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# MUST PHILOSOPHERS DISAGREE?

## AND OTHER ESSAYS IN POPULAR PHILOSOPHY

BY

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FELLOW OF THE BRITISH ACADEMY

MACMILLAN AND CO., LIMITED
ST. MARTIN'S STREET, LONDON
1934

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# PREFACE

Of the Papers printed in this volume a considerable number have been published before in various periodicals, largely in America. These now appear in a revised form. I am indebted to their editors for the leave to republish. As the subjects discussed may at first sight appear somewhat diverse, it will be well to explain the principle which underlies their selection from a much larger mass of material. They are all of them somewhat deficient in technicality, and if not grossly popular, yet capable of appealing to others than merely professional philosophers.

I am aware of this defect, and intended it. For the principle of selection used is itself the result of a particular theory of the function of philosophy. Of this function there would seem to be three very distinct conceptions. It may be said, perhaps, that nearly all philosophers would agree that the aim of philosophy was to undertake a task which the special sciences very properly put aside, and to take a comprehensive view of life as a whole: but this agreement is compatible with great divergences about the actual methods to be used by philosophy, and is hardly more than nominal in fact. Actually, the student of philosophic writings is apt to encounter, first, masses of abstruse philosophies which seem dimly to aim at edification, more or less, and are easily suspected of being mystery-mongering at

bottom. Next, he is likely to come across philosophies which seem to cultivate technicality for its own sake : they often make a great parade of ' exactness,' but soon get lost in a vast apparatus of definitions and distinctions, and involve the learning of a great variety of uncouth dialects. These perhaps are best regarded as word-games, often more difficult than cross-word puzzles, but not fundamentally different. Both these sorts of philosophy in the last resort rely on nothing in the world but the existence of words and their assumed meanings, which they manipulate ingeniously. They are therefore essentially verbalism, but not literature, and they occupy at least three-quarters of the histories of philosophy.

But there is a remnant of philosophers who have had belief enough in the value of philosophy to desire to express themselves intelligibly and to endeavour to make philosophy a factor in the general culture of their age. Philosophers of this type can trace their pedigree to Plato, and can point to such personages as Locke, Berkeley and Hume, Schopenhauer and Nietzsche, Voltaire and Bergson, Russell, Santayana and William James, as their masters and models. They will always be a minority, and will be secretly or openly detested by their more professorial colleagues ; but if philosophy is not to sink out of sight in the mire of academic pedantry, it seems to me a duty of all who can to follow their shining example.

There is a further reason for this choice. The organization of the American educational system imposes on every academic subject a great need to explain itself to the people and to cultivate a certain popular appeal. This is by no means merely a burden. It is a great safeguard against the temptation to seek seclusion and safety in ivory towers of

unapproachable technicality and unassailable specialization. At any rate the American university and the American professor have to conceive themselves as not entirely absorbed in sterile 'learning,' and as performing a 'social service' widely appreciated in a democratic community. Accordingly, in my capacity of winter migrant to California, and professor in the University of Southern California, I have frequently had occasion to take part in series of popular lectures on philosophic topics, and many of the Papers in this book have had this origin. They will doubtless appear despicable to the haughty specialist; but they are related to a different system of education (as explained in Chapter III), and to an interest in philosophy which differs both in kind and in amount from anything we can foster in Oxford. I do not believe that in any British university town the local professors would volunteer courses of free lectures open to the public, such as those now for years organized by Professor J. E. Boodin at the Los Angeles Public Library, nor that, if they did, they would draw such large and appreciative audiences. On the other hand, the Paper on 'The Psychology of Examinations' should help Americans, and especially Rhodes Scholars, to understand the aims and methods of our Oxford system.

I am greatly indebted to my friend, Mrs. Louise Strang Griswold, for help in the proof-reading and indexing.

CORPUS CHRISTI COLLEGE
OXFORD
*July* 1934

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# PART I

# EDUCATIONAL

# CHAPTER I

## *MUST* PHILOSOPHERS DISAGREE?[1]

THE question which we are met to discuss to-night is not a dispute about the facts. We are all aware that philosophers are even more prone to disagree than doctors, and probably all of us are ready upon occasion to contribute our quota to the disagreements that mark, and scar, the face of philosophy. But what may well be a subject for wonder and inquiry is the explanation of these facts. How did this state of affairs ever arise and spread, and what reasons are there for it? And is there any cure? Or is there something in the very nature of philosophy which makes it inevitable that philosophers should disagree? This is the question I wish to discuss and to which I wish to give a reasoned answer in the affirmative. It is a very serious, and not at all a flippant question, not only because it appears at first sight to affect the credit of philosophy, but also because to answer it we shall have to go deep into the nature of philosophy itself, and to bring out some of the most essential differences between philosophy and science.

### § 1

I wish, moreover, to discuss this question as seriously as it deserves, and with no desire to score debating points. I hope, therefore, that no gay and frivolous dialectician will try to burke our discussion by pointing out that I have astutely chosen the better part, because, whatever

[1] From the Aristotelian Society's *Supplementary Volume*, 1933.

happens, my contention must obviously prove victorious. For whether others agree with me or disagree, whether we quarrel or agree to differ, we shall equally prove that disagreement is characteristic of philosophy. Such a dialectical victory, however, would be profoundly inadequate, because it would not reveal *why* in philosophy disagreement is normal and universal, whereas in all other subjects it is occasional and abnormal. I want, therefore, *ab initio* fully to face the whole paradox of the situation, and to admit the serious discredit it has brought upon philosophy. It is *prima facie* reasonable to ask how a number of men, all intelligent and all familiar with the same questions, can continue to answer them so differently as do the philosophers; and how a subject can be scientific or worthy of serious attention in which the experts differ as the philosophers do, and as they have done for the last two or three thousand years!

In reply I would suggest that here is precisely one of the points in which philosophy is *not* analogous to science. If, therefore, it is taken for granted, without more ado, that agreement among experts is the essence of science, it is clear that philosophy can lay no claim to be science. But nevertheless, this difference, so far from constituting a defect in philosophy, may really be its glory: it may really mean that philosophy here completes and transcends science, and aims at a higher ideal. If so, its toleration of differences and disagreements may be a characteristic mark of its superiority.

§ 2

In support of this suggestion let us inquire, first of all, how in the sciences the required basis for agreement is actually reached. Whenever we take a science, not as an already made structure of established doctrines, but in its historical setting as a special department of knowing which has been marked off from the rest from motives of convenience for the purpose of inquiry, we find that its chief feature is always that it rests on *abstractions* and *selections* Just because every science is a 'special science,' it selects

a special aspect of the whole field of possible inquiry, and cultivates it by special methods suited to its special purpose. But the other side of special attention is rejection and abstraction. Every science ignores and abstracts from whatever is not relevant to its purpose. When this apparently arbitrary but really legitimate procedure is objected to—and it has only just begun to be noticed even by logicians—it salves its conscience by hoping that some other science will take up what it has omitted; and it is of course often true that these hopes are fulfilled.

It is, however, to be emphasized that there is nothing in this procedure to guarantee that *all* such omissions will be made good. If there are abstractions which are *universal* and are made in all the sciences, if there are aspects of the real which are *universally* omitted, there will be no way of rectifying them within the framework of science; they will either be left uncorrected or else some other discipline will have to be devised to deal with them.

## § 3

Now I shall venture to maintain that this possibility is exemplified in fact. There *are* big and important aspects of the real which fall without the purview of *every* science, and which can therefore be considered only by philosophy, if philosophy is taken comprehensively enough.

There is, for example, the great fact of *personality*. This means that every vital process in the various centres of experience, every feeling, every perception, every reasoning, despite its general likeness to those of other persons, presents individual differences. The actual behaviour of every one is strictly the revelation of an idiosyncrasy.

Idiosyncrasies, however, appear to be beneath the notice, or beyond the reach, of science. In every science these individual or personal differences are ignored in constructing the standardized percipient, thinker, or observer, whose reactions are treated as 'normal.' Similarly, large tracts of actual experience are submerged and excluded as 'subjective,' in order to focus scientific attention upon the

selected and preferred sections which are judged fit to reveal objective reality. Hence the real data, which are truly 'given,' all arise in the personal context of an individual soul: they are never the *scientific* 'data' from, and about, which the sciences argue. The latter are always *sumpta*, selected from the former, and dictated by the interests of each science; moreover, they are usually seen in the glamorous light of whatever interpretative theory happens to be in fashion.

Thus it is 'objectivity' which is always factitious and fictitious; the 'worlds' of the various sciences, that is their selected spheres of interest and operation, are really the outcome of highly selective value-judgments: they are literally *creations* of the sciences, built out of the crude data of our actual experience by the special purpose of each science.

In this procedure, however, one central feature of the actual experience is always omitted. Actual experience is always grouped around a *personal self*, which has come to be what it is by a unique historical development. So all *experienced* reality arises in a personal context and is egocentric, and every self differs more or less from every other; as we all discover when we deal with other selves.

## § 4

To all appearance, however, scientific procedure simply abstracts from these differences and refuses to consider them. Ever since Plato's day philosophers have asserted or assumed that science is not concerned with the individual.[1] It cares only for the universal, for classification by 'kinds' which are taken to be the same in 'essence.' It aims at, and sets up, 'laws' and 'universals,' which 'particulars' have merely to 'obey' and exemplify. Thus the differences between particulars, even when not denied outright, are simply assumed to be irrelevant for scientific purposes, and are ignored as such. It is by this assumption alone that science is enabled to construct the

[1] See *Theaetetus*, 209.

common world of intersubjective intercourse, or 'objective reality,' which different observers can combine to explore.

But this assumption is plainly a *fiction*, a fiction, moreover, of which the real function and purpose have been grossly misunderstood. It is true that the sciences use formulas, from which all references to the time and the place and the particular observations out of which the 'laws' were compiled have been carefully expunged. But the reason for this is not, as is commonly believed by philosophers, either that the particular case is unworthy of scientific attention or that science is incapable of apprehending it. Particular cases are precisely what the sciences are engaged in predicting, and their 'truth' is judged by their success in predicting the flow of events. The astronomer is no more concerned with eclipse in general than, *pace* Aristotle,[1] the doctor is concerned with man in general without treating his particular patient. Both use the general rule to handle the particular case. Nor can any case be so particular that it cannot be taken as the foundation for a general rule. For it rests entirely with us, and our attitude towards it, to take any complex of particulars as a 'case,' of as yet undetermined 'laws,' and the imagination can easily equip even the most unique and anomalous event with shadowy companions to form its 'kind.'

The true reason, therefore, for the apparent abstraction from the particulars of cases is simply the desire for a general formula which can be 'universalized' and is not *restricted* to the events which have occurred on a particular occasion. The 'law' has to be liberated from its historical setting, merely because it is needed for use upon *other* 'cases' with *their* historical setting. Thus the abstraction from particularity is *intended* merely to produce applicability.

It may next be suggested that the abstraction from *personality* in the sciences has a similar meaning and function. It is intended to eliminate, or at least to slur over, the annoying discrepancies between the various individual ways of taking the world, which are such

[1] Cf. *Rhetoric*, 1, 2.

obstacles to calculating and predicting personal reactions, and it succeeds, not indeed perfectly, but sufficiently to warrant the abstraction. It succeeds sufficiently to permit us all to speak of '*the*' common world, in which all persons share, and to conceal its real nature from nearly all. Yet in ultimate analysis 'the' world is an artefact, a construction, and a fiction. It is constructed by omitting from the infinitely numerous worlds of personal experience the infinitely numerous items which are merely different, and cannot be shared. They simply are not counted, and do not count. After ejecting them, the sciences can proceed happily to explore the remainder of the real, which is then called 'objective,' and to lay down 'laws' which hold 'universally.' All of which is very convenient, comfortable, profitable, and pragmatically intelligible.

But I must insist that it *is* abstraction, none the less; and it is *not* the whole story. After the sciences have done their utmost and told us what the truth is according to their several lights, they leave us with a big unsolved problem, the problem of the Whole. To this problem they can offer no solution, because their whole procedure has been to *dissect* the apparently presented real by selecting such parts as seem to them relevant to the special purpose and interests of each science. So from one point of view the final outcome of the scientific attitude towards the real is, not a cosmos, but a chaos, a congeries of sciences that have selected different aspects of the Whole, studied different 'facts,' and departed from the given in different directions. The cosmic jig-saw puzzle has been cut up. Humpty-Dumpty has been effectively dismembered, and just because it is a *special* science, *no* science can presume to put him together again. It is therefore essentially futile and wrong in method to debate whether the Whole is best understood in geometrical terms or in physical or in psychological, and to ask whether 'God' (if that is the name adopted for the Whole) is more of a mathematician, or of a physicist, of a psychologist or even of a humourist. A new discipline, with a new method and a new aim, is needed to cope with the problem of the Whole.

§ 5

Now of course there *is* such a discipline, and always has been, though its functions have not always been understood. The traditional name for it is Philosophy, and its ambition is precisely that of putting a glorified and transfigured Humpty-Dumpty together again, that is, of moulding the findings of the sciences into a harmonious view of the (hypothetical) cosmos. In other words, Philosophy, and Philosophy alone, is the study of *all* the data, and to its all-embracing purpose nothing can be presumed to be irrelevant—except, of course (and the exception is of great importance), such scientific details as may safely be taken to make no difference to its purpose or to the meaning of the real.

Whence, of course, it follows at once that Philosophy has no right to make abstractions. Rather, it must *undo* the arbitrary abstractions the sciences have made, and make good any damage they may have done. Now this applies particularly to the scientific abstraction from personality. Personality cannot be ignored by Philosophy; it is a fact for Philosophy which cannot be overlooked. For it would seem to be the root of the underlying obsessions which render rational discussion so difficult in philosophy. Just as there are persons with whom rational conversation is impossible, because they are obsessed with sex (and take everything *sens. obs.*), so among philosophers. The sex-obsession dominates Freud; the mechanical, Watson; while (until recently at any rate) the philosophers deemed 'orthodox' were so obsessed with the 'Absolute' that they never noticed how utterly empty and fatal to human knowledge were the explanations given in its name. So personality turns out to be a most important fact, which Philosophy is bound to exalt to a place of honour. It would seem to be the one fact which is capable of providing any unifying principle to connect together and arrange the results of the sciences, so that in its light they can be seen to form a whole and a harmony.

Hence Philosophy has always rightly claimed to concern itself with the totality of being, the existence of which it has usually taken for granted. Moreover, of this totality of being it has always claimed to take a wholesale and synoptic view.

On both these grounds personality is entitled to a hearing and to philosophic recognition. It is indisputably among the primary facts to be taken into account, and the fact that in the past it has not been taken into account is only a further reason for doing so now. We shall thus enable ourselves to see that historically it has always inspired philosophies with their principles of synthesis. The historians of philosophy—nearly all of them German pedants—have laboured long and earnestly to depict the kaleidoscopic succession of philosophies as steps in a logical development in which every later philosopher 'presupposed,' and studied, all his predecessors. But the real facts were ever so much more romantic than these romances. Actually every philosophy was the offspring, the legitimate offspring, of an idiosyncrasy, and the history and psychology of its author had far more to do with its development than *der Gang der Sache selbst.* Whenever it is possible to reconstruct the psychological history of a philosopher, it plainly attests the truth of this *aperçu.* And the reason why so many philosophies remain mysteries is precisely because we cannot reconstruct the psychology of their authors.

Very often this is our own fault. The philosophic public is not inquisitive enough. By a sedate (or professorial) convention it does not ask philosophers what they mean, or why on earth they have written as they have, while they are alive. It waits till they are dead, and can no longer explain themselves, and then it starts guessing their riddles. Thereby it makes hay of them; it turns them into desiccated lecture-fodder, which provides innocuous sustenance for ruminant professors. I speak with some feeling, as one who does not greatly relish the prospect of nourishing parasitic historians after his demise! Anyhow, these can now speculate, safely, endlessly, and fruitlessly, about what a philosopher may have meant, nay must have meant;

they are no longer in danger of being upset by his telling them what he *did* mean. They can, moreover, declare that such speculations are the finest sort of mental training. Without let or hindrance they can bring him into logical relations with doctrines he may never have heard of, and can complacently catalogue his logical lapses without troubling about their psychological explanation. Hence the historian of philosophy can find no consistency in any philosophy. Taken as timeless systems, in abstraction from the personality in which they were rooted and grew up, all are defective, nay incomprehensible. There is not one that is wholly consistent, no not one. There is not one which is wholly clear and intelligible, which cannot become debatable or be involved in a fog. But it never seems to occur to the critic that his *method* may be at fault. The real connexions of the philosophic system he criticizes may be psychological and aesthetic rather than logical: a system of Philosophy is best regarded as a sort of poetry, and often of lyrical poetry at that! Nevertheless he insists on viewing the system from the outside, as a logical structure, and not as a psychological process extending over a lifetime. And he thereby throws away, or loses, the key to understanding.

Thus we see that Philosophy cannot fulfil its chosen function of unifying experience without including in its synthesis all the idiosyncrasies and personalities which the whole affords. Neither can it understand its own history.

## § 6

Two consequences follow. In the first place, any unity Philosophy can aim at will have to be of a very tolerant and elastic kind, and such that it can find room for personal differences, without crumbling. This should, of course, discredit all philosophic methods which are dogmatic, authoritarian, and intolerant, and favour those which are freer and more flexible, and afford ample scope for individual differences and personal preferences, like, let me say, the pragmatic.

Secondly, the personal philosophies, which alone seem to have any logical warrant, will necessarily differ. But it does not follow that they will differ without limit and without measure, and will not allow themselves to be classified in any way. We shall expect rather to find that they group themselves in natural classes, of which the members show considerable likeness, and differ markedly from other classes.

This, moreover, is the situation which in fact philosophic history reveals. The great types of philosophic diversity, the great problems on which philosophers disagree, are very persistent, and exemplify themselves from generation to generation in different philosophies. They carry on an inconclusive and unending warfare, precisely because neither side has hitherto penetrated to the psychological core of its opponents' creed. Could they do so, and catch a glimpse of each other's internal economy and inner harmony, they might understand why their traditional methods of controversy had been so ineffective. So it is wiser to recognize these facts than to try to iron them out and to stretch them all on the Procrustean bed of a single, rigid, and absolute scheme of development.

## § 7

But of course it is a wholly different question whether it follows from the fact that philosophies must differ, that they must differ to the extraordinary extent they do. I must confess that I do not think they need, and that for the acerbities and futilities of philosophic controversy philosophers are much to blame. For philosophers are peculiar people, who excel ordinary folk quite as much in the oddities of their idiosyncrasies as in the profundities of their thought. It is probably because they feel this themselves that they feel it necessary to veil their personalities. So when they start in to build their systems they habitually conceal their destination and cover up their tracks; never if they can help it do they reveal the road by which they reached their conclusions. The logical

concatenation of a philosophic system never expresses its psychological coherence, which has to be worked out, laboriously and imperfectly, long after its author is dead, from unpublished scraps and notes, and letters, and drafts that have accidentally escaped destruction.

So when two philosophers engage in controversy they hardly ever understand each other. They hardly ever even try to understand each other. They have brooded and ruminated so long over their own solitary thoughts and their own peculiar interpretations of books, that they have become almost incapable of making contact with another living mind. They shrink from such contact. So neither of them ever plays with all his cards upon the table, or even in his hand. They usually keep their best trumps up their sleeves!

It is probably for this reason that both are pretty sure to have invented a technical language of their own, which departs widely from previous usage, to which they have compiled no glossary, and which they do not use consistently and without frequent relapses into more ordinary dialects. Hence they do not understand each other's language, and fight phantoms.

A further bar to fruitful discussion in philosophy is the curious etiquette which apparently taboos the asking of questions about a philosopher's meaning while he is alive. This *may* be only a consequence of the awe which his character inspires, and not merely of the greater freedom of speculation which his commentators enjoy and exploit, when their subject is safely buried and cannot rise up and rebuke them, as Kant did Fichte. But it has certainly preserved the vitality of many insoluble questions and interminable controversies which fill the histories of philosophy, and which could have been ended at once by asking the living philosophers a few searching questions.

## § 8

On the other hand, if these defects could be remedied, Philosophy could, I think, largely be acquitted of the

heaviest charge that lies upon it, that of unconscionable obscurity. The obscurity of many philosophers is notorious and indisputable; but it may be explained as a defence-reaction. They write obscurely in order to be respected by academic colleagues who dare not criticize what they are not sure they have understood, and in order not to be found out.

But the great philosophic issues themselves are not essentially obscure. They can be stated quite simply and plainly, and so that their vital importance becomes clear even to the plain man.

So, theoretically, they *could* be discussed, openly, profitably, and effectively, and settled to a large extent. It is, in my opinion, a grave indictment of our universities that their philosophic staffs do so miserably little to settle philosophic questions.

What is, therefore, most sorely needed in Philosophy is the institution of thorough and systematic discussion of the great questions in dispute between the different sorts (not schools!) of philosophers. The protagonists in these discussions should be selected, not so much for their age, infirmities, and reputation, but for their open-mindedness, honesty, and good temper. I believe that they could clear up and clear away a majority of the questions which cast a slur on Philosophy, in considerably less than the five to ten years which Prof. E. A. Burtt[1] thinks would be needed for them to understand each other even with "the utmost good will and forbearance on each side"; while as for the few questions, which, like the clash between optimism and pessimism, are perhaps too vital and cut too deep into personality to be disposed of thus, they could at least make clear the ground of difference, and agree to differ. And would not even that be a notable advance?

[1] *Publications in Philosophy* of the College of the Pacific, vol. i, p. 92, 1932.

# CHAPTER II

## THE PSYCHOLOGY OF EXAMINATIONS[1]

THIS Paper is intended to instruct and elevate ; if it also contrives to amuse, that is not altogether my fault. You have doubtless heard that in England we are very much in the habit of ' muddling through,' and sometimes achieve surprisingly effective results by theoretically indefensible makeshifts. You will not therefore be surprised to be told that in Oxford also we have muddled through so long, that we have evolved a very curious and subtle system of examination, which you may, I think, be interested to hear about. For you are very much more interested in the theory of Education than we can pretend to be. Still you may not know that Education in England is more completely enslaved to an Examination System than any country except old-time China. Under it teachers and taught suffer alike, as a rule in silence. As regards the taught this is not surprising, for while they remain *in statu pupillari*, they are much too busy steeling themselves for some ordeal to have time to complain. As for the teachers, it is the merest prudence that they should keep their mouths shut : they are all expecting, even hoping, to obtain another job, and avid to earn the little extra gain which replenishes their slender purses.

It is therefore only at the end of a misspent life, when the hope of examining again waxes dim and fades, that a teacher can afford to speak the truth about the examination-system he has helped to run. Such is my case. I address

[1] Written in 1927 for an intermittently active Psychological Society, but also upon occasion delivered in America.

you to-night as one who has finished with examinations, both actively and passively. I speak as one *iam rude donatus*, which the schoolboy aptly translated *gifted with rudeness*, and will make a clean breast of it.

## § 1. *Of the End of Examinations*

Unlike Aristotle who, as you may have heard, ended his *Ethics* by saying 'let us begin,' I will begin with the end of examinations. I will, however, pass over with a bare mention the purely commercial or chrematistic end which renders a craftily constructed examination, like the Oxford Locals or the various sorts of School Certificates, a far more paying proposition than a gold mine—although this end has a basis also in psychology. Vicariously at least, the British Public *loves* examinations, and is willing to pay handsomely to indulge its craving. So you cannot show a British schoolmaster or a British parent an alluring examination but he will insist on sending his boy or his girl in for it, and you will have your reward. But it is on a less sordid end that I prefer to dwell.

Taking the highest possible view of the end of our Oxford examinations, one may say that, as conceived by the best Oxford Examiners, it is not to promote or applaud research or to add to the burden of learning and the manure-heap of human knowledge, worthy as these ends are deemed elsewhere. It is, simply and solely, to *classify the minds* of the examinees in the Four Classes, and to stamp them indelibly and for life as $\alpha$, $\beta$, $\gamma$, or $\delta$, *men*. For this reason there is little prospect that theses and Research Degrees will ever be taken seriously in Oxford. For *their* end, however illusory it may be, is the increase of knowledge, and they imply that even a second- or third-class man, if he is skilfully guided, and works hard and long enough, may compass that end. It goes sorely against the grain of an Oxford examiner to pass such a one's work, the credit for which is, he feels, due to the 'supervisor.'

Nevertheless I would not have you think that Oxford examiners are wholly insensitive to mere brute knowledge.

A distinguished family of examinees who were said to be afflicted with a "disgusting appetite for mere brute knowledge" were nearly all placed in the First Class. The truth is that brute knowledge, if there is enough of it, inevitably affects the minds of examiners and extorts high marks from them, especially if it exceeds their own. Young examiners are particularly susceptible, because they are apt to compare the candidate's knowledge with their own, and to mark his paper down if they think it inferior. There are also examiners who will never give an *a* mark, and if several of this sort happen to coincide, how appalling a Class List results may be imagined.

In general, however, it may be laid down that in the long run the examinees set the standard in every examination. No board of examiners will in the long run have the heart to withhold First Classes from their best men, however poor their standard may be; and no syllabus, however hard and forbidding it may look on paper, can be used to plough the great majority of those who come up for examination under it. If the syllabus is made too hard, the pass mark will be lowered.

It follows also from this psychological principle that if in any year there are a few candidates of outstanding merit, they will raise the standard for the rest. A long list of Firsts is more likely, therefore, to mean a very even lot of candidates with a big bunch towards the bottom of the First Class, who could not be split up, and all went in together. It is well, therefore, to accept with a grain of salt assurances that the standard of an examination is invariant.

Indeed some of the questions about the standard seem to be, even theoretically, insoluble. There is, for example, the unsolved crux of the $\beta + +$ man. What is to be done with a man who gets high second-class marks in every paper, but never quite displays first-class quality? If only the *φύσει a*, the inherently first-class man, is to be admitted to the First Class, the $\beta + +$ all-round man must be kept out. Yet on any numerical system of marking he will score far more marks than the man who is clearly *a* in

one branch of the examination, but sinks to various grades of $\beta$ in others. Consequently the examiners, if they keep him out of the First Class, must expect to be put to shame subsequently by the Civil Service examination in which he will come out far above many of their Firsts.

Nor will it avail them to say, "Oh well, the Civil Service examination is a bad one!" Now it is true enough that it is bad at present. For during the war it was deluged with political eyewash and reconstructed to suit the demands of Cambridge and to handicap the Oxford *Lit. Hum.*; but it used not to be at all a bad examination. It got quite as good results as our Schools, at a far lower cost of human time and energy. No doubt the mark on each paper represents only one of many examiners' opinion, whereas in Oxford there are two, or sometimes three, marks on a paper. A candidate is likely to be overmarked in some papers, and undermarked in others; on balance his marks may be nearly right. Instead of five opinions on his work there may be twenty in all, and the twenty may collectively place him as correctly as the five, especially as they are prevented from overmarking and undermarking and are kept straight by a 'desirable average,' and a curve, on which their marks should fall symmetrically. I feel sure that the vagaries of individual examiners and boards in Oxford would be considerably checked if these base mechanical devices were introduced among us. The standard would not wobble so much, and the eccentricity of single bad examiners would be revealed. Another advantage the Civil Service has is that the examiners do not examine names and colleges but only numbers. To the difference this would make in an Oxford Class List I will presently return.

On the other hand, if examiners give Firsts to $\beta++$ men and Seconds to the brilliant but unequal *α φύσει*, their verdict will be confuted in Fellowship examinations; but as these have now, alas, grown so rare, they may well consider this the lesser risk. I suppose it was on this theory that F. H. Bradley, R. L. Nettleship, and Moseley got Seconds.

When I say a *φύσει α*, I do not of course mean a genius, to whom severer treatment is meted out. A genius, so far as my experience goes, generally gets a Third, or even worse. I remember saving one such from a plough on his prepared translations, by discovering in the nick of time that he was really a mathematician, who had tried to read Greats from a love of philosophy with insufficient Greek. Another time quite the cleverest writing was produced by a girl, with a vile hand and viler History Papers, whom the historians wanted to plough. Fortunately one of the philosophers had qualifications in Roman history, and obtained leave to *Viva* her. After which he stoutly declared that she had just qualified; but her class was a Fourth. That too was the class of Sweet, the philologist, who knocked this subject out of the Oxford curriculum by discovering that there were 72 vowel and 500 consonant sounds which a scientific philologist must learn to distinguish and if possible to make; while the brilliance of A. E. Housman, now professor of Latin at the Sister University, was rewarded with a plough. About the end of Examination, then, let so much have been said.

## § 2. *Of Setting the Papers*

I will speak next about the setting of the Papers. A former colleague of mine used paradoxically to maintain that this was really a waste of time and energy. It was necessary to print only a rubric: "Write out your answer." For whatever questions you set, his answer was what you got. But this is surely an extreme view, which would lead to a cutting-down of the examiner's pay. He would be docked of what he gets for setting questions. It is safer, therefore, to say that here a mean must be observed between setting stock and novel questions. To the former the objection is obvious: they play straight into the hands of the crammer. Dull papers also elicit dull answers, whereas there is nothing better than a bright sporting question to draw out cleverness. Many examiners are fond of wrapping up stock questions in obscure

verbiage, so that it is not easy to identify them, or indeed to conjecture what they mean; this does not seem to me to be commendable. Ambiguous questions, however, may sometimes be set, for this is a way of extending the examinee's choice, and if he discovers that a question not meant to be ambiguous will bear another than the obvious meaning, why then he is a clever fellow, and let him take it as suits him best. But let him first make clear that he sees the obvious meaning, and proffer an excuse for not reacting to it.

Novel questions, on the other hand, it is very little use setting. You never get them answered, at any rate in the year in which they are set. The next year you are pretty sure to get the answers, but they will then be answers to *other* questions. Nevertheless it is well to set new questions sparingly, and as a moral discipline, in order to keep up the illusion that the subject of examination is progressive, and to open the eyes of teachers to its possibilities.

Delicate diplomatic questions arise when two examiners meet to set a paper, and each has favourite questions he wants to ventilate. The result will depend largely on the personal relations between them. It may be, of course, that each will crab the other's favourites, and a colourless paper will result, providing only a fare of chestnuts. But if the relations between them are harmonious, both may get their way. For each will then approve of his colleague's favourites, expecting reciprocity. It may even happen that, knowing the sort of question B likes, A will propose to set them himself; when of course B will agree. Whereupon the public will declare, "That paper was mostly set by B. I spotted the old buffer's questions at once." But the public may be quite mistaken.

### § 3. *Of Marking Papers*

After the questions have been set and done, they must be marked. Here the main problem is that of determining how much of the candidate's answer is his own. His

sources have to be detected, and the use he has made of them has to be judged. In Oxford the chief source, which is naturally suspect, is the College tutor. Hence the examiner's most urgent task is to eliminate the tutor! Some tutors are hard to eliminate. They teach so well that when they are eliminated nothing seems to be left. Or again they may beguile a careless examiner into marking a third-class man an *α*. To avoid such blunders, the thing to do in these cases is to segregate the papers from that College and to read them all together, noticing carefully the small points of difference in the reproduction of the teaching between the *α* man and the *γ*, and to mark accordingly. If any lingering doubt remains, the marks may be verified in Viva: there one may often tell at sight the difference between the *α* man and the *γ* subjected to the same instruction.

But this elimination of the tutor leads to a few paradoxes. Thus it seems odd that a good tutor should be a handicap, because he gives trouble to the examiners, as we have seen. On the other hand, a bad tutor may be an advantage. For a man with a notoriously bad tutor may be overmarked if he shows what looks like spontaneous intelligence, because the examiners say, "Oh, he can never have got that from his tutor!" The pupils of a young and inexperienced tutor are likely to be overmarked at first, until the examiners get to know his views from the Papers. Hence one wily tutor has for forty years taught different pupils different views, and concealed his own, simply in order to defeat the examiners. This is the greatest known instance of tutorial self-sacrifice.

It might be inferred from all this that it was a fatal blunder for a tutor to write a book, and so divulge his views. But though it is a breach of academic etiquette to write books, dangerous to dissipate the protective halo of nebulosity that envelops one's reputation, and improvident to turn the contents of a good Lecture into a bad book, the habit does little harm. For the Oxford dons do not read each other's books; they examine each other's pupils, and think that they will thus get the essential core of each

other's doctrine stripped of the meretricious adornments of literary form, and adapted to the level of the meanest intelligence.

But they have also, *per accidens*, to examine *their own* pupils, and must then show discretion. An examiner who marks his own pupils' papers successfully must be a good psychologist. For if he modestly marks them too low he damns them, because his colleagues think (or even say) he must know his own men best, and the $\gamma$ he marked them must be right. If, on the other hand, he marks them conspicuously higher, his colleagues simply discount his marks as products of College patriotism. And he has no vote upon their class. He aims, therefore, at marking his men as high as the highest mark he thinks his colleagues are likely to give them; or, alternatively, at making his marks agree well with those of a colleague whose reputation as a good examiner stands high. Thus will he also acquire repute.

