of a great silence. And it gave me I know not what strange feeling to look at the living forest that surrounded this great grey pile so closely, the jungle luxuriant and gay in the sunlight, a sea of different greens; and to know that there all round me had once stood a multitudinous city.

That night a troupe of Cambodian dancers were dancing on the terrace of the temple. We were escorted along the causeway by boys carrying a hundred lighted torches. The resin of which they were made charged the air with an acrid, pleasant perfume. They formed a great circle of flame, flickering and uncertain on the terrace and in the middle of it the dancers trod their strange measure. Musicians, hidden by the darkness, played on pipes and drums and gongs, a vague and rhythmical music that troubled the nerves. My ears awaited with a sort of tremor the resolution of harmonies strange to me, but never attained it. The dancers wore tight-fitting dresses of richly glowing colours and on their heads high golden crowns. By day no doubt they would have looked trumpery, but in that unexpected light they had a gorgeousness and a mystery that you find with difficulty in the East. Their impassive faces were dead white with powder so that they looked like masks. No emotion, no fleeting thought was permitted to disturb the immobility of their expression. Their hands were beautiful, with small and tapering fingers, and in the progress of the dance their gestures, elaborate and complicated, pointed their elegance and emphasised their grace. Their hands were like rare and fantastic orchids. There was no abandon in their dance. Their attitudes were hieratic and their movements formal. They were like idols that had come to life, but still were impregnated with divinity.

And those gestures, those attitudes, were the same as of those of the bayadères that the old sculptors had graven on the stone walls of the temples. They had not changed in a thousand years. Repeated endlessly on every wall in every temple, you will see the self-same elegant writhing of the delicate fingers, the self-same arching of the slender body, as delights your eye in the living dancer before you.

No wonder they are grave under their gold crowns when they bear the weight of so long an ancestry.

The dance ended, the torches were extinguished, and the little crowd shuffled away pell-mell into the night. I sat on a parapet taking a last look at the five towers of Angkor Wat.

My thoughts went back to a temple that I had visited a day or two before. It is called Bayon. It surprised me because it had not the uniformity of the other temples I had seen. It consists of a multitude of towers one above the other, symmetrically arranged, and each tower is a four-faced, gigantic head of Siva the Destroyer. They stand in circles one within the other and the four faces of the god are surmounted by a decorated crown. In the middle is a great tower with face rising above face till the apex is reached. It is all battered by time and weather, creepers and parasitic shrubs grow all about, so that at a first glance you see only a shapeless mass and it is only when you look a little more closely that these silent, heavy, impassive faces loom out at you from the rugged stone. Then they are all round you. They face you, they are at your side, they are behind you, and you are watched by a thousand unseeing eyes. They seem to look at you from the remote distance of primeval time and all about you the jungle grows fiercely. You cannot wonder that the peasants when they pass should break into loud song in order to frighten away the spirits; for towards evening the silence is unearthly and the effect of all those serene and yet malevolent faces is eerie. When the night falls the faces sink away into the stones and you have nothing but a strange, shrouded collection of oddly shaped turrets.

But it is not on account of the temple itself that I have described it—I have, albeit with a halting pen, already

described more than enough—it is for the sake of the bas-reliefs that line one of its corridors. They are not very well done, and the sculptors had but too obviously little sense of form or line, but they have notwithstanding an interest which at this moment called them up vividly to my memory. For they represent scenes in the common life of the day in which they were done, the preparation of rice for the pot, the cooking of food, the catching of fish and the snaring of birds, the buying and selling at the village shop, the visit to the doctor, and in short the various activities of a simple people. It was startling to discover how little in a thousand years this life of theirs had changed. They still do the same things with the same utensils. The rice is pounded or husked in the self-same way and the village shopkeeper on the same tray offers for sale the same bananas and the same sugar cane. These patient industrious folk carry the same burdens on the same yokes as their ancestors carried so many generations back. The centuries have passed leaving no trace upon them, and some sleeper of the tenth century awakening now in one of these Cambodian villages would find himself at home in the artless round of daily life.

Then it seemed to me that in these countries of the East the most impressive, the most awe-inspiring monument of antiquity is neither temple, nor citadel, nor great wall, but man. The peasant with his immemorial usages belongs to an age far more ancient than Angkor Wat, the great wall of China, or the Pyramids of Egypt.

Back to Methuselah

BY GEORGE BERNARD SHAW

BACK TO METHUSELAH was first published in 1921. Shaw called it a Metabiological Pentateuch, referring to the first five books of the Bible, commonly called the Pentateuch, which give the ancient Jewish version of the creation and the laws for man's well being. Shaw's new version of the creation is a metaphysics of biology. Hence his description of his five plays, which, briefly, are about how long the normal expectation of life would have to be for man to run his affairs sensibly. As usual, the play has a long preface in which the theme is argued and as usual the preface is more amusing than the play. In 1945, when Shaw chose *Back to Methuselah* as the volume to represent him in *The World's Classics*, he wrote this essay as a postscript. He was then in his ninetieth year and *Back to Methuselah*, which so strangely foretold the manner of his own death four years later (a fall in his garden), had long been his favourite among his own writings.

ONE of the many summits in the mountain range of human selfconceit is the introduction by an author of his book as a World Classic. He cannot with any decency do it himself. And when he is invited to do so by a publisher whose prestige has been won in serious literature, his gratified compliance must be in the vein of apology and explanation rather than a fanfare of brazen exultation.

Therefore, though I am not addicted to what I have called "the modest cough of the minor poet" I will try to be as apologetic as my nature permits. I have never claimed a greater respect for playmaking than for the commoner crafts; and as every joiner is (or used to be) not only allowed

but challenged to produce a masterpiece, I feel no shame in hawking my masterpiece without a cry of stinking fish.

Besides, I do not regard my part in the production of my books and plays as much greater than that of an amanuensis or an organ-blower. An author is an instrument in the grip of Creative Evolution, and may find himself starting a movement to which in his own little person he is intensely opposed. When I am writing a play I never invent a plot: I let the play write itself and shape itself, which it always does even when up to the last moment I do not foresee the way out. Sometimes I do not see what the play was driving at until quite a long time after I have finished it; and even then I may be wrong about it just as any critical third party may.

Take for examples the masterpieces of Dante, of Michael Angelo, and of John Bunyan. The three are beyond all question world classics notwithstanding the legendary fictions and childish superstitions which adapted them to the mental habits of their time, and still make them intelligible and interesting as stories, but which also aberrate them again and again into flat absurdity. Dante would have placed Mahomet in paradise had he realized that his Divine Comedy, with its ridiculous hell, its Sunday school purgatory, and its Feminist heaven, was driving at the same world Catholicism as the Koran. When Michael Angelo painted in the Sistine Chapel the series of Bible illustrations which culminated in the gigantic fable of the Last Judgement, he did not know that the series would be "continued in our next" by Nietzsche in his Thus Spake Zoroaster, the twain being driven more or less in spite of themselves to shew, Michael Angelo physically, Nietzsche mentally, not what mankind is but what it might become. Bunyan, when he was writing *The Pilgrim's Progress*, knew very well that he

was being moved not by personal lust to become a Great Writer, but by "grace abounding to the meanest of sinners." Yet, if when his Holy War was sinking into the quicksand of sectarian nonsense in which it ends, he had been shewn a copy of *Peer Gynt* as an account of what his pilgrim would come to, or congratulated on having in *The Life and Death of Mr Badman* developed to a point not reached by Ibsen until three hundred years later, he would have been considerably scandalized.

I shall not go on to suggest that Goldsmith's *Deserted Village* should be used as a preface to Henry George's *Progress and Poverty*, and Keats's *Isabella* to Marx's *Capital*; but as a playwright I must not pass over my predecessor Shakespear. If he could be consulted as to the inclusion of one of his plays in the present series he would probably choose his *Hamlet*, because in writing it he definitely threw over his breadwinning trade of producing potboilers which he frankly called *As You Like It*, *Much Ado About Nothing*, and *What You Will*. After a few almost Ibsenish essays in *As You Dont Like It*, he took up an old play about the ghost of a murdered king who haunted his son crying for revenge, with comic relief provided by the son pretending to be that popular curiosity and laughing-stock, a village idiot. Shakespear, transfiguring this into a tragedy on the ancient Athenian level, could not have been quite unconscious of the evolutionary stride he was taking. But he did not see his way clearly enough to save the tons of ink and paper and years of "man's time" that have been wasted, and are still being wasted, on innumerable volumes of nonsense about the meaning of *Hamlet*, though it is now as clear as daylight. *Hamlet* as a prehistoric Dane is morally bound to kill his uncle, politically as rightful heir to the usurped throne, and filially as "the son of a dear father murdered" and

a mother seduced by an incestuous adulterer. He has no doubt as to his duty in the matter. If he can convince himself that the ghost who has told him all this is really his father's spirit and not a lying devil tempting him to perdition, then, he says, "I know my course."

But when fully convinced he finds to his bewilderment that he cannot kill his uncle deliberately. In a sudden flash of rage he can and does stab at him through the arras, only to find that he has killed poor old Polonius by mistake. In a later transport, when the unlucky uncle poisons not only Hamlet's mother but his own accomplice and Hamlet himself, Hamlet actually does at last kill his enemy on the spur of the moment; but this is no solution of his problem: it cuts the Gordian knot instead of untying it, and makes the egg stand on end only by breaking it. In the soliloquy beginning "Oh what a rogue and peasant slave am I" Shakespear described this moral bewilderment as a fact (he must have learnt it from his own personal development); but he did not explain it, though the explanation was staring him in the face as it stares in mine. What happened to Hamlet was what had happened fifteen hundred years before to Jesus. Born into the vindictive morality of Moses he has evolved into the Christian perception of the futility and wickedness of revenge and punishment, founded on the simple fact that two blacks do not make a white. But he is not philosopher enough to comprehend this as well as apprehend it. When he finds he cannot kill in cold blood he can only ask "Am I a coward?" When he cannot nerve himself to recover his throne he can account for it only by saying "I lack ambition." Had Shakespear plumbed his play to the bottom he would hardly have allowed Hamlet to send Rosencrantz and Guildenstern to their death by a forged death warrant without a moment's scruple.

Two and a half centuries later the same thing occurs to the author of another world classic, Charles Montagu Doughty, who, compared to Shakespear, can be catalogued only as a bigoted simpleton when, undeveloped at the age of 32, he travelled in Arabia. To him the Arabs were dangerous and damned heathens, corrupted by a false religion invented by an impostor named Mahomet who had forged a spurious Bible called the Koran. To defend himself against them he armed himself with a loaded revolver and carried it wherever he went.

The protection seemed very necessary; for the Bedouins were so like himself (or he like them) that they regarded him as a damned infidel; and the fanatically pious among them considered it their religious duty to kill and despoil the Nazarene. Again and again his bags were rifled and the knife was at his throat. Yet with the revolver in his hand and his assailants at his mercy he did not discharge it. Like Hamlet he could not bring himself to judge and kill. Like Shakespear he could not see why: he could only record the simple fact. Yet his travel diary, published long after with the now famous title *Arabia Deserta*, is a world classic.

This logicless sequel puzzles the student of literature who is trying to find out what qualifies a book to rank as a classic. Doughty, when he began his two years roaming through the Arabian deserts, was what we call an educated English gentleman who had gone through a professional training in medicine. Yet he writes like a child of ten for the most part; and his diary, with scraps of memoranda stuck in anyhow in no order except the order of date, is in no sense a considered work of art. His interests are those of an amateur explorer only; and the comments on Bedouin life, character, and religion, which make his book so readable, change from day to day, from

place to place, from meal to meal. On one page all the Bedouins he has known are "a merry crew of squalid wretches, iniquitous, fallacious, and fanatical." Two pages later the Beni Salim are "of gentle and honest manners; and I was never better entertained in nomad menzils." Many of his entertainers were more civilized, tolerant, and sceptical than he. His style is certainly unique; but it suggests the simplicity of a man who had never read a book in his life except the Bible, which he often quotes, less with any artistic appreciation than to shew that its descriptions tally with the facts of eastern life and thought as he found them.

There must have been something majestic or gigantic about the man that made him classic in himself. He was already a poet; for twice in his travel diary he explodes into half a page of prophetic rhapsody; and when he came home he spent the rest of his life in writing immense prophetic epics in blank verse of a Himalayan magnificence and natural eminence that would have made Milton gasp. Small wonder that when the knife was at his throat it got no farther; and when he arrived at the next oasis penniless and in rags, the rulers there clothed him and made those who had robbed him give him back their booty and repay him his stolen money to the last farthing. Englishmen who met him have described him to me as "a mountain of a man"; and extant portraits bear them out as far as portraits can.

It is clear then that in him as in Hamlet-Shakespear a step in evolution had occurred and taken all the vulgar fight out of him without taking any of the courage. And this brings me Back to Methuselah, and to the right of my "metabiological pentateuch" to be included in a list of world classics. Like Shakespear I had to write potboilers until I was rich enough to satisfy my evolutionary appetite

(or, as they say, give way to my inspiration) by writing what came to me without the least regard to the possibility of lucrative publication or performance. Like Shakespear again, I was a born dramatist, which means a born artist-biologist struggling to take biology a step forward on its way to positive science from its present metaphysical stage in which the crude facts of life and death, growth and decay, evolution and reversion, consciousness and unconsciousness, selfpreservation and selfsacrifice, defy the methods of investigation we employ in our research laboratories, and have to be made apprehensible by fictions, pictures, and symphonies in which they are instinctively arranged in a manner which gives a mysterious pleasure to some of the readers, spectators, and listeners, and provokes others to passionate denial and persecution. When I am not potboiling for myself or others I am being driven by my evolutionary appetite to write these fictions. Even when I have the box office in view I am not free to choose the most lucrative sort of fiction. Evolution keeps creeping in. I write such shameless potboilers as *Pygmalion*, *Fanny's First Play*, and *You Never Can Tell*, to oblige theatre managers or aspiring players; but at least I do not write detective stories to oblige publishers. I am clever enough at the tricks of my trade to be able to combine some worldly potboiling with my transcendental metabiology, but only up to an impassable boundary. If I could not do this, and had either to prosper as a stockbroker or starve as a metabiologist I should starve, as Mozart and Beethoven very nearly did when they composed symphonies instead of sentimental drawingroom ballads.

In writing *Back to Methuselah* I threw over all economic considerations, and faced the apparent impossibility of a performance during my lifetime. When a professional

manager of whom I had never heard (though his name, by the way, was Barry Jackson, and he was already famous in the Midlands) approached me with a view to a performance, I asked him whether he had no regard for his wife and family. He replied that he was not married, and that he kept a theatre out of his private means as other similarly endowed plutocrats kept racehorses or steam yachts. In short, he was doing it to gratify his evolutionary appetite and could afford the cost. So I gave him my blessing and a performing licence; and he went ahead and produced the Methuselah cycle at his Birmingham Repertory Theatre, where he had made theatrical history by many notable experiments and revivals while London was barely marking time. When I asked him what he had lost by the Methuselah adventure he said with every appearance of satisfaction, "Only £2500." Later on, when he repeated it in London and I repeated my question, he answered exultantly "I have not lost: I have made twenty pounds." The twenty pounds did not give him a dock laborer's wages for his trouble; but it left him none the poorer, and my conscience all the lighter.

Clearly then, Back to Methuselah was not a commercial job: it came straight from the Life Force operating as an *élan vital* through myself and Barry Jackson. What, then, are world classics?

Well, they all try to solve, or at least to formulate, the riddles of creation. In them the Life Force is struggling towards its goal of godhead by incarnating itself in creatures with knowledge and power enough to control nature and circumstances. A classic author has to consider how far he dare go; for though he is writing for the enlightenment of mankind he may not be willing to venture as far as martyrdom for its sake. Descartes burnt one of his books to escape being burnt for having written

it. Galileo had to deny what he believed to escape the same fate. The priests forced these alternatives on them not because they did not agree with them, but because they had to govern the people, and the people could be governed only by fictions and miracles, not by the latest steps in science. If the people will not obey their rulers unless they see the blood of St Januarius liquefy, then the priests must work that miracle for them or let them run wild. As long as civilization seems to stand or fall with the belief that God stopped the movement of the sun in its orbit to oblige Joshua as casually as the driver of a tramcar stops his vehicle to pick up a passenger, popes and emperors must take care that no physicist is allowed to tell the mob that it is the earth that moves round the sun and not the sun round the earth, even when they are entirely convinced that the physicist is right. When I was a municipal councillor I had to connive at bogus miracles, pretending that tubs of soap and water were as magical as the cauldron of Macbeth's witches, because my constituents believed in magic, not in soap and sunshine. It is useless to parrot the old saying that the blood of the martyrs is the seed of the Church, and expect scientific heretics to die to advertize their heresies rather than recant to save their lives. Descartes, when he burnt his book, knew that its truths would inevitably be rediscovered and become familiar, and that this would only be retarded by his being burnt for publishing them.

As for me I can write safely on the assumption that Galileo and Descartes knew much more about physics than Moses. But I am not therefore free to publish anything I like. Plays of mine have been banned for many years on grounds injuriously defamatory to myself; and at least one of my books is on the index in Eire, apparently

because the heroine does not wear petticoats. The disciples of Pavlov would burn me if they had Torquemada's power. But State intolerance is founded, not now on crude fanaticism, but on the fear that if the people discover that the miracles they believe in are either fables or frauds, and that the scriptures they accept as Divine revelations are questionable in any sentence, they will empty the baby out with the bath water, and defy all religion and all morality. And in fact many of them have done so as far as such defiance is practicable, which is not very far, as disbelief in the Bible story of the ten commandments is no defence against being imprisoned for theft or hanged for murder.

Now it is hardly possible for men engaged daily in the starkly realistic practice of government, which is full of surprises for simpletons, to share the credulities of the crowd. They soon become arch heretics themselves; and as such they persecute heresy only as long as they believe that, as Ibsen put it, society is held together by chain stitched seams which will ravel out if a single stitch is cut. But they find out that this does not in fact happen. When experience taught them that Voltaire could laugh at Habbakuk and call on them to crush the Church as an infamy without immediately bringing down French civilization about their ears they inferred that their own scepticisms could be tolerated safely, and allowed the laws against them to fall into desuetude, without, however, daring to repeal them. It is fairly safe for me personally to fill my books and plays with heresies, and even be accepted as a world classic on the strength of them; but it is none the less within quite recent historical memory that the vogue of Voltaire and his fellow-heretic Rousseau was followed by the French Revolution, and that Rousseau's "Get rid of your miracles and the whole

world will fall at the feet of Christ " has ended in whole States falling at the feet of Pavlov and Hitler.

The moral of this is that heretical teaching must be made irresistibly attractive by fine art if the heretics are not to starve or burn. I have to make my heresies pleasing as plays to extract the necessary shillings from those to whom they are also intensely irritating. Back to Methuselah, having begun its stage career by extracting £2500 from the pocket of Sir Barry Jackson, presently enabled him to extract a surplus of £20 from the pockets of his audiences.

Now the artistic attractions of the Methuselah cycle must operate in the theatre without explanation; but its heresies can be discussed on paper in prefaces or post-scripts. First among them is the evanescence of God Almighty, and His replacement by a creative force striving by trial and error towards a goal of all-knowingness and almighty power over nature. But this aspiring fallibility is either indignantly rejected or personified and deified in an imaginary Supreme Being in the sky if not on earth.

Hence our gods, saviors, prophets, saints, heroes, and the like. It is through such conceits that we are governed and governable; yet only by debunking them can we evolve towards the goal. Most of us don't want to evolve. When God becomes too remote, too awful, and too cruel to be bearable, and we have to invent something more human, and call it Messiah or Christ, or Zoroaster or Buddha, we immediately destroy its humanity by insisting on its superhuman sinless perfection and unerring knowledge and wisdom; so that it becomes as incredible as God was unbearable.

Our villagers, contemplating the mischief and horror of the Four Years war in 1917, said " Well, I suppose there

must be a God; but what is He thinking of to let all this go on?" Now to admit that God can err, or that He is powerless in any particular, is to deprive Him of the attributes that qualify Him as God; but it is a very healthy admission for the strongminded. It increases our sense of responsibility for social welfare, and is radiant with boundless hopes of human betterment. Our will to live depends on hope; for we die of despair, or, as I have called it in the Methuselah cycle, discouragement. What damns Darwinian Natural Selection as a creed is that it takes hope out of evolution, and substitutes a paralysing fatalism which is utterly discouraging. As Butler put it, it "banishes Mind from the universe." The generation that felt nothing but exultant relief when it was delivered from the tyranny of an Almighty Busybody by a soulless Determinism has nearly passed away, leaving a vacuum which Nature abhors.

Readers of my preface will remember that it was a remark by Weismann that set me on the track of Methuselah. He suggested that death is a result of Natural Selection, not "natural" in the ordinary sense, lifetimes varying in duration from the immortality of the eternally splitting amoeba to the brief span of the drosophila fly. Immortality is natural, death only an artifice to make it bearable as a burden and get rid of its garments of flesh as they wear out. The legend of Methuselah is neither incredible nor unscientific. Life has lengthened considerably since I was born; and there is no reason why it should not lengthen ten times as much after my death.

This possibility came to me when history and experience had convinced me that the social problems raised by millionfold national populations are far beyond the political capacity attainable in three score and ten years of life by slowgrowing mankind. On all hands as I write

the cry is that our statesmen are too old, and that Leagues of Youth must be formed everywhere to save civilization from them. But despairing ancient pioneers tell me that the young are worse than the old; and the truth seems to be that our statesmen are not old enough for their jobs. Life is too short for the experience and development needed to change romantic schoolboys and golfing sportsmen, or even prematurely forced Quakers, into wise senators. In the nineteenth century we reacted from an effete feudalism into a Cobden-Croce world in which the love of money is the root of all good, and freedom of contract and thought man's choicest treasure ("heart-breaking nonsense" Carlyle called it), and are now reacting into either a Marxist world in which the millennium will be guaranteed by a new Catholicism in which the proletarians of all lands are to unite, or an idolatry of imaginary Carlylean heroes and bogus Nietzschean supermen; but we have no sages old enough and wise enough to make a synthesis of these reactions, and to develop the magnetic awe-inspiring force which must replace the policeman's baton as the instrument of authority. Though I am very far from being as clever and well informed as people think, I am not below the average in political capacity; yet in my 89th year I am no more fit to rule millions of men than a boy of 12. Physically I am failing: my senses, my locomotive powers, my memory, are decaying at a rate which threatens to make a Struldbrug of me if I persist in living; yet my mind still feels capable of growth; for my curiosity is keener than ever. My soul goes marching on; and if the Life Force would give me a body as durable as my mind, and I knew better how to feed and lodge and dress and behave, I might begin a political career as a junior civil servant and evolve into a capable Cabinet minister in another hundred years or so.

The Agnostics and Atheists and Determinist Diehards who have thrown over the creeds whipped into them in their childhood are surprised and alarmed to see Creative Evolution reviving much that they have discarded as superstitious. For example, the Creative Evolutionist believes firmly in Providence and in what used to be called the will of God. But he also insists strongly on the first of the 39 Articles of the Church of England, which, in a blinding flash of inspiration (it unfortunately did not last long enough to prevent its contradiction in the following articles) affirms that God has neither body, parts, nor passions, and is therefore not a Person but an incorporeal Purpose, unable to do anything directly, but mysteriously able to create corporeal organs and agents to accomplish that purpose, which, as far as we can see, is the attainment of infinite wisdom and infinite power. Instead of dwelling morbidly on the quite unedifying and not too interesting inference that in the beginning the earth was a wisp of blazing gas torn off from the sun, the votary of Creative Evolution goes back to the old and very pregnant lesson that in the beginning was the Thought; and the Thought was with God; and the Thought *was* God, the Thought being what the Greeks meant by "the Word". He believes in the thought made flesh as the first step in the main process of Creative Evolution. He believes in a new Jerusalem, and resolves, like Blake, that he will not cease from mental fight nor shall his sword sleep in his hand till he has built that paradise in England's green and pleasant land.

We are only just discovering that there is such a thing as wishful thinking; but the Creative Evolutionist knows that all thinking is wishful, and that we cannot think until our wishes or fears or cupidities or curiosities create what we call attention. I have known this since my childhood, when somebody shewed me that if I held up my

two forefingers in a line from my eyes, I could see two of the nearest when I looked at the farthest, or vice versa, because I had on my two retinas two separate images of everything in sight except the thing I wanted to see. Yet I was conscious of them only when I co-ordinated them. Later on, when I threw over my childish belief in the infallibility of the Bible on discovering that much of it is obsolete or wicked, what struck me most was that the obsolescences and wickednesses had never been hidden from me: they had been staring me in the face all the time. I had simply not thought about them. There must have been an evolutionary growth in my mind which directed my attention to them. Attention is the first symptom of thought. John the Evangelist would have worded it so, had he been born a Victorian.

Civilization is at present an imposture: we are a crowd of savages on whom a code of makeshift regulations is forced by penalties for breaking them. They are never explained to us. When I was sent to school I was confronted by a new set of rules and made aware that if I broke them I should be punished. As no other reason for obeying them was given to me I concluded naturally that I could break them without the slightest loss of selfrespect, and indeed with some pride in my independence and cleverness, as long as I was not found out. My hero in fiction was the rebel, not the goodygoody citizen, whom I despised. This attitude became a habit which I have never been able to shake off quite completely. Yet it would have been easy without overstraining my childish powers of comprehension to make me understand that people cannot live together, and be fed, clothed, lodged, and protected from robbery and murder, unless they agree to do certain things at the same moments in the same order, and meanwhile abstain from doing certain other things however

tempting: in short, that social behavior is expected behavior, and that to behave unexpectedly, to be original as we call it, though without this eccentricity there can be no improvement, is to assume a dangerous responsibility. A child must begin as a Conservative, and learn later that though it must tolerate change it must do so very critically. That is to say it must be an intelligent and voluntary Conservative and not merely a dunderhead with a stock of dictated habits. When I associated with other boys in secret gangs it was to do mischief for the fun of it, to wreck and steal and circumvent law and order, to emulate Dick Turpin and Jack Sheppard, and generally to defy the commandments and do whatever our teachers and the police told us we must not do. If we had had even the simplest lessons in citizenship we should, like the Boy Scouts and Girl Guides of a later time, have conspired to do good instead of evil. No doubt we should also have played at the cruelties of the criminal law; for children, who like exercising authority as their elders do, will, if not carefully policed, do diabolical things to one-another in imitation of the vindictive side of law and parental authority. To remedy this we must reform the law and re-educate the parents.

All this faces us with the dilemma that civilization means stabilization; and creative evolution means change. As the two must operate together we must carefully define their spheres, and co-ordinate them instead of quarrelling and persecuting as we do at present. We must not stay as we are, doing always what was done last time, or we shall stick in the mud. Yet neither must we undertake a new world as catastrophic Utopians, and wreck our civilization in our hurry to mend it. Professional science must cease to mean the nonsense of Weismann and the atrocities of Pavlov, in which life is a purposeless series of

accidents and reflexes, and logic only a thoughtless association of ideas. Still less must it mean mere erudition in the scriptures of the saints, prophets, and metaphysicians from Augustin and Aquinas to Butler and Bergson and Shaw. It must renounce magic and yet accept miracle; for as biology is still in the metaphysical stage (all its new knowledge of chromosomes and hormones only substitutes millions of miracles for the single mystery formerly called the soul or the breath of life); and as physics, in spite of its miraculous electrons and its abolition of matter, is nearer to the positive stage, the metaphysicians and artist-philosophers must co-operate with the astronomers and physiologists in separate but friendly and at the edges overlapping departments of social service. Both are trying to see a little farther into the dark; and whether the electronic microscope or the philosopher's brain has pierced it farthest is not worth quarrelling about; for the darkness beyond still forces us to tolerate both microscopic revelation and metaphysical speculation with all its guesses and hypotheses and dramatizations of how far thought can reach. We must have a hypothesis as a frame of reference before we can reason; and Creative Evolution, though the best we can devise so far, is basically as hypothetical and provisional as any of the creeds.