## § 4. *Of Vivas*

When the papers have been marked, the examiners meet and take down each other's marks in the black books which are the truly sacred scriptures of Oxford University. It will then appear that a large number of the examinees have their classes determined by the consensus among the examiners. With good examining, not more than a quarter or a third of the number should be in doubt; but even then a Board of examiners may always contain a member who is either over-scrupulous or too fond of the sense of power he feels in viva-ing a quivering candidate, and who therefore insists on unnecessarily viva-ing some whose position is really quite clear on the marks. Bad examining brings retribution with it; for there will be such discrepancies in the marks that one half or more will have to be viva-ed. In either case the Viva is the instrument to which in Oxford we appeal in order to arrive at truth in doubtful cases.

The Viva is a great institution, and full of psychological subtleties. It is not, however, *theoretically* in-

dispensable, for the doubtful cases *could* be dealt with otherwise. They arise from two causes, subjective and objective. They may be due to discrepant marks. One examiner may have given a $\gamma$ where another has awarded an $\alpha$. Or the *agreed* marks may be actually on the line between two classes. Or, lastly, it is quite possible that the papers themselves are $\alpha$-$\gamma$, and that a Viva is needed to discover what the mark should be. This sounds queer, but some stories will illustrate it. In a College Scholarship examination, I was once struck by the extraordinary marks of one candidate whose papers I had not come across myself. They not only showed $\alpha$-$\gamma$ discrepancies, but an examiner had actually marked one paper $\alpha$-$\delta$, to which a cautious colleague had given $\beta$. Although the boy did not interest Corpus, I felt his case must be investigated. His first two sentences provided the solution of the mystery. He was a humourist! And the $\alpha$-$\delta$ mark on his Essay was thoroughly defensible. The $\delta$ was a moral judgment, the $\alpha$ an intellectual. The $\beta$ was a wrong mark, both intellectually and morally, because it did not draw attention to his work. An examiner of the College of his first choice, seeing me read his papers, asked me what I thought of him. "I think he is a very clever fellow!" "So do I." "Are you, then, going to take him?" "I hardly dare, because he would grieve old X—— so much!" "But," said I, "X—— is not examining." He was taken, and X—— did not die of grief.

A still queerer case occurred in Greats. A certain Scotchman showed an amazing knack in writing philosophic jargon. It was copious and most impressive, and seemed plainly $\alpha$, until you asked yourself what it meant. But then you could not answer. It was beautiful but meaningless—plainly $\alpha$-$\gamma$. What, then, was *I* to mark it? I reflected on my colleagues, the other two philosophy examiners, and felt sure *they* would mark it $\alpha$; so as a mere matter of precaution, I marked it $\gamma$. When the marks came to be compared, I found I had been right: they had both marked it $\alpha$. The historians agreed that

the history was $\gamma$, and there was no dispute about the classics, also $\gamma$. So there were three examiners who thought the man a $\gamma$, and two who thought him an $\alpha$. No one thought him a $\beta$. Of course, he was viva-ed, by one of his friends. But the latter committed the tactical error of letting him talk, instead of asking him definite questions, and so ascertaining what, if anything, he had meant. He talked as he had written, even more volubly; but at the end of the Viva we were as wise as before. So the votes still stood three $\gamma$ to two $\alpha$, and we could do nothing but give him a $\beta$, which no one thought he deserved. The sequel was that in the following vacation I met an assistant from the Scotch university from which our hard case had come. He asked me about him. I told my tale. "It was the same with us," he said. "My professor thought he was a wonder!" "And you?" "Oh, I thought he was a fraud." "Then I agree with you." I still think I was right, and that a suitable Viva would have proved it.

The alternative to the Viva is of course the re-reading and re-marking of the papers that have occasioned discrepant marking, and this is practised to a considerable extent. The usual result is for the revised marks to approximate, rather than for one mark to be given up. But this does not really meet the case of the objective $\alpha$-$\gamma$ discrepancy. Re-reading may turn it into an agreed $\beta$, which is certainly wrong.

Re-reading, moreover, does not cope with subjective discrepancies so satisfactorily as a Viva. For the latter saves the face of the examiner who marked amiss, and enables him to surrender gracefully to the new evidence brought in by the Viva. If he has undermarked, he can say, "I still think his papers were poor, but he comes up on his Viva." If he has overmarked, he can say, "His papers were plausible, but he has certainly broken down in his Viva." So it is much simpler and more effective to viva a candidate than to quarrel about his merits.

The successful conduct of a Viva demands, however, the highest psychological skill on the part of the examiner who conducts it. In general it may be said that the great

art lies in viva-ing a man *up*. Any fool can viva a man *down*; but to viva up takes some learning, and some examiners never learn it. I never succeeded in doing it in my first year. But in my last year I actually got a man voted the higher class immediately after my Viva; but though it was technically a final vote, I had to consent to his being put in the lower class in the end, when the line came to be drawn. We had omitted on this occasion to draw up a tentative class-list before beginning to Viva, and were viva-ing each case on the crude marks, a procedure sure to lead to unnecessary Vivas and to trouble further on.

But why, you may ask, should an examiner, who is by definition a heartless monster, *want* to viva a man up? Because many of the Vivas are due to discrepant marks and differences among the examiners, and there is a kindly convention that, if possible, the examiner who takes the more favourable view should take the Viva. That gives him a personal interest in showing that *his* opinion was right, and his colleagues' wrong. He uses the examinee to prove this, and so is naturally his *friend*, whereas his enemies are among the examiners who only sit and listen.

This is a useful thing for a candidate to know, as it may induce him to help the viva-er to help him, whereas if he is hostile and sulks, one is powerless. A good many years ago a certain College sent in for Greats four men who were $a\beta$ on the marks. Three of them were viva-ed by me, and two of them got Firsts. The third, whom I thought the cleverest of the lot, sulked so badly that I could get nothing out of him. The Head of that College recently told me that two *was* the right number of Firsts, that year, but we had given them to the wrong men! In the light of their subsequent performances I was disposed to agree; but it was not my fault we went wrong. I had been in favour of three Firsts, and had brought two of them off!

If it is granted, then, that an examiner may legitimately want to viva up—and some of this applies also to the 'neutral' Vivas given to objective 'liners'—how is he to set about it? He first reads the examinee's papers care-

fully together, and tries to reconstruct his mind and its contents. This is a matter of practical psychology. He then decides what *not* to ask him. It is no use asking him either what it is clear from his papers he does not know, nor what he clearly knows. If he asks the first, he lets his man down ; if he asks the second, he fails to convince his hostile colleagues. He must therefore gauge from the papers by breaking fresh ground in what direction he is most likely to strike oil.

The importance of this principle may best be illustrated by a feat of which a former President of Corpus, Thomas Case, was justly proud, and by which Oscar Wilde obtained his First. Wilde's marks were nowhere near a First ; but Case had been much struck by the quality of one of his answers in the Greek History paper, and obtained leave to viva him. When Wilde appeared, Case asked him just *one* question : " What do you think of the philosophy of Plato, Mr. Wilde ? " That was enough to set Wilde off, and he went on discoursing for three-quarters of an hour, at the end of which time the examiners unanimously voted him a First. But was not Case cleverer than Wilde, in seeing the psychological connexion between Greek History and the philosophy of Plato ?

It must not be thought, however, that such brilliant Vivas are common ; they are necessarily rare, because the very best men get undisputed Firsts, and consequently Formal Vivas. A Formal Viva is given when the class is decided on the marks and voted before the Viva. So it does not matter what is asked, or what is answered, in the Viva. The best Viva I ever witnessed arose out of a hard case. Three philosophers had agreed that a man's philosophy was $\alpha$, two historians agreed that his history was $\delta$, and his classics were undisputed $\gamma$. What was he to have ? The historians vetoed his First, and said it was hopeless to try to bring up his history ; but finally they made us a sporting offer : " If you can convince *us* that he is as good as *you* say in philosophy, he shall have a Second. But you must give him the hardest Viva you can think of." We accepted this bargain, and it fell to me to take on the

job. I felt so sure of my man, that I sent a note to a friend of mine who wanted to hear a Viva, that if he wanted to hear a good one, he should come to the Schools next day at such an hour. At the end of this Viva the historians confessed themselves convinced; but their victim will probably go through life thinking that my Viva spoilt his First, whereas it saved him from a Third.

An even more sensational story used to be told by my friend Dr. Marett, the well-known anthropologist and now Rector of Exeter College. It proves that a man may sometimes benefit by doing *badly* in a Viva. He had been told that a Scholar of Balliol had expressed an intention of patronizing one of his lectures on anthropology, and when the class assembled, identified him as a grave-looking scholar with a dome-like head who always sat in the front row, and looked particularly grave whenever Dr. Marett ventured on a joke or a frivolity. Nevertheless he attended all his lectures with the most exemplary regularity throughout the year. In the summer, Dr. Marett, as one of the examiners, had to pass upon the sad case of a Scholar of Worcester whose marks were very, very bad. The other examiners wanted to condemn him unheard and to plough him outright. But Marett pleaded with them, and finally Dr. Macan, the Senior Examiner, said, "Very well, then, you shall give him quarter of an hour δ-ε." Marett agreed, but what was his surprise when there appeared before him his supposed Balliol Scholar with the dome-like head! When he recovered from his surprise he determined to reward his attendant's fidelity. So instead of asking the stock questions considered appropriate to a δ Viva, such as "What are the deadly virtues and the cardinal sins in Plato's *Republic*?" he determined to ask him a few sporting questions straight out of his anthropology lectures, by answering which he would astonish the other examiners and assure his class. So he asked a sporting question, but got no answer. Then he asked again, an easier question. Again no answer. Finally he asked the easiest question he could think of, the answer to which no one who had ever attended any one of his lectures could ever have erased

from his soul. But again the same stolid silence. Then he gave up, sent the man away and said he would no longer stand in the way of his plough. But No, said Macan, he could not allow that. Never had he witnessed so unfair a Viva. Here was a wretched creature trembling on the verge of the abyss, who had been asked the most improper questions, questions which he himself could not have answered. Either he must be recalled and given questions suitable to his order of intelligence, or he must be passed. So he got his Fourth, and Dr. Marett's kindness indirectly attained its aim ! Perhaps then of Vivas more than enough has been said.

### § 5. *Of Class Lists*

I will say less of Class Lists, though their composition depends greatly on the internal relations of the board of examiners, and the skill of its members in practical psychology. A clever tactician will often get his men good classes by linking their fate with that of others in whom his colleagues are interested. Such manœuvres mostly concern the drawing of the line between classes, especially that between the First Class and the Second. They also explain the variations in the size of classes more adequately than the theory that the intellectual crop varies greatly from year to year. We have already noticed other reasons for the wobbling of the standard. I will say this, however, for Oxford examiners : that they are not often influenced in compiling their Class Lists by considerations relating to the good of the School in which they are examining. Yet they have great power to encourage or choke off.

I remember years ago Classical Moderations had only three classes, and as a natural consequence the Second Class was large. It was quite possible, therefore, for a Commoner to get a Second. Consequently it was worth their while to read for Honours in Mods. The number of those reading Honour Mods was large, quite 250 *per annum*. Then some logical or overweening Mods dons asked, Why have we not four classes like Greats ? We are every whit as good ! So they agitated for the same.

A statute was introduced. Said I to our senior Mods tutor, "Aren't you going to oppose that statute?" "Why?" said he. "Because," said I, "all our Commoners will get Thirds, and a third of our Scholars Seconds, if the examiners have four classes to fill." "Oh," said he, "it will make no difference." "Well," said I, "it is your look-out; but mark my words, in ten years' time it will have halved the numbers of those reading Mods!" Needless to say it did. In recent years examiners have been undermining Greats by a similar lack of forethought, and last summer's list is likely to mark a milestone on the way to its tombstone. On the other hand, I am disposed to think that that summer's Modern Greats list must have been one of the best and purest, if not *the* best list, ever issued (at least 80 per cent pure). For two reasons. In the first place, four of the five examiners had no pupils in; and secondly, I myself was chairman of the examiners!

The other great factor in determining a Class List is the external pressure of public opinion. This means that if certain powerful Colleges do not get what they consider an adequate number of Firsts, the examiners are sure to get into hot water. But if they do not give themselves or each other away, nothing can be proved against them. At the end of each examination the papers are vindictively torn up and there is no checking what is affirmed about them by examiners. Still I have sometimes thought that quite as much satisfaction would be given, at a much smaller cost of human labour, if the various tutors were requested to send in claims stating how many Firsts they thought they deserved and then a properly weighted sliding scale were applied to their claims, giving a higher percentage to the good Colleges and a lower to the bad ones. But this subject should perhaps be considered under the next head, viz.:

## § 6. *Of Reforms*

Really great examinations should never be reformed. Of them, as of the Jesuits, one should say *sint ut sunt aut*

*non sint.* They go on till they perish, and when they perish are apt to drag social convulsions in their train. Take, for example, the greatest examination ever devised, the Chinese Civil Service Examination. It ruled China for 3000 years. Or, more accurately, China was ruled for 3000 years by mandarins selected by it, who got their marks chiefly for an essay in classical Chinese in which they inserted all they knew. They had six weeks to write it in, shut up in cells. That was some test of endurance and capacity. Monstrous and absurd, you say? Yet it picked the best brains in China, and the papers set for the last 2000 years ought to be published. The earlier ones were no doubt destroyed by that ruthless foe of the classics, the subversive emperor Hwang-ti. And what was the result of abolishing the Chinese Civil Service Examinations in 1908? Why, within three years' time, in 1910, China fell into revolution, and has been in a state of chaos ever since! Let us take warning, therefore, and be cautious how we change the methods by which we pick our mandarins and bonzes!

There is, however, one tiny, wee reform I should like to mention. Indeed I have done so already. The examiners should not have before them, as they mark the papers, the candidates' names and Colleges and all the information as to their status implied therein—but only numbers or mottoes, as in the University Scholarships. If it be objected that some examiners would recognize some candidates while invigilating them, let them be invigilated by bulldogs or let there be created an expert staff of invigilators. Or again the candidates might wear gas-masks, which would protect them also against the noxious fumes generated in the examination-chamber! This reform would of course entail the abolition of Vivas; but though I hope I have explained their function and value, many reformers wish to abolish them anyhow.

At any rate, this reform, if it were adopted, would be sure to lead to curious and interesting results. I should expect it to throw much light on the psychological value of prestige and the infallibility of examiners.

## § 7. *Of Conclusions*

" Finally, what of your moral, what conclusions do you come to ? " " Well," I should reply, " this is a paper on psychology, not on ethics or metaphysics. I need not provide a moral, nor come to any conclusion." But lest you think I mean to go on for ever, I will confess that I see one conclusion to which all this points. The good examiner must be a good psychologist, and the good psychologist is the good examiner, or at any rate the one who gets his way. And perhaps one might add that examiners will not cease to do injustice, and examinations to be evil, until teachers are taught to teach, and taught a good psychology. And by a good psychology I do not mean one that is merely an ingenious game with arbitrarily defined figments, but one that is applicable to life and to the mental operations of every one of us.

My last word must be an apology for inflicting on you a paper that could not have been read before any other learned society in Oxford. This too is connected with the subject of examinations. For in Oxford we have examinations in everything but psychology, and this is just why psychology can still be such fun ! It is not examinable nonsense like Logic !

# CHAPTER III

## SOME PROBLEMS OF MASS EDUCATION[1]

I DO not know how far people in America realize that they are living in the midst of one of the two great booms in the history of Higher Education. In Europe certainly this is not realized ; but here you have it continually before your eyes. To realize it you have merely to look round at this beautiful and dignified building which has sprung up overnight, and at the birth of which many of us ' assisted ' (in the French sense !) only a year ago, and to remember that we are now engaged in celebrating the Semi-Centennial of a great University which has grown from zero to an enrolment of 15,000 within a mere fifty years. In Europe it would take centuries for such an institution to emerge from medieval squalor and obscurity.

There has been nothing like the rush of young America into college since Higher Education leapt into being in the fifth century before our era, when the youth of the propertied classes in Athens discovered that neither their life nor their property was safe unless they could defend themselves with their tongues before democratic juries. This discovery led to the creation of the Academic Life and rendered possible the Academic Man ; it led to the schools of the sophists and the philosophers, and to the elaboration first of rhetoric, grammar, and logic, and then of science, and culminated in the evolution of a new profession, that of the lawyer. We have had the lawyer with us ever since,

[1] An Address at the Dedication of the Hall of Philosophy in the University of Southern California, 1930.

like the poor, and shall have, so long as there are any rich.

You see, then, why the Greek boom in Higher Education was such an aristocratic affair. It was an incident in a successful effort at self-defence by the few against the assaults of the many. Another incident in this movement was the birth of Bureaucracy, which must be fathered upon Socrates and his declaration that Virtue is Knowledge. This has since become a great slogan of Intellectualism, and a parent of moral paradox ; but at the time its meaning was political. It meant the condemnation of a democracy which conferred office in rotation and by lot upon all its citizens, and it was a demand for expert government. Consequently the victorious democrats killed Socrates ; but his contention triumphed, and bureaucracy has ever since tempered democracy and, unobtrusively, controls it.

The flavour of exclusiveness and class-distinction thus stamped upon the Higher Education by its origin has long endured. In Europe the Higher Education is still largely a caste-mark, and directed toward the exaltation of the few rather than toward the elevation of the many. But in proportion as America, with her rapidly growing wealth and power, has emancipated herself from the prestige of European traditions, it has become evident that she is bent upon a new departure in education also. She is making a great experiment in mass education, and is carrying it from the schools to the universities. Moreover, she is getting a response which gives the lie to Bertrand Russell's expectation that even if the Higher Education were thrown open to all, only a limited number of young people would wish to avail themselves of it.[1] Actually there would seem to be no limits to the number of young people who are crashing the gates and forcing the hands of university authorities. American opinion has plainly decreed that the Higher Education shall be democratized.

Now what is the Academic Man, to whom it falls to administer this decree, to do about this situation, which may in virtue of the American hegemony presently extend itself

[1] *Roads to Freedom*, p. 110.

to all the world? He is a servant, not a master, of the Public now, as of princes formerly. The Academic Man in education corresponds to the Bureaucrat in politics. He has a difficult position and grave responsibilities, and one may sometimes doubt whether as yet he fully recognizes either. The best advice to give him is probably that once given to British politicians by Benjamin Disraeli when the franchise was enlarged, namely, " Educate your masters ! "

But how shall he educate his masters ? Hardly without adjusting himself to the new situation, and to some extent reforming himself. His legitimate function is to advance his subject, both by research and by instruction. By the former he increases knowledge, by the latter he renders it effective. He has also to perform the social service of guiding forces he does not generate and which are superior to him in strength and rank higher in public esteem. He has to make the best of them ; but if he does his best, he can do a great deal, and will have his reward.

But he has to struggle not merely with external forces, but also with his own mentality and bias. He is the product of a very special training, and leads an abnormal life. He should recognize this, therefore, and cultivate self-knowledge. The γνῶθι σεαυτόν should take precedence in his mind to knowing others and other things. He should beware of yielding to the temptations to which he is most prone, and eschew his besetting sins.

Now his greatest temptation is, not to court popularity, but to cultivate a technicality which seems sheer unmeaning pedantry, till it is seen to be protective. For by it he secures himself against inexpert criticism, intimidates his expert colleagues, and conquers the esteem of those who dare not attack what they too have failed to understand, and therefore feel bound to praise—on the principle illustrated by Andersen's famous tale of the emperor's clothes. Hence in a way, as William James well said, the Academic Man becomes the natural enemy of the subject he is supposed to expound. He hates the vulgar herd, and tries to keep them at a safe distance. If you let him, the distance

will be such that he loses sight of them altogether! His besetting sins are pedantry and pride, and he looks down with profound contempt on a science that dares descend into the market-place and mingle with the haggling and harrowing perplexities of practical life. His ideal man is the Aristotelian Sage, vowed to the contemplation of perfectly useless (but therefore higher) knowledge, and none the less adored as an exemplary being by an uncomprehending multitude.

Now in the American conception of Higher Education there is clearly no place for such a sage. He can find in it neither the pedestal nor the repose which his dignity demands. The American professor cannot remain aloof and aloft above the heads he is instructing; he must make his subject and his teaching relevant to American life. Whatever else he is and does, he must become the bearer of a message to the people, put in a language the people can understand. If he tried to pose as the High Priest of a Secret Science, the people would soon turn and rend him, scrap science, and return to fundamentalism. That seems one of the most certain implications of the great American experiment in mass education.

I would next suggest that, in order to detect the really able, and to raise them to positions that will employ their powers, you need more apparatus to winnow the grain from the chaff. Education could be made much more competitive. You could develop a system of scholarships and prizes, which are essentially a combination of honour and gain, and have been found to form a powerful stimulus to the best students in England. You could also, in the allotment of such scholarships, express your expert opinion as to the relative educational value of the various studies, and give extraneous support to those that needed and deserved it. In Oxford and Cambridge this is how the subjects said to belong to a 'liberal' education are largely maintained in their position. Liberal education, it has been said, is so called because it is so liberally endowed.

Well and what about Philosophy? I am coming to that, though you may think me unconscionably slow in

getting to my point. I suppose I may assume that we are all more or less convinced of the vital value of Philosophy. I certainly am myself. But I am also conscious of the difficulties which one encounters when one attempts to bring this vital value home to the meanest intelligence, or even to any that is not already convinced. Philosophy is pre-eminently a subject that belongs to a liberal education. It is not directly and immediately useful, and therefore needs support; but it can be shown to deserve it.

You will doubtless think of Fichte's defence of Philosophy: it cannot bake bread, but it can justify faith in God, Freedom, and Immortality. Fichte's dictum is still true in part. Despite the rise of pragmatism, I have not yet, indeed, heard of any philosophic bakery, though there is plenty of half-baked thought to practise on. As for Freedom and Immortality, I deplore that so much philosophy has pusillanimously fought shy of the very problems which have the most direct human appeal, and think that it has made a grave mistake both in theory and practice. For there is nothing like a real, poignant question for stimulating human ingenuity. As regards God, it must be admitted that the philosophers have excogitated some very queer specimens: they have dignified with that solemn name whatever suited their book. So the first question one would like to address to them is not "Do you believe in God?" but "What do you mean by 'God'?" Their only exculpation is that many theologians have been nearly as bad.

Despite these cavils Philosophy is to some extent a going concern, and part of the old Higher Education, and therefore to be adjusted with the rest of it, to the requirements of mass education. What practical hints, then, can be given it in order that it may hold its own and more?

(1) It must get out of the stupid habit of priding itself on being useless. Philosophy is not a useless study, and never was, even when its use as a caste-mark was camouflaged by this phrase. No real knowledge is ever really useless, though all knowledge can be rendered worse than useless by misuse. And to proclaim a study useless is to

damn it in the eyes of the people. Why then persist in an untruth grown pernicious ?

(2) Philosophy should cultivate greater lucidity and a simpler style of presentation. Its field is extensive, and it has no need to dwell by preference only on its most arid regions. It has abundant problems to discuss, many of them urgent and capable of clear and attractive statement. It is a mere perversion of academic pedantry to neglect these for artificial Pseudo-problems, which are not intelligible, and would not be worth solving, even if they were soluble. Nor is the mere fact that a professor has been taught to grapple with such problems in his youth, and wasted much time and sympathy on them, and flatters himself that he has good lectures on them, a good reason why he should in turn inflict them on his pupils. Philosophy should be summoned, therefore, to institute a purge of its stock of questions, and should scrap those which are antiquated and unreal, unimportant and unintelligible. It needs a robuster and more living faith that an insoluble problem means, in all probability, a question wrongly put.

(3) This means, I think, less history of philosophy and a change of attitude towards it. I am aware that much of it is suggestive and can be made interesting and instructive; but as a whole it is not the avenue to philosophic truth. It seems to be involved in a dilemma. If it is studied in a purely historical spirit, every philosophy has to be taken in retrospect, in relation to the conditions out of which it arose : but this means ignoring its subsequent career and present value. If it is described from the standpoint of its historian, his emphasis will fall on what seems important in it in his day, for he is no prophet. So if a new issue springs up later, we shall search our histories of philosophy in vain for anticipations of its earlier phases. They may be there, but will have been omitted. So histories of philosophy can never be trusted when most we need them. We must always refer to the originals. And after all, the example of the other sciences is against such absorption in history. They flourish, without insisting on rehearsing their whole history, with all their errors and false clues

lovingly recorded, before they set to work upon their present problems. Why should not we? It is best to treat the history of philosophy as a specialty, and to leave it as an inexhaustible reservoir of Ph.D.-thesis subjects.

(4) May I therefore recommend, as an alternative policy, more connexion with the sciences and more interest in their problems? Can we not cultivate closer relations especially with those which stand closest to philosophy? I mean psychology and the theory of education. It grieves me to see them standing aloof from philosophy. We ought not to think that they have nothing to teach us, and I am sure they ought not to think that they can dispense with philosophy. Similarly the moralists and the sociologists ought to get together. No change in the last thirty or forty years has shocked me more than the almost complete departmentalizing of academic subjects. It seems, however, to be rooted in accidents of academic organization rather than in the nature of things.

I am aware that I have tried your patience by touching on a great variety of topics, without disposing of any. Nor have I shrunk from allusion to the weaknesses of Philosophy, which I would fain ascribe to the alienation from life fostered in academic recluses by an aristocratic system of Higher Education. Yet in spite of these weaknesses I would conclude by a profession of faith. Philosophy retains a glorious function, if only it will rise to it. It alone has the right and the duty to correlate the results of all the sciences, and to reinterpret them in the light of our immediate personal experience. Its task may be unending, because its data will never be all in; its efforts may end in failure, because they overtax our powers and strain us beyond endurance; but the philosophic ideal will ever shine upon our aspirations and guide toward the light the faltering and reluctant steps of men!

# CHAPTER IV

## TWO LOGICS[1]

### I. LOGIC AS A WORD-GAME

MY reason for choosing Logic as the topic of my discourse is not that I imagine that it will at once strike the alumni of the University of Southern California as a popular and attractive subject they are anxious to hear more about, but rather that its mention may awaken memories of bygone struggles with painful puzzles which they were told had somehow reference to the art of thinking, but to which they have probably never again given a thought since they were sophomores. Educationally the place of Logic in college somewhat resembles that of elementary mathematics in school. It is part of the educational tradition, and so strongly rooted in it that it could scarcely be eradicated by a complete proof that it has become sheer nonsense. Such a proof can be given, and indeed will be given in this paper; but it does the traditional logic less than justice. It is not usually *seen* to be nonsense; it was not nonsense when it was devised, and, even though it has now been developed into nonsense, it remains quite a good word-game. Moreover, beside the Logic which has been reduced to nonsense, there is another Logic, which is the authentic method of science, and is exemplified in all our thinking, even though this has not yet been fully realized.

Originally Logic was neither nonsense nor a word-

[1] F. C. S. Schiller, *Formal Logic*, 2nd edition (Macmillan, 1931); F. C. S. Schiller, *Logic for Use* (G. Bell, 1930).

game. It was an essential part of a man's civic equipment. It was developed in the schools of Athens, in order to determine who had won in an argument. These schools, moreover, were strictly professional. They aimed at teaching the young men who could afford to pay fees to the professional teachers called Sophists how to argue and to defend themselves with their tongue. The young men vitally needed this art because Athens and many other Greek cities had become democracies in which the wealthy were in constant danger from professional informers. They had constantly to defend their life and property in the law-courts before democratic juries prejudiced against them. How were they to be safe? They could not hire lawyers to defend them, because as yet there were no lawyers. The legal profession arose out of this same situation later, but only by gradual steps. The first step was to buy a speech in defence from a 'rhetor'; the second to obtain leave to call in a friend or 'advocate,' to plead one's case. But in the fifth century B.C. the only way of self-defence was to learn to argue oneself, more persuasively or convincingly than one's accuser.

Hence the enormous interest which the young men of the wealthy classes showed in the art of public speaking. They flocked to the Sophists to get a higher education, and especially to learn the art of conducting a case, or, as their enemies invidiously put it, of making the worse appear the better reason. But how could it be made clear that one *had* the better reason, how could one know *when* one had won one's case? Logic arose as the answer to these questions. It was animated from the first by the desire to prove oneself superior to one's adversary, and to *compel* him to own himself beaten. After sundry technically interesting but abortive experiments by the Sophists, Socrates and Plato, Aristotle discovered the *syllogism*, and thereby made the fortune of *Formal Logic*. The syllogism was instantly hailed as the very thing that was wanted by the schools, as the universal test of the validity of any reasoning, as the infallible guarantee of necessary truth, as the very 'form' of proof. Above all, it was

valued as the irresistible engine of *compulsion* by means of which victory in debate could be assured.

You had merely to confront your opponent with two true premisses suitably, that is ' validly,' arranged, and to draw the necessary conclusion ; to this he could not then refuse assent.

Moreover, armed with the syllogism you could go forth as a prophet, and prescribe eternal laws to nature. If it was once true that *all men were mortal*, it was always true ; if an individual, say Socrates, had once been corralled in the category ' man,' you could be absolutely sure that he would die, and could prophesy accordingly ; in short, neither science nor common-sense, neither facts nor experience, could set limits to your power.

So for several thousand years the syllogism lorded it over the submissive human mind ; but now signs are multiplying that its long reign is ending. It has turned out (1) that the absolutely true premisses from which Aristotle thought demonstration could set out are hard, nay, impossible, to get. Hence (2) the conclusion of a syllogism can at most *confirm* the truth of its premisses, which are really hypothetical. But the verification of a hypothesis is not a formally valid process : it always commits the fallacy of affirming the consequent. Hence verification is not proof, and if syllogistic proof rests upon verification, it too can not be formally valid. (3) There are, it seems, *no* means determining whether an apparent syllogism is a real one, simply by looking at its verbal form. It is always liable to break in two in the middle, because its middle term may become ' ambiguous ' when you try to use it. So though you can in general affirm truly that *good sailors do not get seasick*, and also that *Nelson was a good sailor*, yet when you put these two true premisses together and infer that therefore Nelson did not get seasick, you find yourself egregiously wrong ! This defect in the syllogistic form, which was first detected some thirty years ago by Alfred Sidgwick, finally disposes of the claim of formal validity to guarantee truth. We may start from premisses we have every reason to believe true,

and may construct a perfectly valid syllogism; and yet the real may give the lie to our conclusion. Thus the syllogism becomes a form which may always play us false when we attempt to use it seriously. (4) It breaks down likewise as an instrument of prediction. The argument that because *all men are mortal and Socrates is a man*, therefore *Socrates is mortal* in no wise makes it certain that men will continue to die in the future as they have done in the past. For if our science discovered ways of arresting the ageing of living tissue, as quite conceivably it might, *natural* mortality would cease. 'Mortality' would have to change its meaning from 'doomed to die' into 'liable to death,' nor could human 'mortality' any longer be illustrated as above, by one, like Socrates, who has been *dead* for several thousand years! In short, the syllogism is thoroughly discredited.

With the syllogism all Formal Logic is overthrown. Its essential conceptions, 'formal validity' and 'logical necessity,' can no longer be exemplified. It is summoned to own to their real character, and to justify the hidden assumptions on which it really rests. The notion of formal validity is a poor substitute for 'material' truth, which is what our thinking really aims at; and logical necessity is no longer needed to hold a reasoning together when we have detected the *purpose* which animates a train of thought.

Both are affairs merely of *words*, as are the famous 'Laws of Thought.' These are the conventions which regulate the juggling with words that makes up the game called Formal Logic. That *A is A* is not the unmeaning tautology it seems: it is the *fiction* required to justify the transition from *A* to anything any one may choose to call 'A.' This postulates the *fixity* of terms and reveals the gulf between verbal manipulation and real thinking. For in the latter it is axiomatic that the meaning of terms *cannot* be fixed and that every significant assertion *must* modify it. For unless we could learn something *new* from it the assertion would not be made.

This consideration finally reveals that the ultimate

issue is about *the nature of meaning*. Is Logic to restrict itself to the meanings of words, such as may be found defined in dictionaries, or is its real concern with the meanings of the men who use the words to express and convey their *personal* meanings ? If we adopt the former alternative, we get a Formal Logic which ignores personal meaning, and indeed abstracts from it, and so becomes, strictly, meaning-less. If we adopt the latter, we can scrap the whole of Formal Logic, declaring it *strictly non-sense*, because it has abstracted from the only meaning which is real. But we must construct a new Logic which is based on personal meaning, actual thinking, and the real problems of science and life.

## II. Personalist Logic

My aim in this essay is to draw out the consequences of the break-down of Formal Logic traced in my first paper and to consider whether we shall not fare better with what may be called a *personalist* Logic, because it refuses to make the abstraction from personal meaning and personality generally, which we saw to be characteristic of Formal Logic.

Personalist Logic rests in the last resort upon a number of quite familiar facts, which no one dreams of denying till he has plunged into philosophic controversy. Thinking is a mental process ; judging is an act ; meanings occur in minds ; minds cherish purposes, and enter upon trains of thought. Moreover, all minds are personal, and exist in the plural. What does that mean ? It means that there are many minds and that they are not merely vain repetitions of a standard pattern. Each has its individual peculiarities or idiosyncrasies, and is in a way unique. Regarded from without, after the fashion of observant science, personality is the *sum of the differences* which distinguish one mind from another. As lived within, with all the wealth of direct experience of its self-preserving identity and continuity, personality may, of course, mean infinitely more ; but this overplus of meaning is not ex-

pressible in scientific terms. Not because it is not real, but because it must be felt and lived.

If now our knowing proceeds thus personally, why should not our logic recognize this fact? If its business is to regulate our thinking, why should it not begin by describing it as it is? Why should it ignore our actual procedure and substitute the artificial concatenation of a number of fictitious entities and babble about inherently meaningful terms connected by logical necessity in a valid form? Let us pluck up courage to dispute that verbal meaning is the genuine primary and important meaning at all, and try to develop a logic that starts from personal meaning and regards verbal meaning as derived and secondary. It could not yield a worse logic, and might easily do better.

Actually the facts seem to be simple enough. No one thinks till (he thinks) he has to. That is, till he becomes aware of a question or a problem. Why? Because thinking is troublesome, and takes up time, and delays the course of action. So stopping to think must justify itself by conducing to better action. When we stop to think it must be because we think we can thereby better our reaction to the situation. When we embark on a train of thought it must be because we think it will waft us to the destination of some desired end. It is thus the end in view which directs our thought and measures our success. A willing mind needs no logical necessity to drive it onward. Nor do we aim merely at logical validity: real truth alone contents us. And we are interested in the inherent meanings of ' terms ' only to make them vehicles of our own personal meaning. Language is recalcitrant to our meaning only because it has become imbued with the meanings of those who have used our words before us. But it is still personal meaning which engenders verbal, and it is a blunder to infer that a word's meaning is ever sacrosanct and rigid; it remains plastic and pliable to skilful and resourceful usage.

On this vital point Humpty-Dumpty was the pioneer of the true doctrine. " When I use a word," he said, " it

means just what I want it to mean, no more and no less." He proclaimed his mastery over verbal meaning, and moulded it to his purpose. He was masterful, but just. When he overworked a word in a new sense which suited him, he always paid it extra ; and he did not overlook the problem of *communicating* his meaning. When he used ' impenetrability ' in a highly personal sense, he did not disdain to divulge his meaning to Alice. If only the philosophers and scientists who revel in technical terminology would follow his example !

If meaning is personal, so is judgment. Every judgment is an *act*, for which its author takes responsibility. It is also an *experiment*, of which he notes, and takes, the consequences. It is, moreover, an experiment which aims at *new* truth, and modifies the meaning of the terms it uses. For if the combination *S is P* were not thought to convey information, it would not be judged ; and when it has been judged it enriches the (verbal) meaning both of *S* and of *P*. *S* is henceforth an *S*-of-which-*P*-can-be-predicated, and *P* a *P*-which-can-be-predicated-of-*S*.

Personalist Logic, therefore, is not concerned with propositions as such. It treats them as mere verbal formulas and as *instruments* for operating upon particular situations, which have real meaning only in their contexts. But, so taken, they cease to be propositions and become *judgments*.

Judgments alone can be true (or false). Propositions can only be *useful* (applicable) and relevant. Their so-called ' truth ' is only ' potential ' and ' proleptic,' and depends on their application. If a proposition is *misapplied* (as all can be), it does not yield a ' truth.' Even ' two plus two equals four ' fails, if it is used to predict the behaviour of drops of water or of mercury.

As for reasoning, it always deals with probabilities. Even a syllogistic conclusion is only the deduction from a hypothesis which has to be verified by coming true in fact. But such verification does not make it absolutely true or even formally valid. It merely increases its probability and that of its premisses. Thus neither truth

nor proof is ever absolute. But for this very reason both can be *progressive* to infinity.

Lastly, it is not ultimately true that scientific method, which is the method of proceeding by hypotheses resting on volitional postulates and verified at every step by confrontation with experience, either must, or does, abstract from personality. True, in formulating 'laws of nature' abstraction is made from the particularity of the events from which these formulas are drawn. They are not *said* to hold at any particular time or place or of any particular thing. But the reason is that we desire to transfer them from one particular context to another. For 'laws of nature' are *our* means of predicting and controlling the course of events, and they have to be extracted from their historical setting in order to become applicable to future cases. These of course are just as particular as the setting from which the laws were taken: so when the time for their application comes their particularity is restored. Thus the truth of our 'law' is tested and confirmed by its success in predicting events at a particular time and in a particular place. Also, it should never be forgotten, for *the purposes and the satisfaction of a particular observer.* So the abstraction from personality which is practised in the sciences is more apparent than real; the sciences are not guilty of the delusion of many philosophies that unapplied, depersonalized, 'universals' are as such of superior dignity and value.

# CHAPTER V

## THE SACRIFICE OF BARBARA[1]

IT would seem that the old adage 'it never rains but it pours' applies, not only to the tropics, but also to the supercelestial regions where Pure Thought subsists on the supersensible aether and deathless Forms are gorged with nectar and ambrosia. For some time now rumours of commotions and strange innovations in these exalted regions have been wafted down to earth. Euclid's three dimensions no longer seemed to satisfy the requirements of pure geometry nor to fill the maw of space-time; the pure Forms of Plato and the apodictic proofs of Aristotle were no longer 'words of power' and terms to conjure with; while Einstein was ousting Newton as the corner-stone of physics. On earth, of course, the Titans had long been in revolt, piling Pelion on Ossa, and performing other gigantic feats of engineering; but the realms of Eternal Truth had seemed unshaken, even when certain sages began to think 'dangerous thoughts.' They were not really to be feared, so long as their heresies remained too abstruse to be teachable, and no textbooks were extant to divulge their mysteries.

But now the supercelestial region is torn by a convulsion unequalled since the day when Zeus dethroned and mutilated his father Kronos. Already the Revolution is descending from the Academic World into the campus, if not into the market-place, and threatening to end the long reign of Barbara. Barbara, be it said, denotes a pet name for the old Formal Logic, which has been an ingredient in

[1] From the *Personalist* for October 1931.

liberal education for above two millennia, and notoriously was " neither a science nor an art but only a dodge," that is, a pretty harmless and moderately entertaining word-game, which could be taught to sophomores.

Poor Barbara is now in an evil plight. For, by what seems not accident but a fell design, she is falling a victim to fierce attacks, launched simultaneously from Cambridge, England, and Cambridge, Massachusetts. With one accord two doughty champions of Symbolic Logic, Professor R. M. Eaton of Harvard and Miss L. S. Stebbing of Girton (and now Professor in Bedford) College, both in a manner disciples of Professor A. N. Whitehead and Earl Russell, and both filled with holy zeal to substitute for Barbara as queen of the realm of knowledge the Sacred Scriptures of Whitehead and Russell, have written twin logics, amounting to nearly twelve hundred pages of printed matter, with a similar purpose and a similar title.[1]

One cannot doubt the grim determination of their attack. By their concerted efforts they have dragged their victim, weakened for centuries by the preliminary tortures of the Thousand Cuts, down to the Altar of Science, and stretched her helpless on the Stone of Sacrifice. Already one can see them brandishing their glassy, obsidian knives, tearing Barbara's heart out of her breast and displaying it in gory triumph before a frantic academic crowd that hails such ritual murders as the fancied panacea for their intellectual ills !

But the humaner eye of a less heathen logic shrinks with horror from the hideous fanaticism of these Aztec rites. For it foresees, all too clearly, that this will not be the end of it. The fate of Barbara is only a beginning. She will not be the only victim when a fanatic Formalism begins to prey upon its kith and kin. Thousands of innocent students of philosophy in her train are doomed to suffer untold agonies from the pedant cult that insists upon turning the Altar of Science into a Stone of Sacrifice. I

[1] Ralph M. Eaton, *General Logic, An Introductory Survey*, pp. xii, 630 (New York, Chas. Scribner's Sons, 1931).

L. S. Stebbing, *A Modern Introduction to Logic*, pp. xviii, 505 (New York, T. Y. Crowell Co., 1931).

am more solicitous to alleviate their fate than to rescue Barbara, who after all does not belong to the mortal realm, was never very much better than she should be, and throughout her long reign often abused her power.

Moreover, behind the question how much technicality students of logic should be made to suffer looms a larger issue. Ought not teachers of philosophy to realize that their subject is already perilously near the danger-point at which a subject grows unteachable? And ought they not to beware of pushing it over the brink? Of course the reply will be forthcoming that if science demands the sacrifice, if precision of thought can be obtained at no smaller cost, no regard for the consequences, no consideration for the human weaknesses of students, must stay the hands of the high priests of inexorable science. But if Philosophy goes over the brink and is precipitated into the limbo of obsolete and futile subtleties, will not all the values of which we believe it to be the vehicle perish with it? Such are the considerations which move me to inquire whether logic is truly a science which must be worshipped with human (and indeed superhuman) sacrifices, and whether Symbolic Logic is a real advance in logic, and is not rather a cruel, needless, and pernicious superstition of the Academic Grove.

§ 1

Before discussing this question, however, I should make it plain that I do not wish to cast any slur on the two books under review. I have great respect for both Professors Stebbing and Eaton, and think that both have written good books, which display competent workmanship. If I had to use them as textbooks for teaching logic, I should be hard put to it to choose between them. For both are Formal logicians who have taken refuge in Symbolic Logic to escape from the whims of Barbara. Both have made gallant attempts to infuse logical order into the chaos of logical tradition, and to make a teachable extract from Symbolic Logic. Both, moreover, have had to compromise with the rigour of their ideal of Logic as

the science of pure Form. Both have introduced full, and perhaps excessive, expositions of the vagaries of Barbara, though they heartily despise her; and both have done homage to the insistent demand for a logic of scientific method, to the extent of discussing the problems of 'inductive' logic, though both admit in handsome terms that its processes cannot be represented as purely formal.

For example, Professor Eaton confesses that "natural science cannot be made completely deductive" (p. 583), that "induction yields proofs of probability rather than truth" (p. 488), and that "in no case is the probability of an induction *exactly* measurable" (p. 495), and that "the truth-frequency of any class of propositions is to be determined by empirical observations" (p. 493). Similarly Professor Stebbing, after declaring that "logic is purely formal" (p. 478) and that the logician "emphasizes the distinction between pure and empirical science: in the former demonstration is possible; in the latter it is not" (p. 493), confesses that "the problem of the logical justification of induction is not one that need concern the scientist" (p. 492), that only "in so far as scientific method exhibits form is it the proper concern of the logician," and that "every modern logician recognizes that the foundation of the theory of induction is to be found in the theory of probability" (p. 493).

Despite these admissions, both Professors Eaton and Stebbing have many acute and interesting things to say about scientific procedure. But should it not have occurred to them that they ought to have ruled out induction altogether as unamenable to form and therefore extra-logical? Ruthless excision of all 'inductive' matter would have greatly purified the form of both these treatises on Symbolic Logic, and have enabled their readers to realize the essential emptiness of pure form.

## § 2

I am not concerned to deny that on the ground it shares with Barbara Symbolic Logic carries 'analysis' further

than Formal Logic, even though the analysis of both be only verbal. On that ground it can make a number of unanswerable criticisms of the arbitrary restrictions, such as that of valid reasoning to the subject-predicate relation, which have determined what topics should receive treatment in Formal Logic. So I am quite willing to admit that Symbolic Logic is a more perfectly formal form of Formal Logic. But what I boggle at, and what I think all Formal logicians need to justify, is the foundation of their structures. I question their fundamental abstraction of 'form' apart from 'matter' and the set of assumptions they have chosen to build their science upon. And particularly I complain of their neglect to *state*, candidly and completely, the abstractions on which they have built. It is their *philosophic* or epistemological basis which seems to me so incomplete and insecure.

Now on this matter I get little help either from Professor Stebbing or from Professor Eaton. Both seem to me (1) to rule out and beg unjustifiably, uncritically, and dogmatically, a number of questions that ought to have been cleared up, (2) to omit many questions that ought to have been argued, and (3) to use many notions to which they are not entitled.

§ 3

I will take as examples of the first defect the treatment of the notions of Logic and of truth (and falsity). Both Professor Eaton and Professor Stebbing assume that Formal Logic is possible and must be the only logic worthy of the name; but by neither is this choice at all adequately defended. Professor Eaton devotes to it only one brief paragraph (p. 4) which admits that there is a psychological and philosophical background even to Formal Logic. Professor Stebbing hardly admits even this. She conceives Logic as "the science of pure form" (p. 486) and holds that "all demonstration is purely formal, so that the *validity* of reasoning with regard to any matter of fact is wholly dependent upon the *formal* properties of the objects that enter into the reasoning" (p. 487). It is grudgingly ad-

mitted that " the logician also may have to take note of psychological processes " (p. 473) and that inference is a mental process which would be irrelevant if Logic were strictly confined to the theory of propositional forms (p. 210); but " its *validity* depends upon conditions that are logical " (p. 211). ' Validity ' and ' truth ' are said to be ' quite different ' (p. 246), but the existence (or occurrence) of validity is taken for granted. As for truth " we need not attempt to discuss the problem as to what is meant by a *true* proposition " (*ibid.*). I can imagine no discussion more vitally necessary to Symbolic Logic.

From all this *I* should conclude that the systematic status of Logic is a very burning question, and that to neglect it is anything but scientific.

§ 4

I do not expect Formal logicians to agree, but at any rate they will find it hard to evade an admission that the present status of *truth* in logic is something of a scandal. What is meant by ' truth,' and what are its relations to ' validity ' ? Has Formal Logic any use for ' truth ' at all ? Does truth of pure ' form ' occur at all ? Is it even conceivable ? In what sense or senses is truth claimed by judgments, propositions, and propositional functions ? These surely are vital questions to which every logic should provide a coherent answer.

Symbolic Logic in particular seems bound, not merely to assume that true propositions exist, but also to clear up their relations to the truth of judgments and of propositional functions. On this question its attitude appears to be obscure and inconsistent.

(1) Its initial difficulty is to explain how true propositions can be distinguished from false merely *by their form*. For false propositions also formally claim truth. Hence the formal truth-claim which inheres in a proposition as a verbal formula must not be confused with real truth. For else there would be no false propositions and error would be impossible.

(2) Next there arises the difficulty of determining the *meaning* of a proposition. Before we can inquire whether it is true, we must discover what it means, and realize that it may be true in one sense and use, and false in others. Moreover, as in number the false senses far exceed the true, it would seem that every proposition must contain far more falsity than truth. Anyhow the question of *meaning* clearly takes precedence over that of truth.

Now it is soon seen that meaning depends on *use*. Apart from its use the proposition is a form of words which mean *potentially*; but their actual meaning can only be determined when they are used in a context; it is only then that they convey truth or falsity. Hence all words and all propositions are to be deemed (potentially) 'ambiguous.' They may be used in different senses, and these must be ascertained before their truth-claim can be discussed. Moreover, these possible senses are innumerable and inexhaustible. For even if we had catalogued all *past* uses, we could not foresee to what future uses a proposition might not be put. Further, because every proposition can be used so as to convey truth, it can be *misused* to convey falsehood. So, in its use, it may become false. Logically, therefore, every proposition should be regarded as both true *and* (at least potentially) false, and as infinitely 'ambiguous' besides.

This infinite 'ambiguity' of the proposition is, however, better called its *plurality of senses*. For what it means is that a form of words can turn, in use, into an indefinite plurality of *judgments*. The reason therefore why one cannot say of a proposition *what it means* is that in ultimate analysis there is no 'it.'

A judgment, however, is clearly in a different position. It is a personal act of thought which uses the verbal form called a 'proposition' in a definite spatio-temporal context. It is a personal truth-claim, advanced by some one at some time, and place, for some purpose. It is an event, and its truth is relative to its occasion. To eternal truth it lays no claim, for it does not inhabit the fabulous realm of timeless subsistence. What it means, and whether it

is true, are always questions of actual fact. It may be obscure and really ambiguous, if it is not understood, or if intended equivocally; but in their context most judgments *are* understood, and ambiguity is not inherent in the judgment, as plurality of senses is in the proposition.

A propositional function is conceived by Symbolic Logic as a formula capable of becoming a proposition when determinate values are assigned to the '*variables*' it contains. Its (meaning and) value will thus depend on the values given to its terms. Symbolic Logic appears to be in doubt whether truth should be predicated of propositional functions. As a rule it is stated that "these schematic forms are neither true nor false" and that "any expression that might conceivably be sometimes true and sometimes false is not a proposition, but a propositional function," whereas "it is characteristic of a proposition . . . that if it is true or false, it is true or false once and for all."[1] Professor Stebbing, however, mentions "a propositional function that is always true" (p. 225), and Professor Eaton also alludes to this possibility (p. 448). But this doctrine seems hard to justify. For it would mean that one could not give values to the variables of a propositional function such as to produce false propositions; or in other words that a propositional function cannot be misapplied.

## § 5

In view of these dicta can it be maintained that Symbolic Logic has any clear conception of truth that applies unambiguously to propositional functions, propositions, and judgments? It seems impossible in the first place really to separate 'propositions' from propositional functions. For actually all the terms of a proposition, being 'ambiguous,' would seem to be 'variables.' Their meaning, and so the truth of the proposition, seems to depend on the values assigned to its constituent terms. It suffices to point to the enormous variability of a proposition in

[1] Eaton, pp. 391, 362.

which 'Nero' figures, according as 'Nero' refers to a Roman Emperor or a coloured slave, to a black dog or a cat. Certainly then propositions are "sometimes true and sometimes false" and Professor Eaton's propositions that are "true or false once and for all" are a myth. No one has ever devised a form of words that could not be used ambiguously, and misused.

The proposition altogether is a very anomalous affair. So soon as it is used, it turns into a judgment; so soon as it goes out of use, it turns into a verbal formula or string of words whose meaning admits of infinite variation. May we not conclude that propositions merge into propositional functions and, strictly speaking, do not exist at all? Are they not just fictions devised for the uses of Formal Logic, and would it not be far wiser to found logic on judgments, which are at any rate observable occurrences and psychic facts?

§ 6

But even if Formal Logic finds propositions such convenient counters in its word-game that it cannot bear to drop them, it must at least be summoned to cease from confusing the 'truth' of propositions with that of judgments. The difference in the ways in which 'truth' can be predicated in these two cases would seem to be plain. The one thing a proposition cannot be is what it is always *assumed* to be: it is not true *or* false. A proposition is *both* true *and* false, or *neither*: it is the former when regarded as a form-to-be-used (variously); it is the latter when it is recognized as a 'propositional function.' A judgment, on the other hand, is always definitely either true or false, according as it is the best available solution of the problem that provoked it or not. Again the 'ambiguity' to which a proposition is liable is really a '*plurality of senses*,' *i.e.* of the uses to which it may be put. It is (potentially) universal, because it inheres in its 'form,' and in the usefulness of language; but it is no obstacle to its actual use. The fact that a proposition may be used in *n* senses need not hinder me in apprehending the sense in which it *is*

used on a given occasion. In a judgment, on the other hand, ambiguity, when it occurs, is a serious blemish, because it may baffle understanding.

This duplicity of 'truth' in Formal Logic Professor Eaton has the grace to admit. He says (p. 16) "the adjectives true, false, doubtful, impossible, though they are applied to judgments, do not characterize this act in the same sense as they do propositions." To remedy this he proposes to call judgments *correct* or *mistaken* rather than true or false (p. 17). To this proposal I must demur. Linguistically, 'correct' seems better suited to express formal validity than truth. Moreover, Formal Logic really has as little need for 'truth' as our actual thinking has for 'formal validity.' Justice would be done, therefore, if this latter term were left to Formal Logic while 'truth' was reserved for judgments. Formal Logic could then be allowed to play about with 'validity' to its heart's content and might even refrain from confusing it with truth.

## § 7

Of fundamental questions which Formal Logic ought to have discussed for the sake of thoroughness, I will only mention a few. Is it really possible to abstract the pure form of reasoning and to base a science on it? Is it really permissible to suppose, with Professor Stebbing (p. 133), that by substituting symbols "precise, *i.e.* well-defined and therefore unambiguous," for words, the haunting wraith of ambiguity can be laid for ever? If so, why is it that controversies about the meanings of its most vital terms, like 'implication,' can break out even in Symbolic Logic? Is it really possible to rule out the psychic side of thought, and to ignore the conceptions of purpose, satisfaction, selection, relevance, and the rest, which refer to it? If it is possible, why is no attempt ever made to show *how* it is possible, and why do not Formal Logicians find it possible to get along without constant references to the topics they taboo?

§ 8

This question brings us to the third item of the programme sketched at the end of § 2. I notice that Professor Stebbing makes constant and effective use of conceptions like relevance, selection, purpose, context, et cetera, which appear to be incompatible with any Formal Logic, though they do not figure in her (fairly full) Index. Professor Eaton is hardly less prone to do the same thing. He assures us (p. 412) that " whatever being a class has springs from the *relevance* of universals to individuals," but devotes no consideration to the logic of relevance, or to the other pragmatic conceptions he feels prompted to use (cp. pp. 580-83). And he also does not allow them to sully the formal orthodoxy of his Index. Now in itself it is no matter for regret when the practice of philosophers is better than their theory. But in what are professedly theories of Symbolic Logic some little apology would seem to be needed for the intrusion of these strange and extraneous notions. It is not enough to keep them out of the Index. There should be, if not some acknowledgment of their sources, at all events some excuse for their introduction, and some little reflexion on their compatibility with the rest of the treatise. It is a pity on all grounds that both Professor Eaton and Professor Stebbing prefer to *use* the conceptions of an alien logic rather than to *explain* them; and it is still more of a pity that neither of them takes any interest in the processes by which human knowledge is actually augmented. For had they done so, they could not have failed to observe that these processes have no resemblance to anything with which any sort of Formal Logic is concerned.

# PART II

# HISTORICAL

# CHAPTER VI

## WILLIAM JAMES [1]

THE history of philosophy is by no means rich in new ideas and picturesque personalities. I once set myself to enumerate the really important and novel ideas that had occurred to philosophers, and found that I could not get beyond nine.[2] Nor would it be very much easier to count up as many great personalities among philosophers, and even these seem to get not commoner but scarcer as time goes on. They are to be found, almost exclusively, among the philosophers of antiquity, whose biographies we may suspect to have been inflated by a strong infusion of myth. If we can believe the traditions that have come down to us, and whether we can or not will depend on our native and acquired credulity, Thales, Pythagoras, Heraclitus, Protagoras, Empedocles, Parmenides, Socrates, Plato, and Plotinus may have been personally great: but since that time who is there on whom this epithet could plausibly be bestowed?

I suppose, therefore, that I ought to regard it as a singular piece of good fortune that the only two human beings who ever at once made upon me an impression of personal greatness should both have been philosophers: the one was Arthur Balfour, the other was the subject of this article, William James.

James, moreover, was not only personally great, but also the effective promulgator of a great idea, the bearer of a great message, the last indeed in my list of the nine great

[1] A Los Angeles Public Library Lecture, 1930.

[2] Cp. p. 94.

ideas which have cropped up in philosophy, and of the only great idea which has so far taken birth in America, Pragmatism. So you see how great is my responsibility in endeavouring to give you, in the short space of one hour, some idea of a great man and a great idea, of William James and of Pragmatism !

First, let me try to give you some idea of James's personality. I was not privileged to sit at the feet of James while he was still teaching at Harvard University ; but when, nearly forty years ago, I set out on my first voyage to discover America, I was told that James was one of the few men in America I must not fail to meet, and was equipped with a letter of introduction to him from James Bryce, the famous historian and British Ambassador at Washington. It so happened that I had no opportunity of presenting myself to James for several years, but when the auspicious moment came, the effect was instantaneous and electrical. Within five minutes of first meeting James, I found myself talking to him as if I had known him all my life ! That was one of the effects of James's personality on people. He had a marvellous gift of psychological sympathy in dealing with nearly every one, and inspired confidence as well as admiration. The one exception to this rule that I observed was the case of a philosopher and a colleague, George Santayana. He and James seem to have been naturally antagonistic and antipathetic to each other, I don't know why, and you should bear this in mind when you read what Santayana has to say of James. A more typical display of the real James I witnessed years later when James first came to Oxford.

He had never met G. F. Stout, who was then endeavouring to instil a little psychology into the medieval Oxford mind, and was anxious to make his acquaintance. So I took him round to the Stouts' to tea. It was a Sunday afternoon, and we had hardly begun to talk when an undergraduate called. Stout imprudently told James that the young man was suffering from a curious obsession, and this at once aroused James's sympathy. The result was that James and Stout spent the rest of the afternoon talking

to the young man about his troubles, while Mrs. Stout and I were left disconsolate, to lament the great psychologist's excessive sympathy with the distresses of the human soul! You will find abundant evidence of his catholic sympathies with every sort and condition of human nature, throughout his incomparable *Letters*, so skilfully edited by his son, Henry, which I hope I may suppose many of you have read. If not, may I recommend you to take an early opportunity of filling in this gap in your education? You will thoroughly enjoy the process, and it will give you some idea of the great range of James's interests. He is equally charming in condoling with a little son on the loss of a milk tooth, in acknowledging the gift of an azalea from an appreciative class of Radcliffe College girls, in discussing the psychology of Shakespeare's genius, and in refusing an invitation to a formal gathering of professional philosophers.

It was in virtue of his psychological sympathy that James had such a fascination for all sorts of cranks, not only philosophic, with the sole exception of the hard-bitten shrivelled pedant. Now cranks are people who in general are not accustomed to encounter much sympathy: the world treats them coldly and severely. So when James received them with an open mind and ear, and listened to them and took an interest in their struggles to express themselves, and soothed them and treated them as though they might really have become, by some divine chance, the vehicles for some unsuspected revelation, they promptly fell in love with him, and became his devoted adherents. James treated them tenderly and spent enormous amounts of time and trouble on them and not a little money. I remember in the nineties of the last century he had on his hands a little self-educated Polish Jew cobbler in New York, who had a philosophic soul (not sole) for ever urging him beyond his last, and a firm conviction that he had discovered the Secret of the Universe. Said James: "What if this little fellow should turn out to be a second Spinoza?" and in the end got up a subscription among his friends, but mainly I suspect out of his own pocket, to

enable him to get his revelation off his chest. I still have a copy of the resulting publication. It is called *The Disclosure of the Universal Mysteries* ; but I have never heard that it has appealed to the patriotism of Jewish philosophers like Spinoza's *Ethic* or to the philosophic pride of shoemakers, like the works of Jacob Böhme.

James, however, did not merely lavish precious balms of human sympathy on his cranks : he also exploited them. Whenever he wanted to say anything particularly neat and scathing about a philosophic doctrine he was upsetting, he could always mobilize one of his pet cranks, whom he appeared to have kept up his sleeve for this very emergency. He would then quote from him some vivid and outrageously apt dictum, with crushing effect. Thus, who that has met them can ever forget the ' unlettered carpenter ' of James's acquaintance who so neatly laid down the principle, *and the limits*, of democracy in the memorable saying, " There is very little difference between one man and another ; but what little there is is very important," or the old lady of Boston who was wont to divide philosophies into the *thick* and the *thin*, or the gorgeous pictorial phrases James extracted from his ' pluralistic mystic,' Benjamin P. Blood ?

On James's death some of his cranks tried to attach themselves to me ; but I, alas, was not equal to the occasion nor able to retain their allegiance. I suppose I was too distant, either spiritually or geographically. In particular I remember one who wrote under the name ' Salvarona ' and had evolved what he called a metaphysic of Hunger, and used to send me pamphlets about the nervous system of Jesus. I am afraid I was too much of a logician and not enough of a psychologist to appreciate his work, but James would, I am sure, have made good use of him and have immortalized him by quotation.

But I must not spend all my time on James the man, for I know you will want me to speak about James the philosopher. The first thing I would beg you to note about him is that he was not, strictly speaking, a professional philosopher at all. He was really one of the great succession of amateurs who have stirred philosophy and stimu-

lated thought, in line with Descartes, Spinoza, Leibniz, Berkeley, Hume, Schopenhauer, Mill, Bentham, and Spencer. For he was brought up to be a scientist, a physiologist, and a doctor of medicine, and the first course he delivered in Harvard University was one in anatomy. James took to philosophy from the love of it, from personal interest in its problems, and not because he thought he could make a living by cataloguing the varieties of philosophic opinion, and speculating about the sense of the abstruse abstractions in which defunct philosophers have hidden away their esoteric doctrines.

He told me once that the first philosophic lecture he had ever listened to was when he began to lecture on philosophy himself! This unphilosophic past shows, I think, in James's work, not indeed in any lack of grip of the essential problems, which, as professional philosophers should never be allowed to forget, are the common problems of human life, but in his elevation above the sordid squabbles of philosophy, in his freedom from the ' genteel tradition ' with its transparent insincerity, and in the vigour and originality of his thought. His exemption from what, I fear, is too often the dull mechanical routine of academic philosophy largely accounts for the virgin freshness with which James's mind approached the problems of philosophy. It gave him all the advantages which the amateur has over the professional, and enabled him to discover, like Plato before him, that philosophy is *love* of wisdom and that in matters of the spirit love is not always blind, but a source of insight and penetrating perception, and that valuable truth is least likely to reward the nerveless and half-hearted efforts of ' dispassionate ' research.

Secondly, I would have you note that there was a great deal of the *artist* in James's composition, and that his literary genius was largely hereditary. He thought at one time of making painting his profession, as two of his sons have since done; and both his father and his brother, the novelist, have amply shown that power over words was an heirloom in the family.

At the same time I would not have you think that

James's style, which is so delightfully different from that of most philosophers, and makes anything he writes such a joy to read, was a sheer gift of the gods or of fortune, and required no cultivation. I believe that his way of writing was part of a fully considered policy, part of a deliberate protest against the paralysing Germanism which he saw creeping into American academic life, together with German scholarship and ideals of research, desiccating the professor and alienating him from the people. James felt strongly, and it seems to me rightly, that philosophy could have no future, and could never hope to grapple with its problems, or to impress the world with the value of its findings, unless it could manage to express itself in intelligible and attractive language. He saw that the carelessness and illiteracy of Kant had done as much irredeemably to *spoil* German thought, and to render it *incapable* of precision and lucidity, and even of knowing its own mind, as the literary genius of Plato had for ever made the fortune of Greek philosophy; so he wished American philosophy not to abandon the better models British philosophy had provided in Locke, Berkeley, Hume, and Mill.

He himself surpassed his models. His own writings read more easily than anything else in philosophic literature. Of all his works only the big *Psychology* can be called technical in style, and even this is mainly due to the great chunks of quotations from other psychologists which it embodies. The rest are popular and intelligible, to all except some philosophy professors. For James reads so easily that many of his philosophic colleagues, unaccustomed to such light and palatable fare, have tortured themselves to find hidden meanings in what he says, and so have often missed his points.

But, as you probably know, easy reading does not usually mean easy writing. And so it appears to have been with James. Whenever he was engaged upon any considerable piece of literary composition his letters to his friends grew full of groanings over the slowness and arduousness of his progress. He assures them that working all day and rewriting half a dozen times has only yielded him

a page and a half of manuscript, and envies them their facility and rapidity of composition. Yet I was often tempted to take these complaints with a grain of salt. No doubt they were justified at times, but at others James must have written easily. His letters, for example, must often have been dashed off at full speed, as the handwriting and the erasures show. And what is most remarkable, their style is no whit inferior to that of the most finished compositions. Thus there is no trace in the finished product of the labour that sometimes went to its production. The quality is alike exquisite, whether the writing was difficult or easy, rewritten half a dozen times or just dashed off on a casual postcard. The letters are a complete proof that James could write just as well on the spur of the moment as in his most laborious works. It was all a question of getting out his intrinsic quality, and this was sometimes easy, sometimes harder.

In coming finally to the philosophic achievements proper of James I shall have to confine myself to a few capital points. The first is that he broke down for good and all the hard and fast divisions which false abstractions had introduced into the treatment of philosophic problems. For example, it was long the custom of those who did not understand the significance of his work to regard him as a psychologist who had strayed beyond his tether and taken to theory of knowledge and even metaphysics. But what James had actually done was to shatter the classification which put psychology in one compartment and shut off metaphysics and theory of knowledge in separate partitions. As a matter of fact the whole of James's philosophy is part of one endeavour. It is contained already in his big *Psychology* published in 1890. If you want chapter and verse, read H. V. Knox's little study of James which is largely composed of quotations selected by preference from the *Psychology*. This point was also proved by John Dewey's feat in extracting his Instrumentalism from the *Psychology* without any further help from James. But the other philosophers were too dull to perceive this. They thought that as his philosophy appeared in a work called

'Psychology' it did not concern them. They praised it as psychology, for it was such good reading; but that a good psychologist could also be, nay, could for that very reason be, a great philosopher, never entered their heads. When James proceeded to draw out the implications of his new psychology and to set down its applications to their disputes, they were genuinely shocked to find that a mere reform of psychology portended a revolution in philosophy.