The history of modern thought now teaches us that when we are forced to give up the creeds by their childishness and their conflicts with science we must either embrace Creative Evolution or fall into the bottomless pit of an utterly discouraging pessimism. This happened in dateless antiquity to Ecclesiastes the preacher, and in our own era to Shakespear and Swift. "George Eliot" (Marian Evans) who, incredible as it now seems, was during my boyhood ranked in literature as England's greatest mind, was broken by the fatalism that ensued

when she discarded God. In her most famous novel *Middlemarch*, which I read in my teens and almost venerated, there is not a ray of hope: the characters have no more volition than billiard balls: they are moved only by circumstances and heredity. "As flies to wanton boys are we to the gods: they kill us for their sport" was Shakespear's anticipation of George Eliot. Had Swift seen men as creatures evolving towards godhead he would not have been discouraged into the absurdity of describing them as irredeemable Yahoos enslaved by a government of horses ruling them by sheer moral superiority. Even Ibsen, though his characters, like Shakespear's, *reck* with volition, perpetrated a tragedy called *Ghosts*, in which an omnipotent god is discarded for an inevitable syphilis. One of the masters of comedy among my playwright colleagues drowned himself because he thought he was going his father's way like Oswald Alving. Even a mind so keen and powerful as that of Dr Inge has been troubled by the notion that Life cannot survive extremes of temperature, nor reach inconceivable heights long after the cooling of the sun makes a good riddance of Yahoo mankind. (The sun, by the way, is getting hotter by the latest guesses.) Discouragement does in fact mean death; and it is better to cling to the hoariest of the savage old creator-idols, however diabolically vindictive, than to abandon all hope in a world of "angry apes", and perish in despair like Shakespear's *Timon*. Goethe rescued us from this horror with his "Eternal Feminine that draws us forward and upward" which was the first modern manifesto of the mysterious force in creative evolution.

That is what made *Faust* a world classic. If it does not do the same for this attempt of mine, throw the book into the fire; for *Back to Methuselah* is a world classic or it is nothing.

Democracy

BY D. H. LAWRENCE

D. H. LAWRENCE is known as a novelist, short-story writer and as the author of three fine travel books. He was also a poet and his prose is the prose of a poet; that is, of a writer who can illuminate a word or a phrase so that it shines with fresh meaning; or, as here, a man who has a prophetic vision of life, which rises above the pedestrian content of normal prose. In this essay, Lawrence looks at western civilization and marks its great failing, that it is turning men into units that are less than men, creatures without individuality. Democracy can only flourish when men live in full manhood. It is an essay which offers great opportunities for discussion. We may not agree with all he says, we may think he overlooks much in his statements; but he does excite thought, for he approaches the problem, not through the reason, like the usual prose writer, but through the instincts and the passions, like a poet.

WHITMAN gives two laws or principles for the establishment of Democracy. We may epitomize them as:

(1) The Law of the Average; (2) The Principle of Individualism, or Personalism, or Identity.

The Law of the Average is well known to us. Upon this law rests all the vague dissertation concerning equality and social perfection. Rights of Man, Equality of Man, Social Perfectibility of Man: all these sweet abstractions, once so inspiring, rest upon the fatal little hypothesis of the Average.

What is the Average? As we are well aware, there is no such animal. It is a pure abstraction. It is the reduction

of the human being to a mathematical unit. Every human being numbers one, one single unit. That is the grand proposition of the Average.

Let us further examine this mysterious One, this Unit, this Average; let us examine it corporeally. The average human being: put him on the table, the little monster, and let us see what his works are like. He is just a little monster. He has two legs, two eyes, one nose—all exact. He has a stomach. He is a little organism. He is one very complicated organ, a unit, an identity.

What is he for? If he's an organ, he must have a purpose. If he's an organism, he must have a purpose. The question is premature, yet it shall be answered. Since he has a mouth, he is made for eating. Since he has feet, he is made for walking. And so on, and so on.

What a loathsome little beast he is, this Average, this Unit, this Homunculus. Yet he has his purposes. He is useful to measure by. That's the purpose of all averages. An average is not invented to be an Archetype. What a really comical mistake we have made about him. He is invented to serve as a standard in the business of comparison. He is invented to serve as a standard, just like any other standard, like the metre, or the gramme, or the English pound sterling. That's what he is for—nothing else. He was never intended to be worshipped. What comical, fetish-smitten savages we are.

We use a foot-rule to tell us how big our house is. We don't proceed to say that the foot-rule is the sceptre which sways the earth and all the stars. Yet we have said as much of this little standardized invention of ours, the Average Man, the Man-in-the-street. We have made prime fools of ourselves.

Now let us pull the gilt off the image, and see exactly what it is, and what we want it for. It is a mathematical

quantity, like the metre or the foot-rule : a purely arbitrary institution of the human mind. Let us be quite clear about that.

But the human mind has invented the institution for its own purposes. Granted. What are the purposes? Merely for the comparing of one *living* man with another *living* man, in case of necessity : just as money is merely a contrivance for comparing a leg of mutton with a volume of Keats' poems. The money in itself is nothing. It is simply the arbitrary static measure for human desires. We mistake the measure for the thing it measures, and proceed to base our desires on money. It is nonsensical materialism.

Now for the Average Man himself. He is five-feet-six inches high : and therefore you, John, will take an over-size pair of trousers, reach-me-downs ; and you, François, mon cher, will take an under-size. The Average Man also has a mouth and a stomach, which consume two pounds of bread and six ounces of meat per day : and therefore you, Fritz, exceed the normal consumption of food, while you, dear Emily, consume less than your share.

The Average Man is somehow very unsatisfactory. He is not sufficiently worked out. It is astonishing that we have not perfected him before. But this is because we have mixed the issues. How could we scientifically establish the Average, whilst he had to stand draped upon a pedestal, as an Ideal? Haul him down at once. He is no Ideal. He is just a Standard, the creature on whom Standard suits and Standard boots are fitted, to whose stomach Standard bread is adjusted, and for whose eyes the Standard Lamps are lighted, the Standard Oil Company is busy refining its gallons. He comes under the Government Weights and Measures Act.

Perfect him quickly : the Average, the Normal, the Man-in-the-street. He is so many inches high, broad,

deep; he weighs so many pounds. He must eat so much, and sleep so much, and work so much, and play so much, and love so much, and think so much, and argue so much, and read so many newspapers, and have so many children. Somebody, quick—some Professor of Social Economy—draw us up a perfect Average, and let us have him before the middle of next week. He is urgently required at the moment.

This is all your Man-in-the-street amounts to: this tailor's dummy of an average. He is the image and effigy of all your equality. Men are not equal, and never were, and never will be, save by the arbitrary determination of some ridiculous human Ideal. But still, in the normal course of things, all men *do* have two eyes and one nose and a stomach. In the teeth of all opposition we assert it. In the normal course of things, all men *do* hunger and thirst and sleep and laugh and feel miserable and fall in love. And the Average Man just represents what all men need and desire, physically, functionally, materially, and socially. *Materially* need: that's the point. The Average Man is the standard of material need in the human being.

Please keep out all Spiritual and Mystical needs. They have nothing to do with the Average. You cannot Average such things. As far as the stomach goes, it is not really true that one man's meat is another man's poison. No. The Law of Average holds good for the stomach. All young mammals suck milk, without exception. But in the free, spontaneous self, one man's meat is truly another man's poison. And therefore you *can't* draw any average. You can't *have* an average: unless you are going to poison everybody.

Now we will settle for ever the Equality of Man, and the Rights of Man. Society means people living together. People *must* live together. And to live together, they must have some Standard, some *Material* Standard. This is

where the Average comes in. And this is where Socialism and Modern Democracy come in. For Democracy and Socialism rest upon the Equality of Man, which is the Average. And this is sound enough, so long as the Average represents the real basic material needs of mankind: basic material needs: we insist and insist again. For Society, or Democracy, or any Political State or Community exists not for the sake of the individual, nor should ever exist for the sake of the individual, but simply to establish the Average, in order to make living together possible: that is, to make proper facilities for every man's clothing, feeding, housing himself, working, sleeping, playing, according to his necessity as a common unit, an average. Everything beyond that common necessity depends on himself alone.

The proper adjustment of material means of existence: for this the State exists, but for nothing further. The State is a dead ideal. *Nation* is a dead ideal. Democracy and Socialism are dead ideals. They are one and all just *contrivances* for the supplying of the lowest material needs of a people. They are just vast hotels, or hostels, where every guest does some scrap of the business of the day's routine—if it's only lounging gracefully to give the appearance of ease—and for this contribution gets his suitable accommodation. England, France, Germany—these great nations, they have no vital meaning any more, except as great Food Committees and Housing Committees for a throng of people whose material tastes are somewhat in accord. No doubt they *had* other meanings. No doubt the French individuals of the seventeenth century still felt themselves gloriously expressed in stone, in Versailles. But man loses more and more his faculty for collective self-expression. Nay, the great development in collective expression in mankind has been a progress

towards the possibility of purely individual expression. The highest Collectivity has for its true goal the purest individualism, pure individual spontaneity. But once more we have mistaken the means for the end: so that Presidents, those representatives of the collected masses, instead of being accounted the chief machine-section of society, which they are, are revered as ideal beings. The thing to do is not to raise the idea of Nation, or even of Internationalism, higher. The need is to take away every scrap of ideal drapery from nationalism and from internationalism, to show it all as a material contrivance for housing and feeding and conveying innumerable people. The housing and feeding, the method of conveyance and the rules of the road may be as different as you please—just as the methods of one great business house, and even of one hotel, are different from those of another. But that is all it is. Man no longer expresses himself in his form of government, and his President is strictly only his superlative butler. This is the true course of evolution: the collective activities are at last merely auxiliary to the purely individual activities. Business houses may be magnificent, but there is nothing divine in it. This is why the Kaiser sounded so foolish. He was really only the head of a very great business concern. His God was the most intolerable part of his stock-in-trade. Genuine business houses may quarrel and compete, but they don't go to war. Why? Because they are not ideal concerns. They are just practical material concerns. It is only Ideal concerns which go to war, and slaughter indiscriminately with a feeling of exalted righteousness. But when a business concern masquerades as an ideal concern, and behaves in this fashion, it is really unbearable.

There are two things to do. Strip off at once all the ideal drapery from nationality, from nations, peoples, states,

empires, and even from Internationalism and Leagues of Nations. Leagues of Nations should be just flatly and simply committees where representatives of the various business houses, so-called Nations, meet and consult. Consultations, board-meetings of the State business men: no more. *Representatives of Peoples*—who can represent me?—I am myself. I don't intend anybody to represent me.

You, you Cabinet Minister—what are you? You are the arch-grocer, the super-hotel-manager, the foreman over the ships and railways. What else are you? You are the super-tradesman, same paunch, same ingratiating manner, same everything. Governments, what are they? Just board-meetings of big business men. Very useful, too—very thankful we are that somebody *will* look after this business. But Ideal! An Ideal Government? What nonsense. We might as well talk of an Ideal Cook's Tourist Agency, or an Ideal Achille Serre Cleaners and Dyers. Even the ideal Ford of America is only an ideal *average* motor-car. His employees are not spontaneous, nonchalant human beings, à la Whitman. They are just well-tested, well-oiled sections of the Ford automobile.

Politics—what are they? Just another, extra-large, commercial wrangle over buying and selling—nothing else. Very good to have the wrangle. Let us have the buying and selling well done. But *ideal*! Politics *ideal*! *Political idealists*! What rank gewgaw and nonsense! We have just enough sense not to talk Ideal Selfridges or Ideal Krupps or Ideal Heidsiecks. Then let us have enough sense to drop the ideal of England or Europe or anywhere else. Let us be men and women, and keep our house in order. But let us pose no longer as houses, or as England, or as housemaids, or democrats.

And then, when the people of the world have finally got over the state of giddy idealizing of governments,

nations, inter-nations, politics, democracies, empires, and so forth; when they really understand that their collective activities are only cook-housemaid to their sheer individual activities; when they at last calmly accept a business concern for what it is; then, at last, we may actually see free men in the streets.

It is obvious that Whitman's Democracy is not merely a political system, or a system of government—or even a social system. It is an attempt to conceive a new way of life, to establish new values. It is a struggle to liberate human beings from the fixed, arbitrary control of ideals into free spontaneity.

No, the ideal of Oneness, the unification of all mankind into the homogeneous whole, is done away with. The great *desire* is that each single individual shall be incommutably himself, spontaneous and single, that he shall not in any way be reduced to a term, a unit of any Whole.

We must discriminate between an ideal and a desire. A desire proceeds from within, from the unknown, spontaneous soul or self. But an ideal is superimposed from above, from the mind; it is a fixed, arbitrary thing, like a machine control. The great lesson is to learn to break all the fixed ideals, to allow the soul's own deep desires to come direct, spontaneous into consciousness. But it is a lesson which will take many aeons to learn.

Our life, our being depends upon the incalculable issue from the central Mystery into indefinable *presence*. This sounds in itself an abstraction. But not so. It is rather the perfect absence of abstraction. The central Mystery is no generalized abstraction. It is each man's primal original soul or self, within him. And *presence* is nothing mystic or ghostly. On the contrary. It is the actual man present before us. The fact that an actual man present before us is an inscrutable and incarnate Mystery, untranslatable,

this is the fact upon which any great scheme of social life must be based. It is the fact of *otherness*.

Each human self is single, incommutable, and unique. This is its *first* reality. Each self is unique, and therefore incomparable. It is a single well-head of creation, unquestionable: it cannot be compared with another self, another well-head, because, in its prime or creative reality, it can never be comprehended by any other self.

The living self has one purpose only: to come into its own fullness of being, as a tree comes into full blossom, or a bird into spring beauty, or a tiger into lustre.

But this coming into full, spontaneous being is the most difficult thing of all. Man's nature is balanced between spontaneous creativity and mechanical-material activity. Spontaneous being is subject to no law. But mechanical-material existence is subject to all the laws of the mechanical-physical world. Man has almost half his nature in the material world. His spontaneous nature *just* takes precedence.

The only thing man has to trust to in coming to himself is his desire and his impulse. But both desire and impulse tend to fall into mechanical automatism: to fall from spontaneous reality into dead or material reality. All our education should be a guarding against this fall.

The fall is possible in a twofold manner. Desires tend to automatize into functional appetites, and impulses tend to automatize into fixed aspirations or ideals. These are the two great temptations of man. Falling into the first temptation, the whole human will pivots on some function, some material activity, which then works the whole being: like an *idée fixe* in the mental consciousness. This automatized, dominant appetite we call a lust: a lust for power, a lust for consuming, a lust for self-abnegation and merging. The second great temptation is the inclination

to set up some fixed centre in the mind, and make the whole soul turn upon this centre. This we call idealism. Instead of the will fixing upon some sensational activity, it fixes upon some aspirational activity, and pivots this activity upon an idea or an ideal. The whole soul streams in the energy of aspiration and turns automatically, like a machine, upon the ideal.

These are the two great temptations of the fall of man, the fall from spontaneous, single, pure being, into what we call materialism or automatism or mechanism of the self. All education must tend against this fall; and all our efforts in all our life must be to preserve the soul free and spontaneous. The whole soul of man must *never* be subjected to one motion or emotion, the life-activity must never be degraded into a fixed activity, there must be *no fixed direction*.

There can be no ideal goal for human life. Any ideal goal means mechanization, materialism, and nullity. There is no pulling open the buds to see what the blossom will be. Leaves must unroll, buds swell and open, and *then* the blossom. And even after that, when the flower dies and the leaves fall, *still* we shall not know. There will be more leaves, more buds, more blossoms: and again, a blossom is an unfolding of the creative unknown. Impossible, utterly impossible to preconceive the unrevealed blossom. You cannot forestall it from the last blossom. We know the flower of today, but the flower of tomorrow is all beyond us. Only in the material-mechanical world can man foresee, foreknow, calculate, and establish laws.

So, we more or less grasp the first term of the new Democracy. We see something of what a man will be unto himself.

Next, what will a man be unto his neighbour?—Since every individual is, in his first reality, a single, incommu-

table soul, not to be calculated or defined in terms of any other soul, there can be no establishing of a mathematical ratio. We cannot say that all men are equal. We cannot say $A = B$. Nor can we say that men are unequal. We may not declare that $A = B + C$.

Where each thing is unique in itself, there can be no comparison made. One man is neither equal nor unequal to another man. When I stand in the presence of another man, and I am my own pure self, am I aware of the presence of an equal, or of an inferior, or of a superior? I am not. When I stand with another man, who is himself, and when I am truly myself, then I am only aware of a Presence, and of the strange reality of Otherness. There is me, and there is *another being*. That is the first part of the reality. There is no comparing or estimating. There is only this strange recognition of *present otherness*. I may be glad, angry, or sad, because of the presence of the other. But still no comparison enters in. Comparison enters only when one of us departs from his own integral being, and enters the material mechanical world. Then equality and inequality starts at once.

So, we know the first great purpose of Democracy: that each man shall be spontaneously himself—each man himself, each woman herself, without any question of equality or inequality entering in at all; and that no man shall try to determine the being of any other man, or of any other woman.

But, because of the temptation which awaits every individual—the temptation to fall out of being, into automatism and mechanization, every individual must be ready at all times to defend his own being against the mechanization and materialism forced upon him by those people who have fallen or departed from being. It is the long unending fight, the fight for the soul's own freedom

of spontaneous being, against the mechanism and materialism of the fallen.

All the foregoing deals really with the integral, whole nature of man. If man would but *keep* whole, integral, everything could be left at that. There would be no need for laws and governments: agreement would be spontaneous. Even the great concerted social activities would be essentially spontaneous.

But in his present state of unspeakable barbarism, man is unable to distinguish his own spontaneous integrity from his mechanical lusts and aspirations. Hence there must still be laws and governments. But laws and governments henceforth, we see it clearly and we must never forget it, relate only to the material world: to property, the possession of property and the means of life, and to the material-mechanical nature of man.

In the past, no doubt, there were great ideals to fulfil: ideals of brotherhood, oneness, and equality. Great sections of humanity tended to cohere into particular brotherhoods, expressing their oneness and their equality and their united purpose in a manner peculiar to themselves. For no matter how single an ideal may be, even such a mathematical ideal as equality and oneness, it will find the most diverse and even opposite expressions. So that brotherhood and oneness in Germany never meant the same as brotherhood and oneness in France. Yet each was brotherhood, and each was oneness. Souls, as they work out the same ideal, work it out differently: always differently, until they reach the point where the spontaneous integrity of being finally breaks. And then, when pure mechanization or materialism sets in, the soul is automatically pivoted, and the most diverse of creatures fall into a common mechanical unison. This we see in America. It is not a homogeneous, spontaneous coherence

so much as a disintegrated amorphousness which lends itself to perfect mechanical unison.

Men have reached the point where, in further fulfilling their ideals, they break down the living integrity of their being and fall into sheer mechanical materialism. They become automatic units, determined entirely by mechanical law.

This is horribly true of modern democracy—socialism, conservatism, bolshevism, liberalism, republicanism, communism: all alike. The one principle that governs all the *isms* is the same: the principle of the idealized unit, the possessor of property. Man has his highest fulfilment as a possessor of property: so they all say, really. One half says that the uneducated, being the majority, should possess the property; the other half says that the educated, being the enlightened, should possess the property. There is no more to it. No need to write books about it.

This is the last of the ideals. This is the last phase of the ideal of equality, brotherhood, and oneness. All ideals work down to the sheer materialism which is their intrinsic reality, at last.

It doesn't matter, now, who has the property. They have all lost all their being over it. Even property, that most substantial of realities, evaporates once man loses his integral nature. It is curious that it is so, but it is undeniable. So that property is now fast evaporating.

Wherein lies the hope. For with it evaporates the last ideal. Sometime, somewhere, man will wake up and realize that property is only there to be used, not to be possessed. He will realize that possession is a kind of illness of the spirit, and a hopeless burden upon the spontaneous self. The little pronouns 'my' and 'our' will lose all their mystic spell.

The question of property will never be settled till people cease to care for property. Then it will settle itself. A man

only needs so much as will help him to his own fulfilments. Surely the individual who wants a motor-car merely for the sake of having it and riding in it is as hopeless an automaton as the motor-car itself.

When men are no longer obsessed with the desire to possess property, or with the parallel desire to prevent another man's possessing it, then, and only then shall we be glad to turn it over to the State. Our way of State-ownership is merely a farcical exchange of words, not of ways. We only intend our States to be Unlimited Liability Companies instead of Limited Liability Companies.

The Prime Minister of the future will be no more than a sort of steward, the Minister for Commerce will be the great housekeeper, the Minister for Transport the head-coachman: all just chief servants, no more: servants.

When men become their own decent selves again, then we can so easily arrange the material world. The arrangement will come, as it must come, spontaneously, not by previous ordering. Until such time, what is the good of talking about it? All discussion and idealizing of the possession of property whether individual or group or State possession, amounts now to no more than a fatal betrayal of the spontaneous self. All settlement of the property question must arise spontaneously out of the new impulse in man, to free himself from the extraneous load of possession, and walk naked and light. Every attempt at preordaining a new material world only adds another last straw to the load that already has broken so many backs. If we are to keep our backs unbroken, we must deposit all property on the ground, and learn to walk without it. We must stand aside. And when many men stand aside, they stand in a new world; a new world of man has come to pass. This is the Democracy: the new order.

Non-violence

BY ALDOUS HUXLEY

IN his middle age and later years Mr Huxley has devoted a great deal of attention to the current problems of mankind. In this passage, taken from two chapters of his most interesting book on these questions, he first of all states the harsh facts about how human societies are ruled, and then proceeds to a discussion of what the individual can contribute to making things better. This resolves itself into an interesting discussion of non-violence as the hope of mankind.

FOR our present purposes, the significant facts about the governments of contemporary nations are these. There are a few rulers and many ruled. The rulers are generally actuated by love of power; occasionally by a sense of duty to society; more often and bewilderingly, by both at once. Their principal attachment is to pride, with which are often associated cruelty and avarice. The ruled, for the most part, quietly accept their subordinate position and even actual hardship and injustice. In certain circumstances it happens that they cease to accept and there is a revolt. But revolt is the exception; the general rule is obedience.

The patience of common humanity is the most important, and almost the most surprising, fact in history. Most men and women are prepared to tolerate the intolerable. The reasons for this extraordinary state of things are many and various. There is ignorance, first of all. Those who know of no state of affairs other than the intolerable are unaware that their lot might be improved. Then there is fear. Men know that their life is intolerable,

but are afraid of the consequences of revolt. The existence of a sense of kinship and social solidarity constitutes another reason why people tolerate the intolerable. Men and women feel attached to the society of which they are members—feel attached even when the rulers of that society treat them badly. It is worthy of remark that, in a crisis, the workers (who are the ruled) have always fought for their respective nations (i.e. for their rulers) and against other workers.

Mere habit and the force of inertia are also extremely powerful. To get out of a rut, even an uncomfortable rut, requires more effort than most people are prepared to make. In his *Studies in History and Jurisprudence* Bryce suggests that the main reason for obedience to law is simply indolence. 'It is for this reason,' he says, 'that a strenuous and unwearying will sometimes becomes so tremendous a power . . . almost a hypnotic force.' Because of indolence, the disinherited are hardly less conservative than the possessors; they cling to their familiar miseries almost as tenaciously as the others cling to their privileges. The Buddhist and, later, the Christian moralists numbered sloth among the deadly sins. If we accept the principle that the tree is to be judged by its fruits, we must admit that they were right. Among the many poisonous fruits of sloth are dictatorship on the one hand and passive, irresponsible obedience on the other. Reformers should aim at delivering men from the temptations of sloth no less than from the temptations of ambition, avarice and the lust for power and position. Conversely, no reform which leaves the masses of the people wallowing in the slothful irresponsibility of passive obedience to authority can be counted as a genuine change for the better.

Reinforcing the effect of indolence, kindness and fear, rationalizing these emotions in intellectual terms, is

philosophical belief. The ruled obey their rulers because, in addition to all the other reasons, they accept as true some metaphysical or theological system which teaches that the state ought to be obeyed and is intrinsically worthy of obedience. Rulers are seldom content with the brute facts of power and satisfied ambition; they aspire to rule *de jure* as well as *de facto*. The rights of violence and cunning are not enough for them. To strengthen their position in relation to the ruled and at the same time to satisfy their own uneasy cravings for ethical justification, they try to show that they rule by right divine. Most theories of the state are merely intellectual devices invented by philosophers for the purpose of proving that the people who actually wield power are precisely the people who ought to wield it. Some few theories are fabricated by revolutionary thinkers. These last are concerned to prove that the people at the head of their favourite political party are precisely the people who ought to wield power—to wield it just as ruthlessly as the tyrants in office at the moment. To discuss such theories is mainly a waste of time; for they are simply beside the point, irrelevant to the significant facts. If we wish to think correctly about the state, we must do so as psychologists, not as special pleaders, arguing a case for tyrants or would-be tyrants. And if we want to make a reasonable assessment of the value of any given state, we must judge it in terms of the highest morality we know—in other words, we must judge it in the light of the ideal postulates formulated by the prophets and the founders of religions. Hegel, it is true, regarded such judgments as extremely ‘shallow’. But if profundity leads to Prussianism, as it did in Hegel’s case, then give me shallowness. Let those who will, be *tief*; I prefer superficiality and the common decencies. We shall understand nothing of the problems

of government unless we come down to psychological facts and ethical first principles.

To a greater or less degree, then, all the civilized communities of the modern world are made up of a small class of rulers, corrupted by too much power, and of a large class of subjects, corrupted by too much passive and irresponsible obedience. Participation in a social order of this kind makes it extremely difficult for individuals to achieve that non-attachment in the midst of activity, which is the distinguishing mark of the ideally excellent human being; and where there is not at least a considerable degree of non-attachment in activity, the ideal society of the prophets cannot be realized. A desirable social order is one that delivers us from avoidable evils. A bad social order is one that leads us into temptation which, if matters were more sensibly arranged, would never arise. Our present business is to discover what large-scale social changes are best calculated to deliver us from the evils of too much power and of too much passive and irresponsible obedience. It has been shown in the preceding chapter that the economic reforms, so dear to 'advanced thinkers,' are not in themselves sufficient to produce desirable changes in the character of society and of the individuals composing it. Unless carried out by the right sort of means and in the right sort of governmental, administrative and educational contexts, such reforms are either fruitless or actually fruitful of evil. In order to create the proper contexts for economic reform we must change our machinery of government, our methods of public administration and industrial organization, our system of education and our metaphysical and ethical beliefs. With education and beliefs I shall deal in a later section of this book. Our concern here is with government and the administration of public and industrial affairs.

In reality, of course, these various topics are inseparable parts of a single whole. Existing methods of government and existing systems of industrial organization are not likely to be changed except by people who have been educated to wish to change them. Conversely, it is unlikely that governments composed as they are today will change the existing system of education in such a way that there will be a demand for a complete overhaul of governmental methods. It is the usual vicious circle from which, as always, there is only one way of escape—through acts of free will on the part of morally enlightened, intelligent, well-informed and determined individuals, acting in concert. Of the necessity for the voluntary association of such individuals and of the enormously important part that they can play in the changing of society I shall speak later.