The reform in psychology which James initiated, and which is my second point, had all the simplicity of genius. It consisted in the overthrow of the psychological atomism known as associationism, and the substitution therefor of a description of psychic process as a continuum. As soon as it was done, it became obvious that the new description was much simpler and easier and that associationism had been based on quite outrageous fictions.

Yet there were reasons for these fictions. British philosophy had quite naïvely started from common-sense and taken as indisputable fact the analysis of reality which has been found sufficient for its purposes. This analysis broke up the real into a world of distinct interacting things and persons, all immersed in the continua of space and time. Now actually this is far from being either complete analysis or complete atomism. For space and time and causal connexions suffice to weld together the many into a world. But it is possible to mistake the aim of common-sense procedure. If it is assumed that the aim of common-sense is to provide not an effective platform for action, but a logically complete analysis of the continuous into discrete atoms, and if it is taken as self-evident that every distinguishable impression or idea is a distinct existence, it is clear that common-sense analysis does not go nearly far enough, and stops far short of its logical conclusion. So Hume said, let us be logical, insisted on going the whole hog, and triumphantly reduced the world to an atomic dust-heap of sensations. Space and time were alleged to be atomic in their composition, causation was reduced to succession, floundering in a mire of unwarranted expectation, while

of the self which held together and remembered its experiences, Hume frankly and openly despaired. He gave up the problem how such feats were possible for what could *ex hypothesi* be nothing but a series of flashes of sensation.

But the result of Hume's radical consistency was chaos and scepticism, and subsequent philosophy had to find a way out of the *impasse* into which he had led it.

Unfortunately the philosophers all started on the wrong track. They did not retrace their steps sufficiently far, nor go back behind the work of common-sense. Under the leadership of Kant it seemed clear to them that, inasmuch as Hume had destroyed causation and the other connecting principles, what was needed was to resuscitate a new and more impressive set of 'synthetic' categories, to stitch Humpty-Dumpty together again.

So Kant set himself to manufacture them, in great profusion, and to decorate them with the title of 'pure *a priori*,' without which no German philosopher can now think his thought decently arrayed. All his successors followed Kant like sheep. No one raised the prior question, whether after all philosophic reflexion ought not to have started further back, with really crude experience, as it is given *before* any intellectual work is done upon it and it is analysed at all, and arranged in a practically manageable order by the categories of common-sense. Had the question been raised why and how the common-sense world was constructed, it would have been evident that a world of interacting things was by no means what the mind originally encountered in the beginning of knowing. The real datum for the nascent mind was a big buzzing confusion as James said, *i.e.* a chaotic continuum. If now one started from that, one clearly never needed any principles of *synthesis*. One needed rather justifications for *analysis*, clues for the practice of breaking up the flux, in thought, and slicing it up into separate entities. This was the great discovery in psychology and epistemology made by James, and almost simultaneously by Bergson in France.

It completely transformed the situation and sidetracked as wholly irrelevant and superfluous the problems

put by Hume and Kant and their successors. All that was now needed was motives and means for breaking up the flux. These were easily forthcoming in the shape of psychological observations on the selectiveness of attention and the variations of interest. James was fully entitled to declare that the real way to a truly critical philosophy led not through *Kant* but *round* him, and that the Kantian formulation of the problem of knowing with all its endless and fruitless intricacies could, and should, be short-circuited altogether. Moreover, by discarding the false premisses which British empiricism had shared with, and foisted upon, German apriorism a new, more radical and more tenable empiricism had become conceivable.

It was this that led, thirdly, to the development of Pragmatism, than which no novelty of thought has ever been more grotesquely and stupidly misinterpreted. Really, however, it was a very simple affair. It was merely a revolt against a number of pernicious abstractions which had long blocked the path of philosophic progress. Thus it had been assumed as a matter of course that there was no connexion between the canons of right thinking and the actual procedures of our thought; or in other words, between logic and psychology. Nor yet was there any connexion between right thinking and right doing, and between theory and practice, nor any doubt about where the line between them should be drawn. By denying this dichotomy and showing how even our highest 'theoretical' abstractions were derived from, and relative to practical needs, were intended for use upon the problems of life and drew their significance from this relation, Pragmatism reinstated *life in its integrity* as the supreme aim of philosophic thought. By refusing to take meaning, use, and value as three unrelated notions which had nothing to do with one another, pragmatism for the first time rendered the nature of truth intelligible, and enabled philosophers to understand the process by which truths are in real life actually established, developed, and if need be, modified, and scrapped. This process proved to be identical with the procedure which had long been prac-

tised by the sciences spontaneously and with signal success. It is not too much to say that on one side Pragmatism means the discovery by Philosophy of the method of Science. But the method of science, rightly understood, is the method also of all knowing and all living, and the scientists themselves, misled by the false formal logic of intellectualist philosophy, had not understood it. They had only practised it, instinctively, and without theoretic sanction from the current logic, like every one else who had problems to solve and knowledge to acquire. Now that the new pragmatic logic has exposed the inanity and malignity of the old logic, and explained the procedures of actual knowing, we may expect logic to act as a stimulus, and no longer as an obstruction, to the growth of knowledge.

Thus Pragmatism has restored to Philosophy its contact with everyday life and with the working sciences. Philosophy is no longer doomed to be an idle game of 'contemplation,' juggling with verbal counters, whose sole use is to minister to the superiority-complex of its adepts, and to inculcate contempt for the activities, pursuits, and values of the vulgar. It has been emancipated from the dead hand of Pedantry which withers what it touches and kills what it lives on ; but so long as any society breeds pedants and promotes them to professorships, *this* achievement will never quite be forgiven William James.

Similarly his famous doctrine of the Will to Believe, which opens out such vast fields to the cultivation of a verifiable and progressive religious life, and has done so much to found a new science of the psychology of religion, will never be acceptable to those who are openly or secretly anti-religious. But it is best understood as a further plea for a recognition of the integrity of human nature, and of the profound irrationality of relying on an elegant extract called ' pure reason ' in order to grapple with the riddles of the Sphinx. With a masterly but loving hand James traced out the real complexity of human belief, and the subtle relations between belief and action, and for ever disposed of the pretensions of those of faint heart and little

faith to have a monopoly of philosophic elevation, logical security, and scientific rectitude.

Let me finally say a word of warning about the Americanism of James's philosophy. I am not in general in favour of introducing nationalism into the discussion of philosophic and scientific questions, which I think prosper best when there is the freest intercourse and completest co-operation between those who are devoted to their elucidation. The nationalist excesses of the learned in all countries were among the most shameful revelations of the decline in civilization occasioned by the late war. Like the churches, the universities nowhere upheld the universality of human values, but were tempted to play the jackal to the wolves of war. Moreover, it seems to me to be very unsound and dangerous to argue from the character of a people to that of a philosopher belonging to that people. For every people is so mixed in its composition that any individual may inherit from his actual ancestors qualities very unusual and rare in the people at large. Also the philosopher may be a genius, and is pretty sure to be at least an eccentric, who departs in various ways from the norm of his people. And if in addition he is also a professor, it is well to remember that he belongs to a very highly selected class, leading a very peculiar and specialized life, and tempted in various ways to dissent from the current opinions popular in his time and country. We should therefore expect the professor as such to develop everywhere a strong and even excessive bias in favour of the theoretic life, that is, in favour of the life he leads.

I do not of course deny that the social life and the social valuations which surround him may have an influence on even the most opinionated professor. I merely want to point out that his reaction to popular standards is quite as likely to be dissent and violent aversion as accommodation. Hence to account for Pragmatism it is not enough merely to point to the pragmatic activities of American life. After all, if all that was necessary for the discovery of Pragmatism was just comprehension of American life and of the salient features of American

civilization, any one of hundreds or thousands of American philosophy professors might have discovered Pragmatism long before James.

Actually Pragmatism was a great and difficult discovery. You can take this from me, because I had myself taken several steps on the way to it, before James blazed a trail that all could follow. But great discoveries have a knack of seeming very simple after they are made, like the egg of Columbus and natural selection and Newtonian gravitation, though thousands of apples have for ages fallen on uncomprehending heads. Pragmatism is no exception to this rule. American civilization, resting as it did on the physical conquest of a continent and the applications of science to life, no doubt pointed to Pragmatism as the theory of its practice; but after all the same has more or less been true of human life and activity always and everywhere. Actual human life and actual knowing are everywhere pragmatic.

The civilizations of the valleys of the Euphrates and the Nile were from the first based upon the practical control of those powers of nature; what the early Egyptians achieved in the case of the Nile the modern Americans have not yet surpassed in the case of the Mississippi. Moreover, always and everywhere, a genius has been needed to discover the meaning of human activity, and with it the truth of Pragmatism. In the Greece of the fifth century B.C. the genius was Protagoras, and it cost him his life; in the China of the Ming dynasty it was Wang-yang-min, and it cost him four centuries of oblivion, till he was unearthed again by an American scholar; in the America of the nineteenth century the genius who revealed to the American people the meaning of their doings, and so enabled them to go on doing them more intelligently and harmoniously, was William James.

# CHAPTER VII

## THE LETTERS OF WILLIAM JAMES[1]

THE Letters of William James are the fascinating record, belated but all the more welcome, of a great personality. Now the jewel of personality has many facets—perhaps their number is infinite *in posse*—whereby it responds to the stimulus of other souls, and flashes back upon them sparks of its own inherent fire, which nevertheless, in proportion as the reacting soul is sensitive and sympathetic, display a distinctive colouring, appropriate to the individual stimulus. Unfortunately such displays are rare. The necessities of life compel us ordinarily to conceal our personality. Our wormlike soul secretes around it a protective tube of sand and dirt and shells, of rubbish and convention, ensconces itself in artificial darkness, and not infrequently dies therein, of inanition. It is only a few who dare to be themselves, and to reveal themselves. But they are the most interesting and delightful of persons; for, after all, there is nothing men relish more than human personality. They come out in their letters better than in autobiographies, which always tempt to a pose, or in biographies, which nearly always tone down personality, and blur its outlines. One cannot but applaud, therefore, the rare act of filial self-denial by which Mr. Henry James has allowed his father to speak for himself and given to the world these gorgeous letters, embedded in a minimum of connective tissue, instead of a more conventional 'Life.' But he has shown excellent judgment and the literary art which is hereditary in his family by his selection of his

[1] From the *Quarterly Review* for July 1921.

material; this was very abundant, because any one who ever received a letter from William James would be sure to keep it. One could wish perhaps that he had not selected quite so severely, and had given us four volumes instead of two; but by excluding most of the technical philosophy he has succeeded in exhibiting the enormous range of his father's interests in all sorts and conditions of men, and the many facets of his personality.

This method of selection is well calculated to bring out the vital fact that the best sort of letter is literally a 'correspondence,' and reveals, not only the writer, but also his endeavour to attune himself to the demands and interests of another, and, so, indirectly, the person written to. It is marvellous how James succeeds in adapting himself to different personalities. He is equally a model and a delight when praising his son Henry's (*aet.* 8) improved handwriting: "So well written that I wondered whose hand it was, and never thought it might be yours. Your tooth also was a precious memorial—I hope you'll get a better one in its place. Send me the other as soon as it is tookin out. They ought to go into the Peabody Museum. If any of George Washington's baby-teeth had been kept till now, they would be put somewhere in a public museum for the world to wonder at. I will keep this tooth, so that if you grow up to be a second George Washington, I may sell it to a Museum" (i, p. 276). Or when telling his son William (*aet.* 6) about some performing seals, "the loveliest beasts, with big black eyes, poking their heads up and down in the water, and then scrambling out on their bellies like boys tied up in bags" (i, p. 278). Or his daughter (*aet.* 8) about "an immense mastiff, so tender and gentle and mild, although fully as big as a calf. His ears and face are black, his eyes are yellow, his paws are magnificent, his tail keeps wagging *all* the time, and he makes on me the impression of an angel hid in a cloud. He longs to do good" (ii, p. 25). Or again when coaxing a desiccated philosopher into taking a less pedantic view of a human problem: "If the world is a Unit there *are* no sides—there's the moral rub! And you don't see it! Ah

Hodgson ! Hodgson *mio* ! from whom I hoped so much ! Most spirited, most clean, most thoroughbred of philosophers ! *Perchè di tanto inganni i figli tuoi?* If you want to reconcile us rationally to Determinism, write a Theodicy, reconcile us to *Evil*, but don't talk of the distinction between impediments from within and without when the within and without of which you speak are both within that *Whole* which is the only real agent in your philosophy " (i, p. 246). Or again listen to his description of his brother Henry's style : " You know how opposed your whole ' third manner ' of execution is to the literary ideals which animate my crude and Orson-like breast, mine being to say a thing in one sentence as straight and explicit as it can be made, and then to drop it for ever ; yours being to avoid naming it straight, but by dint of breathing and sighing all round and round it, to arouse in the reader who may have had a similar perception already (Heaven help him if he hasn't !) the illusion of a solid object, made (like the ' ghost ' at the Polytechnic) wholly out of impalpable materials, air, and the prismatic interference of light, ingeniously focused by mirrors upon empty space. But you *do* it, that's the queerness " (ii, p. 277). Or finally his penetrating estimate of Shakespeare *à propos* of Frank Harris's book (ii, p. 335) : " Harris himself is horrid, young and crude. Much of his talk seems to me absurd, but nevertheless *that's the way to write about Shakespeare.* . . . He seems to me to have been a professional *amuser*, in the first instance, with a productivity like that of a Dumas or a Scribe ; but possessing what no other amuser has possessed, a lyric splendour added to his rhetorical fluency, which has made people take him for a more essentially serious human being than he was. Neurotically and erotically, he was hyperaesthetic, with a playful graciousness of character never surpassed. He could be profoundly melancholy ; but even then was controlled by his audience's needs. A cork in the rapids, with no ballast of his own, without religious or ethical ideals, accepting uncritically every theatrical and social convention, he was simply an aeolian harp passively resounding to the stage's

call. Was there ever an author of such emotional importance whose reaction against false conventions of life was such an absolute zero as his ? I know nothing of the other Elizabethans, but could they have been as soulless in this respect ? But *halte-là* ! or I shall become a Harris myself ! "

It is difficult for a reader of these intensely vivacious and spontaneous outpourings to believe that the same qualities, when they enliven James's books, were the fruit of long incubation and laboured composition, as he himself always maintained. Perhaps what he meant was that the repression of his personality, and the toning-down of his exuberance, was the painful process that cost time and effort. But there is no noticeable difference between his books and his letters, and if the style is the man, he is equally himself in both. Both abound in the same vividness, lucidity, fertility of illustration, and a pure Irish sense of fun, which had no doubt descended to him from an ancestry that came almost entirely from Ulster.

As in his letters, so he was in speech ; always original, racy, vitalizing, virile, utterly devoid of any sort of *hauteur*, humbug, and pretence, and genuinely interested in any human soul that crossed his path. Well do I remember how I took him round one afternoon to an eminent psychologist whom he desired to meet and with whom he was anxious to exchange views ; but when an undergraduate happened to come in who was suffering from an obsession, theoretic psychology was promptly put aside and James talked to him about his troubles for the rest of his visit ! It was no wonder that, within five minutes of meeting him, men found themselves talking to James as if they had known him all their life. He had also, it must be confessed, a peculiar fascination for ' cranks,' who are much more sensitive than professors to the human appeal. James listened to them with unending patience, sympathized, counselled, and sent them away comforted ; but he utilized them as well, and had a deadly way of mobilizing a quotation from some pet crank to

ridicule and confound any theory he was upsetting. In short, his greatness was securely rooted in his personality.

William James was a great man; the greatest, probably, who has yet taken birth in the Great Republic. He was also a great philosopher, one of the half-dozen who have made an epoch and given a new direction to the deepest, and dimmest, *nisus* of the human soul. But he was a great philosopher, *because* he was a great man; a great man essentially, a philosopher consequentially. Nor did he achieve philosophic greatness by retiring from the world and suppressing his feelings; his personality, and his belief in personality, are the clue to all his philosophic achievements. It was because he believed in personality, and possessed so sympathetic and attractive a personality himself, that he developed his open-mindedness, his freshness of thought, and his directness of approach to the problems of life. It was the source also of his democratic appreciation of every sort of human endeavour; for the essence, both of democracy as a political ideal, and of Christianity as a specific religion, is just the value of personality. His belief in it could extract from 'an unlettered carpenter of my acquaintance' the profound dictum that "there is very little difference between one man and another; but what little there is is very important," and entitled him to quote and adopt it;[1] for he was ever exploring its possibilities, and thoroughly lived up to it himself. It was, moreover, because he believed in, studied, and loved personality that he became the incomparable psychologist he was. It was because he was a great psychologist that he became a great philosopher who inexorably brought shrivelled shibboleths and arid formulas to the test of immediate psychical experience, and broke down the artificial barriers erected between psychology and philosophy by the Brahmins of the academic caste.

His personality constituted both the glory and the tragedy of James's life. On the one hand, multitudes were drawn towards him, to bask in its rays; but on the other

[1] *Will to Believe*, p. 256; cf. *Essays and Reviews*, p. 149.

they absorbed much time and energy that might have augmented his literary fecundity, and have gone to make his views more ponderously systematic in their form and so more impressive to his philosophic *confrères*. These were filled with envy of James's popularity, and not by nature at all disposed to gloat over him, but rather to be shocked. For in the academic world a personality like James is inevitably something of an anomaly: having the effect, if not precisely of a bull in a china-shop, yet of a vacuum-cleaner in a 'museum of curios'—as he once profanely called the philosophy of Kant. It is a thousand pities that none of the millionaires who endow universities in America with such lavish generosity knew enough about the academic life and its defects to realize that he could do infinitely more for human learning by liberating James from the strain of academic teaching, to which the duty of supporting his family kept him enslaved, than by founding 'university seminaries' for breeding pedants to all time, and for encouraging "bald-headed and bald-hearted young aspirants for the Ph.D. to bore one another with the pedantry and technicality, formless, uncircumcized, unabashed, and unrebuked, of their 'papers' and 'reports.'" [1]

Of course such men did not relish James. He did not seem to take himself and his subject seriously enough. His method of introducing neophytes to the philosophic atmosphere, was not to plunge them into the sacerdotal gloom of a Gothic cathedral in a London fog, but to invite them to come out and explore the ascent of an unknown peak. No wonder solemn 'sophomores' were driven to exclaim, "Do be serious for a moment, Professor!" Their elders, more cunningly, complained that he was not 'systematic.' They told him this so often that not only they, but James also, came to believe it. And in a sense it was true. The would-be systematist must be made of sterner stuff. He must have the heart to sacrifice everything to his system, wife, child, and self. He must become a quaint crank, like Herbert Spencer, and go and

[1] *Essays and Reviews*, p. 460.

live in a boarding-house, or a book-verminous recluse, like Kant. " The philosopher is a lone beast, dwelling in his individual burrow," as James observes (ii, p. 164), or a cross between a beast and a god, as Aristotle would have had to admit, and his " collective life is little more than an organisation of misunderstandings " (ii, p. 311).

But it is not really true that James's thought was incoherent and lacking in unity. It did not always seem consistent to a verbal critic who would not concern himself with James's meaning in his actual context, was satisfied to argue from ' the ' meaning of the words, and failed to notice that James was apt to start with an opponent's phraseology and to develop it into a vehicle of his own meaning. But then no thought can seem consistent to a sufficiently minute and excessively verbal criticism—simply because, as knowledge grows it expands, and ultimately bursts, ' the ' meaning of the words it uses.

James's thought drew its central and abiding unity from his personality. And, being personal, his distinctive attitude towards philosophic problems was assumed at a very early period of his life. His ' pragmatism ' exists entire (all but the name) in his *Principles of Psychology* (1890). Indeed, it exists already, in essentials, in an article he published in the *Journal of Speculative Philosophy* twelve years before, which emphasizes the teleological function of intelligence with all the momentous consequences James extracted from it.[1] Like all great thinkers, therefore, James arrived at his personal reaction upon the universe in youth, long before he had reasoned or written it out.

But his professional colleagues, not being expert in individual psychology, did not see this. They could not believe that a real philosopher could be so unprofessional, so human, so full of fun, so free from solemnity and humbug. They took his idiosyncrasy as proof positive that James could not really be a philosopher, although his new ideas were manifestly reviving interest in philosophy all the world over. So far as they understood him—

[1] *Essays and Reviews*, pp. 63-8.

which was not a long way—they disapproved of him. They writhed under his style, with " its deliberate *anti*-technicality " (ii, p. 297), which they rightly regarded as a sacrilegious attempt to break through the academic ring, and to appeal to the people. He quite recognized that it made him " an object of loathing to many respectable academic minds " (ii, p. 301). But for the most part they honestly did not understand him. How could they understand a philosophy that went abroad among the people clothed in racy English, and did not wrap itself up in sesquipedalian jargon ? It was unfair and indecent to write like James. One always had to translate what he said into the familiar *clichés* of philosophic debate, and then generally found that it would not fit them ! So the truly academic man struggled desperately to grasp what was as clear as daylight to the man in the street, and usually failed laughably. Few, however, had the candour and *naïveté* to admit it, like the late Prof. J. H. Hyslop. Not long before his death I had, in reviewing him, to point out that he had quite misunderstood James's very important theory of the ' transmissive ' function of brain in relation to mind, which entirely demolishes the cogency of materialism. He defended himself by declaring " the difficulty always with Prof. James was to determine technically what he meant by his language on a crucial point. As a popular writer he was clear enough, but the moment he touched on technical problems you never could be sure that his language had the accepted meaning of history. It is quite probable that if I could have found what the meaning of his terms was my animadversions would have been very different. But I must insist that the terms mean either what I said, or they mean nothing." [1] Prof. Hyslop did not see that in arguing from what he alleged to be the meaning of the words against James's, he was only pitting one man's meaning against another man's—in this case wrongly, because he could perceive no difference between ' transmissive ' and ' transitive.'

The discrepancy between James and the conventional

[1] *Journal* of the S.P.R., No. 364, p. 198.

philosophers was not, however, merely due to a clash of personalities or to the fear of cheapening philosophy by making it easy to follow. There were also good philosophic reasons for it. James had carried respect for personality to the pitch of professing willingness to consider whether it was not as good a clue to reality as the method of abstractions; in other words, he was willing to assign to it metaphysical status and value. Now this was not only a revolutionary suggestion, but one bound to gall traditional philosophy in a very sore point.

Ever since Plato the treatment of personality had been involved in inextricable difficulties, because the accepted theory of knowledge had found no room for it. If 'universals' were the true reality, and individual beings were only concretions of universals, or even if all knowledge manipulated and rested on universals, it seemed to follow that no intelligible account could be given of the differences between one person and another. Thus the difference between Socrates and Theaetetus had to be pronounced indefinable and unknowable.[1] So Plato had said, and no one had ventured to gainsay him. Plato had recognized the difficulty, but without perceiving that it meant the bankruptcy of his metaphysical *method*.

Yet he had merely misapprehended the scope of his method. He had taken as ultimate metaphysical truth what was merely a device of human knowing, and his method failed to make room for personality in the end, simply because he had unwittingly abstracted from it at the outset. If we conceive the problem of knowing as being that of classing together a number of individuals who are much alike, and for some purposes may be treated as if they were identical, it is natural and proper that we should employ conceptions which are 'universal,' and ignore their differences. Our purpose is classificatory, and we are not interested in individuals as such, but concerned only to bring out what is *common* to them. But our purpose is none the less a creation of personal interest. We abstract from personality, because it is a fact that for

[1] *Theaetetus*, 209.

*many* of our purposes we can profitably do so, and handle persons in the bulk, as merely cases of a 'kind.' That is the simple fact which underlies the famous Theory of Ideas. But it in no wise compels us to ignore personality for *other* purposes; and, when we interest ourselves in real life and in persons as such, we can then, as rightly, treat each personality as unique.

There is not, then, really any mystery about the inability of knowledge to take account of personality; the mystery is manufactured needlessly by ignoring the purposive nature of knowing. And yet, as we trace its all-pervasive influence, personality may well seem a fit symbol to express the central mystery of being. For it entails a relativity more radical than any that has yet been recognized by physics. It is through the medium of our personality that we see all that there is, for us; yet it is itself never seen by eye, or microscope, or any apparatus of principles and methods. For the eye is meant to look out upon the outer world, and the soul cannot turn its eye upon itself; even in 'introspection' there is an inspecting person as well as an inspected character. As for principles and methods, they are but inventions that help personality to attain its ends; when mastered and fully understood, they minister to it, and neither control nor 'analyse' it. To take the abstraction from personality, as practised in the sciences, as betokening a superior and superhuman truth, is simply a blunder.

It is not, however, a meaningless blunder, but indicative of a 'complex' that lurks in many philosophic breasts. It would hardly be perpetrated, were it not that these are those—many at times, and some habitually—who are *weary* of their personality, and resentful of its omnipresence. They long to escape from themselves, and make appeal to scientific method to give them extraneous support and to relieve them of the burden of their being. One has merely to read such deliverances as Bertrand Russell's *A Free Man's Worship* (cf. ii, 356), "splendid, atheistic, titanic," to realize that it is precisely because they are so coldly impersonal and remote that mathe-

matics can evoke an emotional response that soothes the fevered spirit. The commoner way of seeking escape from self is by the religious *via mystica*; but the difference in the objects in which salvation is sought alters neither the essential mysticism of the attitude nor the inherent self-contradiction of seeking self-satisfaction in self-transcendence.

Like the religious mysticism, then, so sympathetically studied by James in his *Varieties of Religious Experience*, the scientific abstraction from personality has its function and value; both are expedients of spiritual hygiene in which some patients find relief. But as an account of our scientific procedures this abstraction is not the last word. For, as we have seen, the sciences are ultimately *methods*, for common use; and as such they can properly ignore the incommunicable factor in human reactions which is wholly personal, and differentiates one man from another. This abstraction is justified for their purposes; but it entails inadequacy and incompleteness philosophically. Philosophy, having the duty of considering all the facts, cannot make it. It cannot deny the significance and value of the personal, without renouncing its ambition to be all-inclusive.

Moreover, the value of the personal cannot be denied without denying value altogether. And this is a prospect no philosophy can really face. For values permeate reality so vitally that wholly to cancel them would be the ruin of the cosmos. Yet they spring from personality, and enter the world with it. It is supremely valuable itself, and demonstrably the source of all the values that are recognized. The Good, the True, the Beautiful, nay even the Real, for us at least, are more or less obviously creations of our discriminating and valuing personality, and to expunge them all seems a hopeless enterprise. For if this inconceivability could be achieved, it would no longer be permissible to value anything as good, as true, as real; the whole world would lapse into worthless, meaningless, chaotic, nightmare. The values themselves would become 'illusions'; but what is 'illusion' but a negation of the

value called 'reality'? Thus the attempt to get rid of values defeats itself.

The same conclusion may be proved, almost as simply, by observing how we all frame and uphold our claims to be possessed of the true, the good, and the real. The last of these cases is the most comprehensive and least obvious; so it will probably suffice to concentrate upon it. A little critical reflexion should convince us that we were not originally possessed of the reals we now recognize; they are the outcome of the whole cognitive endeavour of mankind up to date. They have come within our ken by the continual correction of errors, the discarding of unrealities, the sacrifice of illusions. Thus our actual reals are the products of a long sifting, the victors in a prolonged struggle for existence. Moreover, whoever has had occasion to doubt, to stop to think, and to deliberate, must have gone through the process of rejecting claimants to reality and preferring what he esteemed the best and worthiest claim. Generalizing, then, we may say that of whatever object of thought the reality is asserted and believed, the claim to reality must have been preferred to that made on behalf of unsuccessful rivals that were condemned, and sank into 'unreality' by their rejection. It should be added that it continues to hold its status as reality in virtue of its superiority over all other claimants. Seeing, then, that all truth and all reality have to be adopted by a selection, and by a rejection of error and illusion, it is clear that 'true' and 'real' must mean for us *truer* and *more real*, *i.e.* superior in value to any alternatives that have been, or may be, suggested.

This implication of personality in values and of values in every object of human interest (whether 'theoretical' or 'practical') is the insuperable obstacle to all the academic attempts at dehumanizing philosophy. It reinstates in principle the *romantic* attitude towards the world we live in. But James advocates it not in a revulsion of feeling, as a rebel against science, but in the sacred name of science itself. It is a sober and irrefutable fact that life is a personal venture, and that nothing

venture nothing have. There are no means of avoiding personal responsibility for whatever we do or think. Whether we believe or disbelieve or doubt and suspend belief, we are judged by our beliefs, that is, our *acts*. There are no absolute guarantees, and no predestined dooms. All our beliefs, our methods, our results, are provisional and subject to revision; they are conditional upon their working, and moulded by the lessons that intelligence draws from experience. For they are made by man for man that man may live. They are not, therefore, fit objects for idolatry or uncomprehending worship; but no pains can be too great to render them as good as possible, for the best are barely good enough.

It was because he realized this so intensely that James never hesitated to champion a number of ideas that were in academic disrepute. He disputed the metaphysical truth of Determinism, which is just a form of the scientific postulate that the incalculable individuality of things shall not be allowed to disturb scientific calculations, and of Monism, which adds to Determinism the pretension to lay down the law to the real *a priori*, by imposing on it our conception of a 'universe.' He vindicated the *right* to believe against a rationalism that conceived faith as a purely intellectual process, and failed to see that it always involved an act. He was a life-long psychical researcher, who neither gave up hope nor lapsed into credulity; thus showing (like Henry Sidgwick) that it is possible to live in close proximity to pitch and not be defiled, and that interest in the abnormal need not degenerate into morbidity. His attitude here was an illustration of what his friends always recognized, viz. that beneath all James's enthusiasm and his chivalrous defence of the under dog there dwelt a calmly critical judgment that was incorruptible and not easy to deceive or to stampede by the emotions. The special attraction psychical research had for him was that it concerned itself with a precious affirmation of the romantic, personal view of reality he was exploring. As he puts it in the essay on psychical research included in the *Will to Believe* (pp. 323-4): "Religious thinking, ethical

thinking, poetical thinking, teleological, emotional, sentimental thinking, what one might call the personal view of life to distinguish it from the impersonal and mechanical, and the romantic view of life to distinguish it from the rationalistic view, have been, and even still are, outside of well-drilled scientific circles, the dominant forms of thought. But for mechanical rationalism, personality is an insubstantial illusion. The chronic belief of mankind, that events may happen for the sake of their personal significance, is an abomination. . . ." But "the personal and romantic view of life has other roots besides wanton exuberance of imagination and perversity of heart. It is perennially fed by *facts of experience*, whatever the ulterior interpretation of these facts may prove to be." And so the scientific view *cannot* ignore it, so long as it professes to account for facts and to account for all of them.

The issue, then, between William James and the traditional philosophy is not about technical trifles like the disputes of the schools : it is one of the deepest human interest. One would give much to know how, and out of what, James developed his convictions, what was the source of his originality and courage in breaking with tradition. Unfortunately, as in all such cases, our curiosity cannot be completely satisfied. In part because the origin of a personality is never wholly explicable in terms of ancestry, history, and upbringing ; as is signally illustrated in the James family itself by the divergent development of William and Henry, though both were brought up together by the same father, rather unkindly described by Prof. Santayana as " one of those somewhat obscure sages whom early America produced : mystics of independent mind, hermits in the desert of business, and heretics in the churches. They were intense individualists, full of veneration for the free souls of their children, and convinced that every one should paddle his own canoe, especially on the high seas." [1]

[1] *Character and Opinion in the United States*, p. 64. James's own beautiful letter to his father, on receiving the news of his last illness, should be compared (i, p. 218).

But has not James himself taught us that genius is never deducible from its environment? It springs from so incalculable a confluence of qualities that no one can predict it or take the credit for it; it has to be accepted as a gift of the gods.[1] James, moreover, has left no history of his spiritual struggles and of the development of his opinions, having, as he says in one of his remarkable and revealing letters to T. W. Ward, soon learnt to consume his own smoke (*Letters*, i, p. 77). These letters are the more important because during what were probably his most formative years (1869–73), when James was wrestling with a bad spell of physical and mental depression and 'having it out' with the universe, he was living at home in the circle of his Cambridge intimates, and so had little occasion to put his soul on paper.

Nevertheless there remain a few precious traces of the spiritual struggle by which he reached the bracing, moralizing atmosphere of his later *Weltanschauung*. James was clearly not one of the happy, healthy-minded, simple souls, 'once-born,' impervious to doubt, insensitive to the *lacrimae rerum*, who go on from strength to strength, to finish up flatly in the undrained swamp of spiritual stagnation. He had been a 'sick soul' in his day; as his friend Flournoy revealed, and these *Letters* confirm (i, p. 145); he had portrayed himself, camouflaged as a 'French correspondent,' in the vivid description of *The Varieties* (p. 160). Of his wanderings in the City of Dreadful Night there is no further record; but their fruits preserved James's thought from the insipidities of a callous optimism. We recognize them in the tonic 'bite' of passages like these: "The lunatic's visions of horror are all drawn from the material of daily fact. Our civilization is founded on the shambles, and every individual existence goes out in a lonely spasm of helpless agony."[2] Or when he tells Benjamin Paul Blood, the 'pluralistic mystic,' to whom he devoted the last article he wrote, "I take it that no man is educated

[1] *Principles of Psychology*, ii, chap. 28; *Will to Believe*, p. 216 f.
[2] In the *Hibbert Journal* for July 1910.

who has never dallied with the thought of suicide," [1] and confesses to T. W. Ward that " all last winter, when I was on the continual verge of suicide, it used to amuse me to hear you chaff my animal contentment." [2]

James's spiritual troubles were not merely due to bad health, and doubts about his professional career. He was simultaneously going through an acute religious crisis, and considering, not which philosophic theory formulated best the absolute truth about reality, but whether he could think the world such that life in it was endurable. The nature of his crisis, and the means by which he emerged from it, come out best from the following documents—the letter to Oliver Wendell Holmes, Jr. (*Letters*, i, p. 82), his contemporary memorandum (1870) proclaiming, after reading Renouvier, that his " first act of free will shall be to believe in free will " (*ibid.* i, 147), his father's letter to his brother Henry (*ibid.* i, 169) (1873), the criticism of Herbert Spencer's definition of mind (*Essays and Reviews*, p. 43 f.) published in 1878, and lastly chapters 5, 21, and 28 of *The Principles of Psychology* (1890).

A comparison of these documents shows, I think, that the essential trouble with James, as with so many of his generation, was the withering of the spiritual values, of God, freedom, and immortality, under the devastating onset of Naturalism. Nowadays some have learnt, from James as much as from any one, that the situation is by no means desperate, while many, it is to be feared, have grown used to their spiritual losses, and no longer view them tragically. But at that time Naturalism seemed to bear down all opposition with the irresistible might of science, and to leave nothing standing but the meaningless evolutions of matter determined by a mindless mechanism. This view of the world had received an imposing systematic form in the Synthetic Philosophy of Herbert Spencer, whose vogue was even greater in America than in England. Against it James's soul revolted. But instead of defying it by a mere refusal to believe himself an ' automaton,' or of evading it by an equivocal ' idealism,' which saved the

[1] *Letters*, ii, p. 39. [2] *Ibid.* i, p. 129.

phraseology of spirituality while secretly betraying its cause, James set himself to fight it on its own ground. He began by dividing his enemies, and boldly appealed to Darwin to confute Spencer. He had the acuteness to perceive that Spencerism was essentially 'pre-Darwinian,' and had not really assimilated the method of biology and the implications it had for the theory of the mind's place in nature. Now biological method has no use for the fictions of an inactive, inefficacious mind that merely 'contemplates' the mechanical routine of happenings without power to intervene or to direct its course. As H. V. Knox has excellently shown,[1] James had seen (as Spencer had not) that biological method implies that mind *must* have survival-value. It cannot, therefore, be the impotent superfluity to which intellectualistic 'contemplation' reduces it. It must have efficacy, and make a real difference in the course of events. An intelligent and living being is not merely an automatic victim of natural selection.

But what *is* the difference it makes? Simply this, that it is not merely selected, but itself *selects*. It is active and *reacts* upon external stimulation, in order to live. That is, it reacts selectively and teleologically, and its ends are determined by the goods it aims at. That there should be a mind at all, and that the mind should function as it does, become intelligible only when we recognize that mind is selective and purposive, through and through. Its so-called 'cognitive' operations are just as subservient to its vital purposes, just as biologically useful, as any of its other acts. So James concludes: "I must still contend that the phenomenon of subjective 'interest,' as soon as the animal consciously realizes the latter, appears upon the scene as an absolutely new factor. . . . The knower is not simply a mirror floating with no foothold anywhere, and passively reflecting an order that he comes upon and finds simply existing. The knower is an actor, and co-efficient of the truth on one side, whilst on the other he registers the truth he helps to create. Mental interests, hypotheses, postulates, so far as they are bases for human

[1] *The Philosophy of William James*, chap. ii.

action—action which to a great extent transforms the world—help to *make* the truth which they declare. In other words, there belongs to mind, from its birth upward, a spontaneity, a vote. It is in the game, and not a mere looker-on ; and its judgments of the *should-be*, its ideals, cannot be peeled off from the body of the *cogitandum* as if they were excrescences, or meant, at most, survival. We know so little about the ultimate nature of things, or of ourselves, that it would be sheer folly dogmatically to say that an ideal rational order may not be real " (*Essays and Reviews*, pp. 65, 67).

The rest of James's philosophic career was spent in the working out of this programme, though, owing to circumstances beyond his control, he was not, alas, able to complete it. But it is the clue to his ' pragmatism,' a vile and " unlucky " (ii, p. 295) word, which he lamentably adopted from his friend, the " queer being," Charles S. Peirce,[1] whose lectures " he could not understand a word of " (i, p. 80), and whose papers he found " bold, subtle, and incomprehensible " (i, p. 149). He admitted (in letters to me) that " I dislike ' pragmatism,' but it seems to have the *international* right of way," and that " ' Humanism ' which did not at first much ' speak ' to me, I now see to be just right " ; but nevertheless he chivalrously stuck to ' pragmatism ' ; because his opponents, seeing what a bad word it was, gladly took it up. For the rest he gave the chief credit of his conversion to Renouvier, whose recalcitrance to determinism had kept him in countenance at the turning-point, and whose ' pluralism ' had shattered for him the hideous burden of the ' block universe.'

But it was James's nature to confess to more obligations than he owed, and to expand and expound the doctrines he took over, until they became little more than pegs for his own. There is little doubt that his answer to Naturalism

[1] *Letters*, ii, p. 191. The rest of the description is unfortunately suppressed. Only ignorance of Greek can explain the prevalent philosophic delusion that the word somehow connoted ' practicalism,' and involved ' subjective idealism ' ; etymologically it should mean a testing of ' ideas ' by *things* conceived, it is true, as products of action, like the German *Tat-sache*. However, it was not ugly enough for Peirce's taste, and he subsequently substituted ' pragmaticism ' for his own brand.

was substantially his own achievement. And it is the only sound answer that has ever been devised. It will continue to appeal to all who really feel the pressure of religious problems, in a way that neither theological dogmatism, nor the verbal dialectics of *a priori* metaphysics, nor mere emotional revolt, can emulate. Its only effective rival is mysticism; for this too assumes a personalist attitude towards the real.

# CHAPTER VIII

## WILLIAM JAMES AND THE MAKING OF PRAGMATISM[1]

AT the recent Congress of Philosophy at Harvard I was considerably surprised to hear what very modest and apologetic estimates were put on American achievements in philosophy by some of the spokesmen of America in welcoming the representatives of foreign countries. I could not but think this modesty a sacrifice of truth to politeness, when I reflected first on the paucity of the really important discoveries which form the bright spots in the history of philosophy and, secondly, on the very great importance of one achievement which indisputably stands to the credit of America. I mean, of course, the development of Pragmatism, and as I was myself involved in it, and can testify to some aspects of it which are not generally known, and am, moreover, unfortunately growing old, I wish to avail myself of this opportunity in order to give reasons, before it is too late, for my conviction that the origination of Pragmatism was one of the major events in the history of thought, and to put on record certain incidents connected with the origination of Pragmatism which came within my personal knowledge.

But before I do so, let me first justify my remark about the rarity of really important novelties in the history of thought. They cannot indeed be enumerated on the fingers of one hand, but one does not need to be four-armed, like an Indian god, in order to accommodate all the conceptions which can be accounted first-class discoveries.

[1] From the *Personalist* for April 1927.

I find I cannot recognize more than *nine* of such discoveries. Of these I should credit the first, the *Absolute* or *One* of Monism, to the Hindus, although a case may perhaps be made out for Parmenides for an equal share in this discovery. Still it was in India that the ethical and logical implications of this monistic line of thought were worked out in their completest and most consistent form. The next two, *Pure Spirit* and *Universals*, must both be set down to Plato. Aristotle, another Greek, is the undisputed father of *Formal Logic*. In Western thought at any rate, Descartes, a Frenchman, is the first philosopher to discover the *Self*; though it had long been familiar to language and long been exploited in the East, and with true philosophic modesty even been identified with the Absolute. The honour of discovering the *Critical problem*, and the claim that the epistemological question takes precedence over the ontological, must, I think, be divided between England and Germany, between Locke and Kant, though neither of them succeeded in constructing a consistently critical philosophy, though not even their followers could swallow either's system as it stood, and though, in some aspects, both seem to have been anticipated by the Sophists and Sceptics of antiquity. On the other hand a definite recognition of the *Problem of Value* seems to be first traceable in Germany. Its origin is obscure, but it is clearly post-Kantian and post-Hegelian; and as its significance is still largely unexplored, it may be said to be still at the beginning of its philosophic career.

Of *Darwinism* the effective birth-place is England, as that of *Pragmatism* is America: but in both these cases it was found, after the new doctrine had won its way to recognition, that anticipations of it, often of a very definite kind, could be traced all the way back to the Greeks. So far, the earliest Darwinian on record is Anaximander, and the earliest pragmatist, Protagoras: but they were both so far ahead of their times that their words fell upon deaf ears. This is due to a persistent feature in human psychology. The first hundred times or so that a new idea is ventilated, it is simply disregarded and treated as though

it had never been ; the one hundred and first time, when some forceful genius gets the world by the long ears and makes it listen, the learned can always show that it was anticipated long ago. So they are satisfactorily confirmed in their conviction that there is nothing new under the sun ! Nevertheless Pragmatism was as new as anything could be in the fog-laden atmosphere of philosophy.

Under these circumstances the best proof of an idea's novelty is to be found in the completeness and grotesqueness of the way in which it is misunderstood ; and certainly, judged by this test, the novelty of Pragmatism ranks amazingly high. Its putative parent, Peirce, was so shocked by the fame of the doctrine fathered upon him, and so dismayed by the Herculean exploits which it accomplished even in its cradle, that he was actually driven to disown his paternity, and to take refuge in a ' pragmaticism ' which, he said, was ugly enough to be left severely alone. He has thereby provided philosophy with a superb example of the folly of a *gran rifiuto*, though he has not yet found a Dante to damn him for it. Its real progenitor, James, could hardly restrain his nearest and dearest pupils from participating in the congenial labour of misrepresenting what they had never understood.

The whole of Continental Europe, with a perhaps pardonable ignorance of English idiom, cried out that the demand that truth must ' work ' and ' pay ' was just a piece of the banausic sordidness and vile commercialism of the American mind, endeavouring to degrade the highest and most sacred spiritual values to mere matters of dollars and cents. Even the champions of the Hegelian Absolute found it an intolerable strain upon its (theoretically infinite) elasticity to swallow the new doctrine and to absorb, transcend, transmute, and transmogrify it in its all-engulfing maw. I myself can well remember what an uproar was aroused at the Heidelberg Congress of Philosophy in 1908 by my innocent remark that Pragmatism was a philosophic movement which had originated in America. The Germans took it as an intolerable piece of impertinence for a philosophic movement to originate in

America, and it was no use pleading that this happened to be sheer historical fact.

Amid this hubbub no one noticed that the very doctrines which all were furiously denouncing had long been before them, and indeed had excited general and unstinted admiration under another name. So long as William James enunciated his views under the label of ' psychology,' what he said was accepted and applauded ; but when he called the same views ' philosophy,' he was decried as a subverter of the pillars of the Temple of Truth. For a detailed proof of the correctness of this comment I may refer to an excellent little book which deserves to be better known in America, *The Philosophy of William James*, by H. V. Knox.[1] It is largely a string of quotations, and expounds James's Pragmatism almost wholly in his own words ; and the best of the joke is that he has selected his most significant quotations from the *Principles of Psychology* !

Now that was in 1914, and by that time some of us had ' caught on.' I myself cannot claim to have been much less obtuse than the general mass of philosophers. John Dewey alone had had the perspicacity to detect the philosophy that was contained in James's psychology and to derive his ' instrumentalism ' independently from that fountain head. I myself had been delighted with James's *Will to Believe*, and had expressed myself pretty freely in a review which appeared in *Mind* for October 1897. This may have done something to attract the attention of English philosophers to William James, who was at that time practically unknown, at least in Oxford. Still I could not then claim any status as a disciple of James. I had met him only about twice ; though five minutes after meeting him the first time I found myself talking to him as if I had known him all my life. It ought to be impressed on all American students of philosophy, from their Freshman year on, what a very great man James was. I have only met two men I should call really great, and Arthur

[1] London, Archibald Constable, 1914. Cf. also an article by M. Baum in the *Journal of Philosophy*, XXX, 2.

Balfour is the other. Still, when the California Lecture on *Philosophical Conceptions and Practical Results* baptized Pragmatism and flung it into the stream of philosophic controversy, I could in no wise set up as an authority on the meaning and the mind of James. I knew that he was a man after my own heart, but there were others far better qualified than I to pronounce upon his views.

Dickinson Miller was one of these, a friend and a favourite pupil of James. He was also a friend of mine, and at that time I knew him better than I knew James. In January 1899 he wrote a subtle and impressive article in the *International Journal of Ethics*, called " The Will to Believe and the Duty to Doubt," criticizing the doctrine of the will to believe, and not long afterwards sent it to me with a request that as an admirer of James's I should write a reply to it. He had, it seems, asked James to reply, but the latter had refused.

I read the article and wrote to Miller that I was aware that he knew James much better than I did but that I could not but think that he had seriously mistaken James's meaning, giving my reasons. Miller sent my letter to James, and asked him to decide between us. To my great delight, James decided in *my* favour. Then for the first time did I realize the enormous capacity of the philosophic mind for misconstruing James. It would otherwise never have entered my own mind that the particular misconception Miller had fallen into was even possible. The point at issue between us was one which still plays a part in the attacks on Pragmatism, and for which there has never seemed to me to be the slightest justification. It concerned the question whether a pragmatist was entitled by his theory to believe whatever he liked, or in other words whether Pragmatism failed to distinguish between a truth and a truth-claim. I pointed out to Miller that he had failed to allow for the empirical side of James's doctrine and the verification or refutation of a belief by experience of its working.[1]

[1] Miller does actually quote one of the many passages in James which insist on this, but shows that he has not perceived its significance. It would appear from

This still seems to be one of the major difficulties its critics have with Pragmatism. For apriorism is not so much a doctrine, or even a faith, as a habit or aberration of mind. Whether or not there are *a priori* truths there are certainly *a priori* prejudices. And these are so impenetrable that they cannot even conceive the idea that experience of its working may be regarded as relevant to the truth of an idea. And so they are quite impervious to the neatness and beauty of the suggestion that the secular dispute between apriorism and empiricism might be terminated by an equitable compromise, which found a use for *both* of them, admitting that there were *a priori* truth-claims galore, and in fact that nearly every one was chock-full of them, but not that they were on this account self-proving and self-evident truths, and able to dispense with testing by their working in experience.

As I reflected on the situation, this voluntaristic compromise, which alone seems to assign a meaning and a function both to our anticipations of experience and to their corroboration and confirmation by experience, and which, moreover, could bestow logical respectability on the all-pervasive activities of our will to believe, seemed to be exactly what was required. Accordingly when I had occasion to write a contribution to the volume of Essays subsequently known as *Personal Idealism*, I chose this as my subject, and entitled it " Axioms as Postulates."

I conceived my task as that of tracing throughout the established structures of the intellectual world the manifold operations of that volitional activity whose existence and potency James had revealed, under the name of the will to believe, in a single case. And I was naïvely hopeful that by so universalizing it I could render its recognition easier and more palatable. For I had been taught as a youth that this was precisely the way in which Kant had overcome and confuted the scepticism of Hume. Hume had

a discussion in the *Journal of Philosophy*, 1927–9, that the real basis for Miller's strictures on James was merely that he himself used the word ' belief ' in so absolute a way that no verification of a ' belief ' was admissible. My comments on this strange and almost incredible position will be found in " The End of a Great Legend " in the *Journal of Philosophy*, xxvi, 2.

shown, unanswerably, that causality was not an objective fact of observation but a subjective infusion into the series of events. He had inferred that it was an illegitimate addition which vitiated our knowledge. But Kant had turned the edge of Hume's contention by accepting its premisses and drawing a different conclusion. Subjective additions to our data were not limited to the case of causality. They were to be found in every corner of the field of knowledge. Indeed it was impossible to cultivate this field, without the use of the elaborate machinery which Kant proceeded to describe with so much detail and obscurity that thousands of philosophy professors have lived on the *Critique of Pure Reason* ever since. This Kantian machinery of Categories, and so forth, was in a sense subjective: but it generated the only sort of objectivity which it was possible to recognize or needful to know. So the lethal weapon with which Hume had hoped to strike a deathblow at knowledge, not only became innocuous in Kant's hands, but actually essential to the only objectivity that existed or had meaning.

So why should one not, thought I, repeat this Kantian feat, and turn the will to believe, which intellectualistic system-builders had so long rejected, into the keystone of our edifice? It seemed conceivable that even Kantians might welcome such an enterprise. For, after all, Kant had not left his system so logically complete, so perfectly symmetrical and harmonious, as he had tried to make it. Even the most faithful Kantians could not but perceive that the system was traversed by a glaring incongruity. There was no logical connexion between Kant's treatment of the Pure and of the Practical Reason. The latter, though psychologically rooted in Kant's idiosyncrasy, had very much the air of an afterthought, attached to the former by a transparent artifice. But, if it were taken seriously as a logical principle, it clearly embodied a thought which transcended all intellectualism altogether, and could be made to yield quite a novel account of the mental activity which gave form and meaning to the data derived from experience. The process of postulation,

which Kant had admitted only in a niggardly and reluctant way for the special purpose of getting himself out of a difficulty, could be construed more widely and generously. It could be given logical status, and shown to enter into the operation of all our cognitive functions. It could be universalized like the will to believe, and identified with it, or traced to a common root with it in our volitional nature. It would then be capable of generating the whole of the mind's *a priori* furniture and of accounting functionally for the whole structural *a priori*. The result would be a completely and consistently *voluntaristic* theory of knowledge such as had never yet been formulated.

So I set to work to show how all our *axioms* might be conceived as *postulates* which had suggested themselves as desirable if true, and had succeeded and survived, for transparent reasons, and could all be traced to the various activities of our will to believe. This is the genesis and history of my essay on " Axioms as Postulates."

Of course I ought to have expected that the results would be disappointing. They always are. But they ought not to have been so disappointing, if the Kantians had been more seriously concerned with the truth of Kant and the coherence of his system. They seemed to be content with tracing its history and tabulating the dates on which its various sections might be presumed to have been written, in short, with leading the easy, merely parasitic, life of the industrious commentator. For the analogy which seemed so clear to me, between Kant's relation to Hume and my relation to Kant and to James, they had no eyes at all. And the historians of philosophy, those most stalwart devotees of the copy-theory of truth, continue to represent the epistemological alternatives as two, the rationalist and the empirical, both equally intellectualistic, and equally inadequate. The possibility of a synthesis, which would transcend this antithesis by taking both ' reason ' and ' experience ' in a voluntaristic way, continues to be ignored. No doubt it is felt that to recognize it would be too disturbing to traditional classifications, and would upset too many familiar ' categories.' But is it not

one of the saddest tragedies of philosophy that it should be so much easier for a rich man's automobile to pass the portals of the Heavenly Jerusalem than for anything new to get into the histories of philosophy and for anything old that has once got into them to drop out ?

But to continue my reminiscences : after having been rebuffed in my well-meant attempt to mediate in the epistemological wrangle between ' rationalism ' and ' empiricism,' I turned my attention to the excogitation of a suitable *name* for our new manner of philosophizing. For it had very soon been borne in upon me that ' pragmatism ' was a thoroughly bad name, and almost sufficient to damn any dog that bore it. Not only did it not explain itself, but it did not even, at a first hearing, suggest any hint of the direction in which its meaning was to be sought. All that it could suggest was indeed definitely misleading. Etymologically, it was derived from *Pragmata*, but its etymology told one nothing about what it thought about ' things.' To those ignorant of Greek, it conveyed a connexion with ' practice ' which was a dangerous half-truth ; [1] to those familiar with obsolescent English it was associated with ' knavery ' ; to Germans it seemed to tamper wantonly with the well-established meaning of an existing term. Worst of all, it took about half an hour to explain its meaning properly, and how rarely did one have that half-hour granted one !

So, considering all these things, I determined to adopt the term ' humanism,' which seemed significant and apt, and was not encumbered with old senses likely to interfere and to be confused with its philosophic use. It had, moreover, already been employed in senses very cognate to that which I wanted; sporadically indeed, but by good authorities. Thus Pringle-Pattison had used it in his *Man's Place in the Cosmos* [2] and Dickinson Miller had actually applied it to James's philosophic attitude in the very article that had provoked my intervention.[3]

[1] Though of course Greek, like German, ultimately conceives a ' thing ' as a deed.' Cf. *Tatsache.*

[2] P 61. [3] P. 176

Accordingly I proposed to James that he should change the name to Humanism. But he refused on the ground that the name Pragmatism had already been taken up and had established itself. Of course it had been taken up, with joy, by the adversaries of the new way of thinking; for they had realized with terror how dangerously popular its appeal might easily become, and perceived with delight what a handicap an obscure technical name like 'pragmatism' would be. Their really crushing criticism, which they never uttered in public but used to whisper confidentially into the ears of the elect, was that Pragmatism was 'vulgar'; how fortunate then that these heretical vulgarians had been foolish enough to choose to fight under so deterrent a banner!

It was a misfortune also that John Dewey and his vigorous Chicago School had no more attractive name to offer. They did yeoman service to the cause, and *almost* forced the academic world to treat it with the respect which is always accorded to systematic technicality. For the academic pedant always thinks in his heart, and occasionally all but says, "What *I* can understand, I despise." Now he frequently found Dewey hard to understand, and respected him accordingly; whereas James was such easy reading that the typical professional never attended properly to what he said, and invariably misunderstood him. Also Dewey's instrumentalism never inspired fear; even apart from its cumbrous name, it never threatened to become unduly popular. Though not so bad as 'pragmatism,' 'instrumentalism' was a bad name too. It was too long, and ill equipped with cognate adjectives and verbs; on the whole it is not surprising that it did not supplant 'pragmatism' in philosophic use.

James, I think, realized, when it was too late, what a bad name 'pragmatism' was. At any rate, so I was assured by Mrs. James in a precious letter which she wrote me, not long before her death, in response to my *Quarterly Review* article about her husband's *Letters*. She also assured me in it that I was quite right in being sceptical about the extent of James's indebtedness to Peirce.

Writing on August 16, 1921, she said: "I have read three times over your beautiful review of the Letters, and cannot tell you how it touches me. You are so much nearer to William than any one else, and you speak for him as he could not for himself. . . . You are right in what you say of confessing to obligations which he never owed. It used to puzzle me in so strictly truthful a nature. Even Charles Peirce said to me 'I never thought, much less taught, the views William says I did. I have very different opinions.' For years poor C. S. P. had appealed to William for help until at last he acquired the habit of tugging that poor derelict through troubled waters. In one of the last quinquennial catalogues, Peirce changed his middle name from Saunders to Santiago. It was long before I understood that it was a way of calling himself St. James, but there it stands *Charles Santiago Peirce.* When William was a student in the chemical laboratory, and absorbed in philosophy, he found Charles Peirce a stimulating acquaintance; so when years after William sought to give a name to the faith he had long held, he glanced backward and said to himself, 'I must have owed Pragmatism to Peirce.' I protested and begged him not to handicap a cherished belief with so wanton a name. He was sorry afterwards, and preferred Humanism."

We may take it then that James *always* overstated his intellectual debts. I shall never forget a confidential little lunch in my rooms at Oxford, to which I invited my friend, H. V. Knox, to meet James, in order that we might both ask him what precisely he had owed to Bergson. He told us. When he had done, we both cried out, spontaneously and simultaneously, "But these are the very things which *we* have learnt from *you*!" He then admitted that it was possible that though the *Données immédiates de la Conscience* had come out a year before the *Principles of Psychology* Bergson might have read his earlier articles in *Mind* and have assimilated their ideas, and then have developed them in an original way which James thereupon found surprising and stimulating. I am afraid, therefore, that even though he did recognize that the name

' pragmatism ' was a mistake, his chivalrous willingness to give his enemies any verbal advantage they chose to claim would always have kept him loyal to his mistaken choice !

Personally I found it quite easy to adapt myself to the situation. I could accept ' pragmatism ' as a generic term, of which ' instrumentalism ' and ' humanism ' could be species, as could an indefinite number of other views, more or less completely pragmatic, such as those of Poincaré, Mach, and Ostwald, or more extreme, like those of Nietzsche and Vaihinger. For it was evident that, theoretically at least, there might be as many pragmatisms as there were pragmatists, and that Professor A. O. Lovejoy had grossly understated their numbers in limiting them to thirteen ! For it was an essential feature of ' pragmatism ' to be recalcitrant to the scientific fiction which depersonalizes truth. If every ' truth ' originates with an individual thinker facing an actual problem and choosing the best solution that presents itself to his mind, and framing the best judgment for containing it that he can conceive, and succeeding in winning the assent of others to the goodness of his judgment, it surely follows that its depersonalization is a fiction. This fiction is obviously convenient and works pragmatically over a large field of investigation and no one would dream of denying its uses : still its legitimacy may be challenged at any point in any inquiry, should occasion to do so arise, and it cannot ultimately stand. In principle our common truths always arise by our *agreeing* to approve each other's judgments and to sink our differences.

Nor can I see why this result should be decried as sceptical. It need not form a bar to understanding, any more than the fact that in using a common language we all have our personal, social, and national peculiarities of voice, inflexion, and pronunciation. It does not preclude agreement, but rather favours it. For it substitutes agreement for coercion, value for necessity, as the hall-mark of truth. And it brings out a social side to all truth-seeking, which should be a comfort to the " lone beast dwelling in

his individual burrow," which James declared the philosopher to be, with so much painful truth.

This humanist truth, moreover, is not only social, but also democratic. By admitting that every centre of experience should be heard from, because it may yield a contribution to the common store, it grants universal suffrage in the realm of thought, though it does *not* imply equality of value. For our individual guesses at reality and truth are inexorably judged by the value of their results. Every one has an inalienable right to his own opinion, to his personal reaction upon his world—until he can get a better. For the right to his opinion is the correlative of his duty to improve it. James was well aware of this, and was a true democrat who loved to appeal to the people, even in the most highly oligarchic preserves and the remotest recesses of philosophy. He summed up his position in the words of his immortal carpenter : " There is very little difference between one man and another : but what little there is is very important."

Moreover, in his democratic spirit he entirely agrees with his far-off ancestor, Protagoras, who also proclaimed the universal right of every man to find his own truth, and was martyred for making man the measure of all things by the Athenian oligarchs, twelve years before the vindictive democrats in their turn forced Socrates, the anti-democratic philosopher of expert authority, to quaff the hemlock-bowl. It is perhaps fortunate for some of us that the connexion between philosophy and politics is no longer so direct ! Philosophy has become less dangerous since those times ; but it is now in grave danger of being merely dull. If, however, American philosophy, if philosophy anywhere, will but follow the lead of William James, it will not only escape this danger, but may again resume its ancient hegemony over the human strivings to attain to fuller and nobler forms of human life !

# CHAPTER IX

## NIETZSCHE[1]

SOME forty years have now elapsed since Friedrich Nietzsche was carried off to the asylum from which the hand of death alone released him; and during this time his fame as a prophet has been steadily growing on the Continent. But though at the outbreak of the Great War a few intellectuals paradoxically tried to remind the world of their existence by fastening on Nietzsche the spiritual responsibility for the vagaries of German policy under William II, Nietzschean ideas have never taken deep root in England. This may only mean that in the world of ideas the insulation, if not the insularity, of British thought is still a very real fact. Whether this insulation is natural or acquired, and due to the subtle bias against novelties of thought instilled by the classicism of an educational system which, when it succeeds, represents Aristotle as still the last term of philosophic speculation and, when it fails, produces a profound distrust of general ideas as such, we need not now discuss. Now that Nietzsche has crossed the Channel, he will doubtless be read more extensively and understandingly than his precursors Kant and Hegel, who have never become more than caste-marks to enable the academically trained philosophers to mystify the common herd. Nietzsche's writing, on the other hand, is forcible and direct; he can be read and even understood without the study of a lifetime, and his ideas may even

[1] From the *Quarterly Review* for January 1913 *à propos* of a translation of Nietzsche, with some revision.

have an influence on conduct. It is easy to pooh-pooh the ideas he stands for as the vapourings of a megalomaniac, but in the present state of the world they may prove very infectious, and if present trends continue, the gospel of the Superman may well seem preferable to that of the Social insect.

§ 1

We may therefore dismiss the suggestion that the Nietzschean attitude towards life is sheer lunacy, and unworthy of attention. The origination of new ideas is such a rare event in the history of mankind that we cannot afford to ignore them, even if they turn up in an unexpected quarter. Moreover, we have learnt from William James the shallowness of the 'medical materialism' which seeks to judge the value of an idea by the physiological condition of its author. It can no longer be maintained without restriction that an idea must be insane because its author was, or that because it is insane it is worthless, and still less that it is therefore unimportant. It is doubtless not true that all genius is mad, any more than that all lunatics are geniuses: most lunatics are merely dull, but a certain type of genius is apparently closely allied to unsoundness of mind, and certain aspects of civilization are calculated to drive any thoughtful person mad. Conversely madmen, being less obsessed by conventional valuations, are sometimes the best judges of genius and the first to detect it. It should never be forgotten, for example, that a mad king was needed to convince the world of the excellence of Wagner's music. Who, moreover, will set up as an infallible judge of the sanity of ideas? In matters of philosophy and religion the views actually held diverge so widely that every one is naturally impelled to suspect the sanity of every one else's view. Nor could it definitely be proved that we are not all insane; nay, it seems probable that, upon examination, even the most commonplace would be found to cherish some beliefs which the great majority of mankind, or perhaps every one else, would condemn as mad.

§ 2

Nietzsche's work needs critical sifting not only on account of its author's unhappy fate, but also by reason of the form which it has taken. Nietzsche, for reasons probably connected with his manner of working, preferred to express his ideas in aphorisms. Now the aphoristic form naturally impels to paradox and exaggeration ; and its effects must be discounted. Nevertheless it seems probable, especially from the various drafts for what he intended to be his *magnum opus*, the *Will to Power*, that, towards the end of his career, Nietzsche had gone a long way towards working out his ideas systematically, that his aphoristic style had become a literary device rather than a psychological necessity, and that his thought was really more coherent than he made it appear.

§ 3

On the other hand, it is also true that Nietzsche has prejudiced his work by greatly overrating himself. He had lived so long alone that he had lost what sense of proportion he had possessed. His autobiography, characteristically entitled *Ecce Homo*, is a frantic attempt at ' booming ' himself, with more than a touch of megalomania. Now, that men should entertain a higher opinion of themselves than those less intimately acquainted with their work, and should judge themselves by their powers rather than by their achievements, is natural, and perhaps essential to a successful carrying on of the struggle of life. It certainly need not spoil an autobiography, and may even add to its psychological interest, as in the case of Marie Bashkirtseff. But Nietzsche's autobiography is psychologically very disappointing. It throws very little light on the genesis of his character and thought, and exhibits only the prophet's anger at the neglect of an uncomprehending world. It leaves unsatisfied our curiosity as to how a German professor could come to revolt against

pedantry; as to how and why the German parson's son, piously brought up in the German analogue to Winchester, Schulpforta, could become a rabid anti-Christian, a pessimist and a Schopenhauer-enthusiast; why subsequently he threw over Schopenhauer as well as Wagner, and set up for himself; why, though he had a widowed mother and an unmarried sister, he preferred to live alone and became a solitary recluse who had fallen out with nearly all his friends. The riddle of his personality is left unsolved by all that has been published, either by him or about him, though there must have been some who could have thrown light on these questions.

Perhaps that light would illumine too glaringly the holes in the prophet's mantle; but it may well be that Nietzsche revealed the truth when he once wrote to his sister, "my good friends really know nothing about me, and very possibly have not yet thought about this problem. I myself have always been very reticent about all my chief concerns, without however seeming so."[1] There are people of this kind. They are usually content to keep diaries; but they sometimes rush into print in the hope of exciting in aliens the interest they take in themselves, and their friends do not. It may be suspected that a good deal of literature is inspired by this motive. In a queer philosophy written by a crank I once came across the frank admission that he had written his book in the hope of rendering his ideas intelligible to himself; ever since I cannot but think that this must be the real secret of many renowned philosophers. Nietzsche's writings, at any rate, belong primarily to this sort of literature. They are by-products of a soul's development which was cut short at forty-four. He confesses as much in a letter to his friend Erwin Rohde, in which he explains (without specifying) that he "has suffered more than Leopardi," and that "the literature which I produce since 1876 is my home-brewed medicine against disgust with life. . . . *Mihi ipsi scripsi.*"[2]

Allowances, then, must be made for Nietzsche. Living

[1] R. Oehler, *Nietzsches Briefe*, p. 239. [2] *Ibid.* p. 246.

as he did a solitary life, and finding that both the form and the matter of his writings were too new to be intelligible to the ordinary run of critics, he, like Schopenhauer, lost his temper. So he cried aloud in the spiritual wilderness, and (perhaps) saw visions which distorted and magnified the reality. But, when all deductions have been made, there remains in his work not a little which is strong, novel, and important, and has been shown to be fertile and prophetic of further developments. If these developments have at the same time sloughed off the paradoxes and abated the acerbity of Nietzsche's ideas, this only shows that the latter were affected by the abnormal conditions under which they were born into the world and had to grow up.