In countries where rulers are chosen by popular vote there is no likelihood that startlingly novel and unacceptable reforms will be initiated by the central authority. In such countries the movement for reform must always start at the periphery and move towards the centre. Private individuals, either alone or in groups, must formulate the idea of reform and must popularize it among the masses. When it has become sufficiently popular, it can be incorporated into the legislation of the community.

In the modern world the great obstacle to all desirable change is war. The cardinal, the indispensable reform is therefore a reform in the present policy of national communities in regard to one another. Today all nations conduct their foreign policy on militaristic principles. Some are more explicitly, more noisily and vulgarly militaristic than others; but all, even those that call themselves democratic and pacific, consistently act upon the principles of militarism. It is hardly conceivable

that any desirable reform in this direction should be initiated by those who now hold political power. The movement of reform must therefore come from private individuals. It is the business of these private individuals to persuade the majority of their fellows that the policy of pacifism is preferable to that of militarism. When and only when they have succeeded, it will become possible to change those militaristic national policies which make the outbreak of another war all but inevitable and which, by doing this, hold up the whole process of desirable change.

It may be objected that the majority of men and women all over the world ardently desire peace and that therefore there is no need for private individuals to make propaganda in favour of peace. In reply to this I may quote a profoundly significant phrase from *The Imitation*, 'All men desire peace, but very few desire those things which make for peace.' The truth is, of course, that one can never have something for nothing. The voters in every country desire peace. But hardly any of them are prepared to pay the price of peace. In the modern world the 'things that make for peace' are disarmament, unilateral if necessary; renunciation of exclusive empires; abandonment of the policy of economic nationalism; determination in all circumstances to use the methods of non-violence; systematic training in such methods. How many of the so-called peace-lovers of the world love these indispensable conditions of peace? Few indeed. The business of private individuals is to persuade their fellows that the things that make for peace are not merely useful as means to certain political ends, but are also valuable as methods for training individuals in the supreme art of non-attachment.

Individuals can work either alone or in association with other like-minded individuals. The work of the solitary individual is mainly preliminary to the work of the indi-

viduals in association. The solitary individual can undertake one or both of two important tasks: the task of intellectual clarification; the task of dissemination. He can be a theorist, a sifter of ideas, a builder of systems; or he can be a propagandist either of his own or others' ideas. To put it crudely, he can be either a writer or a public speaker. Both these tasks are useful and even indispensable, but both, I repeat, are preliminary to the greater and more difficult task which must be accomplished by individuals in association. Their task is to act upon the ideas of the solitary writer or speaker, to make practical applications of what were merely theories, to construct here and now small working-models of the better society imagined by the prophets; to educate themselves here and now into specimens of those ideal individuals described by the founders of religions. Success in such a venture is doubly valuable. If the success is on a large scale, the existing social and economic order will have undergone a perceptible modification for the better. At the same time the demonstration that the new theories may be made to produce desirable results in practice will act as the best possible form of propaganda on their behalf. Most people find example more convincing than argument. The fact that a theory has actually worked is a better recommendation for its soundness than any amount of ingenious dialectics.

At almost every period and in almost every country private individuals have associated for the purpose of initiating desirable change and of working out for themselves a way of life superior to that of their contemporaries. In the preservation and development of civilization these groups of devoted individuals have played a very important part and are destined, I believe, to play a part no less important in the future. Let us briefly consider the lessons to be drawn from their history.

The first condition of success is that all the members of such associations should accept the same philosophy of life and should be whole-heartedly determined to take their full share in the work for whose accomplishment the association was founded.

The next essential is that such associations should be founded for the pursuit of noble ends and in the name of a high ideal. The fact that a community demands considerable sacrifices from its members, imposes a strict discipline and exacts unremitting effort is not a disadvantage. On the contrary, if the goal is felt to be worth achieving, men and women are glad to make sacrifices.

All over the world and at all times associations of devoted individuals have exhibited one common characteristic: property has been held in common and all members have been vowed to personal poverty. In some communities, Hindu, Buddhist and Christian, it has been the custom for members to beg their bread. Others have preferred to work for their living. Associations of devoted individuals command attention and admiration; and where the devoted individuals are attached to the cause of the locally accepted religion, admiration is tinged with superstitious awe. People give expression to their feelings of admiration and awe by making gifts of property and money. Most religious communities have begun poor and have ended with large endowments. Great wealth is incompatible with non-attachment and this is true, not only of individuals, but also (though the process of corruption is less rapid) of communities. Nothing fails like success. Successful religious orders have always tended to sink into complacency, bogged in the morass of their endowments. Luckily, however, there have always been adventurous spirits ready and able to start afresh with great enthusiasm and little money. In due course, they too achieve

success, and the movement for reform has to start all over again. All effective communities are founded upon the principle of unlimited liability. In small groups composed of members personally acquainted with one another, unlimited liability provides a liberal education in responsibility, loyalty and consideration.

All of us desire a better state of society. But society cannot become better before two great tasks are performed. Unless peace can be firmly established and the prevailing obsession with money and power profoundly modified, there is no hope of any desirable change being made. Governments are not willing to undertake these tasks; indeed, in many countries they actively persecute those who even express the opinion that such tasks are worth performing. Private individuals are not prepared to undertake them in the ordinary way of business. If the work is to be done at all—and it is clear that, unless it is done, the state of the world is likely to become progressively worse—it must be done by associations of devoted individuals. To tend the sick, to relieve the poor, to teach without charge—these are all intrinsically excellent tasks. But for associations of devoted individuals to perform such tasks is now a work of supererogation and, in a certain sense, an anachronism. It was right that they should undertake them when nobody else was prepared to do so. If they undertake them now, when such tasks are being performed, very efficiently, by other agencies, they are wasting the energy of their devotion. They should use this energy to do what nobody else will do, to break the new ground that nobody else will break.

The function of the well-intentioned individual, acting in isolation, is to formulate or disseminate theoretical truths. The function of well-intentioned individuals in association is to live in accordance with those truths, to

demonstrate what happens when theory is translated into practice, to create small-scale working models of the better form of society to which the speculative idealist looks forward.

Men of exceptional moral force and even ordinary people, when strengthened by intense conviction, have demonstrated over and over again in the course of history the power of non-violence to overcome evil, to turn aside anger and hatred. The hagiographies of every religion are full of accounts of such exploits, and similar stories can be found in the records of modern missionaries and colonial administrators, of passive resisters and conscientious objectors. Such sporadic manifestations of non-violence might be put down as exceptional and of no historical importance. To those who raise such an objection we would point out that, in the course of the last century and a half, the principles of non-violence have been applied, ever more systematically and with a growing realization of their practical value, to the solution of social and medical problems regarded before that time as completely insoluble. It was only in the eighteenth and nineteenth centuries that it began to be realized that such problems—the problem of the insane, the problem of the criminal, the problem of the ‘savage’—were insoluble only because violence had made them so. Thus, the cruel treatment of the insane resulted in their disease being aggravated and becoming incurable. In 1815 a committee of the House of Commons investigated the state of Bethlehem Hospital and found it appalling. Bedlam was a place of filth and squalor, with dungeons, chains and torture chambers. As late as 1840 the great majority of asylums in Western Europe were still prisons and their inmates were still being treated as though they were criminals. Towards the middle of the century a considerable effort at reform

was made and, since then, doctors have come to rely in their treatment more and more upon kindness and intelligent sympathy, less and less upon harshness and constraint.

The story of prison reform is essentially similar to that of the reform of asylums. When John Howard began his investigations in the middle of the seventies of the eighteenth century the only decent prisons in Europe were those of Amsterdam. (Significantly enough, there was much less crime in Holland than in other countries.) Prisons were houses of torture in which the innocent were demoralized and the criminal became more criminal.

Like the alienist and the gaoler, the colonial administrator and the anthropologist have discovered that organized and intelligent non-violence is the best, the most practical policy. During the last thirty years professional anthropologists have left the libraries in which their older colleagues fitted together their mosaics of travellers' tales and missionary gossip, and have actually taken to living with the objects of their study. In order to be able to do this with safety, they have found it essential to apply the principles of non-violence with a truly Tolstoyan thoroughness. In consequence, they have won the friendship of their 'savages' and have learned incomparably more about their ways of thinking and feeling than had ever been discovered before. During recent years, the administration of the Belgian, Dutch, English and French colonies has become on the whole more humane and, at the same time, more efficient. This double improvement is mainly due to the anthropologists, with their doctrine of intelligent and sympathetic non-violence. The hideous methods employed in the conquest of Abyssinia are unhappily symptomatic of the new, worse spirit that is now abroad.

So much for the power of non-violence in the relations of individuals with individuals. We have now to consider mass movements in which the principles of non-violence are applied to the relations between large groups or entire populations and their governments. Of these, the movements best known to English-speaking readers are those organized by Gandhi in South Africa and later in India. The South African movement may be described as completely successful. The discriminatory legislation against the Hindus was repealed in 1914, entirely as the result of non-violent resistance and non-co-operation on the part of the Indian population. In India several important successes were recorded, and it was shown that very large groups of men and women could be trained to respond to the most brutal treatment with a quiet courage and equanimity that profoundly impressed their persecutors, the spectators in the immediate vicinity and, through the press, the public opinion of the entire world. The task of effectively training very large numbers in a very short time proved, however, too great and, rather than see his movement degenerate into civil war, Gandhi suspended the activities of his non-violent army.

A special form of non-co-operation is the boycott, which has been used effectively on a number of occasions. It was used in India by the followers of Gandhi. A striking example of the way in which even a threat of non-violent non-co-operation can avert war was provided by the British Labour Movement in 1920. The Council of Action formed on August 9th of that year warned the government that if it persisted in its scheme of sending British troops to Poland for an attack upon the Russians, a general strike would be called, labour would refuse to transport munitions or men, and a complete boycott of the war would be declared. Faced by this ultimatum, the Lloyd

George government abandoned its plans for levying war on Russia.

I have given examples of the use of non-violence in the relations of individuals with individuals and of whole populations with governments. It is now time to consider the use of non-violence in the relations of governments with other governments. Examples of non-violence on the governmental level are seldom of a very heroic kind and the motives actuating the parties concerned are seldom unmixed. The tradition of politics is a thoroughly dishonourable tradition. The world sanctions two systems of morality—one for private individuals, another for national and other groups. Men who, in private life, are consistently honest, humane and considerate, believe that when they are acting as the representatives of a group they are justified in doing things which, as individuals, they know to be utterly disgraceful. The nation is personified in our imaginations as a being superhuman in power and glory, sub-human in morality. We never even expect it to behave in any but the most discreditable way. This being so, we must not be surprised if examples of genuine non-violent behaviour between governments are rare, except in the case of disputes involving matters so unimportant that the sub-human disputants don't feel it worth their while to fight. These can generally be settled easily enough by means of the existing machinery of conciliation. But wherever more important issues are at stake, national egotism is allowed free rein and the machinery of conciliation is either not used at all or used only reluctantly and with manifest bad will.

This has been a long digression, but a necessary one. Non-violence is so often regarded as impractical, or at best a method which only exceptional men and women

can use, that it is essential to show, first, that even when used sporadically and unsystematically (as has been the case up till now), the method actually works; and second, that it can be used by quite ordinary people and even, on occasion, by those morally sub-human beings, kings, politicians, diplomats and the other representatives of national groups, considered in their professional capacity. (Out of business hours these morally sub-human beings may live up to the most exacting ethical standards.)

Modern associations of devoted individuals will have as one of their principal functions the systematic cultivation of non-violent behaviour in all the common relationships of life—in personal relationships, in economic relationships, in relationships of groups with other groups and of groups with governments. The means by which communities can secure non-violent behaviour as between their members are essentially those which must be applied by all reformers. The social structure of the community can be arranged in such a way that individuals shall not be tempted to seek power, to bully, to become rapacious; and at the same time a direct attack can be made upon the sources of the individual will—in other words, the individual can be taught, and taught to teach himself, how to repress his tendencies towards rapacity, bullying, power-seeking and the like. Further training will be needed in the repression not only of fear—a consummation successfully achieved by military training—but also in the repression of anger and hatred. The member of our hypothetical association must be able to meet violence without answering violence and without fear or complaint—and he must be able to meet it in this way, not only in moments of enthusiasm, but also when the blood is cold, when there is no emotional support from friends and sympathizers. Non-violent resistance to violent oppression

is relatively easy in times of great emotional excitement; but it is very difficult at other times. It is so difficult as to be practically impossible except for those who have undergone systematic training for that very purpose. It takes three to four years of training to make a good soldier. It probably takes at least as long to make a good non-violent resister, capable of putting his principles into practice in any circumstances, however horrible.

Trained individuals would perform two main functions. First, it would be their business to keep the life of the association at a higher level than the life of the surrounding society, and in this way to hold up to that society a working model of a superior type of social organization. Second, they would have to 'go out into the world,' where their trained capacities would be useful in allaying violence once it had broken out and in organizing non-violent resistance to domestic oppression and the preparation for and waging of international war.

Most of those who in recent years have actually founded associations of devoted individuals have not even attempted to solve the economic problems of our time: they have simply run away from them. Appalled by the complexities of life in an age of technological advance, they have tried to go backwards. Their communities have been little Red Indian Reservations of economic primitives, fenced away from the vulgar world of affairs. But the problem of modern industry and finance cannot possibly be solved by setting up irrelevant little associations of handicraftsmen and amateur peasants, incapable in most cases of earning their livelihood and dependent for their bread and butter upon income derived from the hated world of machines. We cannot get rid of machinery, for the simple reason that, in the process of getting rid of it, we should be forced to get rid of that moiety of the

human race whose existence on this planet is made possible only by the existence of machines. The machine age in Erewhon had evidently led to no startling increase of population; hence the relative ease with which the Erewhonians were able to return to the horse and handicraft civilization. In the real world, machinery has resulted in the trebling of the population of the industrial countries within a century and a half. A return to horses and handicrafts means a return, through starvation, revolution, massacre and disease, to the old level of population. Obviously, then, such a return is outside the sphere of practical politics. Those who preach such a return and, in their communities of devoted individuals, actually practise it, are merely shirking the real issues. Machine production cannot be abolished; it is here to stay. The question is whether it is to stay as an instrument of slavery or as a way to freedom. A similar question arises in regard to the wealth created by machine production. Is this wealth to be distributed in such a way as to secure the maximum of social injustice, or the minimum? Governments and private companies in the ordinary way of business are not specially concerned to discover the proper solutions of these problems. The task, therefore, devolves upon associations of devoted individuals.

We see then, that if such associations are to be useful in the modern world, they must go into business—and go into business in the most scientific, the most unprimitive way possible.

Now, in order to engage in any advanced form of industrial or agricultural production, considerable quantities of capital are required. The fact is unfortunate; but in existing circumstances it cannot be otherwise. Good intentions and personal devotion are not enough to save the world; if they were, the world would have been

saved long before this—for the supply of saints has never failed. But the good are sometimes stupid and very often ill-informed. Few saints have also been scientists or organizers. Conversely, few scientists and organizers have been saints. If the world is to be saved, scientific methods must be combined with good intentions and devotion. By themselves, neither goodness nor intelligence are equal to the task of changing society and individuals for the better.

Where modern industrial and agricultural production are concerned, scientific method cannot be applied *in vacuo*. It must be applied to machines, to workmen, to an office organization. But machines must be bought and supplied with their motive power, workmen and administrators must be paid. Hence the need of capital. In the circumstances of modern life, associations of devoted individuals cannot do much good unless they command the means to make a considerable investment.

Having made its investment and embarked upon production, the association will have to work out, by practical experiment, the most satisfactory solutions of such problems as the following:—

To find the best way of combining workers' self-government with technical efficiency—responsible freedom at the periphery with advanced scientific management at the centre.

To find the best way of varying the individual's labours so as to eliminate boredom and multiply educative contacts with other individuals, working in responsible self-governing groups.

To find the best way of disposing of the wealth created by machine production.

To find the best way of investing superfluous wealth and to determine the proportion of such wealth that ought to be invested in capital goods.

To find the best way of using the gifts of individual workers and the best way of employing persons belonging to the various psychological types.

To find the best form of community life and the best way of using leisure.

To find the best form of education for children and of self-education for adults.

To find the best form of communal government and the best way to use gifts of leadership without subjecting the individuals so gifted to the temptation of ambition or arousing in their minds the lust for power.

Devoted and intelligent individuals living in association and working systematically along such lines as these should be able quite quickly to build up a working model of a more satisfactory type of society.

Leaders and Followers

BY BERTRAND RUSSELL

THE power at the disposal of mankind has increased in a wonderful way during this century. Bertrand Russell, who has been writing books for the last thirty years to indicate how mankind is progressing, never wrote anything more important than this book which analyses power. During the nineteenth century it was usually thought that men sought power to become wealthy. During this century, we have watched rulers in many lands, who have scorned personal wealth, sway whole peoples. Bertrand Russell maintains that the desire for power itself, without any desire for personal wealth and what it brings, is the basic force which urges men to become rulers. Rulers are necessary, power is essential; but nothing is more difficult to use with restraint and when power gets out of hand, nothing corrupts more quickly. It is most important that we face these facts as we look towards the future and seek the rational, humane conduct of human affairs.

BETWEEN man and other animals there are various differences, some intellectual, some emotional. One of the chief emotional differences is that some human desires, unlike those of animals, are essentially boundless and incapable of complete satisfaction. The boa constrictor, when he has had his meal, sleeps until appetite revives; if other animals do not do likewise, it is because their meals are less adequate or because they fear enemies. The activities of animals, with few exceptions, are inspired by the primary needs of survival and reproduction, and do not exceed what these needs make imperative.

With men, the matter is different. A large proportion of the human race, it is true, is obliged to work so hard in obtaining necessities that little energy is left over for other purposes; but those whose livelihood is assured do not, on that account, cease to be active. Xerxes had no lack of food or raiment or wives at the time when he embarked upon the Athenian expedition. Newton was certain of material comfort from the moment when he became a Fellow of Trinity, but it was after this that he wrote the *Principia*. St. Francis and Ignatius Loyola had no need to found Orders to escape from want. These were eminent men, but the same characteristic, in varying degrees, is to be found in all but a small exceptionally sluggish minority. Mrs A, who is quite sure of her husband's success in business, and has no fear of the workhouse, likes to be better dressed than Mrs B, although she could escape the danger of pneumonia at much less expense. Both she and Mr A are pleased if he is knighted or elected to Parliament. In day-dreams there is no limit to imagined triumphs, and if they are regarded as possible, efforts will be made to achieve them.

Imagination is the goad that forces human beings into restless exertion after their primary needs have been satisfied. Most of us have known very few moments when we could have said:

If it were now to die,
Twere now to be most happy, for I fear
My soul hath her content so absolute
That not another comfort like to this
Succeeds in unknown fate.

And in our rare moments of perfect happiness, it is natural, like Othello,—to wish for death, since we know that contentment cannot last. What we need for lasting happiness is impossible for human beings: only God can have complete bliss, for His is 'the kingdom and the

power and the glory'. Earthly kingdoms are limited by other kingdoms; earthly power is cut short by death; earthly glory, though we build pyramids or be 'married to immortal verse', fades with the passing of centuries. To those who have but little of power and glory, it may seem that a little more would satisfy them, but in this they are mistaken: these desires are insatiable and infinite, and only in the infinitude of God could they find repose.

While animals are content with existence and reproduction, men desire also to expand, and their desires in this respect are limited only by what imagination suggests as possible. Every man would like to be God, if it were possible; some few find it difficult to admit the impossibility. These are the men framed after the model of Milton's Satan, combining, like him, nobility with impiety. By 'impiety' I mean something not dependent upon theological beliefs: I mean refusal to admit the limitations of individual human power. This Titanic combination of nobility with impiety is most notable in the great conquerors, but some element of it is to be found in all men. It is this that makes social co-operation difficult, for each of us would like to conceive of it after the pattern of the co-operation between God and His worshippers, with ourself in the place of God. Hence competition, the need of compromise and government, the impulse to rebellion, with instability and periodic violence. And hence the need of morality to restrain anarchic self-assertion.

Of the infinite desires of man, the chief are the desires for power and glory. These are not identical, though closely allied: the Prime Minister has more power than glory, the King has more glory than power. As a rule, however, the easiest way to obtain glory is to obtain power; this is especially the case as regards the men

who are active in relation to public events. The desire for glory, therefore, prompts, in the main, the same actions as are prompted by the desire for power, and the two motives may, for most practical purposes, be regarded as one.

The orthodox economists, as well as Marx, who in this respect agreed with them, were mistaken in supposing that economic self-interest could be taken as the fundamental motive in the social sciences. The desire for commodities, when separated from power and glory, is finite, and can be fully satisfied by a moderate competence. The really expensive desires are not dictated by a love of material comfort. Such commodities as a legislature rendered subservient by corruption, or a private picture gallery of Old Masters selected by experts, are sought for the sake of power or glory, not as affording comfortable places in which to sit. When a moderate degree of comfort is assured, both individuals and communities will pursue power rather than wealth: they may seek wealth as a means to power, or they may forgo an increase of wealth in order to secure an increase of power, but in the former case as in the latter their fundamental motive is not economic.

This error in orthodox and Marxist economics is not merely theoretical, but is of the greatest practical importance, and has caused some of the principal events of recent times to be misunderstood. It is only by realizing that love of power is the cause of the activities that are important in social affairs that history, whether ancient or modern, can be rightly interpreted.

In the course of this book I shall be concerned to prove that the fundamental concept in social science is Power, in the same sense in which Energy is the fundamental concept in physics. Like energy, power has many forms,

such as wealth, armaments, civil authority, influence on opinion. No one of these can be regarded as subordinate to any other, and there is no one form from which the others are derivative. The attempt to treat one form of power, say wealth, in isolation, can only be partially successful, just as the study of one form of energy will be defective at certain points, unless other forms are taken into account. Wealth may result from military power or from influence over opinion, just as either of these may result from wealth. The laws of social dynamics are laws which can only be stated in terms of power, not in terms of this or that form of power. In former times, military power was isolated, with the consequence that victory or defeat appeared to depend upon the accidental qualities of commanders. In our day, it is common to treat economic power as the source from which all other kinds are derived; this, I shall contend, is just as great an error as that of the purely military historians whom it has caused to seem out of date. Again, there are those who regard propaganda as the fundamental form of power. This is by no means a new opinion; it is embodied in such traditional sayings as *magna est veritas et prevalebit* and 'the blood of the martyrs is the seed of the Church'. It has about the same measure of truth and falsehood as the military view or the economic view. Propaganda, if it can create an almost unanimous opinion, can generate an irresistible power; but those who have military or economic control can, if they choose, use it for the purpose of propaganda. To revert to the analogy of physics: power, like energy, must be regarded as continually passing from any one of its forms into any other, and it should be the business of social science to seek the laws of such transformations. The attempt to isolate any one form of power, more especially, in our day, the economic

form, has been, and still is, a source of errors of great practical importance.

There are many ways in which different societies differ in relation to power. They differ, to begin with, in the degree of power possessed by individuals or organizations; it is obvious, for example, that, owing to increase of organization, the State has more power now than in former times. They differ, again, as regards the kind of organization that is most influential: a military despotism, a theocracy, a plutocracy, are very dissimilar types. They differ, thirdly, through diversity in the ways of acquiring power: hereditary kingship produces one kind of eminent man, the qualities required of a great ecclesiastic produce another kind, democracy produces a third kind, and war a fourth.

Where no social institution, such as aristocracy or hereditary monarchy, exists to limit the number of men to whom power is possible, those who most desire power are, broadly speaking, those most likely to acquire it. It follows that, in a social system in which power is open to all, the posts which confer power will, as a rule, be occupied by men who differ from the average in being exceptionally power-loving. Love of power, though one of the strongest of human motives, is very unevenly distributed, and is limited by various other motives, such as love of ease, love of pleasure, and sometimes love of approval. It is disguised, among the more timid, as an impulse of submission to leadership, which increases the scope of the power-impulses of bold men. Those whose love of power is not strong are unlikely to have much influence on the course of events. The men who cause social changes are, as a rule, men who strongly desire to do so. Love of power, therefore, is a characteristic of the men who are casually important. We should, of course,

be mistaken if we regarded it as the sole human motive, but this mistake would not lead us so much astray as might be expected in the search for casual laws in social science, since love of power is the chief motive producing the changes which social science has to study.

The laws of social dynamics are—so I shall contend—only capable of being stated in terms of power in its various forms. In order to discover these laws, it is necessary first to classify the forms of power, and then to review various important historical examples of the ways in which organizations and individuals have acquired control over men's lives.

I shall have, throughout, the twofold purpose of suggesting what I believe to be a more adequate analysis of social changes in general than that which has been taught by economists, and of making the present and the probable near future more intelligible than it can be to those whose imaginations are dominated by the eighteenth and nineteenth centuries. Those centuries were in many ways exceptional, and we seem to be now returning, in a number of respects, to forms of life and thought which were prevalent in earlier ages. To understand our own time and its needs, history, both ancient and mediaeval, is indispensable, for only so can we arrive at a form of possible progress not unduly dominated by the axioms of the nineteenth century.

Inequality in the distribution of power has always existed in human communities, as far back as our knowledge extends. This is due partly to external necessity, partly to causes which are to be found in human nature. Most collective enterprises are only possible if they are directed by some governing body. If a house is to be built, someone must decide on the plans; if trains are to run on a railway, the time-table cannot be left to the

caprices of engine-drivers; if a new road is to be constructed, someone must decide where it is to go. Even a democratically elected government is still a government, and therefore, on grounds that have nothing to do with psychology, there must, if collective enterprises are to succeed, be some men who give orders and others who obey them. But the fact that this is possible, and still more the fact that the actual inequalities of power exceed what is made necessary by technical causes, can only be explained in terms of individual psychology and physiology. Some men's characters lead them always to command, others always to obey; between these extremes lie the mass of average human beings, who like to command in some situations, but in others prefer to be subject to a leader.

Adler, in his book on *Understanding Human Nature*, distinguishes a submissive type and an imperious type. 'The servile individual,' he says, 'lives by the rules and laws of others, and this type seeks out a servile position almost compulsively.' On the other hand, he continues, the imperious type, which asks: 'How can I be superior to everyone?' is found whenever a director is needed, and rises to the top in revolutions. Adler regards both types as undesirable, at any rate in their extreme forms, and he considers both as products of education. 'The greatest disadvantage of an authoritative education,' he says, 'lies in the fact that it gives the child an ideal of power, and shows him the pleasures which are connected with the possession of Power.' Authoritative education, we may add, produces the slave type as well as the despotic type, since it leads to the feeling that the only possible relation between two human beings who co-operate is that in which one issues orders and the other obeys them.

Love of power, in various limited forms, is almost universal, but in its absolute form it is rare. A woman who enjoys power in the management of her house is likely to shrink from the sort of political power enjoyed by a Prime Minister; Abraham Lincoln, on the contrary, while not afraid to govern the United States, could not face civil war in the home. Perhaps Napoleon, if the Bellerophon had suffered shipwreck, would have tamely obeyed the orders of British officers as to escaping in boats. Men like power so long as they believe in their own competence to handle the business in question, but when they know themselves incompetent they prefer to follow a leader.

The impulse of submission, which is just as real and just as common as the impulse to command, has its root in fear. The most unruly gang of children ever imagined will become completely amenable to the orders of a competent adult in an alarming situation, such as a fire; when the War came, the Pankhursts made their peace with Lloyd George. Whenever there is acute danger, the impulse of most people is to seek out Authority and submit to it; at such moments, few would dream of revolution. When war breaks out, people have similar feelings towards the Government.

Organizations may or may not be designed for the purpose of meeting dangers. Economic organizations in some cases, such as coal mines, involve dangers, but these are incidental, and if they were eliminated the organizations would flourish all the better. In general, meeting dangers is no part of the essential purpose of economic organizations, or of governmental organizations concerned with internal affairs. But lifeboats and fire-brigades, like armies and navies, are constructed for the purpose of meeting dangers. In a certain less immediate sense, this

is also true of religious bodies, which exist in part to allay the metaphysical fears that are buried deep in our nature.