If, then, we resist the temptation of taking Nietzsche merely as a brilliant *littérateur* and a stylist who got some novel effects out of the stubborn German tongue, and agree to take him seriously as a thinker, without exaggerating him into the last thing in prophets, we have to consider chiefly his contributions to the theories of conduct and of knowledge. Of these the former are the more striking, sensational, and famous, but also the less solid; the latter are probably more significant, and will assure Nietzsche of a permanent place in the typical development of modern thought.

## § 4

What may be called the vulgar version of Nietzsche's thought exhausts itself, and thinks to exhaust its subject, by depicting Nietzsche as a ruthless revolutionary who runs *amok* among the ideals and ideas of modern civilization and slaughters them without discrimination. He is the atheist who cries aloud that God is dead, the anti-Christian who is proud to be taken for the Antichrist, the 'immoralist' who proclaims that morality is nothing but the decadent superstition of a slavish mind, the aristocrat who teaches democracy to know its place—which is beneath the feet of a ruling tribe of 'blond wild beasts'—the historian who has reinterpreted history as a secular

struggle between the free and masterful and their revolting slaves, the strong-souled optimist whose adamantine fortitude overcomes the degenerate wail of pessimists about the painfulness of life by reaffirming life in all its crudity, the poet who sings a paean to the victory of the strong and celebrates the subjugation of the weak, the prophet, finally, of the Superman to come, who has changed all values and made a new table of Commandments, and predicts the 'eternal recurrence' in all its details of the cosmic game, which has no purpose and no end, and means nothing but itself. And last, but not least, Nietzsche is the subtle flatterer of human conceit, who is for ever insinuating that whoever is bold enough to adopt his creed is by that act affirming his superiority and joining the ranks of the master-minds.

Now it need not be denied that all this may be abundantly illustrated out of Nietzsche; it represents the surface meaning of his doctrines. But it does not follow that it is either his whole meaning or, as put, the part of him best worth pondering and most resistant to criticism. And, curiously enough, such criticism strips his doctrine of much of its revolutionary character. For example, it is difficult to take Nietzsche seriously as the Antichrist. Religion in general, and Christianity in particular, are not things to be swept away by the flood of any man's rhetoric. It seems nonsense to say that God is dead and Christianity is played out, so long as men are willing to call 'God' whatever they have conceived to guarantee that everything is all right somehow, and to affiliate to 'Christianity' whatever beliefs embody their highest aspirations. The world is realizing more and more that religion is not rooted in merely rational formulas, but in the necessities of life, and cannot be eradicated by dialectics.

## § 5

The immoralism of Nietzsche has been greatly exaggerated. It is relative to the traditional morality of which he denies the value. He does not mean that he

believes that every one should do as he pleases, and put no restraint upon his impulses, though he does recognize that conduct is not an affair merely of 'ethical principles,' but mainly of impulses, and that it behoves us to have them sound. In spite of his denunciations of 'asceticism,' therefore, he sees that a severe 'training' (which is all that asceticism meant originally) is needed to make the higher man after his own heart, whose life would certainly not be that of the pleasure-seeker. But he believes that to establish the new values of a 'master' morality he must negate the old ones of the 'slave' morality which Christianity has imposed on us. Thus his 'immoralism' becomes an aspect of the 'transvaluation of values.'

Now this is an important and valuable idea, and Nietzsche deserves credit for having familiarized us with it. The discovery of the problem of values is probably the greatest achievement of philosophic thought during the nineteenth century; and it is curious to see how gradually and obscurely the discovery was made, and how little the thinkers who are oriented towards the past understand its importance even now. Perhaps the question was rendered ripe for discussion by the rise of pessimism. For, if we reflect on the clash of the optimist and pessimist valuations of life, we cannot but see that the facts are the same on either view, and so come upon the general question: what difference is made to the 'facts' by our attitude towards them? This leads first of all to the recognition of an antithesis between 'facts' and 'values,' which crops up in Germany in the second half of the nineteenth century and is typically expressed in the theology of Ritschl. It is said that a 'fact' is one thing and its valuation something different and independent. The nature of a fact does not necessarily determine a man's attitude towards it; the same facts may consequently be valued variously, and may change their human significance with such a change of valuation. Thus "valuing is creating," as Nietzsche clearly saw (*Thus spake Zarathustra*, p. 67). In the realms of art, morals,

and religion, moreover, the really important facts are such facts of human valuation. But it is not at first perceived that this antithesis of fact and value will not ultimately stand, because the ' facts ' our sciences recognize are permeated through and through by the value-judgments which were thought to be a peculiar human addition to them. Yet it is clear that every judgment of ' fact ' must have been preferred above alternative claimants to the dignity of fact, because it was judged to be more valuable than its rivals by the experts who enunciated it. Thus a human valuation is latent in every judgment, and the argument ends in a thoroughgoing ' humanism.'

## § 6

Nietzsche's analysis did not go quite so far. But he had intimately lived through a striking change of valuation in the realm of art. He had seen Wagner's ' music of the future ' fight its way in a few years from general reprobation as discordant to general admiration as the music best worth hearing, and had himself taken part in the fray, though only to abandon and abuse his friend, in the hour of victory, because he considered *Parsifal* an ignominious capitulation to Christianity. And if he had not happened to come across the ancient tale how Euripides two thousand years before had saved what was then the music of the future from suppression, and its author, Timotheus, from suicide, nor to notice that in the world of fashion annual changes of valuation are the rule, and that at the beginning of each fresh season it is obligatory to condemn whatever taste ruled the year before, this might well seem to him a wonderful event, and suggest the possibility of transvaluing the moral values.

But Nietzsche surely overrated his powers and underrated the frequency of such transvaluations. They are going on everywhere and at all times all round us, and no one man can control the valuations of all the world. For the same objects are valued differently by different persons ; and there is therefore always a question whose valuations

are going to prevail. In this social struggle of conflicting values more or less momentous changes are always occurring more or less rapidly. This is true even within the same general scheme of values. Even the Christian table of values has in practice sloughed off asceticism and the monastic life as ingredients in its moral ideal; nor do Christians now act as if they thought that gluttony and *acedia* still ranked among the Seven Deadly Sins. The situation is further complicated by the fact that many values are acted on without being put in words, while others are recognized in name only and not acted on, whence it may often be inferred that they are not really believed. For the severest test of the sincerity of a belief is that it should be acted on. Thus, however zealous we may be to call 'eternal' the values we believe in, we do not by this epithet exempt them from the flux of all reality.

## § 7

Nietzsche's doctrine, then, is even truer than he thought. It is both easier to change values, and much harder, for there are so many of them. The moral values have to compete with the aesthetic and the prudential; and many acts may be viewed in alternative ways. Chinese 'ethics' appear to be merely codes of etiquette, while Greek 'ethics' relied on feeling for the 'beautiful' and not on the 'sense of duty.' The morality of the Superman, therefore, has not to battle with a single foe, but with an indefinite multitude, each appealing to different types of men. The Christian morality which Nietzsche wishes to supersede has never been the only one. If it had been, the course of history would have been vastly different. But it has always had to contend with a number of alternatives, and to share with them its influence over the human spirit. And it has grown strong and supple and subtle in the process. Had Nietzsche realized what the existence of various codes of honour and propriety or etiquette means in a variety of social and military castes, and the vogue of a multitude of rules of business and pro-

fessional morality, of trade customs and of moral attitudes which are little more than idiosyncrasies, he would hardly have been so sanguine about the success of his particular transvaluation.

Nor is the transvaluation he proposes as new as he imagines. The gospel of violence and strength has always been acted on, though its exponents have mostly been too busy to theorize about their principles. But it is a delusion of academic intellectualism that nothing is real but what has been put in print. One thing, however, may fairly be demanded of the theorist: he should find clear and clean-cut conceptions to cover the facts. We have a right, therefore, to ask Nietzsche as the spokesman of the 'strong' what precisely he means by 'strength,' what constitutes the mastery of his rulers, and what are the qualities so precious that the life and happiness of millions may be sacrificed to gain them. Is 'strength' literally physical, or are intellectual and moral qualities ingredients in its composition? Are we to say that the strong are clearly those who actually exercise power, or those who *ought* to rule and might do so but for social restrictions? In other words, is the theory's ultimate appeal to the way of the world, or to some ideal beyond it?

Here, to our surprise, we get on to ground that has often been fought over. For, as Plato's Socrates in the *Republic* points out to his Thrasymachus, when he is anticipating Nietzsche by a contention that morality is imposed on the weak by the strong in the interest of the rulers, the actual rulers often make mistakes, and the ideal rulers might turn out to be the moral. Darwinism also seems to involve a notion of 'fitness' that may be heckled much as the Nietzschean notion of 'strength.' Are the 'fit' those who in fact survive, or those who would be fittest in some ideal scheme? If we say the former, is not the survival of the fittest a mere tautology? If the latter, are we not surreptitiously trying to obtain from nature the endorsement of some human ideal of fitness, which need not at all involve fitness to survive in the rough and tumble of the actual world? Darwinism extricates itself from the

toils of this plausible but essentially verbal dialectic by insisting on a concrete study of the scientific facts. Taking it for granted that whatever lives must somehow act so as to survive, it inquires how in fact living creatures act. In virtue of what qualities and modes of behaviour do those survive that do? How do they guard against the dangers that beset their life? and are they surviving better than before, or worse? Only after the actual process of survival has been exhaustively explored does the true Darwinian allow inferences to be drawn as to how we ought to act to improve the prospects of survival for ourselves or others. In other words, biological analysis is kept distinct from ethical precept.

§ 8

This distinction is not to be found in Nietzsche, who was probably born too early to have assimilated the full meaning of Darwinism,[1] which was rather slow in spreading into literary circles in Germany. He never unambiguously explains what he means by 'strength,' and seems to have no consistent notion of it. Sometimes he seems to mean physical strength alone, and to exult in 'blond wild beasts,' who overpower and disdain alike craft, discipline, and numbers. But it is plain that such strength is no match for cunning; and, even on Nietzsche's showing, the slave-morality organized by the priestcraft of decadents has triumphed over the valuations of the masters. We find, therefore, cleverness or force of intellect included in the notion of strength in passages explaining "why the weak triumph" (such as *Will to Power*, aph. 864): "The sick and the weak have more intellect . . . and are more malicious and interesting. . . . Woman has always conspired with decadent types—the priests, for instance—against the 'mighty,' against the 'strong,' against *men*. . . . Strong races *decimate* each

[1] He opposes his "Will to Power" to the struggle for existence, misunderstands natural selection, which he confuses with evolution, and has not grasped the cardinal fact that morphological 'degeneration' may be biologically better adaptation, as *e.g.* in the parasitism of *Sacculina* (cf. *Will to Power*, aph. 647, 684-5).

other *mutually*, by means of war, lust for power, and venturousness . . . their existence is a costly affair, and all great ages have to be paid for. The strong are, after all, weaker, less wilful, and more absurd than the average weak ones. They are *squandering* races."

The candour of the admission that the 'strong' are in fact the weaker does not seem to leave much substance in Nietzsche's advocacy of the strong-man doctrine; but he did not himself publish the *Will to Power*. At any rate we should here correct Nietzsche by a wider, more scientific and Darwinian notion of 'strength.' Every quality has to be reckoned as 'strength' which contributes in fact to survival—even the docility and stupidity which induces the masses to accept the leadership of the able. But, if so, how can the moral qualities be excluded from the make-up of strength? In every moral system are not the values recognized largely those which are conducive to social welfare? Is not the individual everywhere called upon to submit his masterful instincts to the requirements of social co-operation? Are not discipline and self-control indispensable for combined action? Even in the animal world, the great beasts of prey lead solitary lives, and are not as a rule a match for a gregarious herd. A mob of supermen could not form even a horde of robbers; a horde of robbers could not conquer a state; and history shows that even conquering bands of warriors vanish from the civilizations they overrun as quickly as snow from the desert's dusty face. And, when Greek 'master-morality' expresses itself in the concrete, it culminates in Aristotle's laughable picture of the 'great-souled man,' whose 'well-founded self-esteem' strikes us as the acme both of priggishness and of social impossibility. Under social conditions Christian humility is more conducive to survival than overweening pride; the valuations of the 'slave' therefore subjugate the world.

## § 9

Does the Darwinian notion of 'strength,' then, dispose of Nietzsche as easily as of Thrasymachus? Not alto-

gether; for Nietzsche has also a more concrete line of argument. He sometimes tries to show that the moral qualities he dislikes—humility, pity, sympathy, etc.—are not truly the sources of social strength they are taken to be, or that they have been fostered to a pitch that renders them biologically dangerous. They may, in short, be phenomena of 'decadence,' the extensive existence of which throughout civilization Nietzsche loudly proclaims.

Now this is a contention science cannot reject offhand. For there is nothing impossible in the suggestion that species, races, and societies may degenerate; they have often done so in the past, and have even died out. Moreover, quite a tiny failure of adaptation may start such a process; and not infrequently the failure seems to arise from an over-development of the very qualities which at first had conduced to success. It should never be forgotten that, if the early bird is too successful in catching the matutinal worm, he destroys his food-supply, and starves. Hence science must carefully examine whether we are not perhaps degenerating in the strict biological sense, *i.e.* becoming less capable of surviving in some important, and perhaps essential, respects.

The results of such examination are by no means reassuring. The comfortable belief that the human race is by some beneficent fatality continuing to improve seems to have no scientific warrant. There is no convincing evidence that either physically or mentally we are superior to the ancients. Nay, it has to be admitted that the cranial capacity of the earliest palaeolithic races was fully equal to that of modern man.[1] We may be becoming more resistant to the attacks of some microbes, but a number of bodily defects, like *e.g.* short sight, must certainly be increasing, because they are no longer fatal to survival. Insanity is apparently increasing rather rapidly, and under modern social conditions degrees of inefficiency and feeble-mindedness are tolerated, and even fostered, which would have eliminated their possessors when life was more strenuous. We may therefore be degenerating

[1] See Sollas's *Ancient Hunters*.

on the whole, as we certainly are in some respects; but there is no reason to despair if we are willing to adopt the remedies Nietzsche also has suggested, with his usual touch of paradox.

§ 10

The 'Superman' is Nietzsche's term for the ideal human type that is to be realized when man pays scientific and systematic attention to the guidance of his own evolution; and we may accept the principle even though we differ as to the sort of superman we want. At present, too, we still know little as to how the human race may be improved, or prevented from degenerating; but eugenics is more and more becoming a subject of sober scientific research, and we already know a good deal more than we are putting into practice. We know, at any rate, that all civilized societies are doing some things wrong, and that many social institutions are working badly. We also know that Nietzsche's preference for an aristocracy is biologically justified, because progress everywhere depends on the few who are capable of creating novelties. But, of course, this is not to sanction all the aristocracies that have existed,[1] nor does it even follow that politically democratic institutions must be given up. It is merely to say that, in fact, men are unequal in all sorts of ways, and that to ignore this and to try to reduce their abilities to the same level may be fatal to the human race.

§ 11

But is not this solicitude about the future of the race a new development, and one that not only the thoughtless but also the pessimistic cannot be expected to display? And what is Nietzsche's answer to Schopenhauer? His answer is the more instructive because on the surface it seems no answer at all. He does not deny either the reality of the Will to Live, though he expands it into a will to conquer and to rule, or the painfulness of life.

[1] *Will to Power*, aph. 953.

But he refuses to draw Schopenhauer's conclusion, and to negate life. On the contrary, he reaffirms it, not *although* but *because* it is painful, and, instead of arguing with pessimism, merely seems to abuse the life-negating tendencies as proofs of decadence. But how is this a rational refutation of pessimism ?

The answer is that, of course, it is not ; but it is all the better for that. Nietzsche had understood the nature both of pessimism and of life far better than the philosophers who go about seeking for ' rational proofs ' of ultimate attitudes and of the presuppositions of all our proofs. He has seen that the belief in life must be the product of an instinct, of a will to live that is hereditary and inborn, and that optimism is not a pure dispassionate reflexion in the mind of the nature of things, but an attitude of will. Pessimism, therefore, means to him, primarily, a weakening of this instinct, and is a symptom of degeneration ; the proper way to meet it is to strengthen the will to live by dint of which the human race has fought its way dumbly through all the horrors of its past.

It may be doubtful whether this remedy is adequate, and certain that it will carry no conviction to a pessimist ; but it affirms the modern criticism of rationalism in its most uncompromising form. Biology has made it evident that reason is a comparative new-comer in the realm of life, which, until then, was wholly swayed by instinct. Nay, at bottom we live by our instincts still, and perish if they are perverted ; our boasted ' reason ' is but the instrument by which we calculate and refine the means to our ends, and is subject, like all our faculties, to the law of natural selection. It could never have developed had it not been a useful and potent weapon in the struggle for existence ; it cannot rightly presume to condemn life, because, if it does, it will be swept away again. For then nature will again select those who are too stupid to see the reasons for pessimism, or too strongly biased by their will to live, to credit them. Thought thus finds itself led to an abyss of irrationality which threatens irretrievably to engulf all intellectual values and to subvert all rational

'principles'; and science seems to vindicate Hume's prescience in declaring with his characteristic incisiveness that "reason both is and ought to be the slave of the passions." This dictum has been taken by most philosophers as a personal insult, but they have never understood its profundity. It forms the starting-point for the most momentous developments of modern philosophy, among which Nietzsche's theory of knowledge holds a definite and important place. But its significance has not been properly appreciated. To make this clear it will be necessary to outline the history of philosophy since Hume, with a slight redistribution of the usual emphasis.

§ 12

Hume had achieved what is very rare in philosophy, viz. a real and great discovery, when he noticed that the notion of causal connexion was not *given* to us in the succession of phenomena, but *added* to them by us in a way that demanded explanation. The importance of this discovery was, however, not that if our right to make additions is denied there results scepticism, nor that if it is conceived as certainly valid a new form of *a priori* can be asserted; it lay in the fact that for the first time in the history of thought a radical doubt is cast on the assumption that the mind's function in knowing is merely to reflect reality.

The fact about causal reasoning observed by Hume is susceptible of several interpretations, and philosophers have perceived its scope only very gradually. Kant's interpretation, that *ergo* 'cause' is an '*a priori* category,' would not, of course, have appeased Hume's scruples; it would only have confirmed his suspicions of human knowledge to learn what a mass of *a priori* machinery was needed to 'form' the data of experience and to transform them into scientific facts. For, so long as it is taken for granted that thought *ought* to reproduce reality, the more we have to add and to manipulate, the less trustworthy do the results of thought become, and the more certainly has

knowing to be condemned as systematic falsification. Granting, therefore, that Kant had shown that the case of causal connexion did not stand alone, and that nowhere could there be found ' facts ' that had not been ' faked,' or as he called it ' formed,' by our ' *a priori* ' additions, whoever denied the rightfulness of such interference with our data was bound to infer that what was called ' truth ' was in reality a sort of ' fiction.' Kant himself had given further support to this estimate by showing that in some cases rational ' principles ' could originate in ' postulates ' of the will, and that whole sciences could be built up on conscious fictions. So far, therefore, from allaying the sceptical scruples Hume's discovery had provoked, Kant had in fact enormously extended their scope. As Nietzsche rightly remarked, ' truth ' itself had become a problem to be doubted for those who really set out from Kant.[1]

Nietzsche wrongly attributes this perception of his own to Schopenhauer, who was a dogmatic metaphysician like the rest of the ' post-Kantians,' though his adoption of an irrational Will to Live as the essence of reality may possibly be traced to the after-effects of Hume's discovery of the function of ' instinct.'

## § 13

There can be no doubt, however, that Nietzsche himself had come face to face with the problem of truth, and had seen the necessity for refining further on the Critical position as it was left by Kant. He had soon discovered that the intellectual values are no more unassailable than the moral, and was fond of quoting the revelation which formed the final initiation of the Moslem mystic, " nothing is true, everything is permitted." By the time he wrote *Schopenhauer as Educator* (1874) he had also seen through the unreality and the futility of academic ' philosophy,' and could say " the only method of criticising a philosophy that proves anything at all—namely, to see whether one can live by it—has never been taught at the universities ;

[1] *Thoughts Out of Season*, ii, 123.

only the criticism of words, and again words, is taught there" (p. 190). But it is only in the *Will to Power* (1886–8) that a definite theory of knowledge is shaping itself out of the two perceptions that 'truth' is more akin to 'fiction' than to 'reflexion,' and that it must have *some* connexion with life. The resulting theory was never completed, and two distinct, and even incompatible phases may be noted in its development, according as the life-preserving beliefs are valued as 'false' or as 'true.'

The first of these phases is the older and the more obvious, suggested as it is, not only by the drift of Kant's theory of knowledge, but also by observation of the systematic inculcation by society of beliefs which are held to be not true but useful (to teachers, rulers, etc.) and socially salutary. It is clear that this estimate of the situation follows logically from the assumption that 'truth' *ought* to reflect 'reality.' If we refuse to acquiesce in the word '*a priori*' as a cloak for any number of logical sins, the apparently arbitrary use of postulates and fictions in our knowing must be valued as falsification. Yet both Kant and biology agree that some at least of these volitional procedures are practical necessities of life. Does it not follow that we live by falsehoods, and that the paradise of science is built by man out of salutary illusions?

In the first stage of his epistemology Nietzsche interprets thus. Truth itself is false; facts are 'fakes.' All the objects that the intellect respects are illusions. For example, "there is no truth; 'truth' is merely 'that kind of error without which a certain species of living being cannot exist. The value for life is ultimately decisive"; or it is "a form of *faith* which has become a condition of existence" (*Will to Power*, aph. 493, 532, cf. 428). "There are no such things as mind, reason, thought, consciousness, soul, will or truth; they all belong to fiction" (*ibid.* 480). "The aberrations of philosophy are the outcome of the fact that, instead of recognizing in logic and the categories of the reason merely a means to the adjustment of the world for utilitarian ends (that is to say, especially a useful falsification), they were taken to be the

criterion of truth—particularly of reality. The ' criterion of truth ' was, as a matter of fact, merely the biological utility of a systematic falsification of this sort," etc. (*ibid.* 584). There are no ' facts,' but only " interpretations, prompted by our needs " (*ibid.* 481). There is no ' self,' which is a fiction ; for a belief may be life-preserving, and yet false (*ibid.* 483). There is no ' cause,' which is " a faculty to effect something, superadded fancifully to what happens " (*ibid.* 551, cf. 477-9). There is no logic, for logical thought is " a complete fiction which never occurs in reality." Its principles, the ' laws ' of Identity and Contradiction, are ' fictions ' and ' imperatives,' which apply only to figments and are not " adequate to reality." For " identical cases " are a " coarsening " fiction, created by a " will to power " that such they *shall* be. Logic, therefore, like mathematics, only " holds good of assumed existences which we have created." It is " our attempt at making the actual world more calculable and more susceptible to formulation for our purposes " (aph. 512, 514, 516, etc.).

§ 14

True, this estimate of the performances of the human intellect is not proved up to the hilt ; and the ordinary philosopher is more likely to be horrified than convinced. But Nietzsche does not stand alone in it, and his conclusions have received independent confirmation from technical philosophers of the highest rank. Bergson's doctrine that science is an adaptation of reality to the needs of practice is a milder way of expressing the same judgment. Still closer is the parallelism between Nietzsche and Prof. Vaihinger's monumental study of the scientific function of fictions, which was written in 1875–8, though not published until 1911, under the name of *The Philosophy of the As If.* For Vaihinger, the author of a great commentary on the *Critique of Pure Reason*, had been led by his profound study of Kantian philosophy to the same conclusions as Nietzsche. And lastly, the various forms of ' pragmatism ' which have sprung up in America and

England, though they started independently and more immediately from the facts of psychology, biology, and logic, represent a converging development.

There is then a great and growing consensus of authorities as to the facts. 'Knowledge,' 'truth,' 'logic,' nay, even 'perception,' are not in fact reproductions of the given, but manipulations of it and operations on it, which variously and wondrously transform it. But what is to be the valuation of this fact? Is it necessary to infer that 'truth' is false, and 'knowledge' falsification? Is not this inference itself a valuation? Nay, does not this valuation destroy itself by destroying the distinction between true and false? If all 'truth' is 'fiction,' and we cannot know without feigning, fiction ceases to be a term of abuse. Moreover, as an analysis of knowledge this usage is open to the objection that it is singularly inconvenient. For we do distinguish between the true and the false; and surely this distinction has a function and a meaning.

## § 15

Is there, then, no alternative interpretation? There are to be found in Nietzsche suggestive hints that he was feeling his way towards such an alternative. They occur especially in a draft of the *Will to Power*, which forms vol. xiv. of the Collected Edition of his *Works*, but has unfortunately not been translated. It is not, however, easy to say whether they are isolated *aperçus* or the beginnings of a revaluation of the 'work of the mind' as good and true, nor how far Nietzsche was conscious of the discrepancy between them and his more usual valuations.[1]

But let us experiment with the suggestion that human activity may be a source of truth, and not of falsity. Granting that all knowledge involves human manipulation, that truth is essentially a valuation (aph. 507), that

[1] Nietzsche is not rigorously consistent in applying his doctrine that science is fiction; for example, he bases his doctrine of the 'eternal recurrence' on the scientific principle of the conservation of energy (aph. 1063), without observing that the fictitious nature of the latter must hopelessly discredit it.

sensations do not occur, and that perceptions are already impregnated with valuations, because the original data were a chaos [1] and only such ideas could survive as were serviceable (aph. 508), that " the whole cognitive apparatus is not directed upon ' knowledge ' but upon the mastery over things " (aph. 503), yet why should the inference be drawn that " the world that concerns us at all is false " (aph. 616) ? What sense is there in calling it ' false ' ? Is it not better to infer that a ' real ' world that does not concern us at all must be false ? Admittedly the whole " worth of the world lies in our interpretation " (*ibid.*) ; why not then radically change our attitude towards this refutation of our prejudices, and welcome the facts, the risks of life and the ' adventure ' of thought (aph. 929) ? Instead of ignoring or resenting the facts, why not say, " pleasure is no longer to be found in certainty but in uncertainty . . . in continual creativeness," and use " no longer the humble phrasing ' it is all only subjective,' but ' it is all *our* work ! let us be proud of it ' " (aph. 1059), especially when we perceive that the classifying of an experience as ' subjective ' or ' objective ' is itself the product of a value-judgment ?

## § 16

The willingness to perform this last transvaluation of the meaning of Hume's discovery that we make additions to our data out of our own resources, is the achievement of that form of pragmatism which is called ' humanism ' ; and, so far, it represents the final term in the development of this important line of thought. Yet it is a very simple and easy change of valuation, which gets philosophy out of difficulties that have tormented it for centuries, and dissipates the illusion of scepticism. It is only necessary

[1] It is to be noted, however, that Nietzsche, like Kant and all philosophers before James and too many since, follows Hume in conceiving this ' chaos ' as constituted by a procession of atomic ' ideas ' or ' images,' and not as a continuous flux. So he cannot see that as the problem of knowing is not one of synthesis but of analysis, and as a *continuum* may be analysed in an indefinite number of ways, any method of introducing order into this chaos must be arbitrary and therefore false, if our interference as such involves falsification.

to say " truth is human, of course, knowledge is active, and a condition of life and power, and not a passive receptivity of ' impressions ' and the reflecting of an alien reality. Very well then, so much the better, and thank God for that ! For does it not make reality for us most hopefully human too ? Let us discard as useless and unwarranted the prejudice that truth ought to reflect, copy, reproduce a ' given,' seeing that it plainly neither does nor can. If our truth is human, why not admit that our reality is so too, and that *therefore* our truth may be adequate to it ? Why assume that the world of our experience is not commensurate with our intelligence ? Why labour to identify it with an ' absolute ' reality that must for ever baffle and elude us ? Let us not condemn ourselves to hopeless scepticism by wantonly defining ' truth ' in such a way that no human mind can conceivably achieve it ! Let truth include and sanction whatever operations we find necessary and most helpful in our knowing activities ; nay, let a reference to its function, value and success in standing the various tests which we use to sift the ' true ' from the competing ' false,' be incorporated into the very meaning of ' truth.' "

It cannot, indeed, be contended that Nietzsche had quite reached this position, though it has been shown that he sometimes gets very near it, and actually formulates the pragmatist criterion for testing truth-claims, viz. the success of their consequences (aph. 510). More frequently he does not emancipate himself completely from the prejudice " if due to our activity, then necessarily false." This is why he is not strictly a pragmatist, despite his tendencies to humanism. He perceives the pragmatic nature of ' truth,' but he does not ' value ' it as true, but as false. But, of course, the difference is much too fine to have been observed by the critics of pragmatism. Indeed, they not only class him as a pragmatist, but usually prefer to attribute his position falsely to strict pragmatism. For they can then declare that pragmatists are unscrupulous persons who think that any lie they find convenient may rightly be taken as ' true.' Whereas, of course, it is

of the essence of pragmatism to show that when an alleged truth or truth-claim works fully, no one is entitled to call it 'false.' It is not seen that the same assertion cannot be simultaneously a 'lie' and a 'truth' to the same person, and that every one's beliefs are always for the time being 'true' to him. 'Truth,' consequently, is (in fact) plural, as Nietzsche sees (aph. 540), though it does not follow that "consequently there can be no truth," but only that it is still in the making.

Nietzsche's theory of knowledge, then, has all the instructiveness of a transition-form; he is still obsessed with the idea that it is wrong in our knowledge that it should not try to copy its data. But he expresses this prejudice so frankly and traces out the resulting paradoxes so boldly, that he is easily seen to have argued himself into a position which is arbitrary and untenable. This, indeed, seems to be the conclusion of the whole matter; in his theory of knowledge, as in his theory of morals, Nietzsche is immensely suggestive, and stimulates to further progress by his very errors. His work is everywhere incomplete and sometimes crude; but it is brilliant and intensely alive; and his career was cut short by madness just as his powers were maturing.

# CHAPTER X

## HERBERT SPENCER AS A MORALIST[1]

YOU may have been surprised to find Herbert Spencer included in our list of Great Moralists for the purpose of these Lectures. For the present generation probably regards him not as a living force but as a Victorian fossil, hopelessly dead and done for. Even the select band who read philosophic books can hardly be expected to plough through the serried rows of Spencer's *Works*, and contemporary discussion has ebbed away from the subjects which he treated, and rages about other topics. I shall therefore have to begin by vindicating Spencer's claim to figure in these Lectures.

I think I can do this most easily by becoming a bit autobiographical, and telling you for what I feel I myself have been indebted to Spencer. I had been brought up at Rugby School with what was termed 'a good old-fashioned classical education,' including Latin and Greek verse composition, for which I had no aptitude whatever. But liberal education was heavily endowed, and glittering prizes were dangled before the eyes of every intelligent and ambitious boy. Such a one was not allowed to drop verses and so to impair his chances of getting a scholarship that would be an 'honour' to his school. Privately, however, I had read a good deal of modern science and history and had long been a convinced evolutionist. At Oxford I fell a victim to what was surely the strangest way of teaching philosophy ever devised, even in the

[1] A Los Angeles Public Library Lecture, 1932.

Kallipolis of Plato. It consisted in taking young men of twenty, the pick of the classical scholars, and plunging them headlong with no introduction, warning, or preparation whatever, into the *Republic* of Plato, to be studied in the Greek. Now the *Republic* is doubtless a great work of art and contains material to please every taste; but the same could hardly be said for Aristotle's Nicomachean Ethics, which followed one term later. By way of an English introduction to philosophy we were recommended to read T. H. Green's *Prolegomena to Ethics*, a bit of advice I still regard as the acme of bad pedagogy. No wonder the effect was that bands of philosophic tiros used to go on pilgrimages to a North Oxford cemetery to defile the grave of Green! For the rest J. S. Mill still served as whipping boy, who was severely castigated by every logic lecturer with scholastic arguments that had done duty ever since the university's foundation in the twelfth century. Finally, Hegel, or rather the name of Hegel, provided the dark background of impenetrable fog and mystery, on which our struggles were projected.

After two years of this sort of philosophic training the mental muddle we were in, augmented by tutors who fancied they were practising the Socratic method upon cocksure and presumptuous youths, may be imagined more easily than described. For myself I had arrived at the conclusions that Platonic dialectics were just a word-game, that Green simply begged all the difficult questions, and that his and Aristotle's social ethics were nothing but the glorification of arbitrary and largely senseless social taboos. None of them seemed to me to have discovered any real and cogent reason inherent in the nature of things, why one should act in one way rather than another, and call the one way good and the other bad.