In submission to the Divine Will there is a sense of ultimate safety, which has led to religious abasement in many monarchs who could not submit to any merely earthly being. All submissiveness is rooted in fear, whether the leader to whom we submit be human or divine.

It has become a commonplace that aggressiveness also often has its roots in fear. I am inclined to think that this theory has been pushed too far. It is true of a certain kind of aggressiveness, for instance, that of D. H. Lawrence. But I greatly doubt whether the men who become pirate chiefs are those who are filled with retrospective terror of their fathers, or whether Napoleon, at Austerlitz, really felt that he was getting even with Madame Mere. I know nothing of the mother of Attila, but I rather suspect that she spoilt the little darling, who subsequently found the world irritating because it sometimes resisted his whims. The type of aggressiveness that is the outcome of timidity is not, I think, that which inspires great leaders; the great leaders, I should say, have an exceptional self-confidence which is not only on the surface, but penetrates deep into the subconscious.

The self-confidence necessary to a leader may be caused in various ways. Historically, one of the commonest has been a hereditary position of command. Read, for example, the speeches of Queen Elizabeth in moments of crisis: you will see the monarch over-riding the woman, convincing her, and through her the nation, that she knows what must be done, as no mere commoner can hope to do. In her case, the interests of the nation and the sovereign were in harmony; that is why she was 'Good Queen Bess'. She could even praise her father

without arousing indignation. There is no doubt that the habit of command makes it easier to bear responsibilities and to take quick decisions. A clan which follows its hereditary chief probably does better than if it chose its chief by lot. On the other hand, a body like the mediaeval church, which chose its chief on account of conspicuous merits, and usually after he had had considerable experience of important administrative posts, secured, on the average, considerably better results than were secured, in the same period, in hereditary monarchies.

Some of the ablest leaders known to history have arisen in revolutionary situations. Let us consider, for a moment, the qualities which brought success to Cromwell, Napoleon, and Lenin. All three, in difficult times, dominated their respective countries, and secured the willing service of able men who were not by nature submissive. All three had boundless courage and self-confidence, combined with what their colleagues considered sound judgment at difficult moments. Of the three, however, Cromwell and Lenin belonged to one type, and Napoleon to another. Cromwell and Lenin were men of profound religious faith, believing themselves to be the appointed ministers of a non-human purpose. Their power-impulses thus seemed to themselves indubitably righteous, and they cared little for those rewards of power—such as luxury and ease—which could not be harmonized with their identification with the cosmic purpose. This is specially true of Lenin, for Cromwell, in his last years, was conscious of falling into sin. Nevertheless, in both cases it was the combination of faith with great ability that gave them courage, and enabled them to inspire their followers with confidence in their leadership.

Napoleon, as opposed to Cromwell and Lenin, is the supreme example of the soldier of fortune. The Revolution

suit him, since it made his opportunity, but otherwise he was indifferent to it. Though he gratified French patriotism and depended upon it, France, like the Revolution, was to him merely an opportunity; he had even, in his youth, toyed with the idea of fighting for Corsica against France. His success was due, not so much to any exceptional qualities of character, as to his technical skill in war: when other men would have been defeated, he was victorious. At crucial moments, such as the 18 Brumaire and Marengo, he depended upon others for success; but he had the spectacular gifts that enabled him to annex the achievements of his coadjutors. The French army was full of ambitious young men; it was Napoleon's cleverness, not his psychology, that gave him the power to succeed where the others failed. His belief in his star, which finally led to his downfall, was the effect of his victories, not their cause.

To come to our own day, Hitler must be classed, psychologically, with Cromwell and Lenin, Mussolini with Napoleon.

The soldier of fortune, or pirate chief, is a type of more importance in history than is thought by 'scientific' historians. Sometimes, like Napoleon, he succeeds in making himself the leader of bodies of men who have purposes that are in part impersonal: the French revolutionary armies conceived of themselves as the liberators of Europe, and were so regarded in Italy as well as by many in Western Germany, but Napoleon himself never brought any more liberation than seemed useful for his own career. Very often there is no pretence of impersonal aims. Alexander may have set to work to hellenize the East, but it is doubtful whether his Macedonians were much interested in this aspect of his campaigns. Roman generals, during the last hundred years of the Republic,

were mainly out for cash, and secured their soldiers' loyalty by distributions of land and treasure. Cecil Rhodes professed a mystical belief in the British Empire, but the belief yielded good dividends, and the troopers whom he engaged for the conquest of Matabeleland were offered nakedly pecuniary inducements. Organized greed, with little or no disguise, has played a very large part in the world's wars.

The ordinary quiet citizen, we said, is led largely by fear when he submits to a leader. But this can hardly be true of a gang of pirates, unless no more peaceable profession was open to them. When once the leader's authority is established, he may inspire fear in mutinous individuals; but until he is a leader, and is recognized as such by the majority, he is not in a position to inspire fear. To acquire the position of leader, he must excel in the qualities that confer authority: self-confidence, quick decision, and skill in deciding upon the right measures. Leadership is relative: Caesar could make Antony obey him, but no one else could. Most people feel that politics is difficult, and that they had better follow a leader—they feel this instinctively, and unconsciously, as dogs do with their masters. If this were not the case, collective political action would scarcely be possible.

Human Psychology

BY WILFRED TROTTER

OCCASIONALLY the prose anthologist can offer a passage of such curious felicity that his task becomes completely rewarding. This passage from the only full-length book of a very brilliant doctor is an example. Irony has never been used more deftly or more tellingly since Swift. At the end, when the five points have been made and the analysis is concluded, man must seem to every reader a most miserable creature. It is not Trotter's purpose to leave that impression. He is a scientist, facing the facts as he sees them and stating them without any compromise, except the grace of irony. He turns away from this devastating mood in the next chapter and offers as fine a statement as can be found anywhere of the essential virtue, altruism, which he believes will save mankind. The centre of the statement you will find in the notes.

WHEN we come to consider man we find ourselves faced at once by some of the most interesting problems in the biology of the social habit. It is probably not necessary now to labour the proof of the fact that man is a gregarious animal in literal fact, that he is as essentially gregarious as the bee and the ant, the sheep, the ox, and the horse. The tissue of characteristically gregarious reactions which his conduct presents furnishes incontestable proof of this thesis, which is thus an indispensable clue to an inquiry into the intricate problems of human society.

It is desirable perhaps to enumerate in a summary way the more obvious gregarious characters which man displays.

1. He is intolerant and fearful of solitude, physical or mental. This intolerance is the cause of the mental fixity and intellectual incuriousness which, to a remarkable degree for an animal with so capacious a brain, he constantly displays. As is well known, the resistance to a new idea is always primarily a matter of prejudice, the development of intellectual objections, just or otherwise, being a secondary process in spite of the common delusion to the contrary. This intimate dependence on the herd is traceable not merely in matters physical and intellectual, but also betrays itself in the deepest recesses of personality as a sense of incompleteness which compels the individual to reach out towards some larger existence than his own, some encompassing being in whom his perplexities may find a solution and his longings peace. Physical loneliness and intellectual isolation are effectually solaced by the nearness and agreement of the herd. The deeper personal necessities cannot be met—at any rate, in such society as has so far been evolved—by so superficial a union; the capacity for intercommunication is still too feebly developed to bring the individual into complete and soul-satisfying harmony with his fellows, to convey from one to another

Thoughts hardly to be packed
Into a narrow act,
Fancies that broke through language and escaped.

Religious feeling is therefore a character inherent in the very structure of the human mind, and is the expression of a need which must be recognized by the biologist as neither superficial nor transitory. It must be admitted that some philosophers and men of science have at times denied to the religious impulses of man their true dignity and importance. Impelled perhaps by a desire to close the circle of a materialistic conception of the universe,

they have tended to belittle the significance of such phenomena as they were unable to reconcile with their principles and bring within the iron circle of their doctrine. To deal with religion in this way has not only been an outrage upon the true scientific method, but has always led to a strong reaction in general opinion against any radical inquiry by science into the deeper problems of man's nature and status. A large and energetic reaction of this kind prevails today. There can be little doubt that it was precipitated, if not provoked, by attempts to force a harsh and dogmatic materialism into the status of a general philosophy. As long as such a system is compelled to ignore, to depreciate, or to deny the reality of such manifestly important phenomena as the altruistic emotions, the religious needs and feelings, the experiences of awe and wonder and beauty, the illumination of the mystic, the rapture of the prophet, the unconquerable endurance of the martyr, so long must it fail in its claims to universality. It is therefore necessary to lay down with the strongest emphasis the proposition that the religious needs and feelings of man are a direct and necessary manifestation of the inheritance of instinct with which he is born, and therefore deserve consideration as respectful and observation as minute as any other biological phenomenon.

2. He is more sensitive to the voice of the herd than to any other influence. It can inhibit or stimulate his thought and conduct. It is the source of his moral codes, of the sanctions of his ethics and philosophy. It can endow him with energy, courage, and endurance, and can as easily take these away. It can make him acquiesce in his punishment and embrace his executioner, submit to poverty, bow to tyranny, and sink without complaint under starvation. Not merely can it make him accept

hardship and suffering unresistingly, but it can make him accept as truth the explanation that his perfectly preventable afflictions are sublimely just and gentle. It is in this acme of power of herd suggestion that is perhaps the most absolutely incontestable proof of the profoundly gregarious nature of man. That a creature of strong appetites and luxurious desires should come to tolerate uncomplainingly his empty belly, his chattering teeth, his naked limbs, and his hard bed is miracle enough. What are we to say of a force which, when he is told by the full-fed and well-warmed that his state is the more blessed, can make him answer, 'How beautiful! How true!' In the face of so effectual a negation, not merely of experience and common sense but also of actual hunger and privation, it is not possible to set any limits to the power of the herd over the individual.

3. He is subject to the passions of the pack in his mob violence and the passions of the herd in his panics. These activities are by no means limited to the outbursts of actual crowds, but are to be seen equally clearly in the hue and cry of newspapers and public after some notorious criminal or scapegoat, and in the success of scaremongering by the same agencies.

4. He is remarkably susceptible to leadership. This quality in man may very naturally be thought to have a basis essentially rational rather than instinctive if its manifestations are not regarded with a special effort to attain an objective attitude. How thoroughly reasonable it appears that a body of men seeking a common object should put themselves under the guidance of some strong and expert personality who can point out the path most profitably to be pursued, who can hearten his followers and bring all their various powers into a harmonious pursuit of the common object. The rational basis of the

relation is, however, seen to be at any rate open to discussion when we consider the qualities in a leader upon which his authority so often rests, for there can be little doubt that their appeal is more generally to instinct than to reason. In ordinary politics it must be admitted that the gift of public speaking is of more decisive value than anything else. If a man is fluent, dextrous, and ready on the platform, he possesses the one indispensable requisite for statesmanship; if in addition he has the gift of moving deeply the emotions of his hearers, his capacity for guiding the infinite complexities of national life becomes undeniable. Experience has shown that no exceptional degree of any other capacity is necessary to make a successful leader. There need be no specially arduous training, no great weight of knowledge either of affairs or the human heart, no receptiveness to new ideas, no outlook into reality. Indeed, the mere absence of such seems to be an advantage; for originality is apt to appear to the people as flightiness, scepticism as feebleness, caution as doubt of the great political principles that may happen at the moment to be immutable. The successful shepherd thinks like his sheep, and can lead his flock only if he keeps no more than the shortest distance in advance. He must remain, in fact, recognizable as one of the flock, magnified no doubt, louder, coarser, above all with more urgent wants and ways of expression than the common sheep, but in essence to their feeling of the same flesh with them. In the human herd the necessity of the leader's bearing unmistakable marks of identification is equally essential. Variations from the normal standard in intellectual matters are tolerated if they are not very conspicuous, for man has never yet taken reason very seriously, and can still look upon intellectuality as not more than a peccadillo if it is not paraded conspicuously; variations

from the moral standard are, however, of a much greater significance as marks of identification, and when they become obvious, can at once change a great and successful leader into a stranger and an outcast, however little they may seem to be relevant to the adequate execution of his public work. If a leader's marks of identity with the herd are of the right kind, the more they are paraded the better. We like to see photographs of him nursing his little grand-daughter, we like to know that he plays golf badly, and rides the bicycle like our common selves, we enjoy hearing of 'pretty incidents' in which he has given the blind crossing-sweeper a penny or begged a glass of water at a wayside cottage—and there are excellent biological reasons for our gratification.

In times of war leadership is not less obviously based on instinct, though naturally, since the herd is exposed to a special series of stresses, manifestations of it are also somewhat special. A people at war feels the need of direction much more intensely than a people at peace, and as always they want someone who appeals to their instinctive feeling of being directed, comparatively regardless of whether he is able in fact to direct. This instinctive feeling inclines them to the choice of a man who presents at any rate the appearance and manners of authority and power rather than to one who possesses the substance of capacity but is denied the shadow. They have their conventional pictures of the desired type—the strong, silent, relentless, the bold, outspoken, hard, and energetic—but at all costs he must be a 'man', a 'leader who can lead', a shepherd, in fact, who, by his gesticulations and his shouts, leaves his flock in no doubt as to his presence and his activity. It is touching to remember how often a people in pursuit of this ideal has obtained and accepted in response to its prayers nothing but

melodramatic bombast, impatience, rashness, and foolish, boasting truculence; and to remember how often a great statesman in his country's need has had to contend not merely with her foreign enemies, but with those at home whose vociferous malignity has declared his magnanimous composure to be sluggishness, his cautious scepticism to be feebleness, and his unostentatious resolution to be stupidity.

5. His relations with his fellows are dependent upon the recognition of him as a member of the herd. It is important to the success of a gregarious species that individuals should be able to move freely within the large unit while strangers are excluded. Mechanisms to secure such personal recognition are therefore a characteristic feature of the social habit. The primitive olfactory greeting common to so many of the lower animals was doubtless rendered impossible for man by his comparative loss of the sense of smell long before it ceased to accord with his pretensions, yet in a thriving active species the function of recognition was as necessary as ever. Recognition by vision could be of only limited value, and it seems probable that speech very early became the accepted medium. Possibly the necessity to distinguish friend from foe was one of the conditions which favoured the development of articulate speech. Be this as it may, speech at the present time retains strong evidence of the survival in it of the function of herd recognition. As is usual with instinctive activities in man, the actual state of affairs is concealed by a deposit of rationalized explanation which is apt to discourage merely superficial inquiry. The function of conversation is, it is to be supposed, ordinarily regarded as being the exchange of ideas and information. Doubtless it has come to have such a function, but an objective examination of ordinary

conversation shows that the actual conveyance of ideas takes a very small part in it. As a rule the exchange seems to consist of ideas which are necessarily common to the two speakers, and are known to be so by each. The process, however, is none the less satisfactory for this; indeed, it seems even to derive its satisfactoriness therefrom. The interchange of the conventional lead and return is obviously very far from being tedious or meaningless to the interlocutors. They can, however, have derived nothing from it but the confirmation to one another of their sympathy and of the class or classes to which they belong.

Conversations of greeting are naturally particularly rich in the exchange of purely ceremonial remarks, ostensibly based on some subject like the weather, in which there must necessarily be an absolute community of knowledge. It is possible, however, for a long conversation to be made up entirely of similar elements, and to contain no trace of any conveyance of new ideas; such intercourse is probably that which on the whole is most satisfactory to the 'normal' man and leaves him more comfortably stimulated than would originality or brilliance, or any other manifestation of the strange and therefore of the disreputable.

Conversation between persons unknown to one another is also—when satisfactory—apt to be rich in the ritual of recognition. When one hears or takes part in these elaborate evolutions, gingerly proffering one after another of one's marks of identity, one's views on the weather, on fresh air and draughts, on the Government and on uric acid, watching intently for the first low hint of a growl, which will show one belongs to the wrong pack and must withdraw, it is impossible not to be reminded of the similar manoeuvres of the dog, and to be thankful that

Nature has provided us with a less direct, though perhaps a more tedious, code.

It may appear that we have been dealing here with a far-fetched and laboured analogy, and making much of a comparison of trivialities merely for the sake of compromising, if that could be done, human pretensions to reason. To show that the marvel of human communion began, perhaps, as a very humble function, and yet retains traces of its origin, is in no way to minimize the value or dignity of the more fully developed power. The capacity for free intercommunication between individuals of the species has meant so much in the evolution of man, and will certainly come in the future to mean so incalculably more, that it cannot be regarded as anything less than a master element in the shaping of his destiny.

Liberty and Progress

BY G. LOWES DICKINSON

IN the Symposiums of Plato and Zenophon in ancient Greek literature, a group of friends sit around after dinner and discuss an agreed topic. Lowes Dickinson uses the form to allow a number of distinguished people to confess the faith that is in them regarding politics and the future of human society. 'The member in whose house the meeting was held was chairman for the evening, and after the paper had been read it was his duty to call upon the members to speak in what order he thought best.' Each person speaks in character, standing up when called on and delivering a set speech. There is no conversational discussion, but each speech develops from those preceding it and the chairman calls upon the man who will most appropriately reply to the last speech. As in the Greek symposiums, an agreeable setting is supplied: 'After dinner, the time of year being June, and the weather unusually warm, we adjourned to the terrace for our coffee and cigars. The air was so pleasant and the prospect so beautiful, the whole weald of Sussex lying before us in the evening light, that it was suggested we should hold our meeting there rather than indoors.' The discussion was opened by Lord Cantilupe, an elder statesman. The Prime Minister spoke next, followed by the Leader of the Opposition. The others followed. The speeches quoted here are by Henry Martin, a professor, and Charles Wilson, a scientist. As the passage opens, the surrounding scene is recalled, giving atmosphere to the eloquence.

It was night now; the moon had set, and the sky was thick with stars. Among them one planet was blazing red, just opposite where I sat; and I saw the eyes of my neighbour, Henry Martin, fixed upon it. He was so lost

in thought that he did not hear me at first when I asked him whether he would care to follow on. But he assented willingly enough as soon as he understood. And as he rose I could not help admiring, as I had often done before, the singular beauty of his countenance. His books, I think, do him injustice; they are cold and academic. But there was nothing of that in the man himself; never was spirit so alert; and that alertness was reflected in his person and bearing, his erect figure, his brilliant eyes, and the tumultuous sweep of his now whitening beard. He stood for a moment silent, with his eyes still fixed on the red star; then began to speak as follows:

‘If,’ he said, ‘it be true, as certain mystics maintain, that the world is an effect of the antagonisms of spiritual beings, having their stations in opposite quarters of the heavens, then, I think, MacCarthy and myself must represent such a pair of contraries, and move in an anti-thetic balance through the cycle of experience. I, perhaps, am the Urthona of his prophet Blake, and he the Urizen, or vice versa, it may be, I cannot tell. But our opposition involves, on my part at least, no hostility; and looking across to his quarter of the sky I can readily conceive how proud a fate it must be to burn there, so red, so sumptuous, and so superb. My own light is pale by comparison, a mere green and blue; yet it is equally essential; and without it there might be a danger that he would consume the world. I speak in metaphors, that I may effect as gently as possible the necessary transition, so cold and abrupt, from the prophet to the critic. But you, sir, in calling upon me, knew what you were doing. You knew well that you were inviting Aquarius to empty his watering-pot on Mars. And Mars, I am sure, will pardon me if I obey. Unlike all the previous speakers, I am, by vocation, a sceptic; and the vocation I hold to be

a noble one. There are people who think, perhaps, indeed, there is almost nobody who does not think, that action is the sole end of life. Criticism, they hold, is a kind of disease to which some people are subject, and which, in extreme cases, may easily be fatal. The healthy state, on the other hand, they think, is that of the enthusiast; of the man who believes and never doubts. Now, that such a state is happy I am very ready to admit; but I cannot hold that it is healthy. How could it be, unless it were based upon a sound, intellectual foundation? But no such foundation has been or will be reached except through criticism; and all criticism implies and engenders doubt. A man who has never experienced, nay, I will say who is not constantly reiterating, the process of criticism, is a man who has no right to his enthusiasm. For he has won it at the cost of drugging his mind with passion; and that I maintain is a bad and wrong thing. I maintain it to be bad and wrong in itself, and quite apart from any consequences it may produce; for it is a primary duty to seek what is true and eschew what is false. But even from the secondary point of view of consequences, I have the gravest doubts as to the common assumption that the effects of enthusiasm are always preponderantly if not wholly good. It may, indeed, be true that intellect without passion is barren; but it is certain that passion without intellect is mischievous. And since these powers, which should be united, are, in fact, at war in the great duel which runs through history, I take my stand with the intellect. If I must choose, I would rather be barren than mischievous. But it is my aim to be fruitful and to be fruitful through criticism. That means, I fear, that I am bound to make myself unpleasant to everybody. But I do it, not of malice prepense, but as in duty bound. You will say, perhaps,

that that only makes the matter worse. Well, so be it! I will apologize no more, but proceed at once to my disagreeable task.

‘ Let me say then first, that in listening to the speakers who have preceded me, while admiring the beauty and ingenuity of the superstructures they have raised, I have been busy, according to my practice, in questioning the foundations. And this is the kind of result I have arrived at. All political convictions vary between the two extremes which I will call Collectivism and Anarchy. Each of these pursues at all costs a certain end—Collectivism, order, and Anarchy, liberty. Each is held as a faith and propagated as a religion. And between them lie those various compromises between faith and experience, idea and fact, which are represented by liberalism, conservatism, and the like. Now, the degree of enthusiasm which accompanies a belief, is commonly in direct proportion to its freedom from empirical elements. Simplicity and immediacy are the characteristics of all passionate conviction. But a critic like myself cannot believe that in politics, or anywhere in the field of practical action, any such simple and immediate beliefs are really and wholly true. Thus, in the case before us, I would point out that neither liberty nor order are sufficient ends in themselves, though each, I think, is part of the end. The liberty that is desirable is that of good people pursuing Good in order; and the order that is desirable is that of good people pursuing Good in liberty. This is a correction which, perhaps, both collectivist and anarchist would accept. What they want, they would say, is that kind of liberty and that kind of order which I have described. But as liberty and order, so conceived, imply one another, the difference between the two positions ceases to be one of ends and becomes one of means. But every problem of

means is one of extreme complexity which can only be solved, in the most tentative way, by observation and experiment. And opinions based upon such a process, though they may be strongly held, cannot be held with the simplicity and force of a religious or ethical intuition. We might, conceivably, on this basis adopt the position either of the collectivist or of the anarchist; but we should do so not as enthusiasts, but as critics, with a full consciousness that we are resting not upon an absolute principle, but upon a balance of probabilities.

‘ This, then, is the first point I wished to make, that the whole question is one to be attacked by criticism, not by intuition. But now, tested by criticism, both the extreme positions suggests the gravest possible difficulties and doubts. In the case of anarchy, especially, these force themselves upon the most superficial view. The anarchist maintains, in effect, that to bring about his ideal of ordered liberty all you have to do is to abolish government. But he can point to no experience that will justify such a belief. It is based upon a theory of human nature which is contradicted by all the facts known to us. For if men, were it not for government, might be living in the garden of Eden, how comes it that they ever emerged from that paradise? No, it is not government that is the root of our troubles, it is the niggardliness of Nature and the greed of man. And both these are primitive facts which would be strengthened, not destroyed, by anarchy. Can it be believed that the result would be satisfactory? The anarchist may indeed reply that anything would be better than what exists. And I can well understand how some generous and sensitive souls, or some victims of intolerable oppression, may be driven into such counsels. But they are surely counsels of despair. Or is it possible really to hold—as MacCarthy apparently does—that on

the eve of a bloody revolution, whereby all owners of property will be summarily deprived of all they have, the friendly and co-operative instincts of human nature will immediately come into play without friction; that the infinitely complex problems of production and distribution will solve themselves, as it were, of their own accord; that there will be a place ready for everybody to do exactly the work he wants; that everybody will want to work at something, and will be contented with the wage assigned him, that there will be no shortage, no lack of adaptation of demand to supply; and all this achieved, not by virtue of any new knowledge or new capacity, but simply by a rearrangement of existing elements? Does anyone, does MacCarthy really, in a calm moment, believe all this? And is he prepared to stake society upon his faith? If he be, he is indeed beyond the reach of my watering-pot. I leave him, therefore, burning luridly and unsubdued, and pass on to Allison.

‘Allison’s flame is gentler; and I would not wish, even if I could, altogether to extinguish it. But I am anxious, I confess, to temper it; for in colour, to my taste, it is a little ghastly; and I fear that if it increased in intensity, it might even become too hot, though I do not suggest that that is a present danger. To drop the metaphor, my objections to collectivism are not as fundamental as my objections to anarchy, nor are they based upon any lack of appreciation of the advantages of that more equitable distribution of the opportunities of life which I take to be at the bottom of the collectivist ideal. I do not share—no man surely who has reflected could share—the common prejudice that there is something fundamental, natural, and inevitable about the existing organization of property. On the contrary, it is clear to me that it is inequitable; and that the substitution of the system

advocated by collectivists would be an immense improvement, if it could be successfully carried out, and if it did not endanger other Goods, which may be even more important than equality of opportunity. Nor do I hold that in a collectivist state there need be any dangerous relaxation of that motive of self-interest which every reasonable man must admit to be, up to a point, the most potent source of all practical energy. I do not see why the state should not pay its servants according to merit just as private companies do, and make the rewards of ambition depend on efficiency. In this purely economic region there is not, so it seems to me, anything absurd or chimerical in the socialist ideal. My difficulty here is of a different kind. I do not see how, by the democratic machinery contemplated, it will be possible to secure officials sufficiently competent and disinterested to be entrusted with functions so important and so difficult as those which would be demanded of them under the socialist régime. In a democracy the government can hardly rise above—in practice, I think, it tends to fall below—the average level of honesty and intelligence. In the United States, for example, it is notorious that the whole machinery of government, and especially of local government, where the economic functions are important, is exploited by the more unscrupulous members of the community; and this tendency must be immensely accentuated in every society in proportion as the functions of government become important. A socialist state badly administered would, I believe, be worse than the state under which we live, to the same degree in which, when well administered, it would be better. And I do not, I confess, see what guarantees socialists can offer that the administration will be good. I have far less confidence than Allison in mere machinery; and I am sure that no

machinery will produce good results in a society where a large proportion of the citizens have no other idea than to exploit the powers of government in their own interest. But such, I believe, is the case in existing societies; and I do not see by what miracle they are going to be transformed.

‘Such is my first difficulty with regard to collectivism. And though it would not prevent me from supporting, as in fact I do support, cautious and tentative experiments in the direction of practical socialism, it does prevent me from looking to a collectivist future with anything like the breezy confidence which animates Allison. And I will go further: I will say that no man who possesses an adequate intelligence, and does not deliberately stifle it, has a right to any such confidence. Setting aside, however, for the sake of argument, this difficulty, and admitting the possibility of an honest and efficient collectivist state, I am confronted with a further and even graver cause of hesitation. For while I consider that the distribution of the opportunities of life is, under the existing system, in the highest degree capricious and inequitable, yet I would prefer such inequity to the most equitable arrangement in the world if it afforded a better guarantee for the realization of certain higher Goods than would be afforded by the improved system. And I am not clear in my own mind, and I do not see how anyone can be clear, that collectivism gives as good a security as the present system for the realization of these higher Goods. And this brings me back to the question of liberty. On this point there is, I am well aware, a great deal of cant talked, and I have no wish to add to it. Under our present arrangements, I admit, for the great mass of people, there is no liberty worth the name; seeing that they are bound and tied all their lives to the meanest necessities. And yet we see

that out of the midst of all this chaos of wrong, there have emerged and do emerge artists, poets, men of science, saints. And the appearance of such men seems to me to depend on the fact that a considerable minority have the power to choose, for good or for evil, their own life, to follow their bent, even in the face of tremendous difficulties, and perhaps because of those difficulties, in the more fortunate cases, to realize, at whatever cost of suffering, great works and great lives. But under the system sketched by Allison I have the gravest doubts whether any man of genius would ever emerge. The very fact that everybody's career will be regulated for him, and his difficulties smoothed away, that, in a word, the open road will imply the beaten track, will, I fear, diminish, if not destroy, the enterprise, the innate spirit of adventure, in the spiritual as in the physical world, on which depends all that we call, or ought to call, progress. A collectivist state, it is true, might establish and endow academies; but would it ever produce a Shakespeare or a Michelangelo? It might engender and foster religious orthodoxy; but would it have a place for the reformer or the saint? Should we not have to pay for the general level of comfort and intelligence, by suppressing the only thing good in itself, the manifestation of genius? I do not say dogmatically that it would be so: I do not even say dogmatically that, even if it were, the argument would be conclusive against the collectivist state. But the issue is so tremendous that it necessarily makes me pause, as it must, I contend, any candid man, who is not prejudiced by a preconceived ideal.

'Now, it is not for the sake of recommending any opinion of my own that I have dwelt on these considerations. It is, rather, to illustrate and drive home the point with which I began, that the intellect has its rights, that

it enters into every creed, and that it undermines, in every creed, all elements of mere irrational or anti-rational faith; that this fact can only be disguised by a conscious or unconscious predetermination, not to let the intellect have its say; and that such predetermination is a very serious error and vice. It is without shame and without regret, on the contrary it is with satisfaction and self-approval, that I find in my own case, my intelligence daily more and more undermining my instinctive beliefs. If, as some have held, it were necessary to choose between reason and passion, I would choose reason. But I find no such necessity; for reason to me herself is a passion. Men think the life of reason cold. How little do they know what it is to be responsive to every call, solicited by every impulse, yet still, like the magnet, vibrate ever to the north, never so tense, never so aware of the stress and strain of force as when most irremovably fixed upon that goal. The intensity of life is not to be measured by the degree of oscillation. It is at the stillest point that the most tremendous energies meet; and at such a point is the intelligence open to infinity. For such stillness I feel myself to be destined, if ever I could attain it. But others, I suppose, like MacCarthy, have a different fate. In the celestial world of souls, the hierarchy of spirits, there is need of the planet no less than of its sun. The station and gravity of the one determines the orbit of the other, and the antagonism that keeps them apart also knits them together. There is no motion of MacCarthy's but I vibrate to it; and about my immobility he revolves. But both of us, as I am inclined to think, are included in a larger system and move together on a remoter centre. And the very law of our contention, as perhaps one day we may come to see, is that of a love that by discord achieves harmony.'

The conclusion of Martin's speech left me somewhat in doubt how to proceed. All of the company who were primarily interested in politics had now spoken; and I was afraid there might be a complete break in the subject of our discourse. Casting about, I could think of nothing better than to call upon Wilson, the biologist. For though he was a specialist, he regarded everything as a branch of his speciality; and would, I knew, be as ready to discourse on society as on anything else. Although, therefore, I disliked a certain arrogance he was wont to display, I felt that, since he was to speak, this was the proper place to introduce him. I asked him accordingly to take up the thread of the debate; and without pause his aggressive voice began to assail our ears.

'I don't quite know,' he began, 'why a mere man of science should be invited to intervene in a debate on these high subjects. Politics, I have always understood, is a kind of mystery, only to be grasped by a favoured few, and then not by any processes of thought, but by some kind of intuition. But of late years something seems to have happened. The intuition theory was all very well when the intuitions did not conflict, or when, at least, those who were possessed by one, never came into real intellectual contact with those who were possessed by another. But here, to-night, have we met together upon this terrace, been confronted with the most opposite principles jostling in the roughest way, and, as it seems to the outsider, simply annihilating one another. Whence Martin's plea for criticism; a plea with which I most heartily sympathize, only that he gave no indication of the basis on which criticism itself is to rest. And perhaps that is where and why I come in. I have been watching to-night with curiosity, and I must confess with a little amusement, one building after another laboriously raised

by each speaker in turn, only to collapse ignominiously at the first touch administered by his successor. And why? For the ancient reason, that the structures were built upon the sand. Well, I have raised no building myself to speak of. But I am one of an obscure group of people who are working at solid foundations; which is only another way of saying that I am a man of science. Only a biologist, it is true; heaven forfend that I should call myself a sociologist! But biology is one of the disciplines that are building up that general view of Nature and the world which is gradually revolutionizing all our social conceptions. The politicians, I am afraid, are hardly aware of this. And that is why—if I may say so without offence—their utterances are coming to seem more and more a kind of irrelevant prattle. The forces that really move the world have passed out of their control. And it is only where the forces are at work that the living ideas move upon the waters. Politicians don't study science; that is the extraordinary fact. And yet every day it becomes clearer that politics is either an applied science or a charlatanism. Only, unfortunately, as the most important things are precisely the last to be known about, and it is exactly where it is most imperative to act that our ignorance is most complete, the science of politics has hardly yet even begun to be studied. Hence our forlorn paralysis of doubt whenever we pause to reflect; and hence the kind of blind desperation with which earnest people are impelled to rush incontinently into practice. The position of MacCarthy is very intelligible, however much it be, to my mind—what shall I say?—regrettable. There is, in fact, hardly a question that has been raised to-night that is at present capable of scientific determination. And with that word I ought perhaps, in my capacity of man of science, to sit down.

‘And so I would, if it were not that there is something else, besides positive conclusions, that results from a long devotion to science. There is a certain attitude towards life, a certain sense of what is important and what is not, a view of what one may call the commonplaces of existence, that distinguishes, I think, all competent people who have been trained in that discipline. For we do think about politics, or rather about society, even we specialists. And between us we are gradually developing a sort of body of first principles which will be at the basis of any future sociology. It is these that I feel tempted to try to indicate. And the more so, because they are so foreign to much that has been spoken here to-night. I have had a kind of feeling, to tell the truth, throughout this whole discussion, of dwelling among the tombs and listening to the voices of the dead. And I feel a kind of need to speak for the living, for the new generation with which I believe I am in touch. I want to say how the problems you have raised look to us, who live in the dry light of physical science.

‘Let me say, then, to begin with, that for us the nineteenth century marks a breach with the whole past of the world to which there is nothing comparable in human annals. We have developed wholly new powers; and, coincidentally and correspondingly, a wholly new attitude to life. Of the powers I do not intend to speak; the wonders of steam and electricity are the hackneyed theme of every halfpenny paper. But the attitude to life, which is even more important, is something that has hardly yet been formulated. And I shall endeavour to give some first rough expression to it.

‘The first constituent, then, of the new view is that of continuity. We of the new generation realize that the present is a mere transition from the past into the future;

that no event and no moment is isolated; that all things, successive as well as coincident, are bound in a single system. Of this system the general formula is causation. But, in human society, the specifically important case of it is the nexus of successive generations. We do not now, we who reflect, regard man as an individual, nor even as one of a body of contemporaries; we regard him as primarily a son and a father. In other words, what we have in mind is always the race: whereas hitherto the central point has been the individual or the citizen. But this shifting in the point of view implies a revolution in ethics and politics. With the ancients, the maintenance of the existing generation was the main consideration, and patriotism its formula. To Marcus Aurelius, to the Stoics, as later to the Christians, the subject of all moral duties was the individual soul, and personal salvation became for centuries the corner-stone of the ethical structure. Well, all the speculation, all the doctrine, all the literature based upon that conception has become irrelevant and meaningless in the light of the new ideal. We no longer conceive the individual save as one in a chain of births. Fatherless, he is inconceivable; sonless, he is abortive. His soul, if he have one, is inseparable from its derivation from the past and its tradition to the future. His duty, his happiness, his value, are all bound up with the fact of paternity; and the same, *mutatis mutandis*, is true of women. The new generation in a word has a totally new code of ethics; and that code is directed to the end of the perfection of the race. For, and this is the second constituent of the modern view, the series of births is also the vehicle of progress. It is this discovery that gives to our outlook on life its exhilaration and zest. The ancients conceived the Golden Age as lying in the past; the men of the Middle Ages removed it to an imaginary heaven. Both in effect

despaired of this world; and consequently their characteristic philosophy is that of the tub or the hermitage. So soon as the first flush of youth was past, pessimism clouded the civilization of Greece and of Rome; and from this Christianity escaped only to take refuge in an imaginary bliss beyond the grave. But we, by means of science, have established progress. We look to a future, a future assured, and a future in this world. Our eyes are on the coming generations; in them centres our hope and our duty. To feed them, to clothe them, to educate them, to make them better than ourselves, to do for them all that has hitherto been so scandalously neglected, and in doing it to find our own life and our own satisfaction—that is our task and our privilege, ours of the new generation.

‘ And this brings me to the third point in our scheme of life. We believe in progress; but we do not believe that progress is fated. And here, too, our outlook is essentially new. Hitherto, the conceptions of Fate and Providence have divided the empire of the world. We of the new generation accept neither. We believe neither in a good God directing the course of events; nor in a blind power that controls them independently and in despite of human will. We know that what we do or fail to do matters. We know that we have will; that will may be directed by reason; and that the end to which reason points is the progress of the race. This much we hold to be established; more than this we do not need. And it is the acceptance of just this that cuts us off from the past, that makes its literature, its ethics, its politics, meaningless and unintelligible to us, that makes us, in a word, what we are, the first of the new generation.

‘ Well, now, assuming this standpoint let us go on to see how some of the questions look which have been touched upon to-night. Those questions have been

connected mainly with government and property. And upon these two factors, it would seem, in the opinion of previous speakers, all the interests of society turn. But from the point where we now stand we see clearly that there is a third factor to which these are altogether subordinate—I mean the family. For the family is the immediate agent in the production and rearing of children; and this, as we have seen, is the end of society. With the family therefore social reconstruction should start. And we may lay down as the fundamental ethical and social axiom that everybody not physically disqualified ought to marry, and to produce at least four children. The only question here is whether the state should intervene and endeavour so to regulate marriages as to bring together those whose union is most likely to result in good offspring. This is a point on which the ancients, I am aware, in their light-hearted sciolism laid great stress. Only, characteristically enough, they ignored the fundamental difficulty, that nothing is known—nothing even now, and how much less then!—of the conditions necessary to produce the desired result. If ever the conditions should come to be understood—and the problem is pre-eminently one for science; and if ever—what is even more difficult—we should come to know clearly and exactly for what points we ought to breed; then, no doubt, it may be desirable for government to undertake the complete regulation of marriage. Meantime, we must confine our efforts to the simpler and more manageable task of securing for the children when they are born the best possible environment, physical, intellectual and moral. But this may be done, even without a radical reconstruction of the law of property, simply by proceeding further on the lines on which we are already embarked, by insisting on a certain standard, and that a high one,

of house-room, sanitation, food, and the like. We could thus ensure from the beginning for every child at least a sound physical development; and that without undermining the responsibility of parents. What else the state can do it must do by education; a thing which, at present, I do not hesitate to say, does not exist among us. We have an elementary system of cram and drill directed by the soulless automata it has itself produced; a secondary system of athletics and dead languages presided over by gentlemanly amateurs; and a university system which—well, of which I cannot trust myself to speak. I wish only to indicate that, in the eyes of the new generation, breeding and education are the two cardinal pillars of society. All other questions, even those of property and government, are subordinate; and only as subordinate can they be fruitfully approached. Take, for example, property. On this point we have no prejudices, either socialistic or anti-socialistic. Property, as we view it, is simply a tool for producing and perfecting men. Whether it will serve that purpose best if controlled by individuals or by the state, or partly by the one and partly by the other, we regard as an open question, to be settled by experiment. We see no principle one way or the other. Property is not a right, nor a duty, nor a privilege, either of individuals or of the community. It is simply and solely, like everything else, a function of the chain of births. Whoever owns it, however it is administered, it has only one object, to ensure for every child that is born a sufficiency of physical goods, and for the better-endowed all that they require in the way of training to enable them to perform efficiently the higher duties of society.

‘And as property is merely a means, so is government. To us of the new generation nothing is more surprising and more repugnant, than the importance attached by

politicians to formulæ which have long since lost whatever significance they may once have possessed. Democracy, representation, trust in the people and the rest, all this to us is the idlest verbiage. It is notorious, even to those who make most play with these phrases, that the people do not govern themselves, that they cannot do so, and that they would make a great mess of it if they could. The truth is, that we are living politically on a tradition which arose when by government was meant government by a class, when one man or a few exploited the rest in the name of the state, and when therefore it was of imperative importance to bring to bear upon those who were in power the brute and unintelligent weight of the mass. The whole democratic movement, though it assumed a positive intellectual form, was in fact negative in its aim and scope. It meant simply, we will not be exploited. But that end has now been attained. There is no fear now that government will be oppressive; and the only problem of the future is, how to make it efficient. But efficiency, it is certain, can never be secured by democratic machinery. We must, as Allison rightly maintains, have trained and skilled persons. How these are to be secured is a matter of detail, though no doubt of important detail; and it is one that the new generation will have to solve. What they will want, in any case, is government. MacCarthy's idea of anarchy is—well, if he will pardon my saying so, it is hardly worthy of his intelligence. You cannot regulate society, any more than you can spin cotton, by the light of nature and a good heart. MacCarthy mistakes the character of government altogether, when he imagines its essence to be compulsion. Its essence is direction; and direction, whatever the form of society, is, or should be, reserved for the wise. It is for wise direction that the coming generations cry; and it is our business to see that they get it.

'I have thus indicated briefly the view of social and political questions which I believe will be that of the future. And my reason for thinking so is, that that view is based upon science. It is this that distinguishes the new generation from all others. Hitherto the affairs of the world have been conducted by passion, interest, sentiment, religion, anything but reasoned knowledge. The end of that régime, which has dominated all history, is at hand. The old influences, it is true, still survive, and even appear to be supreme. We have had ample evidence to-night of their apparent vitality. But underneath them is growing up the sturdy plant of science. Already it has dislodged their roots; and though they still seem to bear flower, the flower is withering before our eyes. In its place, before long, will appear the new and splendid blossom whose appearance ends and begins an epoch of evolution. That is a consummation nothing can delay. We need not fret or hurry. We have only to work on silently at the foundations. The city, it is true, seems to be rising apart from our labours. There, in the distance, are the stately buildings, there is the noise of the masons, the carpenters, the engineers. But see! the whole structure shakes and trembles as it grows. Houses fall as fast as they are erected; foundations sink, towers settle, domes and pinnacles collapse. All history is the building of a dream-city, fantastic as that ancient one of the birds, changeful as the sunset clouds. And no wonder; for it is building on the sand. There is only one foundation of rock, and that is being laid by science. Only wait! To us will come sooner or later, the people and the architects. To us they will submit the great plans they have striven so vainly to realize. We shall pronounce on their possibility, their suitability, even their beauty.'

What I Believe

BY E. M. FORSTER

THE above are the reflections of an individualist and a liberal,' Forster says at the end of his essay, which is chosen for this selection because it brings together the ideas which run through it. It is a confession of faith by an artist and thinker. It was written when we were all troubled by the success of totalitarian leaders, not only in Russia but in Germany and Italy. The future of the free world seemed dark. But light comes after darkness, and this statement of belief brings to a fitting climax the ideas which we have met in this selection of the best that has been thought and said in our century and in our time. This essay first appeared in *The London Mercury*. Nearly twenty years later, in 1955, in another London magazine, *The Twentieth Century*, Mr Forster stated again his humanist scale of values. Twenty more years of the European travail had not dimmed his hopes and had served to confirm his beliefs. 'Humanism covers my main belief. . . . My belief in the individual, and in his duty to create and to understand and to contact other individuals. A duty that may be and ought to be a delight.'

I DO not believe in Belief. But this is an age of faith, and there are so many militant creeds that, in self-defence, one has to formulate a creed of one's own. Tolerance, good temper and sympathy are no longer enough in a world which is rent by religious and racial persecution, in a world where ignorance rules, and science, who ought to have ruled, plays the subservient pimp. Tolerance, good temper and sympathy—they are what matter really, and if the human race is not to collapse they must come to the front before long. But for the moment they are not

enough, their action is no stronger than a flower, battered beneath a military jack-boot. They want stiffening, even if the process coarsens them. Faith, to my mind, is a stiffening process, a sort of mental starch, which ought to be applied as sparingly as possible. I dislike the stuff. I do not believe in it, for its own sake, at all. Herein I probably differ from most people, who believe in Belief, and are only sorry they cannot swallow even more than they do. My law-givers are Erasmus and Montaigne, not Moses and St. Paul. My temple stands not upon Mount Moriah but in that Elysian Field where even the immoral are admitted. My motto is: 'Lord, I disbelieve—help thou my unbelief.'

I have, however, to live in an Age of Faith—the sort of epoch I used to hear praised when I was a boy. It is extremely unpleasant really. It is bloody in every sense of the word. And I have to keep my end up in it. Where do I start?

With personal relationships. Here is something comparatively solid in a world full of violence and cruelty. Not absolutely solid, for Psychology has split and shattered the idea of a 'Person', and has shown that there is something incalculable in each of us, which may at any moment rise to the surface and destroy our normal balance. We don't know what we are like. We can't know what other people are like. How, then, can we put any trust in personal relationships, or cling to them in the gathering political storm? In theory we cannot. But in practice we can and do. Though A is not unchangeably A or B unchangeably B, there can still be love and loyalty between the two. For the purpose of living one has to assume that the personality is solid, and the 'self' is an entity, and to ignore all contrary evidence. And since to ignore evidence is one of the characteristics of faith, I certainly can proclaim that I believe in personal relationships.

Starting from them, I get a little order into the contemporary chaos. One must be fond of people and trust them if one is not to make a mess of life, and it is therefore essential that they should not let one down. They often do. The moral of which is that I must, myself, be as reliable as possible, and this I try to be. But reliability is not a matter of contract—that is the main difference between the world of personal relationships and the world of business relationships. It is a matter for the heart, which signs no documents. In other words, reliability is impossible unless there is a natural warmth. Most men possess this warmth, though they often have bad luck and get chilled. Most of them, even when they are politicians, *want* to keep faith. And one can, at all events, show one's own little light here, one's own poor little trembling flame, with the knowledge that it is not the only light that is shining in the darkness, and not the only one which the darkness does not comprehend. Personal relations are despised today. They are regarded as bourgeois luxuries, as products of a time of fair weather which is now past, and we are urged to get rid of them, and to dedicate ourselves to some movement or cause instead. I hate the idea of causes, and if I had to choose between betraying my country and betraying my friend, I hope I should have the guts to betray my country. Such a choice may scandalize the modern reader, and he may stretch out his patriotic hand to the telephone at once and ring up the police. It would not have shocked Dante, though. Dante places Brutus and Cassius in the lowest circle of Hell because they had chosen to betray their friend Julius Caesar rather than their country Rome. Probably one will not be asked to make such an agonizing choice. Still, there lies at the back of every creed something terrible and hard for which the worshipper may one day

be required to suffer, and there is even a terror and a hardness in this creed of personal relationships, urbane and mild though it sounds. Love and loyalty to an individual can run counter to the claims of the State. When they do—down with the State, say I, which means that the State would down me.

This brings me along to Democracy, 'even Love, the Beloved Republic, which feeds upon Freedom and lives'. Democracy is not a Beloved Republic really, and never will be. But it is less hateful than other contemporary forms of government, and to that extent it deserves our support. It does start from the assumption that the individual is important, and that all types are needed to make a civilization. It does not divide its citizens into the bossers and the bossed—as an efficiency-regime tends to do. The people I admire most are those who are sensitive and want to create something or discover something, and do not see life in terms of power, and such people get more of a chance under a democracy than elsewhere. They found religions, great or small, or they produce literature and art, or they do disinterested scientific research, or they may be what is called 'ordinary people', who are creative in their private lives, bring up their children decently, for instance, or help their neighbours. All these people need to express themselves; they cannot do so unless society allows them liberty to do so, and the society which allows them most liberty is a democracy.

Democracy has another merit. It allows criticism, and if there is not public criticism there are bound to be hushed-up scandals. That is why I believe in the Press, despite all its lies and vulgarity, and why I believe in Parliament. Parliament is often sneered at because it is a Talking Shop. I believe in it *because* it is a talking shop. I believe in the Private Member who makes himself a

nuisance. He gets snubbed and is told that he is cranky or ill-informed, but he does expose abuses which would otherwise never have been mentioned, and very often an abuse gets put right just by being mentioned. Occasionally, too, a well-meaning public official starts losing his head in the cause of efficiency, and thinks himself God Almighty. Such officials are particularly frequent in the Home Office. Well, there will be questions about them in Parliament sooner or later, and then they will have to mind their steps. Whether Parliament is either a representative body or an efficient one is questionable, but I value it because it criticizes and talks, and because its chatter gets widely reported.

So Two cheers for Democracy: one because it admits variety and two because it permits criticism. Two cheers are quite enough: there is no occasion to give three. Only Love the Beloved Republic deserves that.

What about Force, though? While we are trying to be sensitive and advanced and affectionate and tolerant, an unpleasant question pops up: does not all society rest upon force? If a government cannot count upon the police and the army, how can it hope to rule? And if an individual gets knocked on the head or sent to a labour camp, of what significance are his opinions?

This dilemma does not worry me as much as it does some. I realize that all society rests upon force. But all the great creative actions, all the decent human relations, occur during the intervals when force has not managed to come to the front. These intervals are what matter. I want them to be as frequent and as lengthy as possible, and I call them 'civilization'. Some people idealize force and pull it into the foreground and worship it, instead of keeping it in the background as long as possible. I think they make a mistake, and I think that their opposites,

the mystics, err even more when they declare that force does not exist. I believe that it exists, and that one of our jobs is to prevent it from getting out of its box. It gets out sooner or later, and then it destroys us and all the lovely things which we have made. But it is not out all the time, for the fortunate reason that the strong are so stupid. Consider their conduct for a moment in the Niebelung's Ring. The giants there have the guns, or in other words the gold; but they do nothing with it, they do not realize that they are all-powerful, with the result that the catastrophe is delayed and the castle of Walhalla, insecure but glorious, fronts the storms. Fafnir, coiled round his hoard, grumbles and grunts; we can hear him under Europe today; the leaves of the wood already tremble, and the Bird calls its warnings uselessly. Fafnir will destroy us, but by a blessed dispensation he is stupid and slow, and creation goes on just outside the poisonous blast of his breath. The Nietzschean would hurry the monster up, the mystic would say he did not exist, but Wotan, wiser than either, hastens to create warriors before doom declares itself. The Valkyries are symbols not only of courage but of intelligence; they represent the human spirit snatching its opportunity while the going is good, and one of them even finds time to love. Brünnhilde's last song hymns the recurrence of love, and since it is the privilege of art to exaggerate, she goes even further, and proclaims the love which is eternally triumphant and feeds upon freedom, and lives.

So that is what I feel about force and violence. It is, alas! the ultimate reality on this earth, but it does not always get to the front. Some people call its absences 'decadence'; I call them 'civilization' and find in such interludes the chief justification for the human experiment. I look the other way until fate strikes me. Whether

this is due to courage or to cowardice in my own case I cannot be sure. But I know that if men had not looked the other way in the past, nothing of any value would survive. The people I respect most behave as if they were immortal and as if society was eternal. Both assumptions are false: both of them must be accepted as true if we are to go on eating and working and loving, and are to keep open a few breathing holes for the human spirit. No millennium seems likely to descend upon humanity; no better and stronger League of Nations will be instituted; no form of Christianity and no alternative to Christianity will bring peace to the world or integrity to the individual; no 'change of heart' will occur. And yet we need not despair, indeed, we cannot despair; the evidence of history shows us that men have always insisted on behaving creatively under the shadow of the sword; that they have done their artistic and scientific and domestic stuff for the sake of doing it, and that we had better follow their example under the shadow of the aeroplanes. Others, with more vision or courage than myself, see the salvation of humanity ahead, and will dismiss my conception of civilization as paltry, a sort of tip-and-run game. Certainly it is presumptuous to say that we *cannot* improve, and that Man, who has only been in power for a few thousand years, will never learn to make use of his power. All I mean is that, if people continue to kill one another as they do, the world cannot get better than it is, and that since there are more people than formerly, and their means for destroying one another superior, the world may well get worse. What is good in people—and consequently in the world—is their insistence on creation, their belief in friendship and loyalty for their own sakes; and though Violence remains and is, indeed, the major partner in this muddled establishment, I believe that

creativeness remains too, and will always assume direction when violence sleeps. So, though I am not an optimist, I cannot agree with Sophocles that it were better never to have been born. And although, like Horace, I see no evidence that each batch of births is superior to the last, I leave the field open for the more complacent view. This is such a difficult moment to live in, one cannot help getting gloomy and also a bit rattled, and perhaps short-sighted.

In search of a refuge, we may perhaps turn to hero-worship. But here we shall get no help, in my opinion. Hero-worship is a dangerous vice, and one of the minor merits of a democracy is that it does not encourage it, or produce that unmanageable type of citizen known as the Great Man. It produces instead different kinds of small men—a much finer achievement. But people who cannot get interested in the variety of life, and cannot make up their own minds, get discontented over this, and they long for a hero to bow down before and to follow blindly. It is significant that a hero is an integral part of the authoritarian stock-in-trade today. An efficiency-regime cannot be run without a few heroes stuck about it to carry off the dullness—much as plums have to be put into a bad pudding to make it palatable. One hero at the top and a smaller one each side of him is a favourite arrangement, and the timid and the bored are comforted by the trinity, and, bowing down, feel exalted and strengthened.

No, I distrust Great Men. They produce a desert of uniformity around them and often a pool of blood too, and I always feel a little man's pleasure when they come a cropper. Every now and then one reads in the newspapers some such statement as: 'The coup d'état appears to have failed, and Admiral Toma's whereabouts is at present unknown.' Admiral Toma had probably every qualification for being a Great Man—an iron will,

personal magnetism, dash, flair, sexlessness—but fate was against him, so he retires to unknown whereabouts instead of parading history with his peers. He fails with a completeness which no artist and no lover can experience, because with them the process of creation is itself an achievement, whereas with him the only possible achievement is success.

I believe in aristocracy, though—if that is the right word, and if a democrat may use it. Not an aristocracy of power, based upon rank and influence, but an aristocracy of the sensitive, the considerate and the plucky. Its members are to be found in all nations and classes, and all through the ages, and there is a secret understanding between them when they meet. They represent the true human tradition, the one permanent victory of our queer race over cruelty and chaos. Thousands of them perish in obscurity; a few are great names. They are sensitive for others as well as for themselves, they are considerate without being fussy, their pluck is not swankiness, but the power to endure, and they can take a joke. I give no examples—it is risky to do that—but the reader may as well consider whether this is the type of person he would like to meet and to be, and whether (going farther with me) he would prefer that this type should *not* be an ascetic one. I am against asceticism myself. I do not feel that my aristocrats are a real aristocracy if they thwart their bodies, since bodies are the instruments through which we register and enjoy the world. Still, I do not insist. This is not a major point. It is clearly possible to be sensitive, considerate and plucky and yet be an ascetic too, and if anyone possesses the first three qualities, I will let him in! On they go—an invincible army, yet not a victorious one. The aristocrats, the elect, the chosen, the Best people—all the words that describe them are false, and all attempts to

organize them fail. Again and again Authority, seeing their value, has tried to net them and to utilize them as the Egyptian Priesthood or the Christian Church or the Chinese Civil Service or the Group Movement, or some other worthy stunt. But they slip through the net and are gone; when the door is shut, they are no longer in the room; their temple, as one of them remarked, is the Holiness of the Heart's Affection, and their kingdom, though they never possess it, is the wide-open world.