It was in this frame of mind that I picked up Spencer's *Data of Ethics*, and for the first time learnt from it that there might be natural principles of right conduct based upon the nature of existence, and that virtue is not wholly a matter of social opinion. I did not, even at the time, entirely agree with all of it, and we shall presently see that

even as a scheme of evolutionist ethics, Spencer's system has plenty of defects, but his proof of the objective basis of ethics has remained with me ever since. So I feel that Spencer really deserves to rank among the great moralists, and that I owe him a debt of gratitude.

Regarded more objectively, Spencer may claim to be the foremost moralist of Evolutionism, that is of the great nineteenth-century scientific movement of thought which drew its strength from Darwinism. That indeed was how he himself conceived his function, even though he confessed himself somewhat disappointed with the results of applying evolutionism to ethics. The doctrine of Evolution, he says, had not furnished guidance to the extent he had hoped.

For this disappointment the blame should not perhaps fall wholly on the doctrine of Evolution ; the fault lay largely in Spencer himself. For Spencer was neither willing to sacrifice to it completely his own pre-evolutionist prepossessions in favour of a hedonistic utilitarianism, nor yet to make up his mind about the nature of the evolution process itself. Was it to be conceived as a definite, unitary, universal trend of events, or as a cyclical alternation, tending successively, now towards a greater heterogeneity and anon back towards homogeneity, or even as merely an oscillation between two conceptual poles logically traceable in all the processes of nature ? In other words, was evolution a single process, or two successive processes, or a twofold analysis of actual happenings ? Spencer never finally committed himself to any of these interpretations ; yet it is pretty clear that they could not all have the same ethical implications.

The discrepancy between evolutionism and utilitarianism, on the other hand, Spencer did perceive, and he made a gallant attempt to bridge the gulf between them, though he never realized how essentially independent and self-sufficient was the simple Darwinian principle of survival-value, and how easily the moral order of a society might be determined by it.

At first sight, indeed, there is no visible connexion between the evolutionist principle of survival and the

hedonist principle of happiness. The evolutionist principle is completely objective, and appeals to the actual consequences of sundry sorts of conduct. It demands that the conduct of every society and of every individual in it shall be such as to conduce to survival and to maximize survival-value: it threatens defaulters and recalcitrants with extinction, if they fail so to comport themselves. Nothing whatever is said about how they are to feel about the objective requirements of survival: whether they enjoy doing what is conducive to survival or hate it, or do not think about it at all, is simply irrelevant, and makes no difference. Do it they must, because otherwise they are wiped out. And with them perish their opinions, convictions, and modes of behaviour.

The happiness-principle, on the other hand, assumes that our likes and dislikes are to make a difference, and that we are free to do as we please. If we do not like a course of conduct which is conducive to survival, why then we need not embark on it; while if we do, that is enough, and no further warrant for it is required. But neither of these policies would seem to be practicable. If we refuse to do what is requisite for survival, we extinguish not only ourselves, but also our views, which will be voted false by the survivors; while if we say that we do what is conducive to survival because it is conducive to happiness, we have not carried the analysis of our action as far as we could and should, and have alleged an incomplete and misleading reason for it. So a Darwinian evolutionism sees no reason to look beyond survival-value and to labour to identify it with happiness. So far as the natural selection of modes of behaviour goes and the natural selection of those who exhibit these various modes of behaviour, it seems to predict nothing as to whether they will be happier or less happy than other people. Survival-value and happiness seem to be two independent standards for judging conduct, and there is no direct connexion between them.

Yet is there not an indirect connexion? So Spencer argues, and goes some way to showing.[1] He points out

[1] *Principles of Psychology*, § 124.

that psychologically the pleasantness of an activity or performance of function augments and prolongs it, whereas its painfulness depresses and arrests it. So he infers that sentient creatures could have evolved only on the condition that there existed for them a general coincidence between pleasantness and life-conserving activity and painfulness and action detrimental to them. In general, living beings must take pleasure in what is good for them and avoid what is bad for them; for if they do the opposite, and find pleasure in what is bad and shrink from what is salutary, they eliminate themselves. Hence there should be nothing but good pleasures, good in the sense of salutary or conducive to survival, and bad pains, and the fear of pleasure which marks ascetic ethics is a great blunder.

How, then, were bad pleasures and salutary pains to be explained? By means of his evolutionism Spencer could escape from the embarrassment they have always presented to hedonists. He did not have to deny the existence of bad pleasures and good pains in order to preserve his principle. He could account for them historically. Pleasures and pains, he thought with Aristotle, were the psychological concomitants of physiological activity or performance of function. Normally pleasure accompanied healthy and salutary functioning, pain morbid and harmful. But bad pleasures might continue to attach themselves to activities which *had once been* necessary and salutary even after they had ceased to be so. Similarly salutary pains might accompany functions to which adaptation was not yet complete. They meant that the human race had recently taken them on and was not yet habituated to them. Hence they still seemed difficult and irksome. The blame for both these disharmonies, moreover, might be laid on the rapidity with which the human race had evolved, in a way which was both consoling and flattering. Owing to the relative rapidity with which the human race had advanced, the natural guidance of conduct by pleasures and pains had broken down. There had arisen what Spencer called a deep-seated derangement and discrepancy

between the ancestral functions to which man was emotionally adapted and the new activities which were demanded of him by the civilization to which he had so audaciously committed himself. This was why men so greatly enjoyed their ancestral pursuits of hunting and fishing and loathed work and sedentary and intellectual activities. Man was still at bottom and at heart as lazy as the dog who had been his first animal companion. But Spencerism held out the hope of removing this derangement. A time was bound to come when man would become really adapted to civilized life. Then his work would become easy and agreeable, his duties would become pleasures, and happiness would become universal.

That there is not a little truth in these suggestions of Spencer's is clear. Indisputably human feelings do extensively hark back to an earlier age. We enjoy the pleasures of the chase, because it was by hunting and fishing that men made their living for untold generations before they became civilized or even tilled the soil and herded cattle. Primitive mentality has undoubtedly persisted in many.

But it is not so clear either that the ancients universally enjoyed hunting, and were successful because they enjoyed it, or that the most successful hunters were those who enjoyed it most, or generally that the point of maximum efficiency in the performance of a function must necessarily coincide with that of the maximum of pleasantness. In the first place, we hardly know how the ancients felt about their means of livelihood; but dislike of it may have been as common then as was dislike of war in later times. No doubt, if some liked and others disliked it, natural selection would promote the increase and survival of the former, on the assumption that the enjoyment of hunting was an important factor in success at hunting. But other qualities also besides enjoyment are needed in a successful hunter. He has to be wary, cunning, and observant of the ways of the game he stalks. This means the possession of intellectual qualities which may often be obstacles to mere enjoyment. If so, natural selection will

favour the survival of the type of man endowed with these valuable qualities rather than of the mere devotee of hunting. Lastly, in the formation of a habit the point of maximum expertness rarely seems to coincide with that of maximum pleasurableness. After a certain point we seem to grow more and more indifferent to an activity which nevertheless continues to grow regular and even automatic.

So it is hard to prove the universal coincidence of efficiency and happiness. No doubt we usually take pleasure in successful activity, and a high degree of inefficiency, of which we cannot but grow conscious, causes unhappiness; but still the most efficient would hardly seem to be the happiest man. His efficiency would seem to involve a strenuousness and tendency to worry which are great drawbacks to happiness.

Now if these scruples are well founded, Spencer's attempt to fuse together the evolutionist and the hedonist test of conduct cannot be pronounced entirely successful. They remain distinct in principle, and how far they can be combined in practice remains a matter of empirical inquiry. Spencer, therefore, can be forced to choose between them in order that his ethics may be put on a single unambiguous basis.

A further difficulty for his system is revealed when the question is raised whether even in the Darwinian notion of survival-value evolutionism has acquired an unambiguous all-compelling principle of ethics. No doubt it is very tempting at first sight to declare that the fact that certain beliefs tend to survival, while others do not, is sufficient to account for our acceptance of them as right and true, and that therefore we can cease troubling our heads about them: indeed, the very fact that certain beliefs have survived and are now current suffices to prove that they are right and true. So it is easy to imagine that survival-value, and that alone, underlies all our beliefs about rightness and truth, and renders further debate about ethics and logic superfluous.

Nevertheless this theoretic deduction does not seem to

accord well with the empirical facts. Superficially at least there seem to be various ways of surviving, and we seem to be left with a certain choice between them. There is, for example, the way of the rabbit and the way of the tiger, the way of the man and the way of the microbe, and it does not even seem quite certain that ours is the way to ultimate victory.

Moreover, Spencer in particular does not seem to allow sufficiently for the fact that there are at least two very different ways of bringing about the adaptation to environment which means happiness and life. The one way is that of submission, the surrendering of impracticable ideals, the scrapping of demands which the existing nature of things does not concede, the acceptance of the given, the truckling to the environment. The other is the way of mastery, the remoulding of nature till it yields to our demands, the remaking of the world. Now Spencer tends to conceive adaptation in the former way: he seems to advocate passivity and to underrate the part played by active reconstruction of the real in the evolution of human, and indeed of all, life. For after all we should remind ourselves that it is not merely the works of man which attest the efficiency of living intelligence to alter brute fact and to remould the real, but also the existence of such things as coal, oil, chalk, coral, limestone, flint, amber, and pearls; and indeed under favourable circumstances the merest fossil can leave an indelible imprint on reality.

May we not reasonably conclude, therefore, that Spencer's ethics might have been more adequate and less disappointing, even to himself, if he had been less utilitarian and more Darwinian, less mechanistic and more vitalistic?

In general it may be said that the Darwinian element in Evolutionism has proved itself more valuable and more viable than the Spencerian. It is superior in logic, and yields a better illustration of scientific method. This comes out both in its ethics and in its theory of knowledge. In the latter, Spencer propounded an ingenious explanation of the *a priori* principles which rationalist philosophers had exalted upon unapproachable pedestals, as objects of

adoration rather than of understanding, dimly visible through a deceptive fog of technical terms. He declared that they were *a priori* to the individual, but *a posteriori* to the race. That is, the psychological necessity with which they seemed to be endowed was to be construed as a consequence of the prolonged success of their logical working in the ordering of experience. But Spencer was not able to show how successful working was able to transform itself into psychological necessity of thought. Even if Lamarckism is a fact, it is not understood: the mechanism whereby the lessons of experience are transmitted and incorporated in the mental structure of succeeding generations is still unknown: the possibility of inheriting acquired characteristics is still in dispute.

Moreover, the Darwinian interpretation of the situation was much simpler. Psychological necessities of thought can at any time arise as 'accidental variations,' and if they are serviceable to the organism and conducive to better reactions upon stimulation, they will be preserved, and diffused throughout the race. Furthermore, it is quite easy to interpret all the '*a priori* necessities of thought' as postulates, volitional and experimental in character, which make demands upon our experience and are intended to render it more amenable to our purposes. This interpretation requires us to sacrifice nothing but the prejudice that adaptation to environment is a purely passive process.

Similarly in Ethics. Both Spencer and Darwin thought it incumbent upon them to derive the moral sense or conscience from non-moral motives, and to allege an 'evolution' of the sense of duty. Now this was a mistake of method on Darwin's part. His own method required him only to say that if a sense of duty could originate as an accidental variation and were found useful and salutary, it would spread. Darwinism, therefore, should have said, as I have said just now, that the origination of man's moral nature was to be conceived by it as an accidental variation. Accidental variation is the general category Darwinian method provides for the reception of all

*novelties*. It is a purely classificatory term, and prejudges nothing as to the real nature of the new-comer, which is decided subsequently by its functioning. Actually Darwin (in his *Descent of Man*, chap. iv) derived the conscience from the judgments of regret passed retrospectively upon an anti-social action by a social and gregarious creature, when its social feelings, temporarily overborne by selfish passion, had recovered their normal predominance. But Darwin left it conveniently vague what were the precise nature and grounds of such judgments of regret; so his derivation of the conscience cannot be deemed complete.

Spencer was more ambitious and explicit. He produced (especially in *Data of Ethics*, chap. vii) an elaborate analysis of the development of the moral sense, and followed it up with a proof that the sense of duty was a transitional phenomenon which was destined to disappear again in the further course of moral evolution.

In chapter vii of the *Data of Ethics* Spencer conceives the conscience or sense of duty as a fusion or conflation of three 'controls' or influences on the individual mind with the psychological and biological fact that the so-called 'higher,' more complex and re-representative feelings, which are later evolved and refer to the remoter consequences of action, have greater *authority* than the lower, earlier, and simpler feelings. Ultimately this authority means merely that they are more conducive to survival; but it takes some time before this is recognized and their guidance is completely accepted. Slowly the lower feelings conform to the higher and yield to their promptings. This recognition of the authority of the higher feelings is for Spencer the truly moral and rational motive for action.

On the other hand, a certain coerciveness always resides in the three 'controls' which are called the political, the religious, and the social; for they are all based on *fear*, of chiefs or rulers, of gods or ghosts, or of public sentiment at large. From the individual all three exact self-restraint and self-control; but in a general way what they demand of him coincides with the conduct demanded by the moral motive proper. Hence there arises a transfer of the

associated feelings. The coerciveness of the three controls attaches itself to the authoritativeness of the higher feelings and generates the sense of duty.

As Spencer says,[1] "as with the restraints thus generated is always joined the thought of external coercion, there arises the notion of obligation; which *so* becomes habitually associated with the surrender of immediate special benefits for the sake of distant and general benefits." And again,[2] "the representations, having much in common, and being often aroused at the same time, the *fear* joined with the three sets of them becomes, by association, joined with the fourth. Thinking of the extrinsic effects of a forbidden act excites a dread which continues present while the intrinsic effects of the act are thought of; and being thus linked with these intrinsic effects causes a vague sense of moral compulsion. Emerging as the moral motive does but slowly from amidst the political, religious, and social motives, it long participates in that consciousness of subordination to some external agency which is joined with them; and only as it becomes distinct and predominant does it lose this associated consciousness—only then does the feeling of obligation fade. This remark implies the tacit conclusion, which will be to most very startling, that the sense of duty or moral obligation is transitory, and will diminish as fast as moralization increases."

As for "the sentiment of duty in general" as distinct from the several sentiments "which prompt to various virtues," it is generated in a manner analogous to that in which the abstract idea of colour is generated from the experience of the various colours.

How far can this derivation be accepted? Clearly there are flaws in it. Particularly in the predicted evanescence of conscience. As a matter of fact this does not seem to have begun as yet: on the contrary, the ethical importance of the conscience seems to be increasing, and its evolution to be still in its initial stages. For the notion of Conscience was unknown to Greek ethics, and is by no means clearly expressed in many later systems.

[1] *Data of Ethics*, p. 120. [2] *Ibid.* p. 127.

So the empirical evidence does not bear Spencer out; it seems rather to illustrate what T. H. Huxley called Spencer's idea of a tragedy, namely, "a beautiful deduction killed by a brutal fact."

Further, on Spencer's own showing, the authoritativeness and the coerciveness of the sense of duty ought not to evanesce together. Only the authoritativeness should disappear by a gradual process, because there would be less and less need for the exercise of their authority when the lower feelings came to conform more and more to the dictates of the higher. On the other hand, the coerciveness of the sense of duty was always a mistake and a confusion which had no reason in the nature of things. It should therefore vanish at once from any mind that had accepted Spencer's argument, so soon as it had completely assimilated it and conformed its feelings to it. For the infusion of coerciveness into the moral motive was never more than an *error*, due to its long association with the three coercive controls, and to a consequent contamination. For a man's conscience cannot coerce him as can his chief, his priest, and his neighbours. If the bad man sets his conscience at defiance, the usual consequence is merely that it atrophies.

Finally, is Spencer's analysis of the conscience psychologically correct? I dare not assert it. For I cannot myself trace any identity between the alleged elements and the finished product. Neither in form nor in substance can I find any likeness between the feelings which attend our ought judgments and our consciousness of obligation, and which declare the vital difference between Right and Wrong, and their Spencerian derivation. For the latter amounts merely to analysing conscience into a far-sighted perception of one's ultimate advantage, *plus* a fear of external coercion (which is in this case quite groundless and inappropriate), *plus* a confusion of thought which amalgamates them. Of these factors only the first is respectable even intellectually; the others are despicable and deplorable either intellectually or morally or both.

Further, the etymological clue to the original metaphor

in ' right ' and ' wrong ' by no means bears out Spencer's analysis. For ' right ' seems to have meant ' straight ' and ' wrong ' ' crooked,' as is confirmed by our continued use of ' straight ' and ' crook ' in moral contexts. Spencer therefore appears to me to have failed completely to do justice to the psychological character of the moral judgment.

But for all that we may continue to admire many of Spencer's moral qualities, his unswerving sense of justice, his sturdy independence of spirit. These qualities stand out in his *Autobiography*, which is one of a very limited number of such compositions that really succeeds in making one think more highly of their author as a man. I hope I have said enough to justify my hero's inclusion in our gallery of Great Moralists !

# CHAPTER XI

## JAMES THOMSON: A POET OF PESSIMISM[1]

IT may very well be argued that the final question, to which all our philosophies and all our sciences lead up, and which every one has every day to answer for himself, is the question—What is the value of life? It is *the* critical question, *par excellence*, about life, which marks our characteristic attitude of human reflexion, as contrasted with the unquestioning acceptance of animal instinct. It is a question, moreover, every one has to answer for himself, because, in principle, he is the only judge whose verdict overrides that of any spectator: for he alone can tell where the shoe pinches.

### § 1

However, it is clearly a question that can be answered in two ways. It can be answered affirmatively and negatively, and if we take it as an abstract logical question we ought, perhaps, to expect both answers to be equally probable, and to occur with equal frequency. Notoriously, however, this is far from being the case. Mankind does not, in actual fact, question the value of life any more than does the animal world. Mainly, no doubt, for the same reason, namely, that most men rarely, or never, reflect. It is only the few, who are, or may be, philosophers, who reflect on the value of life, and, in consequence, become self-consciously optimists and pessimists. For optimism and pessimism will have to be the names we give to the philosophies which spring from critical reflexion on the value of life.

[1] A Los Angeles Public Library Lecture, 1933.

Linguistically neither of these terms is well chosen. For the meaning which optimism *should* express is simply an affirmative answer to the question about the value of life. It should simply indicate the belief that life is worth living. Instead of which it was originally the expression for a subtle philosophic doctrine, devised by Leibniz, which purported to show much more. Leibniz undertook to prove, not merely that life was good, but also that ours was the best of all possible worlds. By introducing this superlative he really rendered his contention much more difficult, if not impossible, to prove. He also introduced a subtle ambiguity, which rendered his argument decidedly tricky. For when you reflect on it, it is not by any means clear that the best possible world need be good at all. It may only have been the best a deity limited in power, or intelligence, or both, was able to create. So we must *not* press the verbal implications of the word ' optimism.'

Similarly with ' pessimism.' This *should* mean the doctrine that ours was the *worst* of all possible worlds, and so flies to the opposite extreme. But although Schopenhauer, the greatest of pessimist philosophers, made a pretence of proving this, it is manifestly more than anyone is able to establish. For what do we know about possible worlds other than the world (or worlds) we find ourselves actually immersed in, and about their possibilities of good and evil ? It is enough, good enough or bad enough, that we should have to face the question of the value of life, and we merely need a word to express the negative answer which may be given to that question. As so often, philosophic tradition and history only provide bad words, and leave us to make the best of them. So we must adopt the traditional term, without taking it too literally, and take pessimism as meaning merely a denial that life is worth living.

§ 2

We should next observe one or two other curious points about optimism and pessimism. They do not occur with equal frequency. Pessimists are rather scarce, and tend to

lurk in the slums and darker corners of the philosophic world, while optimists sprawl in the palaces. They have to be sought out and dragged into the limelight, while optimists continue to disport themselves on the front pages of every organ of publicity, even after years of depression and calamity.

The reason for this phenomenon, however, is not hard to discover. Pessimism is a depressing and devitalizing doctrine, and depresses everybody. It depresses the pessimist himself, as much as any one, and indeed in larger measure. Hence no one is *voluntarily* a pessimist; every one desires to believe in optimism, if he possibly can. Optimism is every one's great and natural form of bias, and it may be doubted whether any one can emancipate himself from it thoroughly or for long.

Moreover, the formation of this optimistic bias has been going on for ages, probably from the beginning of biological history. For living beings have been able to sustain the struggle for existence only on the condition that they felt and believed that life was worth living, or at any rate by acting as if they believed this. So, throughout biological history, natural selection may be presumed to have favoured and selected optimists, and to have eliminated pessimists and pessimistic tendencies of mind. No wonder, therefore, optimists abound and pessimists are scarce!

So cogent and crushing does this argument appear that it may be suspected of proving too much. One begins to wonder how it is possible that there should be any pessimists at all. How do they manage to survive? How is it that the optimistic bias has not grown so overwhelming as to overpower all the evidence of fact and all the lessons of experience?

In part the answer to this puzzle may be found by taking the question more concretely. It is not, after all, much of a mystery how bears manage to make a living on the stock exchange. Moreover, we can recognize that while some evils are constantly being overcome or mitigated by our efforts, yet the course of events, aided by

human vice and folly, may constantly be generating fresh grounds for pessimism. But what perhaps counts for most is that no pessimist is *completely* pessimistic. He always contrives somehow to secure some refuge and anodyne from pain, to cherish somewhere some ground for hope, to discover in some world or other some redeeming feature, to save him from complete despair. An *absolute* pessimist does not exist, precisely because he cannot survive.

Can the same be said of the absolute optimist? I am inclined to think so, although some of the appearances are against me. At any rate I was once well acquainted with an ingenious philosopher who spent his whole life looking for a philosophy that would prove existence absolutely good, and cultivated the will to believe to a higher pitch of perfection (not to say extravagance!) than any one I have ever met. He seems finally to have succeeded in constructing a philosophy which satisfied him that he had done the trick. To all appearance he lived, and even died, happy in his Fool's Paradise; but I have yet to hear of any one else who could swallow it complete, and the second volume of his *magnum opus* came out posthumously.

Other optimists are usually less extravagant. They only seek to prove that the world is 'on the whole' good, and that the evil in it may be or may be conceived, transcended, or reduced to 'appearance.' It is noticeable in such cases that the more seriously a philosophy has concerned itself with the problem of evil, the more recognition it has accorded to evil in its scheme, the more adequate intellectually it can afford to be. We may almost lay down the rule that a theory of life grows profounder the deeper is the pessimism it has overcome. The great example of this is, of course, the Christian religion. If we take the liberty of stripping off, as a corruption of its essential idea, the excrescent theology which has tried so hard to reduce its conceptions to nonsense, the central affirmation at the core of Christianity is surely this, that God's sympathy with suffering was so intense that He did not shrink from taking upon Himself the burdens and pains of earthly existence.

## § 3

You may gather from what I have said that my search for an adequate spokesman of pessimism has been arduous, and you will doubtless be curious to learn why my choice has fallen on James Thomson, rather than on better known and more pretentious names. I will admit at once that the best pessimists have been grown in Germany and India, and that German pessimism at least has produced a great writer in Schopenhauer. But Schopenhauer was not only a great writer and an interesting personality; he was also fully trained in technical philosophy. I could not therefore have left this side of him out, and concentrated upon his pessimism, without going into his metaphysics; and that would have blurred and complicated the picture of his pessimism, and distracted your attention from the central question—Is life worth living?

Leopardi also, the crippled count of Recanati, was a great pessimist and a great poet, and I was much attracted to his splendid figure. But I doubted whether I could do sufficient justice to his Italian verse; and James Thomson has the advantages that he wrote in a language you can all read, and that his essential message is all compressed into a single poem, *The City of Dreadful Night*. So you will be able to verify all I shall have to say about him with a minimum of difficulty.

## § 4

Before, however, I speak about his poetry, I must try to say something about the man, in order that you may understand the setting of his work. Let me say also that it is true without exception that behind every genuine philosophy there lurks a *man*, and often a queer customer. This is particularly true of the pessimisms, in whose case the fact has been recognized, and even exaggerated, in the charitable hope of exploding the philosophy by exposing its author. But once it is realized that *every* philosophy of every kind has got this personal tang, and ceases to be

fully intelligible when it is overlooked, we see that it is quite unfair to discount one philosophy rather than another as a product of human frailty. No doubt in each case some personal experience or disability was needed to start the pessimist on the way to the City of Dreadful Night: but it is in no wise incredible or morbid that the pessimistic sage should have his eyes opened thus to the woes of all the world. It is only in Oriental legend that all such stimulus can be dispensed with, and that Siddharta Gautama, the king's son endowed with all that the heart desires, upon whom all the joys of life are lavished, can be so sensitive to alien suffering as to flee upon the slightest provocation into the forest to become a Buddha, and to map out the narrow pathway of salvation for all the world.

## § 5

If you look up the James Thomsons in the *Dictionary of National Biography*, you will find about seven of them, not to mention Thompsons with a '*p*.' A couple of them, moreover, are poets. But you will do well to distinguish the better known eighteenth-century author of *The Seasons* from our hero, whom we may entitle the James Thomson of *The City of Dreadful Night*. He was born of Scotch parentage in 1834 and died in 1882, and his external history was somewhat sad and sordid. He was the eldest son of an officer in the mercantile marine, who was stricken with apoplexy in 1840, and thereafter ceased to count in family affairs, though he lingered on till 1853. His mother died in 1842, and the boy was educated in the Royal Caledonian Asylum, whence he passed in 1850 to the Chelsea Royal Military Asylum to be trained as an army schoolmaster. After a few years in this service he was discharged from the army in 1862 for a trivial breach of discipline, and came to London. There, with the exception of a few business episodes as secretary of unsuccessful companies and a trip in a similar capacity for eight months to Colorado in 1872, he led the obscure and ill-paid life of a literary hack, contributing frequent poems

and articles to the *National Reformer*, the organ of Charles Bradlaugh, then England's leading atheist, whom he had met as a soldier in Ireland. In 1875, however, he fell out with Bradlaugh, and henceforth wrote chiefly for the *Secularist Review* and for *Cope's Tobacco Plant*, a tobacco manufacturer's trade-organ.

It will be seen, therefore, that Thomson was not a successful man; but his life was overshadowed by two major tragedies. The first is one which poets have often turned into copy and good account and was of a romantic nature. In 1852, while stationed in Ireland, he fell in love as a boy of eighteen with a sergeant's fourteen-year-old-daughter, named Matilda Weller. Despite their youth the lovers were allowed to get engaged, but, alas, the very next year the girl died while Thomson was in England. Thomson took this bereavement very much to heart; but it might have proved an asset poetically, and he would no doubt have got over it, if he had not succumbed to the temptations of alcohol. This appears to have been an hereditary failing, from which his father also had suffered, and he was never able to shake it off. Indeed, it got worse and worse, and in the end he became a complete dipsomaniac, and practically drank himself to an ignoble death in 1882.

## § 6

A sufficient reason for any amount of pessimism, facile critics will declare, without reflecting that many poets have been drunkards and have yet refrained from becoming pessimists, and have preferred to compose anacreontic odes or religious poems, like Francis Thompson's *Hound of Heaven*, rather than indictments of the universe.

*The City of Dreadful Night* cannot be pooh-poohed as a drunken raving: it must be treated on its merits, as a superb poetic statement of the case against optimism, as a poignant expression of the utter desolation of a soul that abandons itself to a belief in a godless, mindless, ruthless, and mechanical universe. Permit me to quote you some significant passages from this most harrowing of poems.

First (p. 127) the description of the City of Dreadful Night itself:

> The City is of Night, but not of Sleep;
> There sweet sleep is not for the weary brain;
> The pitiless hours like years and ages creep,
> A night seems termless hell. This dreadful strain
> Of thought and consciousness which never ceases,
> Or which some moment's stupor but increases,
> This, worse than woe, makes wretches there insane.
> They leave all hope behind who enter there:
> One certitude while sane they cannot leave,
> One anodyne for torture and despair;
> The certitude of Death, which no reprieve
> Can put off long; and which, Divinely tender,
> But waits the outstretched hand to promptly render
> That draught whose slumber nothing can bereave.

Next, on the issue of Hell *versus* Annihilation, let me quote p. 137:

> And you have after all come back; come back.
> I was about to follow on your track.
> And you have failed: our spark of hope is black.
> That I have failed is proved by my return,
> The spark is quenched, nor ever more will burn.
> But listen; and the story you shall learn.
> I reached the portal common spirits fear,
> And read the words above it, dark yet clear,
> "Leave hope behind, all ye who enter here!"
> And would have passed in, gratified to gain
> That positive eternity of pain,
> Instead of this insufferable inane.
> A demon warder clutched me, Not so fast;
> First leave your hopes behind!—But years have past
> Since I left all behind me, to the last:
> You cannot count for hope, with all your wit,
> This bleak despair that drives me to the Pit:
> How could I seek to enter void of it?
> He snarled, What thing is this which apes a soul,
> And would find entrance to our gulf of dole
> Without the payment of the settled toll?
> Outside the gate he showed an open chest:
> Here pay their entrance fees the souls unblest;
> Cast in some hope, you enter with the rest.
> This is Pandora's box; whose lid shall shut,
> And Hellgate too, when hopes have filled it; but
> They are so thin that it will never glut.

I stood a few steps backwards, desolate :
And watched the spirits pass me to their fate,
And fling off hope, and enter at the gate.
When one casts off a load he springs upright,
Squares back his shoulders, breathes with all his might,
And briskly paces forward strong and light :
But there, as if they took some burden, bowed ;
The whole frame sank ; however strong and proud
Before, they crept in quite infirm and cowed.
And as they passed me, earnestly from each
A morsel of his hope I did beseech,
To pay my entrance ; but all mocked my speech.
Not one would cede a tittle of his store,
Though knowing that in instants three or four
He must resign the whole for evermore.

For a pessimist's confession listen to p. 141 :

I never knew another man on earth
  But had some joy and solace in his life,
  Some chance of triumph in the dreadful strife :
My doom has been unmitigated dearth.
And yet I asked no splendid dower, no spoil
  Of sway or fame or rank or even wealth ;
  But homely love with common food and health,
And nightly sleep to balance daily toil.
Who is most wretched in this dolorous place ?
  I think myself ; yet I would rather be
  My miserable self than He, than He
Who formed such creatures to His own disgrace.
The vilest thing must be less vile than Thou
  From whom it had its being, God and Lord !
  Creator of all woe and sin ! abhorred,
Malignant and implacable ! I vow
That not for all Thy power furled and unfurled,
  For all the temples to Thy glory built
  Would I assume the ignominious guilt
Of having made such men in such a world.
As if a Being, God or Fiend, could reign
At once so wicked, foolish, and insane,
As to produce men when He might refrain !
The world rolls round for ever like a mill ;
It grinds out death and life and good and ill ;
It has no purpose, heart or mind or will.
While air of Space and Time's full river flow
The mill must blindly whirl unresting so :
It may be wearing out, but who can know ?
Man might know one thing, were his sight less dim ;

That it whirls not to suit his petty whim,
That it is quite indifferent to him.
Nay, does it treat him harshly as he saith ?
It grinds him some slow years of bitter breath,
Then grinds him back into eternal Death.

Next, the preacher of pessimism, p. 154 :

Two steadfast and intolerable eyes
  Burning beneath a broad and rugged brow ;
The head behind it of enormous size,
  And as black fir groves in a large wind bow,
Our rooted congregation, gloom arrayed,
By that great sad voice deep and full were swayed.
" O melancholy Brothers, dark, dark, dark !
O battling in black floods without an ark !
  O spectral wanderers of unholy Night !
My soul hath bled for you these sunless years,
With bitter blood-drops running down like tears :
  Oh, dark, dark, dark, withdrawn from sun and light !
My heart is sick with anguish for your bale ;
Your woe has been my anguish ; yea, I quail
  And perish in your perishing unblest !
And I have searched the highths and depths, the scope
Of all our universe, with desperate hope,
  To find some solace for your wild unrest.
And now at last authentic word I bring,
Witnessed by every dead and living thing ;
  Good tidings of great joy for you, for all :
There is no God ; no Fiend with names divine
Made us and tortures us ; if we must pine,
  It is to satiate no Being's fall.
It was the dark delusion of a dream,
That living Person conscious and supreme,
  Whom we must curse for cursing us with life ;
Whom we must curse because the life He gave
Could not be buried in the quiet grave,
  Could not be killed by poison or by knife.
This little life is all we must endure,
The grave's most holy peace is ever sure,
  We fall asleep and never wake again ;
Nothing is of us but the mouldering flesh,
Whose elements dissolve and merge afresh
  In earth, air, water, plants, and other men.
We finish thus ; and all our wretched race
Shall finish with its cycle, and give place
  To other beings, with their own time-doom :
Infinite aeons ere our kind began ;

Infinite aeons after the last man
Has joined the mammoth in earth's tomb and womb.
. . . . .
I find no hint throughout the Universe
Of good or ill, of blessing or of curse;
I find alone Necessity Supreme;
With infinite Mystery, abysmal, dark,
Unlighted ever by the faintest spark
For us the flitting shadows of a dream.
O Brothers of sad lives! they are so brief;
A few short years must bring us all relief:
Can we not bear these years of labouring breath?
But if you would not this poor life fulfil,
Lo, you are free to end it when you will,
Without the fear of waking after death."
The organlike vibrations of his voice
Thrilled through the vaulted aisles and died away;
The yearning of the tones which bade rejoice
Was sad and tender as a requiem lay:
Our shadowy congregation rested still
As brooding on that "End it when you will."
. . . . . .
Our shadowy congregation rested still,
As musing on that message we had heard
And brooding on that "End it when you will";
Perchance awaiting yet some other word;
When keen as lightning through a muffled sky
Sprang forth a shrill and lamentable cry:—
The man speaks sooth, alas!, the man speaks sooth:
We have no personal life beyond the grave;
There is no God; Fate knows nor wrath nor ruth:
Can I find here the comfort which I crave?
In all eternity I had one chance,
One few years' term of gracious human life:
The splendours of the intellect's advance,
The sweetness of the home with babes and wife;
. . . . . .
This chance was never offered me before;
For me the infinite Past is blank and dumb:
This chance recurreth never, never more;
Blank, blank for me the infinite To-come.
And this sole chance was frustrate from my birth,
A mockery, a delusion; and my breath
Of noble human life upon this earth
So racks me that I sigh for senseless death.
. . . . . .
Speak not of comfort where no comfort is,
Speak not at all: can words make foul things fair?