With this type of person knocking about, and constantly crossing one's path if one has eyes to see or hands to feel, the experiment of earthly life cannot be dismissed as a failure. But it may well be hailed as a tragedy, the tragedy being that no device has been found by which these private decencies can be transmitted to public affairs. As soon as people have power they go crooked and sometimes dotty as well, because the possession of power lifts them into a region where normal honesty never pays. For instance, the man who is selling newspapers outside the Houses of Parliament can safely leave his papers to go for a drink and his cap beside them: anyone who takes a paper is sure to drop a copper into the cap. But the men who are inside the Houses of Parliament—they cannot trust one another like that, still less can the Government they compose trust other governments. No caps upon the pavement here, but suspicion, treachery and armaments. The more highly public life is organized the lower does its morality sink; the nations of today behave to each other worse than they ever did in the past, they cheat, rob, bully and bluff, make war without notice, and kill as many women and children as possible; whereas primitive tribes were at all events restrained by taboos. It is a humiliating outlook—though the greater the darkness, the brighter shine the

little lights, reassuring one another, signalling: 'Well, at all events, I'm still here. I don't like it very much, but how are you?' Unquenchable lights of my aristocracy! Signals of the invincible army! 'Come along—anyway, let's have a good time while we can.' I think they signal that too.

The Saviour of the future—if ever he comes—will not preach a new Gospel. He will merely utilize my aristocracy, he will make effective the good will and the good temper which are already existing. In economics, we are told that if there was a new technique of distribution, there need be no poverty, and people would not starve in one place while crops were being ploughed under in another. A similar change is needed in the sphere of morals and politics. The desire for it is by no means new; it was expressed, for example, in theological terms by Jacopone da Todi over six hundred years ago. 'Ordina questo amore, O tu che m'ami', he said; 'O thou who lovest me—set this love in order.' His prayer was not granted, and I do not myself believe that it ever will be, but here, and not through a change of heart, is our probable route. Not by becoming better, but by ordering and distributing his native goodness, will Man shut up Force into its box, and so gain time to explore the universe and to set his mark upon it worthily. At present he only explores it at odd moments, when Force is looking the other way, and his divine creativeness appears as a trivial by-product, to be scrapped as soon as the drums beat and the bombers hum.

Such a change, claim the orthodox, can only be made by Christianity, and will be made by it in God's good time: man always has failed and always will fail to organize his own goodness, and it is presumptuous of him to try. This claim—solemn as it is—leaves me cold. I cannot believe that Christianity will ever cope with the

present world-wide mess, and I think that such influence as it retains in modern society is due to the money behind it, rather than to its spiritual appeal. It was a spiritual force once, but the indwelling spirit will have to be restated if it is to calm the waters again, and probably restated in a non-Christian form. Naturally a lot of people, and people who are not only good but able and intelligent, will disagree here; they will vehemently deny that Christianity has failed, or they will argue that its failure proceeds from the wickedness of men, and really proves its ultimate success. They have Faith, with a large F. My faith has a very small one, and I only intrude it because these are strenuous and serious days, and one likes to say what one thinks while speech is comparatively free: it may not be free much longer.

The above are the reflections of an individualist and a liberal who has found liberalism crumbling beneath him and at first felt ashamed. Then, looking around, he decided there was no special reason for shame, since other people, whatever they felt, were equally insecure. And as for individualism—there seems no way of getting off this, even if one wanted to. The dictator-hero can grind down his citizens till they are all alike, but he cannot melt them into a single man. That is beyond his power. He can order them to merge, he can incite them to mass-antics, but they are obliged to be born separately, and to die separately, and, owing to these unavoidable termini, will always be running off the totalitarian rails. The memory of birth, and the expectation of death always lurk within the human being, making him separate from his fellows and consequently capable of intercourse with them. Naked I came into the world, naked I shall go out of it! And a very good thing too, for it reminds me that I am naked under my shirt, whatever its colour.

Altruism

BY SIR CHARLES SHERRINGTON

THIS last piece sums up the argument of our selection as it summed up the great argument of the philosopher-biologist in his most famous series of lectures. He opens his final lecture by pointing out that man is a part of nature and therefore must give attention to the laws under which nature exists. He says that there are no absolute beginnings or endings and carries us back in thought to the 'ancient pre-human scene' which is 'without one moment of pity, not to speak of mercy'. Then he asks where human values come from, and just before this passage opens, notes that man is slowly drawing from life the inference that the exercise of altruism, charity, is the duty incumbent upon thinking life. The unselfish life is and must be the aim of conscious conduct; and he observes that of all man's new-found values, perhaps altruism will be the most hard to develop. We began our selection by looking at the stars; we end by placing man and his activities in that context.

NATURE is non-moral, not immoral. The hateful abounds in her; but she cannot do better. There is also loveliness and matter for rejoicing; products of evolution which are an altruistic joy; milk to feed the young, maternal care, the dog as our companion. But that does not prove her or evolution benevolent. For natural knowledge, if we hold natural science to be that knowledge, the natural world as phenomenon becomes a vast thing wholly uninfluenced by 'values'. The appeal to Design has lapsed as an argument and that leaves Nature acquitted not only of good but of evil. More literally than ever 'there is nothing

good or bad but thinking makes it so'; and Nature has in that sense no 'thinking' outside man's. He and his ethics stand alone. There is nothing good or bad except himself.

To look round at the world and find there nothing whose thought partakes his 'good' or his 'evil' excites in man a strange sense of loneliness. Laforgue turned from the stars and midnight sky saying, '*comme nous sommes seuls pourtant sur notre terre!*' He felt the pathos of that detached remoteness from even the nearest sky-comrade, unreachably afar. But that is not man's loneliness to the full. His crown of loneliness is his loneliness 'at home' within the compass and amid the community of his planet. The human mind is strangely placed there: no other mind its equal, let alone superior to it. All other mind its inferior, and almost incompanionably so. His thinking is thus thrown utterly upon itself. Grappling with its newly found 'values', yet with no experience except its own, no judgement but its own, no counsel but its own. Marked out, it would seem, to be leader of life upon the planet, more, willy-nilly set so, he yet has none to seek guidance from. None of whom to ask a question. What wonder his religions seek to supply a Higher Being to meet his need in this?

Man's spirit thus yearns for company. His medieval thought had judged him a thing apart, but never allotted to him a loneliness such as this he now is conscious of. Nothing at all outside himself with which he can commune on what is next his heart. Was it not Kant who wrote, 'I declare I am much moved toward the presence of immaterial beings in this world, to put my soul with them.' Facing this, in comparison with himself limitless, 'surround', which is fraught with good and evil but is, it would seem, unaware of either, man now knows enough

of it to know that itself and he are none the less parts of one and the same. There was a time when he nursed the notion that he stood a thing apart, even somewhat after the manner of an Olympian or of one of the host of heaven. He was wont to think of man and Nature as two contrasted empires. He thought of himself as an exception to the order of the rest; not a wheel geared in with the other wheels. 'Most of those who have written on the ways of men have done so as though those ways were no part of Nature. As though forsooth they were not controlled by the general laws of the universe. As though they were something outside Nature.' Poles apart in much, there Spinoza and Aristotle were at one. Science today concurs. It tells man that he is a product of Nature. Broadly taken he is a product of his planet and its sun. Even his mind which would seem most to differentiate him is of the natural world. Its origins trace thence; its climax confirms its origins. They give each other meaning, even as lock and key.

He can however feel of himself and of the world which holds him that he, as evidence goes, is the sole part which glimpses them together as a whole. He finds the whole more than a mere whirlpool motion without progress; it shapes as a motion with an onward progress; a pattern of movement which has long been moving toward what it is, and is not to stay at what it is. He feels that he has been a product of its moving onward. He feels that both he and it, now that his glimpse sees 'values', offer both 'good' and 'evil'. One of my predecessors in these lectures invoked Keats's well-known phrase of the 'valley of soul-making' as 'unquestionable truth' about this juxtaposition of world and man and good and evil. Man viewing himself as an item of the planet's side feels driven to think his meaning there is as a soul in 'a valley of

soul-making'; and Keats had added 'I say soul as distinguished from intelligence'.

How far as yet is this soul made? Civilized man devised and frequented the games at Ephesus. Do not we now walk unmoved across the city slums? It must be so or they would not be. This suffering which is part of Nature's plan, man does not escape it, and neither does he remit it. He himself still stands part guilty of it, not only by omission but commission. Need I cite an instance?

The Blinded Bird

So zestfully canst thou sing?
And all this indignity,
With God's consent, on thee!
Blinded ere yet a-wing
By the red-hot needle thou,
I stand and wonder how
So zestfully thou canst sing!
Resenting not such wrong,
Thy grievous pain forgot,
Eternal dark thy lot,
Groping thy whole life long
After that stab of fire;
Enjailed in pitiless wire;
Resenting not such wrong!

Here survival of the sub-human becomes the more horrible because implemented by intelligence of human grade.

Altruism has to grow. It is not enough for Man to deplore. That is less to mend things than to run from them. A positive charity is wanted; passive negation is not enough. In effect it needs a soul-growth which shall open out a higher self. That asks of the biological an unusual and even a perilously unnatural step. That might be endangered by altruism, the poise of biological sacredness of the self, the *point d'appui* of 'zest-to-live'. The self is the biological pivot of the individual. It amounts to sharing suffering as though another's suffering were its

own. When we sense pain it is that our awareness is that pain. A great gift—some might say divine—comes to the 'self' when perceiving certain suffering external to itself it so reacts to it that that suffering becomes its own. That gift is a gift, it would seem, almost uniquely human. It allots to human life a place supreme among lives. It raises human life to a plane above the life which has not it. It is in mankind an attainment not reached with broadcast equality. There have been planes of our human being where men have gone 'not thinking of much else than that they had enough of life to make them somewhat glad, when life went well with them'. That attitude, in comparison with this other, argues an insouciance amid the misery of others which stands below what can be considered the proper human plane.

'None can usurp this height' returned the Shade,
'But those to whom the miseries of the world
Are miseries, and will not let them rest.'

Altruism as passion; that would seem as yet Nature's noblest product; the greatest contribution made by man to Life.

At first glance such altruism may strike the biologist as contrary to the broad trend and polity of life. That makes the more notable the fact that evolution nevertheless has brought it about. Nothing shows better than it that Man is Nature's beginning to be self-conscious. But biology cries, 'the individual for itself'. What are the most successful individuals which Life has to show? The multicellular. And what has gone to their making? The multicellular organism is in itself a variant from the perennial antagonism of cell and cell. Instead of that eternal antagonism it is a making use of relatedness to bind cell to cell for co-operation. The multicellular organism stood for a change, in so far, from conflict between cell and cell

to harmony between cell and cell. Its coming was, we know now, pregnant with an immense advance for the whole future of life upon the globe. It was potential of the present success of living forms upon the planet. Implicit in it was for one thing the emergence of recognizable mind. It is surely more than mere analogy to liken to those small beginnings of multicellular life of millions of years ago the slender beginnings of altruism today. Evolution has constantly dealt with the relation between bodily and mental as more than mere analogy. It is altruism as passion. It marks, we may think, at the present time the climax of mind. It is well to note it is not essentially rational. It is often more germane to emotion than to intellect. It belongs, if you will, to sentiment, and it can elevate sentiment so that intellect at best ranks but as a tool for sentiment. It creates a reasoned emotion. It may have the conquest of the world before it, in which case reason will play its part, as a tool. It may mean a human future led by womankind more eminently than by men. There rises to the lips, perhaps a little wantonly, the simile of a bird's brain with human cortex appended, a bird's mind with human intelligence attached. And we remember the true bird-mind is of newer type than is our own.

Taking Nature broadly, altruism as yet has little place there. Are the shoal and the herd altruism? Nevertheless, if our new-found civilizations teach us anything, human altruism is growing. Perhaps the highest mass-product of man's civilized society has been the 'human' peace, such as it is, within its border. Peace, though not altruism pure, is yet greater opportunity for greater altruism. Altruistic sympathy as permeating peoples may be small as yet; but, as the periods of the planet reckon, civilization itself is young. If in the past the cohesion of the families changed

the whole outlook of life upon the planet, shall not the wider cohesion of individual lives carry that transformation further, with such consequences to the flowering of life as beggar our fancy to conceive?

Ah Love! could thou and I with Fate conspire
To grasp this sorry Scheme of Things entire,
Would not we shatter it to bits—and then
Re-mould it nearer to the Heart's Desire!

There springs in him a spirit of insurrection. Standing on his planet he, its own product, harbours rebellion against the process which has enthroned him. Mind awakened by distress of mind. His altruism is in bud.

Here is one of the great enigmas which vex man. Our *milieu*, so far as we explore it, appears a battlefield almost from end to end. Our world is in process of becoming, and that becoming is not of peaceful course. It meets on all sides obstacles and perplexities. It engages battle by methods often in man's view atrocious. One of those battles is between man and Nature. Man is in conflict with Nature. We have not here to touch upon man's two other and still greater conflicts; man against man, and man against himself. Our theme is Nature and man as part of Nature. As part of Nature man is deeply involved in conflict with the rest. I would think it a theme even as those others not unworthy the epic and the lyric.

Man, surveying evolution and the situations it creates, finds that his understanding quarrels profoundly with its ethic. Perhaps Nature has no ethics. Then the process would seem, in part, a frustration. He is an adverse critic of his one process of creation. He is becoming an adverse critic of his own 'zest-to-live'. But a life without 'zest-to-live' will assuredly perish. His criticism replies that even as 'self' is the driving force of life so there is need for the human self to sublimate its narrow obsession for

its own existence into delighted service of a 'self-in-common'.

Altruism is confronted by the old primordial 'urge-to-live'. There rises a great antinomy which man's life has to face. Between man and the rest of life truly a new difference has arisen. He on his planet stands as the one life critical of life. His altruism confronting the old 'drive-to-live', is an antinomy which divides him from all other lives he knows. It comes to this, that in his instance 'zest-to-live', before it endorses life, now makes 'conditions'.

The thought comes to him of a new order which should supervene upon our planet. At present it is a place of cross-purposes. Man's fancy has shaped the Happy Isles, and the Utopias of what might be. Religions have promised Paradises, but *after* death. Science, looking forward, has pictured a Solomon's House in a New Atlantis. It was Joseph Priestley, writing amid the discontents of his time, twenty years before the French Revolution, foresaw issuing from Science a future 'glorious and paradisiacal beyond our imagination. Nature, including both its materials and its laws, will be more at our command; men will make their situation in the world abundantly more easy and comfortable; they will probably prolong their existence in it, and will daily grow more happy.' The prediction was correct, save for its concluding *sequitur*, which as we hear it now rings as a *non-sequitur*. Priestley's enthusiasm had thought greater knowledge must mean supremacy of 'the values'. It might but it did not. In all this man can look for no help from any mind on his planet but his own. He has to realize that if he was born to direct, he must shoulder his responsibilities and direct, using his own judgement. He is the only recognizer of 'values'. He is 'the master of his fate'! Rather, it would sometimes

seem to him, he is merely a tragic detail in a manifold which goes its way without being even fully conscious of him. A lonely motive in a more than million-motived construction whose whole motive, if it have one, is unknown to him except as alien to his own and his to it. Master of his fate? Around him torrential oceans of energy; and his own energy by comparison a drop which trickles down the window-pane.

But he has mind, and his mind knowledge. Science as knowledge of energy might help him. Remembering that science has not the words 'suffering' or 'good' or 'bad', he must, to secure his programme, yoke science to his own anthropisms. Supposing that, in the domain of his own planet, he could prove master of his fate, what then were his programme?

We heard Joseph Priestley's forecast from 180 years ago. What are the forecasts of today, taken similarly with applied science in view? 'The vast wastage of natural power by blind competition between multitudes of species which are indifferent to human requirements need not continue if man now applies his scientific knowledge to a deliberately planned project for eliminating species which compete with him for the means of satisfaction, conserving only those which, directly or indirectly, contribute the means of food, of shelter, ornament and a pleasing prospect.' As to the means. 'The first is how to control the physical agencies which limit the survival and quality of species which subserve human needs. The second is how to destroy competing species which do not subserve human needs. The third is how to preserve edible species. The fourth is how to improve the quality of propitious species by selection of suitable varieties.' 'Selective elimination of species can be accomplished by various methods of which the most important are regulation of the

physical environment, segregation, specific poisons, and hyperparasitization.'

We notice here how Nature as man's background has with man's greater knowledge moved further from Sabunde and nearer to Hume, and how the tone of man has become more than before that of an earth-dominating conqueror. The planet is his; a *motif* of his programme is so to regard it. It is his not by any medieval reason of Heaven's gift but by right of growth of mind. We note too that his interests are reckoned the only ones which count. That other life is valued or reprehended not for itself but as it affects man's. Man's life is held to be a life apart and above the rest, not less than in Medieval Christendom or with Fernel, although on grounds quite other now than then. It would seem the 'zest-to-live' belonging to other lives than his own makes no appeal as such to man. The planet is *man's* planet. It is to be rescued from life which obstructs its being man's planet. Man's programme is the planet for one life, his own, and for such lives as are useful satellites to his. That at the moment seems the verdict of his 'values' on this part of the human situation.

In the world of units magnitude of the unit is a deciding factor. Man alone, it would seem, among all the myriads of lives has a picture, imperfect but still a coherent picture, of a great manifold of doing. The circumambient untraversable which isolates his planet does of its very self serve to enhance man's fellowship with man. Only amid human fellowship can 'values' be listened to and shared. His evolution has shaped a social animal. A man wholly solitary would, said Aristotle, be either a god or a brute. To know that he is a life being evolved which carries with it the 'values' can imbue his social system with a purpose. Human fellowship thus emerges as something of unique

worth. Fellow human mind is the sole mind to understand and share to the full with his, and be shared. The loveliest friend of man is man.

One part of Nature man can reach directly. He knows it well from struggles with himself. It is himself. Travelling the road he had come and rising from the unethical whence he rose, he can view himself compact of what his latter day has recognized as 'good' and 'evil'. Nature, a mindless process as it seems, commingles consequences evil and good; he was one of its products so commingled. Some of the hateful he saw about him was of his own commission, especially perhaps towards his fellow-men. Some also of the good seemed to have arisen with him. He must rely upon his 'values'. Dare he trust them, by them to judge the world? If he can, he has a criterion for the world. Sunrise and sunset *are* beautiful if one child feel them so. Shall he not think malaria an evil thing, to be deleted? Shall he not appraise the nightingale and evening star by 'values'?

Nature evolved the 'successful' and he rated as one of her successes. Half a million years back he had been flaking flints in the open weather, shaping a weapon, perhaps to destroy an enemy at the cave-mouth, or to be in his turn killed; it would seem he had felt the beauty of a shapely hand-axe and also had laboured his hand-axe or his scraper not for his own use solely, but for his fellowship, a little group where death kept membership short-lived, and life went direly bare. And now years later he counted his community by tens of millions and its cities belt the planet. He can reach by air in a day one hemisphere from the heart of the other. He can in a second of time send his spoken thought round the planet. The very gap of silence severing planet from planet he now dreamed of breaking. He is beginning to think in units of larger

span, more minutely subdivided and more precisely measured. By reason of changes in him the planet now harboured mentality giving more scope to beauty, and more play to altruism.

Successive forms of life had arisen, dominating the planet through certain epochs. They had had each their turn. The record of the planet's rocks told of the ammonites of the warm ancient oceans. They had flourished and swarmed. They had gone their way. They were but fossils now. The great Saurians in their turn had prevailed, battenning in the rich river plains, towering prodigies of strength and stature. They too had had their day. Their reign had been long, and then they had vanished. Today it is man's turn. A single form and yet the dominant life, so obviously that a glance suffices to show it. What does it mean? Is man one more experiment which Nature makes, later to scrap it? It may be so. Time has brought man his turn to come and then to go? Or did it mean more? Could it be that man would stay? Nothing did stay. The others each had had a spell, in turn to be replaced. There seemed already streaks of sunset across the human landscape. But there is in his instance a new factor, or one at least strangely prominent in it: mind.

But the course of Nature—and of the planet's whole story—reveals a law of primeval antiquity, namely, change, progressive change, a law older even than life itself. A *status quo* would be a breach of law, if Nature's law were breachable.

The old order changeth, yielding place to new,
And God fulfils Himself in many ways,
Lest one good custom should corrupt the world.

The great religions bringing their altruism are evidence of a new tide. Man must lead or go. To lead is all he is

fit for. But leadership does not lie in treating as prey those with whom it competes. Man is above all a leader charged with survival of the 'values' which are in his keeping. With the 'values' his leadership must be some form of fellowship. The pivot of fellowship is altruism. Fellowship cultivates equality of 'selves', equal respect for values and equal rights in values. It asks man to be watchful against himself that he harm not his neighbour. Altruism as basis of co-operative effort, to guide some of the ways of life to nobler common issues. There is so much for men to do in common. A new form of 'zest-for-life', with knowledge for its tool.

Man knows that he is changing, willy-nilly changing. Conforming with a type he is yet always as individual unique. Not wholly like any other which ever was, from the dawn of life through all the ages. The inorganic world is possibly a mere assembly of types, but the organic world is one stream of individuals. No following life is like the one it followed. That states perhaps the uttermost poignancy of death.

The new individual is life's obedience to change. The individual in biology today looms larger than ever before. Did Ray, Linnaeus, Cuvier, when they set out to enumerate the variety of life realize to the full what they were doing? Their counting of species had not the scope of variety. It was reaching the beginning of a new order of variety. Medicine had never been allowed to forget the individual in the type. Medicine's problem has always had to face the individual. Hence ancient Medicine's wisdom about 'temperament'. Aristotle, as against Plato, knew that what matters is the concrete individual, the individual is the approach to reality. Today the individual shows forth to us as a mosaic of genes. Owing to its linkage-making and linkage-breaking the permutation of gene-

complexes sows our world with individual variety, which Nature's nurturing lap develops further.

Our old friend, as we may by now call him, Jean Fernel, even as far back as his mid sixteenth century wrote:

The beginnings of our being are therefore of much matter to us; those who are of health by birth are not a little fortunate. By consequence it would be a great good for our race if solely those who are sane and sound gave themselves to the making of children. For if the husbandman know that for the sowing of the land the best seed is to be chosen, having found by experience that from a poor seed we can expect only a miserable harvest, how much more strictly should that be practised in the propagation of our species.

Today watching for change within ourselves we note that here our being holds out opportunity. 'Man's understanding and control of the living body today are not less than of inanimate nature a century ago,' writes Professor Ralph Gerard. To guide individual variety could better the world, if man knew what is better. Under man's leadership it should be 'better life'.

If we accept the story behind us, the planet, which being blind never before had purpose, now is lent a purpose and—anthropism of anthropisms!—by man. It pleads excuse because a broken light. Hume's Philo spoke in bitterness of Nature. He reproached it with being 'a vivifying principle bringing forth its countless offspring into suffering'. He spoke in bitterness of its blindness. But he himself was an outcome of that Nature; and he was at least a part of Nature beginning to understand itself.

Might not Nature, so bitterly apostrophized by him, make answer, 'You and yours once thought me rational; you said I had foresight and a purpose; you declared I had plan while I created; you read into me a super-intelligence and design. Now that you have undeceived

yourself about me, you seem to take it ill that where you used to say I showed intelligence, I show none; where you used to find design you find now none. But what would you? That I aped intelligence was the making of you. Aping intelligence as I did, it required intelligence to read my pseudo-logical doings. If I had been chaos what good would it have been for you to have intelligence? Intelligence amid chaos would have had no survival value. You would therefore not have had intelligence. Intelligence is yours because it helped you to understand what you misunderstood me to be. That justified your having it and so you have it. It was my pseudo-intelligence sharpened your wits. You thought me rational with "forces" and "causes" and "purposes" and all the rest and so you got your endowment of reason, reason being a means for dealing with what seemed reason. And now your thus begotten intelligence seems to revile its only true begetter! At least you should thank me for being "law". That it was which made you and has given you mind.'

And Nature might continue: 'For you it will be to remember, having got your measure of reason, you are now in fact in competition against a measure of reason as well as of mere semblance of reason. You will have to deal with it as a new situation. For you have your own fellow-folk to deal with. Remember too that it is not going to stop where it is—the modicum of reason which you and yours have—because an extra dose of it can have survival value. You have now as a species had a long innings by reason of your intelligence. It is perhaps a million years since first you were knocking stones into shape.

'You thought me moral, you now know me without moral. How can I be moral being, you say, blind necessity,

being mechanism. Yet at length I brought you forth, who are moral. Yes, you are the only moral thing in all your world, and therefore the only immoral.

‘ You thought Nature intelligent, even wise. You now know her devoid of reason, most of her even of sense. How can she have reason or purpose being pure mechanism? Yet at length she made you, you with your reason. If you think a little you with your reason can know that; you, the only reasoning thing in all your world, and therefore the only mad one.

‘ You are my child. Do not expect me to love you. How can I love—I who am blind necessity? I cannot love, neither can I hate. But now that I have brought forth you and your kind, remember you are a new world unto yourselves, a world which contains in virtue of you, love and hate, and reason and madness, the moral and immoral, and good and evil. It is for you to love where love can be felt. That is, to love one another.

‘ Bethink you too that perhaps in knowing me you do but know the instrument of a Purpose, the tool of a Hand too large for your sight as now to compass. Try then to teach your sight to grow.’

Is this then an unduly sombre reading of the natural world? This is at best but ‘ an interim report ’. The world runs for all to read. We go about and many of us are glad; and all of us are glad at times. Natural knowledge we commonly account a joyous thing; but it is clearly a saddening thing as well. Nature is like a music to which two friends can listen and both be moved and yet each by a different train of thought.

And the pursuit whose quest is Nature’s understanding, has this among its rewards, that as it progresses its truth is testable. Truth is a ‘ value ’. The quest itself therefore

is in a measure its own satisfaction. We receive the lesson that our advance to knowledge is of asymptotic type, even as continually approaching so continually without arrival. The satisfaction shall therefore be eternal.

Hume's *Dialogue* puts the question whether the pain of the world is or is not offset by its joy. The answer to that by Thomas Hardy was 'surely God will soon close down the human show with its misery'. But that was too hasty a prayer. One thing we can discern about Nature as a factor in this question, an element in this situation; at least it is a harmony. Now that for us the magical has been exorcized from it we can feel the vast unbroken harmony it is. Where tragedy and where comedy and where both it is at least a harmony all its own. That we should have attained that knowledge, that it should be given to us to apprehend that, that we can follow it as that, can hear it, trace it, retrace it in part and even forecast it as such, is an inexpressibly estimable good. We are privileged in this. It is, so far as we detect, uniquely the possession of ourselves—it is *the* human possession. When Cleanthes speaks of compensation for pain—there is here compensation. It is the old primeval gift of knowledge, which we, wiser now, know was not primeval but is of yesterday—therefore with promise of further. We traced how, it would seem, we are so fashioned that our world, which is our experience and is one world, is a diune world, a world of outlook and of inlook. This world with all its sweep of content and extent taxes utterance to indicate. Yet it is given us in so far to seize it, and as one coherent harmony. More; it is revealing to us the 'values', as Truth, Charity, Beauty. Surely these are compensation to us for much. And will not this compensation grow? Charity will grow; Truth grows; and even as Truth so Beauty. Music as her ear grows finer embraces

what once were discords. The mind which began by being one thing has truly—as so often in evolution—gone on to being another thing. Even should mind in the cataclysm of Nature be doomed to disappear and man's mind with it, man will have had his compensation: to have glimpsed a coherent world and himself as item in it. To have heard for a moment a harmony wherein he is a note.

NOTES

THE UNIVERSE AROUND US

From the book of the same name

PAGE 2

galactic plane: Hoyle, describing the making of our Galaxy, says: 'This wisp of gas then settled down into a flat circular disk that rotated around the sun.' This produced the plane of our Galaxy.

PAGE 3

in the whole of London: which is equal to the whole of Bombay, Calcutta, Delhi, Lahore and Madras with a few more cities thrown in

Waterloo Station: a large, desolate London railway terminus.

desolate emptiness: that is the impression he has been trying to convey.

PAGE 4

Regent Street: the London street which stretches from the B.B.C. across Oxford Circus and down to Pall Mall. Very full of traffic.

PAGE 5

Democritus: flourished around 400 B.C. Rich scholar, associated with the atomic theory of his master Leucippus.

Leucippus: flourished around 440 B.C. The main outlines of the old Greek atomic theory are due to him. Democritus worked out the details.

Lucretius: poet and philosopher, flourished early in the first century B.C. His famous epic, *De Rerum Natura*, sets out in detail the atomic theory of the universe.

intuitional conjecture: the ancient Greeks could only work on their intuition, which is feeling based on thought. They had no instruments to test their guesses.

Lord Rayleigh (1842-1919): mathematician and physicist.

PAGE 7

shoes, ships, sealing-wax: an amused reference to Lewis Carroll's poem 'The Walrus and the Carpenter' in *Alice Through the Looking Glass*:

Of shoes—and ships—and sealing-wax—Of cabbages—and kings.

PAGE 8

three colours: our old friends, the primary colours, red, blue and yellow.

PAGE 9

Crookes: Sir William Crookes (1832-1919) experimented on properties of highly rarefied gases.

Philipp Lenard (1862-1947): German physicist. Important pioneer in the investigation of cathode rays.

Sir J. J. Thomson (1856-1940): one of the most famous scientists of his age, especially in the fields of electricity and magnetism

PAGE 10

Lord Rutherford (1871-1937): New Zealander. His work led directly to the harnessing of atomic energy both in peace and war.

PAGE 11

Bohr: Niels Bohr (1885-) : Danish physicist.

THE EXPANDING UNIVERSE

From *The Nature of the Universe*

PAGE 13

Milky Way: 'There is a bright band of light, that people call the Milky Way, running roughly overhead in which particularly large numbers (of stars) are concentrated. The stars take on this appearance because the Galaxy is shaped like a disk. When you look at the Milky Way, you are looking along the disk.' Lecture 3.

Galaxy: 'The Galaxy is a thin disk with a diameter of about 60,000 light years. This disk consists of stars—and gas.' Lecture 3. The sun and planets lie near the edge of the disk.

PAGE 14

Andromeda: a magnificent star, surrounded by a nebula, to be seen in December in the Northern Hemisphere, north of the Milky Way and due north of the Pole Star.

troublesome fog: 'Tiny particles of dust condense out of the iron atoms in the interstellar gas, rather in the way water drops form in the clouds in the terrestrial atmosphere. These dust particles are a great nuisance to the observational astronomer, for they produce a sort of fog that limits his vision whenever he tries to look deep into the Milky Way.' Lecture 3. In fact, we can see only about a hundredth part of our Galaxy.

most powerful telescopes: are in America, e.g. at Mount Wilson. 'With even a small telescope you can distinguish about a million stars; with large telescopes, like the one at Mount Wilson, the number rises to well over a hundred millions.' Lecture 3.

MY PHILOSOPHY OF LIFE

From *The Inequality of Man*

PAGE 20

I am a biologist: the biologists and the astronomers between them in this country shared the really extraordinary discoveries in the scientific world.

PAGE 21

advertise medicines: there has been improvement. Every 'patent medicine' sold in Britain must have on the packet what the mixture contains.

PAGE 22

diphtheria antitoxin: has actually almost eliminated the disease in Britain; and it was a great danger to life there earlier in the century.

metal grinder: then a most dangerous trade because the metal powder was carried into the lungs. Now, a suction mechanism on the work bench sucks all the dust safely away. A barman serves drinks late at night in a bad atmosphere, but now the working hours are shortened. The old statistics showed that metal workers had a mortality rate over three times the average. So the problem was tackled and solved. Carpenters and railwaymen seem to live long

PAGE 23

Middle Ages: the Ages of Faith, when the Christian religion through the Catholic Church demanded celibacy for its priests and nuns. It still does, but then Catholicism was universal in the western Church.

marriage . . . to end it: the divorce laws are now extended to cover much more than unfaithfulness.

PAGE 24

slums . . . suburbs: that has been one of the great problems in Britain. The poor go on having children, while the better off, who find education and everything else they want expensive, avoid having large families. So the population grows unbalanced; too many poor, and often intellectually and spiritually poor people.

Ramsay MacDonald (1866-1933): first socialist Prime Minister.

Jack Hobbs: now knighted, one of the greatest batsmen in English cricket.

The ideal society: this is a good example of how even scientists can be led into fantasy. We know that men are not born equal and cannot become so; and that a classless society is a dream of philosophers and priests which recurs and recurs and will never become possible. Yet there is much in his dream we can and should aspire to bring about.

PAGE 25

Dominions: when he speaks of their art, we remember this is 1929 and he is referring to the old Dominions: Canada, South Africa, Australia and New Zealand.

federal union: which it is still seeking under the threat of Russia.

Dean Inge: Dean of St. Paul's Cathedral, London. See p. 191.

PAGE 26

hustle, prohibition . . .: the first is deadly serious. American businessmen live very hard and die early. Prohibition has long gone in America.

Christian Science: a religion founded by an American woman, Mary Eddy Baker, whose followers are taught to suggest to themselves when they are sick that they are well. This is brave but often dangerous. A scientist is naturally sarcastic about it.

'*phutbol*': this also is light fun, suitable for broadcasting, with a background of sense. Sportsmanship is admirable and often strangely lacking in international games meetings.

PAGE 27

French invasion: the French cook so well and the English so often so badly.

Watts and Stephenson: the two inventors most often quoted in such discussions.

Ur of the Chaldees: city of ancient Mesopotamian civilization. Usually quoted in English to represent the oldest civilization bordering on Europe.

PAGE 28

Kaiser: the German Emperor who led his people into the Great War of 1914-18. All political leaders (even the intellectual and liberal Mr Asquith, who was Prime Minister of Great Britain when the war began) were constrained in their popular oratory to speak of war in these old knightly terms which made the hideous thing sound glorious.

destruction of London: only very partial in the second war, but it just escaped much worse.

British revolution: since the last war, it has happened. Not entirely painless it has certainly not meant starvation.

POLITICS AND THE ENGLISH LANGUAGE

From *Shooting an Elephant*

PAGE 29

the English language: at almost any time it would be true to say that English is in a bad way. The ordinary novels of fifty years ago were badly

written, for example. But all the time a few people are writing well and at the moment it is probably true to say that literary people are efficient but politicians are slovenly. Orwell's examples are all political, and we must all concern ourselves with the standards of political speech.

PAGE 30

(*sic*): Latin for 'thus'. A convention used in quoting, and meaning: 'This is not a misprint. It is exactly what was printed.'

that Jesuit sect: preaching, proselytizing priests of the Roman Catholic Church, a sect founded by St. Ignatius of Loyola.

Professor Harold Laski: until his death taught in the London School of Economics. Prominent Socialist writer.

PAGE 31

Professor Lancelot Hogben: wrote a book on language and good popular books, *Science for the Citizen* and *Mathematics for the Million*.

Langham Place: in which Broadcasting House stands. The standard of speech is strict, southern English and higher class and therefore much attacked. The main news bulletin is at 9 p.m. Aitches are dropped by uneducated Londoners.

PAGE 32

Tribune: a socialist weekly with a small circulation, for which Orwell was for a short time literary editor, but he quickly grew out of that sort of thing.

sheer incompetence: in political writing. cf. Mr T. S. Eliot's remark: 'The pursuit of politics is incompatible with a strict attention to exact meanings on all occasions.'

ducks and drakes: to mix everything up into a real mess.

PAGE 33

White Papers: are issued for the use of Members of Parliament and are on sale to the public. Often prepared by the greatest authorities, they are for study before a vote is taken on the subject.

PAGE 34

some kind of dummy: there is a description of such a speaker in Part 3, Section 1 of Orwell's novel, *Coming up for Air*, and the Appendix of his novel 1984 has a wonderful description of 'the appropriate noises coming out of his larynx'.

PAGE 35

Russian totalitarianism: Orwell's best known attack on this is in his fable *Animal Farm*.

mass of Latin words: Orwell never made a clearer image than this.

PAGE 36

anaesthetizes: the same idea of making people less conscious.

PAGE 37

Latin and Greek: one has to be careful about this, as these languages have often supplied English with precise expression (as in the last two words here).

the Saxon word: is the basis of English, but the language has welcomed words from other languages always. As civilization developed rapidly in England four hundred years ago, an immense number of Latin and Greek words were introduced to express civilized ideas.

PAGE 38

the following rules. which E. M. Forster, using the English manner of conscious understatement, in a B.B.C. talk after Orwell's death, said were not bad ones.

PAGE 39

Stuart Chase: American; author of *The Tyranny of Words*.

AN EASTERN JOURNEY

From *The Gentleman in the Parlour*

PAGE 40

Angkor: the remains of the Khmer civilization in Cambodia, mostly built in the half century before A.D. 900. Angkor Wat is the best preserved. French authorities, the greatest on the question, now lean to the belief that the temples were consecrated to the worship of Buddha and not Brahma

Phnom-Penh: or Pnom-Penh, town in Cambodia at the point where the River Mekong divides on its way to the sea.

PAGE 41

silhouettist: these black shadow figures, cut out of black paper or printed black, were popular a century ago and were commonly of fantastic design.

prose pompous and sensual: Maugham has told us elsewhere (e.g. in *The Summing Up*) that when he was training himself as a young man to write he imitated the pompous and sensual passages of English seventeenth century prose writers. He soon reacted from that and his mastery is in the plain, conversational style.

PAGE 42

Ruskin (1819-1900): a master of the varied, solemn and harmonious style in his writings on art. He could when necessary, as in *Unto This Last*, write with effective simplicity.

Walter Pater (1839-94): went to the same school as Maugham. His prose was invariably rich and involved. His subjects were art and literary criticism.

Sir Thomas Browne (1605-82): much studied by Maugham as a young man. A very great artist in the magnificent manner and his subjects were appropriate to his style.

Palladian: name of a school of architecture based on classical Roman building founded by the Italian Andrea Palladio (1518-80).

Veronese (1528-88): Italian painter, who painted, among other things, the ceilings of great houses. This was in the late splendour of the Italian Renaissance.

doing your daily dozen: 'physical exercises' understood.

PAGE 43

Henri Mouhot: Maugham has obviously read this forgotten travel book by a forgotten French naturalist because it was one of the few about the places he was visiting. He has become interested in the author and takes time, with an essayist's freedom, to make a charming sentimental picture of him.

PAGE 44

La Traviata: a song from an opera, very serious and grand, while the *Death of Nelson* and the *Old Sergeant* are homely songs of the people. All the references suggest the cheerful, secure domestic life the wanderer missed so much.

Béranger (1780-1857): French song-writer; popular and patriotic.

PAGE 45

Siva: this contradicts the latest French view on the religion which Angkor Wat celebrates.

PAGE 46

in our temperate zone: where we have nothing like these terrifying manifestations of nature. 'For nature is the most powerful of all the gods' is the thought forced upon every western visitor to the east.

PAGE 47

Keng-Tung: in the southern Shan States, Burma. 'I spent the best part of a week in Keng Tung. . . . It was a village, larger than those I had passed on the way, but a village notwithstanding, of wooden houses, spacious, with wide dirt streets. . . .' (Chapter 20.)

PAGE 50

discover a rhythm: when the sculpture 'submits' itself 'to the general plan' it carries the eye to the grand outlines of the architecture and the whole artistic conception has a movement or 'rhythm' of its own. This harmony was always present in ancient Greek architecture, as Maugham says later.

emotion recollected: quotation from Wordsworth's famous *Preface* to the *Lyrical Ballads* (1800) when he describes the mood in which he wrote his poetry.

Elgin Marbles: large fragments of Greek sculpture originally on the Parthenon in Athens, found nearby by Lord Elgin (1766-1841) and now in the British Museum in London. The work of Phidias (c. 440 B.C.) greatest of Greek sculptors.

remain in one stay: meaning here 'remain in a general standard of excellence'. The quotation is a favourite of Maugham's, for he used it in a novel twenty-six years earlier: 'Man that is born of woman hath but a short time to live, and is full of misery. He cometh up, and is cut down, like a flower, he fleeth as it were a shadow, and never continueth in one stay.' From the service at the burial of the dead, Book of Common Prayer.

PAGE 51

paricose veins: Maugham went to medical school as a young man and never got away from simple physical explanations for states of mind. This passage, which he ends so typically on this note of bathos, humorously bringing us back to sense, is much in the mood of enquiry of our selection.

BACK TO METHUSELAH

Postscript to the play of the same name

Shaw had unusual ideas about spelling and punctuation, and this passage is reproduced exactly as he wrote it.

PAGE 55

Worlds Classics: series of cheap reprints founded by Grant Richards in 1900 and later handled by the O.U.P. Shaw told Grant Richards, who was at that time his publisher, that he could not afford to be published by a reprinter of old texts. Forty-five years later, he allowed himself to appear in the series

"the modest cough": popular jocular saying.

PAGE 56

stinking fish: an old proverb, 'Never cry stinking fish', i.e. never run down your own wares.

Creative Evolution: in his Preface Shaw refers to "those who believe that the impulse that produces evolution is creative".

Dante (1265-1321): greatest Italian religious poet. His *Divine Comedy* was divided into three parts, describing his journey through the other world, which consists (in Roman Catholic belief) of hell, purgatory and heaven.

Michael Angelo (1475-1564): or Michelangelo. Great Italian sculptor, painter, architect and poet. By his excellence in many arts and the strength and magnificence of his creations, Michelangelo has seemed a superman.

Bunyan (1628-88): writer of religious allegories, *The Pilgrim's Progress* the greatest of them. Master of simple narrative prose and much admired by Shaw.

Nietzsche (1844-1900): German ethical writer, much read in England during his lifetime, when Shaw was young. He taught that the superman (a theme for one of Shaw's plays) would replace the Christian ideal of humility. In the Preface Shaw says: "Thus Nietzsche . . . was supposed to have been the first man to whom it occurred that mere morality and legality and urbanity lead nowhere, as if Bunyan had never written *Badman*."

PAGE 57

sectarian nonsense: the nonsensical beliefs of narrow religious sects.

Peer Gynt: 1862. A lyrical drama by Ibsen, most famous Norwegian playwright. After a life of successive degradations, Peer Gynt finds redemption in the pure love of the woman who has waited for him throughout the years.

The Life and Death of Mr Badman: 1680. Two hundred years ahead of Ibsen in the analysis of the sense of guilt.

not reached by Ibsen: read 'by Ibsen' after 'Later' for the plain meaning. By his word order Shaw skilfully involves Ibsen's previous life in the evolution of the three hundred years.

Goldsmith: Shaw is arguing that ideas appear in writings and then re-appear and become effective long afterwards. This is a commonplace. Each generation has to be reminded and each has its own way of saving things. Goldsmith (1730-74) was a poet, playwright and essayist, whose poem, *The Deserted Village* (1770), stressed the importance of agriculture in the national economy. He describes the depopulated village, the peasants having emigrated, and recalls the happiness of earlier, prosperous days.

Henry George (1839-97): an American writer on sociology and political economy. His best known book, *Progress and Poverty* (1879), deals with the problem of *The Deserted Village*.

Keats (1795-1821): one of the greatest of the younger English Romantic poets, whose poem *Isabella* (1820) describes how Isabella's proud brothers kill her humble lover.

Marx (1818-83): German writer whose book *Capital* (1867) is the bible of the communists. Its connexion, if any, with Keats' poem is so remote that it must be considered one of Shaw's jokes.

Shakespear (1554-1616): greatest English playwright and poet. Shaw is fond of comparing his work, with impudent humour, with Shakespeare's.

Ibsenish: grim tragedies, in the Ibsen manner.

an old play: Hamlet, Shakespeare's famous tragedy, is based upon a much simpler earlier version of the same story.

Athenian level: all European tragedy has been measured against the splendour of the ancient Greek tragedies of Aeschylus, Sophocles and Euripides.

prehistoric Dane: a Shavian exaggeration. The story is set in Denmark in early times, but not in what we usually call prehistoric times. Hamlet's uncle killed his father in order to marry his mother.

PAGE 58

Polonius: one of Shakespeare's most successful character studies; of the old, experienced courtier-statesman, all too full of wise sayings.

Gordian knot: meaning a problem to which no solution can be found except by violent action. So called from an old Greek story about a knot so cleverly tied that no one could loosen it. Alexander cut through it with his sword.

makes the egg stand: another world hero, Columbus, the sailor and discoverer, found an active solution to a problem. When he was told that anyone could have discovered America, he challenged those who taunted him to make an egg stand on end. When they had no answer, he crushed an egg upon the table and told them that anyone could have done that too.

"Oh what a rogue . . .": *Hamlet*, II. i. 584.

Jesus: the Jewish religious teacher whom Christians recognize as the Son of God.

Moses: the ancient Jewish leader who gave his people the moral and ethical code called The Ten Commandments.

to send Rosencrantz . . .: two minor characters whom Hamlet sends to their death. Affected as he was by the Christian perception that revenge is futile, he could not have done this—an inconsistency in Shakespeare's characterization, Shaw points out. Compare later: "taken all the vulgar fight out of him without taking any of the courage."

PAGE 59

Doughty (1843-1926): a magnificent prose artist in *Arabia Deserta* (1888), greatest of the great English travel books about Arabia. A 'bigotted simpleton', says Shaw, for believing in Christianity so much that he rejected the Muslim beliefs of the Arabs.

the Nazarene: one of the many names given to Jesus of Nazareth.

writes like a child: most of his readers think he writes a most sophisticated prose, entirely apt to his subject. His book has not (yet) been printed as a World Classic. Shaw is interested that Shakespeare's Hamlet, a confused character, should be a classic, and that Doughty, very like Hamlet in his non-violence, yet a childish writer (in his opinion), though with "something majestic or gigantic" about him, should also be a classic. Creative evolution is at work.

PAGE 60

prophetic epics: all of them at present considered unreadable. The first of them *The Dawn in Britain* (1906) was in six volumes!

PAGE 61

Pygmalion: first performed in 1913, *Fanny's First Play*, 1911, *You Never Can Tell*, 1899. They all had successful runs. Playwrights get their plays accepted if managers think they will draw large audiences, or if a famous actor or actress likes the part written for them.

detective stories: still the easy way for a writer to make money, because the publisher knows they will sell. Shaw derides this potboiling trade.

I am clever enough: no exaggeration. Shaw always makes his plays very amusing, whatever he wants to say.

Mozart (1756-91) and *Beethoven* (1770-1827): two of the greatest European composers. Shaw was particularly fond of Mozart's music, as he shows in the Preface to *Man and Superman*.

PAGE 62

Barry Jackson: the first performance was in New York, and in England in the Birmingham Repertory theatre under the management of Sir Barry Jackson on 9 October, 1923.

elan vital: Shaw translates this in his Preface as 'Life Force'. See *Bergson* below.

goal of godhead: this is the optimism of a religion to say that evolution will go on till men become gods.

Descartes (1596-1650): French philosopher, founder of modern European philosophy. The Church, naturally conservative, made new statement dangerous.

PAGE 63

Galileo (1564-1642): Italian astronomer and physicist. Imprisoned by the Church, compelled under torture to repudiate his statement that the earth moves round the sun.

St. Jamarius: I have seen people crowding in excitement to see the blood liquely in a church in Naples.

Joshua: Shaw shows very sympathetically the difficulty of the priestly rulers. For example, the Bible story has it that the sun was held in the sky so that Joshua could continue to rout his enemies. This story would

become absurd if the earth moved round the sun; and the priests held that the Bible was the literal word of God. An awkward predicament for them.

municipal councillor: in St. Pancras, London.

Macbeth's witches: the three witches in Macbeth seem to be referred to as much as any characters in Shakespeare's plays.

Moses: is supposed to have written that part of the Bible which has the story of the sun standing still.

on the index: the Vatican, head office of the Roman Catholic Church, publishes a list (index) of books which the faithful must not read.

PAGE 64

Pavlov: Russian scientist, whose experiments on living animals incurred Shaw's rage again and again.

Torquemada (1420-98): Spanish monk who founded the notorious Inquisition, where men were heartlessly tortured and burned because they did not conform to the church's beliefs.

empty the baby . . . : a popular saying meaning that extremists go too far.

Voltaire (1694-1778): a notorious cynic, and one of the greatest French prose writers.

Habbakuk: minor prophet in the Old Testament.

Rousseau (1712-78): another French writer, of a very different kind from Voltaire, romantic as against classic, who was a forerunner of the French Revolution.

PAGE 65

Hitler (1885-1945): the German dictator, born in Austria. Nicely placed, from Shaw's point of view, with Pavlov.

PAGE 66

Darwinian Natural Selection: cf. Shaw's Preface to *Back to Methuselah*: "Darwin was given an imposing reputation as discoverer and founder of Evolution when he had really only sidetracked it by shewing that many of its developments can be accounted for by what he called Natural Selection, meaning that instead of being evolved for some vital purpose they were aimless and promiscuous results of external material pressures and accidents leading to the survival of the fittest to survive under such circumstances."

Butler (1835-1902): a writer who had a considerable influence on Shaw and who persistently attacked Darwin's theories, protesting against the banishment of mind from the universe, in a way the next sentence illustrates.

Weismann: Weismann, a very clever and suggestive biologist who was unhappily stultified by Neo-Darwinism, pointed out that as certain living organisms, though they multiply by splitting in living halves, never die, death is neither natural nor inevitable.

Methuselah: 'And all the days of Methuselah were nine hundred, sixty and nine years, and he died.' *Genesis*, v. 27.

This possibility: this is the kernel of Shaw's idea in Preface, Play and Postscript.

PAGE 67

Cobden-Croce: Cobden (1804-65) was a statesman who advocated free trade. Croce (1866-1952), was an Italian philosopher of international fame, who defied the fascists. Both these liberals felt that better conditions (more money and material things) would save humanity.

Carlyle (1795-1881): prose writer and nineteenth century prophet. Much influenced by German philosophy, he wrote *Heroes and Hero-Worship*, which encouraged the cult of the Great Man.

new Catholicism: catholic means 'all-embracing' and the new totalitarianisms are much as Shaw describes them. But the masses still feel nationally, and seem as unwilling as ever to feel that people of other nations are brothers.

Struldbrug: in Swift's *Gulliver's Travels* (1726) the Struldbrugs are a race of men endowed with immortality. They are acutely miserable.

how to feed: he means, in mentioning these things, if he could learn to be conventional.

PAGE 68

39 Articles: the statement of beliefs to which those who become priests in the Church of England subscribe. The first reads: There is but one living and true God, everlasting, without body, parts, or passions; of infinite power, wisdom and goodness; the Maker, and Preserver of all things both visible and invisible, etc.

the Thought: cf. the opening of the Gospel of St. John: 'In the beginning was the Word, and the Word was with God, and the Word was God.'

Blake (1757-1827): English lyric poet. The poem Shaw refers to is in the Preface to a long prophetic poem about Milton:

I will not cease from mental fight,
Nor shall my sword sleep in my hand
Till we have built Jerusalem
In England's green and pleasant land.

wishful thinking: a universal human weakness, whereby we believe that what we should like to be true really is so.

PAGE 69

John the Evangelist: a reference to the opening of the Gospel quoted above.

PAGE 70

social behavior: Orwell points out in his essay on *Gulliver's Travels* that social custom is a greater tyrant than law. 'When human beings are

governed by "thou shalt not", the individual can practise a certain amount of eccentricity: when they are supposedly governed by "love" or "reason", he is under continuous pressure to make him behave and think in exactly the same way as everybody else.'

Dick Turpin and Jack Sheppard: two notorious English highwaymen.

Paulov: (see also above) demonstrated that dogs reacted to stimuli, slobbering when they smelt food. The deduction followed that all our actions are automatic responses to stimuli. A debasing belief, leaving man no dignity.

PAGE 71

St. Augustine (A.D. 345-430): an early teacher of the Christian Church whose writings provided the basis for the Protestant break-away from the Roman Catholic Church.

St. Thomas Aquinas (1225-74): Italian philosopher and churchman. His great work, the *Summa*, which taught the harmony of faith and reason, is one of the great monuments of the medieval mind.

Butler (1692-1752): English bishop and teacher of ethics. Believed that conscience controlled men's actions by its knowledge of right and wrong. This gives men responsibility and dignity.

Bergson (1859-1941): French philosopher, who stated the problems of philosophy afresh and thus, Shaw says with his familiar impudent humour, is in the line which led to Shaw and his Creative Evolution. Creative Evolution and the Life Force (*l'élan vital*) were in fact preached by Bergson in his *L'Évolution créatrice* (1907). It is in the remainder of this paragraph that Shaw comes most closely to the teaching of the scientists which opens this selection. It shows how scientific discovery permeates modern philosophical thinking, and must do. For the function of metaphysics is to make sense of scientific fact.

Ecclesiastes: is the Greek word for 'preacher', and the Book of the Preacher in the Old Testament has for its theme, 'Vanity of vanities, saith the Preacher, all is vanity.'

Shakespeare: in his later plays, e.g. *Timon of Athens*, an expression of the hatred of mankind

Swift (1667-1745): the greatest of the English satirists. His *Gulliver's Travels* has already been noted. In one of the countries Gulliver visits human beings, called Yahoos, are the servants of horses, which are civilized and reasonable creatures, in strong contrast to the savage, loathsome Yahoos.

"George Eliot" (1819-80): pseudonym of English woman novelist, whose novels, notably *Middlemarch*, are again in favour. Her satire *Impressions of Theophrastus Such* is referred to here and that is not now read.

PAGE 72

"As flies...": *King Lear*, IV. i. 36.

Ghosts: (1881) in which Oswald Alving commits suicide because he fears the disease which killed his father.

Dr Inge (1860-1953): usually called 'The Gloomy Dean'.

"angry apes": His glassy essence, like an angry ape,
Plays such fantastic tricks before high heaven
As make the angels weep.

Measure for Measure, II. ii. 120.

Goethe (1749-1832): greatest of German poets, and his greatest poem the drama, *Faust*.

DEMOCRACY

From *Phoenix* (posthumous papers)

PAGE 73

Whitman: Walt Whitman (1819-92) an American poet, whose *Leaves of Grass* (1855) was written to help Americans break away from European thought and form their own ideas on the nature and government of American man. It is therefore a treatise on American ideas of democracy.

Rights of Man: three slogans common in European thought for two centuries, e.g. *The Rights of Man* (1791) is the title of a tract by the democratic Thomas Paine (1737-1809).

PAGE 75

Keats: see p. 185.

reach-me-downs: ready made clothes. Most men's suits are made in factories to various stock sizes in Europe and America.

Standard bread: was actually the trade name of a particular kind of bread.

PAGE 76

ridiculous human Ideal: one of Lawrence's themes in this essay is that ideals are nonsense. 'All ideals work down to the sheer materialism which is their intrinsic quality,' he concludes.

PAGE 77

Versailles: the great palace of the French kings near Paris, which is a symbol of the power and glory of aristocratic rule in France.

PAGE 78

Kaiser: Wilhelm II was the Kaiser (Caesar) who ruled Germany and led her into the disastrous war of 1914-18.

PAGE 79

Cook's: the world-wide travel agency.

Achille Serre: a cleaner of clothing with branch shops all over England.

Ford: the motor manufacturers who developed mass production methods and made it possible for ordinary middle class Americans to possess a car.

Selfridges: a huge department store in Oxford Street, London.

Krupps: the great armament firm in Germany.

Heidsiecks: great wine producers in France.

PAGE 80

But an ideal . . . from the mind: Lawrence had curious beliefs about the instinctive control of the human being by the body. The body is right because it is a part of nature. The workings of the mind are suspect. So he says that we must 'allow the soul's own deep desires to come direct(ly), spontaneous(ly) into consciousness'.

NON-VIOLENCE

From *Ends and Means*

PAGE 88

Bryce (1838-1922): Professor of Civil Law in Oxford and later a diplomatist. *Studies*, published in 1901.

PAGE 89

de jure . . . : by consent of law as well as in actual fact.

Hegel (1770-1831): Professor of Philosophy at Heidelberg and Berlin. He reconciled his teaching with the Christian doctrine that man must die to live, i.e. must practise self-denial.

Prussianism: Prussia ruled the German confederation of states. The Prussians had the militaristic desire to be overlords of all the world.

tief: German for 'profound'.

PAGE 90

in the preceding chapter: where he says: "Advanced thinkers" have talked and written at endless length about the desirable reforms, especially economic reforms. All of us have heard of the public ownership of the means of production; production for use and not for profit; public control of finance and investment, and all the rest. All of us, I repeat, have heard of these ideas and most of us are agreed that they ought to be transferred from the realm of theory to that of fact. But how few of us ever pay any attention to the administrative, educational and psychological contexts in which necessary reforms are to be carried out! That is the trouble, and Britain has found that public ownership brings many problems.

PAGE 91

In countries where rulers...: we have now turned to Chapter 10, 'Individual Work for Reform'. Having read the warning of the earlier chapter, we turn to the practical possibilities of progress. We shall see that in fact much of it is an idealistic appeal for non-violence.

PAGE 92

The Imitation: Of the Imitation of Christ, a mystical work written by Thomas à Kempis (1380-1471), a German monk. One of the most popular Christian books of piety.

these indispensable conditions: these words were published in 1937, and we have learned more about totalitarian ways of governing since then. A writer in a totalitarian country who said that private individuals should profess private thoughts would simply be liquidated. The successful practice of non-violence demands standards of conduct in the enemy which the totalitarians reject.

PAGE 94

The first condition of success: would in fact seem to be that the individuals live in a free and liberal country. But the reader may see further into this difficult question.

PAGE 95

To tend the sick...: he gives these examples as typical of the work performed by religious bodies in earlier times.

PAGE 96

Bethlehem Hospital: a lunatic asylum since 1402 in the City of London, usually called Bedlam.

PAGE 97

John Howard (1726-90): a philanthropist remembered for his work in improving prison conditions.

Tolstoyan: Count Tolstoy (1828-1910), the great Russian novelist, in late life gave up his lands and his titles, even the copyrights of his writings, to live as a peasant.

Abyssinia: conquered in 1936 by the Italian fascists, who used poison gas, for example, against their primitive victims.

PAGES 98-9

Lloyd George government: was in power till 1922. It could be argued that the Trade Union boycott has therefore given us the supreme example of tyranny over the worker. But we cannot tell how differently history might have been written.

PAGE 101

Red Indian Reservations: the white settlers in North America very nearly exterminated the Red Indians who possessed the country but eventually preserved those who remained in settlements at their previous low standard of life. Mr Huxley has lived for many years in America.

PAGE 102

Erewhon: 'Nowhere' in reverse, a satire by Samuel Butler which criticises many aspects of modern western civilization. The satire on the machines was the first part of it, published in a magazine, and the whole was published in 1872.

LEADERS AND FOLLOWERS

From Power: A New Social Analysis

PAGE 106

Xerxes: Greek form for Khshayarsha: King of Persia in the great days of the Persian Empire in the fifth century B.C. Part of the empire which he inherited from his father Darius was Greece, and he prepared a great expedition to punish the Athenians for interfering in the Ionian rebellion. The Greeks defeated him heavily, first at sea and then on land.

Newton (1642-1727): philosopher and mathematician, whose discoveries of the laws of motion and gravitation (published in his *Principia*, 1687) were the basis of physics until the work of Einstein carried us a step forward. Fellow of Trinity College, Cambridge.

St. Francis: Francis of Assisi (1181-1226) was a rich young Italian who turned priest and founded the famous Franciscan Order of friars.

Loyola (1491-1556): St. Ignatius Loyola was a well-born Spaniard, who, like St. Francis, began life as a soldier. Like St. Francis, he turned to religion, and founded the Society of the Jesuits, the intellectual preachers and teachers of the Roman Catholic Church.

danger of pneumonia: by wearing too few clothes in order to be fashionable.

'If it were now to die . . .': Shakespeare, *Othello*, II. i. 192.

PAGES 106-07

'the kingdom . . .': from The Lord's prayer, *Gospel of St. Matthew*, VI. 9.

PAGE 107

'married to immortal verse': Milton, *L'Allegro*, I. 137.

Milton's Satan: in *Paradise Lost*. Book I, line 242 and following gives an idea of Satan's nobility and impiety.

anarchic self-assertion: compare the arguments against anarchy in the Lowes Dickinson passage.

PAGE 108

Marx: see p. 186. His theory of political economy was entirely materialist and therefore mistaken, as Russell shows.

Old Masters: the general name given to paintings by famous old European painters.

will pursue power rather than wealth: that is the core of the argument and that is why the essay is included. We have had during the century a series of rulers all over the world who despise wealth and rich living but have an endless appetite for pure power.

Energy: heat and light are examples of energy.

PAGE 109

magna est veritas... truth is great and will prevail.

the blood of the martyrs... a traditional rendering, much quoted, of a saying of Tertullian, an early Christian writer.

PAGE 112

Adler (1870-1937): Alfred Adler was born in Vienna and joined the psychoanalytic school of Freud. Later, he broke away, believing that the desire for superiority and power was more important than Freud thought.

PAGE 113

Abraham Lincoln (1809-65): President of the United States and political leader of the North in the Civil War.

Napoleon (1769-1821): great soldier and Emperor of the French. Eventually defeated by Wellington at Waterloo (1815) and sent to exile in St. Helena in the ship *Bellerophon*.

Pankhursts: mother and daughter, were leaders in the movement at the beginning of this century for giving women the vote. They thought of troublesome ways of making nuisances of themselves (e.g. chaining themselves to railings in the street) and often went to prison. All through the 1914-18 War they refrained from militant agitation, as they recognised other freedoms were threatened.

Lloyd George (1863-1945): Prime Minister in 1914-18 War. Famous for his social legislation, especially in national insurance

PAGE 114

D. H. Lawrence: the son of very poor people. A friendship grew up between Lawrence and Bertrand Russell (who is really Lord Russell), but ended in Lawrence being quarrelsome

Austerlitz: one of Napoleon's greatest victories.

Madame Mere: French for 'Madame, his mother'.

Attila: King of the Huns, a German tribe who attacked the Roman Empire between 445 and 450.

Queen Elizabeth (1553-1603): Queen of England, a great ruler and a great orator on occasion. Her father, Henry VIII, was a tyrant.

PAGE 115

the mediaeval church: the Roman Catholic Church in the Middle Ages united western Europe in one civilization, thus taking the place of the ancient Roman civilization.

Cromwell (1599-1658): Oliver Cromwell was Protector of England after defeating King Charles the First in the Civil War or Revolution.

Lenin (1870-1924): founder of the USSR. Cromwell was very religious but Lenin preached the materialist Marxist doctrines.

PAGE 116

Corsica: the Mediterranean island, belonging to France, in which Napoleon was born.

18 Brumaire: the day (9 Nov. 1799) on which Napoleon established his supremacy.

Marengo: French victory against the Austrians, 1800. Napoleon was saved from calamitous defeat by the sudden and unexpected appearance of another French force.

Hitler: see p. 188. This was written before the last war, while Hitler and Mussolini were still alive. The Germans always need a leader with religious exaltation in his nature.

Mussolini (1883-1945): Italian Fascist leader, originally a journalist

Alexander (356-323 B.C.): Greek King of Macedonia and conqueror of Egypt and Persia. Marched across Pakistan to the hills.

PAGE 117

Cecil Rhodes (1853-1902): diamond millionaire, who greatly extended British power in South Africa. Founded Rhodes scholarships which take commonwealth students to Oxford.

Matabeleland: a South African territory, named after the tribe to which it belonged. Among the many territories Rhodes annexed.

Caesar (102-44 B.C.): ruler of ancient Rome, after greatly extending the Empire in Europe.

Antony: Mark Antony (83-30 B.C.): famous Roman soldier, friend of Caesar, rival of Augustus, who eventually defeated him. See Shakespeare's two plays, *Julius Caesar* and *Antony and Cleopatra*.

HUMAN PSYCHOLOGY

From Instincts of the Herd in Peace and War

PAGE 118

biology: i.e., the study of the life and development of the social habit.

PAGE 119

intolerant: i.e., intolerant of solitude as well as fearful of it.

resistance to a new idea: is first of all instinctive or emotional, and then the brain supplies reasons for rejecting it.

encompassing being: a god.

'Thoughts hardly to be packed...': from Browning's *Rabbi ben Ezra*.

PAGE 120

the altruistic emotions: which he discusses in the next chapter, saying: 'Throughout the incalculable ages of man's existence as a social animal, Nature has been hinting to him in less and less ambiguous terms that altruism must become the ultimate sanction of his moral code. Her whispers have never gained more than grudging and reluctant notice from the common man, and from those intensified forms of the common man, his pastors and masters. Only to the alert senses of moral genius has the message been at all intelligible, and when it has been interpreted to the people it has always been received with obloquy and derision, with persecution and martyrdom. Thus, as so often happens in human society, has one manifestation of herd instinct been met and opposed by another.' Cf. Sherrington.

the religious needs and feelings: it seems remarkable that Trotter should feel it necessary to stress this. It is an ironic exaggeration of the reaction to the materialistic outlook which became prominent in the nineteenth century.

PAGE 121

tolerate uncomplainingly: this is another case of ironic analysis of the human situation.

in his panics: passages developing this subject in *Collected Papers* by the same author are well worth looking at.

PAGE 122

In ordinary politics...: this is surely the finest irony in the chapter.

PAGE 123

crossing-sweeper: boys who swept the dirty snow or mud away at crossings in towns. They disappeared long ago but this book first appeared in 1919, when people remembered them.

LIBERTY AND PROGRESS

From *A Modern Symposium*

PAGE 127

Henry Martin: Mr E. M. Forster has very kindly told me that Henry Martin was really Henry Sidgwick, the Cambridge philosopher and Charles Wilson was really Karl Pearson, the scientist.

PAGE 128

MacCarthy: the previous speaker, who had ended by quoting Blake.

Urthona: see *The Four Zoas*, one of the Prophetic Books of William Blake, in which the characters are gigantic spirits:

Tharmas before Los Stood; and thus the Voice of Tharmas rolled:

'Now all comes into the power of Tharmas. Urizen is fall'n

And Luvah hidden in the Elemental forms of Life and Death.

Urthona is My Son. O Los, thou art Urthona, and Tharmas Is God.'

from *The Four Zoas*, Night 4, l.128.

Urizen: this reference is scholarly fun. Urizen represents a restrictive morality in Blake's poem, Urthona something more generous.

Mars: the 'one planet (which) was blazing red', a symbol of war.

Aquarius, the water-carrier, in the eleventh sign of the Zodiac.

PAGE 130

a critic like myself: as the following passage shows, he works not by the blinding flash of intuition but by the patient processes of the intellect, of mind working logically.

liberty and order: all will agree to seek them as ends. It is the means by which they can be attained that are so extremely complex.

PAGE 131

anarchy: MacCarthy, the previous speaker, was an anarchist in the good general sense of individualist.

PAGE 132

Allison: an old-world socialist, who carried on the liberal tradition, had spoken just before MacCarthy. He spoke of 'an economic revolution accomplished by a gradual and peaceful transition and issuing in a system of collectivism so complete as to include all the human activities that are really valuable'.

PAGE 133

officials sufficiently competent: England found that this was the prime difficulty when she developed the Welfare State. The officials are remarkably honest, but they might be more expert and more energetic. Cf. what Orwell says about their use of language.

PAGE 134

exploit the powers of government: cf. what Forster says on this subject.

PAGE 135

artists, poets, men of science: this again is the individualist view, that society should be organized so that the exceptional individual can develop fully. The danger of collectivism or socialism is that all in being equal remain equally mediocre.

spirit of adventure . . . progress: which, he implies, always depends at last upon the gifted individual.

PAGE 136

predetermination: as if Good and Right were finally settled before we begin, and no one can challenge it and therefore no one can be allowed to challenge it; and *there* is the end of progress.

PAGE 137

a man of science: this brings us the breath of the modern world, which has developed so powerfully since this Modern Symposium was published at the beginning of the century. Lowes Dickinson is prophetic here, for scientists more and more have taken charge of our lives and of our hopes.

PAGE 139

a certain attitude towards life: the obvious comparison now is with the passage by Haldane. Cf. also, his essay, *What I Think About*, in the same volume of his essays.

PAGE 140

Marcus Aurelius (A.D. 121-180): Roman Emperor and stoic philosopher, whose *Meditations* are one of the great European books on human conduct.

Stoics: ancient Greek school of philosophy, which taught that virtue is the highest good and is found by control of the appetites and passions. It is the natural philosophy for Englishmen to adopt and was particularly popular among educated people when this was written.

PAGE 141

the tub: Diogenes, the cynic, a Greek philosopher who lived in a tub to demonstrate how much he despised earthly pleasures. Many early teachers of the Christian Church deserted society and lived in hermitages or deserts.

PAGE 142

good offspring: usually called eugenics or selective breeding.

PAGE 143

house-room, sanitation: I remember an Oxford surgeon telling me that when he and others had regular meetings to discuss social medicine, they never discussed purely medical problems, but housing, sanitation, food and economics, and other questions which all bore upon preventing sickness.

dead languages: Latin and Greek. He is describing the nineteenth century public school system, now very changed into an admirably balanced system of education.

PAGE 144

Democracy: this attack is well answered in other passages here; e.g. Forster and Huxley on the place of the individual in developing democracy.

government will be oppressive: yet modern totalitarianism, founded on some sort of scientific basis, are the worst tyrannies in the history of man.

WHAT I BELIEVE

From *Two Cheers for Democracy*

PAGE 146

Belief: with a capital 'B' implies a creed or dogma shared with a group. Forster is an individualist, like all artists.

Tolerance, good temper and sympathy: very like Sherrington's altruism, the first and last, with the social sense of 'good temper' added.

science . . . subversive pump: scientists are prepared to make atom bombs as well as penicillin; and this attitude that discovery and invention can be divorced from human morality enrages the artist.

PAGE 147

Erasmus (1466-1536): Dutchman, one of the great European humanists. He, like Montaigne (1533-92) the Frenchman, the first and greatest of all essayists, believed in the development of the individual mind and spirit. While Moses, the ancient Jewish leader, who led the Jews out of captivity in Egypt, and St. Paul, who really founded the Christian Church as an organization, believed in great group movements.

Mount Moriah: on which Abraham was commanded by God to sacrifice his son Isaac; in the Old Testament story.

Elysian Field: the heaven of the ancient Greeks.

personal relationships: this is the idea behind all Forster's writing.

Psychology: not only that, alas, but also what we now know that drugs can do to the personality, when used by irresponsible men, totalitarians who have no respect for the individual.

PAGE 148

Dante: See p. 185. Brutus and Cassius were Roman statesmen who were leaders of the group which assassinated Julius Caesar, because he was threatening to become a totalitarian Leader.

PAGE 149

'even Love, the Beloved Republic . . .': From Swinburne's 'Hertha' in *Songs before Sunrise*.

Private Member: i.e. attached to no great political party. It is very distressing that there are no private members any more in the House of Commons. The two great parties are so balanced and competition is so keen that citizens dare not vote for private members and so risk what they believe to be the wrong party getting in.

PAGE 150

mind their steps: to be careful. This essay has more of these colloquial phrases than anything else Forster has written, no doubt because he is writing a popular pamphlet.

PAGE 151

Nibelung's Ring: an ancient Norse folk story used by the German composer Wagner for a series of four musical dramas. In the Norse poem, Fafnir is the dragon who guards the hoard. In Wagner's opera, he is a giant snake.

Nietzschean: See p. 185. Meaning here the worshipper of force

Wotan: father of the gods in Norse mythology; in Wagner's opera, with limited powers and eventually overthrown. Walhalla was the castle he built with Odin to protect himself from other gods.

Valkyries: in Norse mythology, the messenger maidens of the god Odin.

Brünnhilde: whose last song is sung before jumping onto the funeral pyre of her husband Siegfried.

PAGE 152

League of Nations: founded after the 1914-18 War to ensure co-operation between the nations to avoid war. A complete failure. Now we have the United Nations.

PAGE 153

Sophocles: the ancient Greek tragedian.

Horace: the Roman poet, whose outlook was urbane, amused, cynical.

Great Man: the Nietzsche idea, which produced totalitarianism.

Admiral Togo: an imaginary figure, of course.

PAGE 154

the sensitive, the considerate and the plucky: who have the virtues he speaks of in the beginning: tolerance, good temper and sympathy; and probably Sherrington's ideals are theirs, Truth, Charity and Beauty. There is a most interesting discussion of Truth, Beauty and Goodness at the end of Somerset Maugham's *The Summing Up*.

PAGE 155

Group Movement: an American Christian cult, sometimes called The Oxford Group, which spread to England and flourished in the '30s.

Holiness of the Heart's Affection: 'I am certain of nothing but the holiness of the heart's affection and the truth of the imagination.'—Letter of Keats, 1817.

drop a copper . . . : 'coin' understood. The smallest currency.

PAGE 156

Saviour: one of the names given to Jesus, whose teaching is recorded in the four gospels.

Jacopone da Todi (1230-1306): Italian poet of a noble family of Todi who became a Franciscan friar.

ALTRUISM

From *Man on His Nature*

PAGE 158

Nature is non-moral: as Sherrington moves to the height of his argument, he goes over again the earlier conclusions of his lectures. He has pointed out that man tends to look at the whole of Nature from man's standpoint, which is a moral one. Nature is harsh, but it is outside the moral values through which man always looks at things.

Design: he has already referred to the old argument of philosophers that as there is Design in the working of the world, there must be a controlling Mind or God, to make the Design. The argument was first refuted by Hume, the Scottish philosopher.

PAGES 158-9

'there is nothing good . . .': *Hamlet*, II. ii. 256.

PAGE 159

except himself: harking back to his first statement: 'Nature is non-moral'.

Laforge (1860-87): French poet.

'comme nous sommes . . .': 'yet how absolutely alone we are on our earth!'
willy-nilly set so: means 'more than that, set in that position whether he likes it or not'.

Kant (1724-1804): German philosopher of immense influence in Europe. He believed in the moral law, in immortality and in God. The quotation is from his *Collected Works*, 111, p. 58.

PAGE 160

Olympian: In Greek mythology, the gods lived on Mount Olympus.

'Most of those . . .': This passage from Bertrand Russell's *History of Western Philosophy* may make the argument clear: 'According to Kant,

the outer world causes only the matter of sensation, but our own mental apparatus orders this matter in space and time, and supplies the concepts by means of which we understand experience. Things in themselves, which are the causes of our sensations, are unknowable; they are not in space or time, they are not substances, nor can they be described by any of those other general concepts which Kant calls "categories". Space and time are subjective, they are part of our apparatus of perception.' (p. 734).

Spinoza (1632-77): Jewish philosopher who lived in Holland. Most lovable of all European philosophers. God for him was part of the universe, not a Being outside it.

Aristotle (384-322 B.C.): Greek philosopher who created logic, the science of reasoning.

One of my predecessors: Bernard Bosanquet, who delivered the Gifford Lectures in 1912.

Keats (1795-1821): the quotation is from Letter 114 in the Collected Edition.

PAGE 161

Ephesus: see St. Paul's statement in 1 *Corinthians*, xv, 22. 'If after the manner of men I have fought with beasts at Ephesus', which is explained in *Acts*, ch. 19, which describes the riots in which St. Paul was involved.

The Blinded Bird: from *Moments of Vision* by Thomas Hardy. Owners of songbirds would blind them by piercing their eyeballs with hot needles. The poet addresses the bird in pity as it sits and sings in its cage of 'pitiless wire'.

perilously unnatural step: in the nature of things it is the feeling of selfhood which provides the zest-to-live and altruism might endanger that, operating, as he says later, 'contrary to the broad trend and polity of life'.

point d'appui: base of operations.

PAGE 162

'None can usurp . . .': from Keats, *The Fall of Hyperion*.

perennial antagonism: e.g., life began when one cell divided into two. In another science, physics, neutrons oppose electrons.

PAGE 164

'Ah Love! . . .': from Fitzgerald's poem, *Omar Khayyam*.

PAGE 165

Happy Isles: ancient Mediterranean folklore had many stories of islands, out in the Atlantic where everything was perfect.

New Atlantis: the Utopia of Francis Bacon, set in the Pacific, not the Atlantic. Published, unfinished, in 1626

Joseph Priestley (1733-1804): published his *Essay upon the Principles of Government* in 1768. This is a quotation from it.

French Revolution: in 1789 did away with a tyrannical monarchy and replaced it with a Republic, which soon became a tyranny under Napoleon.

sequitur: long life and happiness do not always go together. Compare what Shaw says. Nor does happiness necessarily follow from scientific development.

'*master of his fate*': from Henley's poem 'I am the master of my fate, I am the captain of my soul'. Sherrington scoffs at this easy optimism.

PAGE 166

180 years ago: the lecture was delivered in 1938.

'*The vast wastage . . .*': from Professor Lancelot Hogben's popular book *Science for the Citizen*, p. 965 (1938).

'*The first is how . . .*': same book, p. 967.

'*Selective elimination . . .*': same book, p. 697.

PAGE 167

hyperparasitization: too many parasites.

Sabunde: Raymond Sabunde was quoted earlier in the lecture as writing: 'every creature is a written letter declaring goodness.'

motif: an idea which recurs again and again. One of the motifs in this selection is altruism.

medieval reason: it goes further back than that to the Old Testament, which came to Europe with Christianity.

Fernel: Jean Fernel was physician to Henri II, King of France. His book *On Hidden Causes*, published in 1548, is discussed at the beginning of the lectures. Fernel 'was the first to draw together into one discipline physiology . . . holding it to be the necessary introduction to scientific medicine.'

PAGE 168

malaria: earlier in the lecture he has a long description of the struggle between the human body and the malaria parasite.

PAGE 169

'*The old order . . .*': Tennyson, *The Passing of Arthur*, 1. 908.

PAGE 170

Ray: John Ray (1627-1705): English naturalist.

Linnaeus (1707-78): Swedish naturalist, founder of modern botany.

Cuvier (1769-1832): French naturalist, founder of the science of comparative anatomy.

'temperament': there are four temperaments, associated with the four elements, air, fire, water and earth.

PAGE 171

'The beginnings of our being...': from his great book, *Medicina* (1554). This is a very early argument for eugenics, or selected mating.

Gerard: in the periodical *Science*, vol. 58, p. 387.

Hume's Philo: earlier in the lecture he says: 'Hume makes his character Philo inveigh against Nature "pouring forth into her lap without discernment or parental care her maimed and abortive children".' Hume (1711-76) was the great Scottish philosopher. His *Dialogues concerning Natural Religion* are referred to later.

PAGE 174

Hardy (1840-1928): novelist and poet with a seemingly pessimistic outlook. A late volume of verse was called *Human Shows, Far Fantasies*.

Cleanthes: in Hume's *Dialogue*. Earlier in the lecture he says: 'the character of Cleanthes offsets the pain to be found in Nature by co-existent equivalence of pleasure.'

was not primeval: we know enough about biology now to know it took many thousands of years for Man with his brain to evolve.

Truth, Charity, Beauty: Plato, the Greek philosopher to whom European thinking owes so much, said that the fundamental virtues are Truth, Goodness and Beauty. The lecturer changes Goodness to Charity, which is altruistic love, and so develops Plato's thought. In Beauty, he refers to Music, which many (E. M. Forster among them) believe is the final and most perfect form of expression.

FURTHER READING

Sir James Jeans: *Through Space and Time* is the book of the Royal Institution lectures of 1933. As these are intended for young people, the book is easy reading. *The Mysterious Universe* is another popular description. Eddington's books, e.g. *The Nature of the Physical World* are, though equally fascinating, much more difficult.

J. B. S. Haldane: Professor Haldane has done a great deal of popular writing. *Possible Worlds* (1927) and *The Causes of Evolution* (1933) may be mentioned.

George Orwell: *Shooting an Elephant* (1950) and *England Your England* (1953) for essays and sketches. *Animal Farm* (1945), a satire in the form of a very simple story, is his most enjoyable book. *Burmese Days* (1934) among the novels, for 1984 is too terrifying to recommend. *Homage to Catalonia* is autobiography and about the Spanish War.

Somerset Maugham: *On a Chinese Screen* (1922) is another travel book. *Cakes and Ale* (1930) and *Of Human Bondage* (1915) among the novels. *The Circle* (1921) and *Our Betters* (1923) among the plays. *The Collected Stories* gives a splendid choice of short stories. *Don Fernando* (1935) is a superb study of Spanish thinking, writing and painting. *The Summing Up* (1938) gives a fine insight into the writer and his work, and is well worth reading for what he has to say about the craft of writing.

Bernard Shaw. *Man and Superman* (1903), *Heartbreak House* (1919) and *St. Joan* (1924) with their introductions may be specially recommended. Shaw's provocative, argumentative English is unsurpassed, and any of his Prefaces are good value. *Sixteen Self-Sketches* tells part of the story of his early life.

D. H. Lawrence: For a novel, *Sons and Lovers* (1913) or *Aaron's Rod* (1922). For a travel book, *Mornings in Mexico* (1927) or *Twilight in Italy* (1916). The short stories are brilliant. The poetry shows how Lawrence achieved his prose style.

Aldous Huxley: *Antic Hay* (1923) or *Those Barren Leaves* (1925) for a novel. *Jesting Pilate* (1926) for travel in the East. *Brave New World* (1932) for a boisterous Utopia. *Mortal Coils* (1922) for short stories. *The Olive Tree* (1936) for literary and other essays, are suggestions on an author unusually prolific in many kinds.

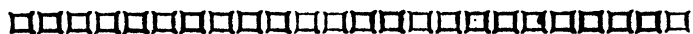
Bertrand Russell: *Sceptical Essays* (1928) and *In Praise of Idleness* (1935) are a personal choice from among the many volumes of essays. *History of Western Philosophy* (1946) is a lucid outline.

Wilfrid Trotter: There are only two books: *Instincts of the Herd* and *Collected Papers* (1941), which contains some remarkable essays.

Lowes Dickinson: *Letters from John Chinaman* (1901) is his most popular book, using the convention of a pretended criticism by an oriental of western civilization. *After Two Thousand Years* (1930), a dialogue between Plato and a Modern Young Man, can be recommended; but so can all his books.

E. M. Forster: *A Passage to India* (1924) is his most popular novel; *Howards End* (1910) generally held to be his best. The two collections of his essays, *Abinger Harvest* (1936) and *Two Cheers for Democracy* (1951) are most useful. His *Goldsworthy Lowes Dickinson* (1934) tells us a great deal about Forster as well as his subject.

(Sir Charles Sherrington and Mr Hoyle are 'one book men' so far as we are concerned.)



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