Our life's a cheat, our death a black abyss
  Hush and be mute, envisaging despair !
This vehement voice came from the northern aisle,
  Rapid and shrill to its abrupt harsh close ;
And none gave answer for a certain while,
  For words must shrink from these most wordless woes.
At last the pulpit speaker simply said,
With humid eyes and thoughtful drooping head :—
" My Brothers, my poor Brothers, it is thus ;
This life itself holds nothing good for us,
  But it ends soon and nevermore can be ;
And we knew nothing of it ere our birth
And shall know nothing when consigned to earth :
  I ponder these thoughts and they comfort me."

Listen finally to the commentary on Dürer's picture of " the Melencolia that transcends all wit," with which Thomson concludes *The City of Dreadful Night.* He describes how :

Baffled and beaten back she works on still,
  Weary and sick of soul she works the more,
Sustained by her indomitable will,

despite

The sense that every struggle brings defeat,
  Because Fate holds no prize to crown success ;
That all the oracles are dumb or cheat,
  Because they have no secret to express ;
That none can pierce the vast black veil uncertain ;
Because there is no light beyond the curtain
  That all is vanity and nothingness.

## § 7

Is that good poetry ? Is that complete and utter pessimism ? I can safely leave you to answer the former question ; but I will permit myself a few comments about the latter. Logically our answers should depend, I think, on whether we judge hell or annihilation preferable.

Now this is by no means such an easy question to decide as most people are disposed to think. Most people nowadays would have no hesitation in declaring for annihilation : yet so great a poet and so sound a theologian as

Dante could conceive Hell also an outpouring of God's creative love. And if you can bring yourselves to consider hell as better than annihilation you will perceive that Dante is plainly logical, and right.

On the other hand, if the majority are right, there may be dooms *worse* than annihilation, and life holds a further terror for the pessimist. He is no longer free to think that he may end it when he will. Life, therefore, may be an evil not so easily escaped by simple suicide. It may be the antechamber to hell, or to a succession of hells.

This hideous thought had duly occurred to Hindu philosophy, whose pessimism is deeper and subtler and more widespread than that of the West. So it bound the errant soul upon the Wheel of Life, and tortured it by unending incarnations, till it cried out for nothingness, and conceived it as the final bliss. The mysterious doctrine of Nirvana, which the Buddha prudently declined to make too clear, is thus explained most plausibly. Nirvana *means* extinction or annihilation ; but as life in any form is conceived as evil, release from pain is precious, nay, is the highest good—to be attained perhaps in the end, after aeons of agonizing struggle, by self-abnegating sages, who make good their escape from a worthless world.

§ 8

So it would seem that after all the belief that death ends all our troubles involves a certain optimism : a complete pessimism cannot make sure of it. In fact the more it distrusts the universe, the less convincing will it find the arguments and indications that point to the finality of death. It is vain, moreover, to claim for them rationality and probability ; for the more rational they seem the less fit are they to be trusted in a universe which *ex hypothesi* is thoroughly irrational.

A thoroughgoing pessimist, therefore, has very seriously to reckon with the possibility that he cannot his quietus take with a bare bodkin. But if he takes it seriously, a long vista of future lives once more opens out before him. He

will doubtless be disposed to think that they will be no better than the present life he loathes ; still while there is life there is hope. That is a psychological law from which he will find it hard to emancipate himself.

So hope revives—with even the faintest and remotest prospect of altering conditions for the better. So long as action is possible even the sincerest pessimist cannot feel sure that he is doomed beyond redemption, and no pragmatist will grant him the right of throwing up the sponge.

In this way the strange dialectic of Hope and Fear bandies our future to and fro, and it is a great pity that academic philosophy has for the most part shrunk so cravenly from exploring it. It has fought shy of pessimism, as of immortality and the other exciting topics of philosophy ; for it has lacked the courage to study either its logical or its psychological implications. It has, in consequence, deprived itself of much insight alike into the human heart and into the human head. But we shall act more wisely, if we decline to let academic quibbling deprive us of the services of *both* these organs, or persuade us that anything can be assured and settled *a priori* by mere reasoning. If we would know what lies beyond the veil—and we have every right to aspire to such knowledge—we must labour perseveringly to lift it, inch by inch. But it may be that after we have gained a few inches, the ells will follow in abundance !

# PART III

# SPECULATIVE

# CHAPTER XII

## OUR NATURAL RELATIVITY[1]

THE momentous discovery that we all have our individual ways of perceiving and feeling and thinking and, in general, of taking our experience, and are, in consequence, each at the centre of a universe of our own, was, of course, made ages ago, and is nothing new. It is the plain meaning of the dictum of Protagoras that *Man is the Measure of all things*, and, to lose its air of paradox, it needs only to be supplemented by a detailed scientific study of *how* man measures, and how, starting from his own individuality, he contrives to transcend its limitations and to build up the objects and institutions of the common world which we all acknowledge in practice, however we may quibble about its theoretic explanation. This necessary appendix to his doctrine of Relativity, which would have deprived it of its terrors even for the most timorous, Protagoras (or those who preserved the few recorded shreds of his thought) unfortunately neglected to provide; and so the human herd-instinct took alarm. Relativity was denounced as anarchic, sceptical, subjectivist, destructive of cosmic order and the unity of the universe, and Platonic fairy tales, glittering with the genius of the greatest poet who has ever invaded the realms of thought, but based on nothing more substantial than the use of the word 'is' in referring to the course of change, were accepted instead as guarantees of immutability and as passports to ultimate reality.

It was therefore a philosophic calamity that the

[1] From the *Personalist* for October 1924.

' glamour ' of the Ideal Theory (which in ultimate analysis, as in etymology, is only ' grammar ') should have distracted man's attention from a scientific study of this relativity, and started him on a wild-goose chase after the ' absolute ' and ' universal.' Platonism substituted imaginary problems for real ones, and provided them with unverifiable solutions. Thus man was blinded to the risks he took in the sweeping simplifications which are the presuppositions of conceptual thinking. Hence when Plato declared that an object which had arrested his attention amid the flux of changes was a ' case ' of one ' universal ' or ' idea ' (rather than of another), that two objects were (despite their differences) cases of the ' same ' universal, and that, because such an identification, interpretation, or classification had succeeded once, it was forthwith established as an absolute and immutable truth—he was not, as he supposed, communicating unquestionable truisms, but appealing to experience to bear out disputable and hazardous hypotheses. Yet these are the risks which we continually and necessarily take in all our practical and scientific judgments. These are always generated by an occasion and a purpose which they are aimed at, and remain relative to the conditions of their birth ; what is gained, then, by conceiving them as more pretentious than they claim to be ? The Platonic theory does not really assure us of absolute, unchanging truth ; it does nothing but create an impassable chasm between the procedures of our thought and the Ideal World to which they are alleged to aspire. Moreover, it fosters in us the bad habit of feigning absolutes which are nowhere to be found in fact.

Physical science, however, is not to be too severely blamed for falling under the Platonic spell. Its attempts to conceive space and time as absolute achieved a masterpiece in Newton's *Principia*. But even Newton could achieve no real fusion of the times that were measurable by various variable motions (of clocks, suns, and moons) with the absolute Time conceived to flow with constant regularity, nor of the personal places, occupied by moving bodies, with the motionless Space through which they

passed. There remained a logical gap and an incongruity between the actual and the absolute. It was simply an *assumption* that they corresponded, and that the actual times and spaces required a reference to the ideal space and time to be intelligible. It was a further postulate that space and time could be conceived as independent of each other.

But it is a characteristic merit of Science that when it makes a mistake, it always goes on to correct it. Even when it has declared a temporary truth absolute, it does not treat it as such, but, when it proves to be in error, transforms it into a better truth. Moreover, it is very apt to find out its mistakes, because it is not satisfied with a glittering generality, but insists on inquiring further *how* precisely it is true, and how its alleged truth can be ascertained.

Accordingly it is not enough for Science to assume that all men are alike, and that a philosopher, or a definition, can represent the whole species to all intents and purposes. The universal likeness has to be put in quantitative terms (as exact as possible), and the limits within which it holds have to be ascertained. Actually, it then turns out, there always are such limits. A healthy man's normal temperature is 98·4° F.; still, there are some whose temperature is normally subnormal, and it cannot be shown *a priori* that a man cannot, like a bird, live normally at 99° F. or more. All men have eyes, and see alike; but some, it seems, are colour-blind, and indeed, when investigated closely, this colour sense seems strangely variable. All men have ears, and hear alike; yet some are musical, and others are 'tone-deaf.' All men have palates, and taste alike; but no, gastronomy's protest is here backed by proverbial philosophy, which deprecates disputing about tastes!

It was this pertinacity about measuring the actual facts, instead of relying on general principles, that has led Science to abandon Newtonian physics. For measurement depends on comparison, and comparison on signalling between different places. But signalling takes time, and the

quickest signals we can use, those transmitted with the velocity of light, require one second to traverse 186,000 miles. For ordinary purposes that is quite fast enough, but it is too slow for the absolute, and means its death. For the time taken up by signalling is indispensable and ineradicable, and utterly precludes *exact* comparison between the time at one place and at another. Einsteinian Relativity therefore lays it down that every place *must have* its own time, theoretically incommensurable with that of every other, and that every time must be *local*—as, of course, ocean travellers had found out long before. Thus has the *aegis* of Science been cast over the time-worn paradox of Protagoras!

Do we hear the cry—surely this terrific revolution in physics and in metaphysics must change our whole outlook upon life? Not a bit of it! If we have been living sensibly, it need make hardly any difference at all. And that for two good reasons. In the first place most of the relativity which the sciences now recognize makes little or no difference for practical purposes. We are quite used to relativity in our means of communication. Thus when two people use the same words they cannot have quite the same meaning, because their associations must be different; nevertheless the words may be so used that the meaning of the one is conveyed to the other. When two people look at the 'same' rainbow together, they are not perturbed by any optical demonstration that each can see only the rainbow of which he is the centre. When two people look at the same clock, they are not prevented from agreeing about the time by the consideration that one of them was a yard nearer to it, and so perceived it a three hundred millionth part of a second sooner. And the Platonist is clearly debarred from objecting to the practice of treating differences as irrelevant by the facts that 'identical' cases of the same 'universal' are similar fictions and that he himself can arrive at them by no other process.

Secondly, whenever our natural relativity does make a difference we have long since devised means of taking it into account. Thus we do not treat all men alike, but

make allowance for age, sex, circumstances, and point of view. We have learned, though slowly and with difficulty, the necessity of toleration. We have even learned that, in the most stubborn cases, we can agree to differ. A practical recognition of Relativity has thus become a matter of urbanity and manners, and only a bigot or a pedant can ignore it. In short, wherever Relativity was practically relevant, it has long been recognized, and the theoretic triumphs it has won in modern science have simply brought our theory into agreement with our practice—to the benefit of both.

# CHAPTER XIII

## THEORY AND PRACTICE[1]

I CANNOT begin to consider the subject of my Address to-day without a word of preface to express my gratification at having been chosen, after many years, to deliver a Lecture which commemorates my old friend, George Holmes Howison. I knew him only in his later years, when he came repeatedly to spend a great part of several sabbatical years in Oxford; but I soon learnt to admire his devotion to philosophy and to respect a personality which seemed to be cast in the old Roman mould. And I think you have done well to cherish his memory on that Pacific Coast where he did so much to lay foundations for the study of philosophy, so deeply and so firmly that his successors can build upon them to this day.

My aim on this occasion will be to explore the implications of the familiar antithesis between Theory and Practice and to examine how it arose and how far it is valid; how far, that is, it should be allowed to direct our thinking.

### § 1

In philosophic history the origination of our antithesis must, on the whole, be credited, or debited, to Aristotle. Aristotle, for reasons better known to himself than to us,

[1] Howison Lecture, delivered at the University of California, Berkeley, in January 1933. It was not published in the usual manner because, owing to the depression, the University could obtain no grant for printing from the Legislature. The ultimate dependence of 'theory' on 'practice' thus receives a pretty illustration!

but not perhaps unconnected with experiences in tutoring Alexander the Great, appears to have convinced himself that he was not cut out to be a king, but ideally fitted to be a professor; so he utterly repudiated Plato's gorgeous paradox that the philosopher must be the ruler if the world is to be well governed. Now this was just like Aristotle. Aristotle did not share Plato's taste for sweeping 'synoptic' views that lost themselves in the panorama of all time and all existence, and fused distinctions in a blaze of unity; so he very naturally disallowed Plato's identification of the philosopher, the good man, and the good ruler. To Plato it had seemed self-evident that the philosopher who had apprehended the Idea of the Good, the supreme cosmic principle, and so was cognizant of ultimate reality, must, in virtue of this illumination, become also the perfect man and the skilled ruler: he had therefore promoted him to the highest rank, alike in the State and in the cosmos. The philosopher was to be a King, inspired unswervingly by a constant vision of eternity, who ordered all mundane affairs with a single eye to the all-inclusive truth about the ultimate reality which was also the highest value, the aim of all purposive endeavour, and the end of ends which fixed the place of everything in the intelligible world of Being which transcended all Becoming. So there was not for Plato any dualism or dissension in the perfect life or in its perfect object. The philosopher was, by definition, the spectator of all time and all existence: and, by virtue of his knowledge, he was possessed also of all the moral virtues, and fit to guide and govern all mankind. There was thus no room in the Platonic scheme for any antithesis between theory and practice as regards the conduct of life, even though metaphysically this scheme rested on a deep dualism between the sensible and the intelligible.[1]

But Aristotle proceeded to upset this sublime synthesis. Whether it was that he was too much of a professor to cherish such regal ambitions, or that he sincerely thought that the Platonic vision of a perfect society ruled by perfect wisdom had overlooked essential differences in

[1] Cp. *Humanism*, p. 23 f.

the constitution of the cosmos, he proceeded to draw the line between the superior and the inferior portions both of the universe and of the human soul quite differently. Whereas to Plato the whole visible world had been regarded as tainted, to Aristotle it was only the sublunary world that was debarred from perfection by the inferiority of its 'matter.' The 'first heaven,' that is the outer sphere of the fixed stars, was capable of an eternal, unchanging, and circular motion which was directly inspired by the Aristotelian deity, the Prime Mover himself. And man, as a denizen of a sublunary world, was so far from being the best being in the universe that his good could not be simply identified with the good of the whole or even of its most valuable parts.[1] Man could no doubt rise at times to the contemplation of the eternal and immutable, and find therein his highest happiness; but in these lofty regions he could not sustain himself, and it was only fitfully that he could lead the 'theoretic' life of pure unadulterated contemplation. Most of his life and most of his faculties were relative to, and absorbed in, terrestrial affairs which were essentially 'contingent,' variable, temporal, and impermanent.

So Aristotle imported a dualistic distinction of kind also into the human soul, into the human reason, and, ultimately, into human life. Whereas for Plato the philosophic or cognitive faculty had been all one, it was now subdivided into a *scientific* part[2] which was concerned only with immutable and necessary objects and the 'theoria,' which contemplated them, and a *calculative* part[3] which was capable of coping with the variations and relations of 'contingent' matter, and all the affairs of action and production. This duality in the soul was deduced from the duality in the universe by the teleological consideration that to objects different in kind faculties differing in kind must correspond.[4]

[1] *Eth. Nic.* vi, 7. 3-4.

[2] ἐπιστημονικόν, true science being restricted by Aristotle to necessary deductions from self-evident principles.

[3] λογιστικόν, deliberation about alternatives being characteristic of all practical affairs, whether of moral action or of production.

[4] *Eth. Nic.* vi, 1. 5.

Thus Aristotle's cosmology demanded a discrimination between the sage and the practical thinker, the *phronimos*.[1] The latter was indeed admonished to respect the superior dignity which the former derived from his converse with the immutable and necessary, but there were assigned to him the whole management of affairs and the entire sphere of politics. Aristotle might hope and feel sure that he would recognize the superior merit of the sage's contemplations ; but he put the sage completely in his power, so that he could make his social status whatever he willed. And it is difficult to share Aristotle's confidence that the man of affairs would have given the sage the position Aristotle demanded for him. Aristotle had stripped him of the political functions and powers Plato had lavished on him, and had expressly denied that his activities had any social value or contributed to the good for man. "Theoretic wisdom," he declared, "will not contemplate anything whereby man may become happy."[2]

Why, then, should the practical man cherish the sage, tolerate him, or even support him? The only reason that can plausibly be suggested for exalting the sage is not practical but aesthetic. If only a city could be made to feel that the sage represented human nature in its highest developments and to admire them aesthetically, or could flatter itself that it could afford to support eccentrics like

[1] The term *phronesis* is usually translated 'practical wisdom,' but it is important to bear in mind that it originally meant *thought*, and that the Aristotelian sense is merely a development of a Socratic use. When Socrates insisted on the need for *thought* about social affairs and declared that 'virtue' (excellence) was 'knowledge,' he meant to substitute ethical reflexion for customary taboos ; when Aristotle selected *phronesis* as his special word for thought about contingent matter (including all human affairs) he was so far merely endorsing Socratic intellectualism. But he soon discovered also the intimate relations between action and belief, and in consequence *phronesis* becomes a fruit of experience, and takes on a highly pragmatic colouring. The man who has 'thought' about actions and knows how to do the right thing (ὀρθόν) has gained knowledge of the Mean, and so of Virtue ; but he has gained this knowledge by practising virtuous actions and acquiring virtuous habits, in a moral society wisely ordered, before his time, by the practical wisdom of his predecessors. Thus every individual's moral insight and practical wisdom arise out of repeated virtuous actions, done at first from deference to social requirements. In other words, in moral matters, practice is prior to theory, and generates it. For the bad man, similarly, becomes incorrigible and incapable of *understanding* goodness by persisting in evil doing. *Eth. Nic.* VI, 5 6.

[2] *Eth. Nic.* VI, 12 1.

Thales, Socrates, and Diogenes, it might be willing to condone their practical uselessness; it might even endow them with professorships of useless knowledge, in token of its own magnificence. Even so it might store up beautiful though useless works of art in its museums. Now Aristotle does not explicitly defend useless knowledge and useless beauty in this way, but it seems the only way of justifying the sage and his doings from a social point of view. If the votary of pure contemplation refuses to fill up the gap in Aristotle's doctrine in the suggested manner, he must at any rate recognize an unsolved problem here.

Before leaving Aristotle's conception of the antithesis between Theory and Practice we should note also how narrowly it restricted the sphere of scientific knowledge. Scientific knowledge was concerned with 'necessary matter' alone, that is, with mathematics and the objects of 'first philosophy,' a few first principles of a metaphysical sort, which Aristotle assumed to be intuitively and infallibly apprehended by *Nous*. A third class of demonstrable objects is indeed sometimes added, in the *Forms*, the eternal and incorruptible universals embodied in the perishable phenomena of Aristotle's static world. But Aristotle was careful to point out that in the sublunary world, the 'form' was always liable to be thwarted by the 'matter'; hence rules might be baffled by exceptions, and phenomena could never be completely trusted to behave according to our expectation or their plan.

The Aristotelian system thus confronts us with a curious duality of aspect. Taken at its face-value, it professes to exalt contemplation above action, theory above practice, and the sage above the practical statesman. But, on its own showing, this supremacy is deceptive and quite illusory. For throughout the whole world of contingent matter, that is, for the whole sphere of modern science (with the possible exception of pure mathematics), the highest authority is the practical man, who is *not* concerned with necessary demonstration, but is allowed to reason about contingencies, probabilities, and general[1] truths. He it is

[1] ὡς ἐπὶ τὸ πολύ.

that regulates also the pursuit of pure truth and the social status of the sage.

Moreover, he is conceived in an essentially, and even excessively, pragmatic manner. His knowledge, for example, is the fruit, not of speculation, but of action. He acquires his insight, his 'eye,' from practical experience, and *thinks* right because he has *done* right habitually. Aristotle's whole doctrine of moral training, issuing in assured virtue or incorrigible vice, is intelligible only if we allow for the power of repeated action to mould belief. As regards thought about things to be done, then, and by implication about all things variable, the supremacy of practice over theory is incontestable.

Nay, more, definite errors may be detected in Aristotle's valuation of the objects of 'theory.' When he asserts[1] that the white and the straight are absolute, and not relative to the human good and the human organism, like the healthy and the good, it becomes necessary to point out that he is definitely wrong. For the *white* is certainly relative to the sunlight of the little planet on which our organs of vision have been evolved in a severe struggle for existence, and so must be regarded as conditioned biologically, while the *straight* is assuredly relative to the (Euclidean) geometry which we have adopted as most convenient, and preferred to the other geometries which the human mind has also excogitated.

It must further be observed that though Aristotle can hardly have been aware of it, the superior dignity of the supralunary heavenly bodies which disposed him to believe them perfect, immutable, and incorruptible, was not merely an error of observation, not finally confuted till 1572, when Tycho de Brahe observed a new star of the first magnitude in the constellation of Cassiopeia, but manifestly a survival of a prehistoric astronomical religion.[2]

Finally, the Greeks' preference for 'pure' science, and their aristocratic contempt for applications that involved manual manipulation, were intimately bound up with their

[1] *Eth. Nic.* VI, 7. 4.

[2] See further, p. 174.

conception of *banausia*, which rendered the use of his hands for anything but fighting unworthy of a gentleman. Thus it is not too much to say that Aristotle's valuation of contemplation had its roots in error, snobbishness, and superstition, and should no more hold valid for us than the medieval interpretation which identified it with the monastic life.

§ 2

But after all outside Oxford Aristotle is no longer considered infallible, and we may take the liberty of correcting his mistakes. Let us proceed, therefore, to inquire how *in fact* theoretic inquiry arose among men and differentiated itself from practice. This inquiry is usually scamped. A mere assertion that *curiosity* is the source of science, or even a perfunctory reference to Aristotle's dictum that philosophy begins in wonder,[1] suffices to dispose of it. At best this last assertion is qualified and brought a little nearer to life by quoting Schopenhauer's caustic addition that the wonder which excites philosophy is aroused by pain and disappointment. But usually curiosity is treated as a final term of scientific analysis, and not investigated further.

Yet is not this unwarrantable and absurd? Must not curiosity be regarded as a biological endowment, like any other? Like any other human or animal quality, is it not subject to natural selection and relative to modes of living and surviving? Must it not be possible to explain in biological terms why some organisms have developed it and others not, and to say what part it plays in their life?

Let us inquire, therefore, into the claims of curiosity to have given birth to science. And, to begin with, let us enumerate the creatures who are distinguished by their possession of this quality in a marked degree. They would appear to be busy-bodies, gossips, monkeys, mongooses, squirrels, and penguins. Not a very distinguished list for the scientist or the philosopher to incorporate into his pedigree, one might think.[2] The curiosity shown by

[1] *Metaphysics*, A 1.

[2] More creditable, however, than the ingenious suggestion Dr. H. M. Kallen makes in his interesting paper in the *Journal of Philosophy* (xxix, 596), that the

these creatures seems to be a little lacking in the high seriousness and tenacity of purpose which are thought to distinguish the devotees of pure science. Though related, doubtless, to their modes of life, and rendered possible and proper thereby, it would seem to be connected rather with the more sportive and trivial aspects of their life. If I were advocating the claims of 'pure' science, I should not be eager to affiliate my claims to respect to the curiosity of penguins, squirrels, mongooses, monkeys, gossips, and busy-bodies! *Non tali auxilio, non defensoribus istis!* I should try to discover another and more reputable pedigree for my pursuits.

## § 3

Nor, perhaps, would this prove difficult. We should begin by observing that, so far as we know, man is the only creature on earth in whose behaviour the antithesis between Theory and Practice can be recognized. It is a distinction peculiar to man, in a way in which those between Work and Play, between Reality and Make-believe are not. Now this is a matter of some significance and importance. For if these latter distinctions were sufficient to characterize man, the puppy dog and the kitten would be formidable rivals to the philosopher, while the beaver and the ant would put him to shame, and he might even be in serious danger of being classified with the drone.

But even in man the distinction between Theory and Practice does not appear to have been an *original* factor in his behaviour. As we have seen, it does not appear in the history of philosophy until Aristotle, and in fact it seems to have been evolved at a definite point in man's history, when, fired with the ambition of mastering the earth, he abandoned his peaceful life in the tree-tops, and his vegetarian browsing upon shoots and fruits, and descended to do battle with the great beasts of the forests and the prairies, thereby transforming himself, by the earliest

high valuation put upon 'idle' curiosity is ultimately to be traced to snobbish imitation of the 'idle rich.'

and most authentic case of lycanthropy on record, into a *were-wolf* or carnivorous *wolf-ape*, *Lycopithecus venaticus*.[1]

Now when our ancestors became hunters they had to change a good many other habits besides their diet. They had, for example, to learn to live together in a pack, and to distribute the spoils of the chase equitably, and so that the whole horde could feed on them and survive. This, according to Carveth Read, was the beginning of social life. There were, moreover, other, quite as momentous, changes. One of the first lessons a hunter has to learn is to stalk his game. And to stalk successfully, he has to observe closely, accurately, and patiently, and to act intelligently, craftily, and promptly.

How keen was the observation of primitive man the specimens of his earliest art, the cave-paintings in his palaeolithic abodes, still survive to attest. We can there see that he depicted, *e.g.*, galloping horses more correctly than all later artists, who painted them *ventre à terre*, floating in the air with all four feet simultaneously off the ground, in what is really an impossible posture. No doubt his accuracy of observation conduced to more and other things than the effectiveness of his food-magic ; but he got no credit for it from his descendants, until many ages later, when photography vindicated the superiority of his perceptions.

Nor was it only his first lesson in scientific observation that man derived from his adoption of hunting as his livelihood ; he learnt from it also his first lesson in moral self-control. For the hunter must learn to abate his eagerness, to inhibit his impulses, to steady his nerves, to control his every act, motion, and emotion, so as not to scare his game nor to defeat his purpose.

Must we not say, then, that all the psychological conditions of successful theorizing are already demanded of the successful hunter ? Can we doubt that this was where, when, and how the human mind grew the intellectual qualities subsequently required for the successful pursuit

[1] This important chapter of human pre-history has been recovered for us by the ingenuity of the late Professor Carveth Read in his *Origin of Man* (1925).

of scientific *investigation*, which, we may remind ourselves at this point, originally meant nothing more than tracking a trail ?

Clearly, then, history shows that the capacity to ' theorize ' or ' contemplate,' that is, to delay action and to watch, was a useful one to develop at a definite stage in man's evolution. Historically Theory springs from Practice and can be definitely traced to special adaptations to the conditions of life. So I cannot but think that philosophic man makes a great mistake when he imagines that as a ruminator he can rival the cow and as a contemplator the cat. The cow has to ruminate for her living, and the cat learnt her contemplation for ages, *watching mouse-holes*, while man was still running about the country in pursuit of the swift-footed deer.

It would seem to follow that the traditional derivations of scientific theory from random, disinterested, otiose curiosity, and aimless philosophic wonder, are mythology and superstition, to which the authentic history of life lends little support. The world has never been one that would tolerate such a way of life. The animal that wandered about it, just wondering or devoured by curiosity, would speedily have been devoured by something more substantial and insistent.

Nor are the traditional, stock examples of theoretic knowledge and pure contemplation much more convincing than these myths. To the Greeks, and particularly Aristotle (as we have seen), the sciences of astronomy and geometry formed the best examples of pure *theoria*. But this valuation was really a relic of a primitive religion, of which the utilitarian function had been forgotten. It was a relic of star-worship, and star-worship had been instituted when the pursuits of the hunter became secondary to those of the nomad and the agriculturist. For it then became desirable, nay necessary, to determine the length of the year with considerable accuracy, in order that herdsmen might know when spring was coming to their pastures, and farmers when to expect seed-time and harvest. The length of the year, however, could be determined only by

continuous astronomical observation, over long periods, of the relative motions of the sun and certain conspicuous stars over selected landmarks; and how could such continuous observation be ensured in the absence of written records? The problem was solved by the deification and worship of the heavenly bodies, conducted in temple-observatories by castes of hereditary astronomer-priests, who could thus transmit the records of their observations from father to son, from generation to generation.[1]

The practical origin of science is even more apparent in the case of geometry. For geometry still has stamped upon its very name its generation from the social need of measuring fields in the annually inundated river-valleys of the Euphrates and the Nile.

Thus the superior dignity of pure science, which Greek theory so profusely recognized, was in fact a superstitious survival, a by-product of an utilitarian cult of heavenly bodies in an astronomical religion, and derived from the practical use of mensuration. Plainly the 'pure' sciences are no aerophytes, but are deeply rooted in human needs.

## § 4

Nor are the champions of pure science much more successful in analysing the *psychological* basis of the mental attitude they commend and prescribe. The psychological stimulus to the pursuit of pure science is usually described as a disinterested love of knowledge for its own sake; but, as described, this is nothing but a tissue of contradictions. A love of knowledge surely is psychologically an *interest*, which may be found or fostered in certain minds, and exploited in certain societies. For in advanced societies it can be utilized for sundry social purposes. It would be, for example, an excellent passion to implant into the souls of the idle rich; and it may possibly conduce to the making of a good professor, though this is far less certain. In any

[1] This explanation of the early cultivation of astronomy is more probable than the theory that the ways of the stars were studied to enable men to find their way about at night. Primitive man was much too afraid of wild beasts and ghosts to roam about at night.

case, ' disinterested ' seems a needlessly paradoxical and singularly inappropriate term to use. For, even though in one sense all love is disinterested, in that it is directed upon the good of the object beloved rather than aimed at some selfish aggrandisement of the lover, yet psychologically the love *is* an interest in the lover who feels it, and values it, and who would grow cold and indifferent if he lost his interest.

When, therefore, the love of scientific investigation is described as ' disinterested,' the description is clearly one from the standpoint of an observer who does not himself feel and share this interest : it does not, and indeed cannot, describe the feeling of the investigator himself. Yet this latter is surely more truly descriptive of the essence of research than that of the cold and distant observer.

Furthermore, it is often overlooked that no attempt is ever made to prove the contention that the ' disinterested ' feeling just discussed is peculiarly characteristic of those who devote themselves to the progress of knowledge, and that it is invariably, or specially, conducive to this progress. It may be taken as probable enough that a goodly percentage of those who cultivate the sciences will be actuated by this feeling more or less, though the psychological inquiries which would establish this have yet to be made. But if it be a fact, it will be so largely because academic life naturally attracts those whose idiosyncrasy is not repelled from a career which, even in our most civilized societies, offers little to those who have greater, or ignobler, ambitions.

§ 5

However, it would be quite a mistake to infer from this situation that those who are blessed, or cursed, by nature with the temperament of the pure researcher are to be at once hailed as higher beings and allowed forthwith to indulge in their genius and their propensities. We should first inquire whether they can safely be let loose on society and permitted to research into whatever may come into their heads. For we may not assume that such a policy

of unguided research will not prove to be misguided, and will adequately safeguard social interests and uses. It cannot even be assumed that it will do justice to the intrinsic importance and relative values of the subjects to be studied. For it unfortunately appears to be part of the psychology of learned men that they are often somewhat wayward in their tastes : so what seems most important in their eyes is apt to seem trivial in the eyes of others, and turns out to be sterile in the light of subsequent developments. Thus to give an absolutely free hand to the learned may be quite a bad way to promote learning, as well as socially deleterious.

At Oxford this possibility used to be illustrated by an anecdote told about Benjamin Jowett, the famous Master of Balliol, and Robinson Ellis, the Latinist. The former had been the latter's tutor, and used periodically to inquire into what he was doing with his leisure as a young Fellow of Trinity. On one of these occasions Ellis had explained that he had been researching into the glosses on the scholia in the text of Ammianus Marcellinus, a late Latin historian of the fifth century A.D. " I cannot understand, Mr. Ellis," remarked Jowett, " why you always seem to interest yourself in the obscurest aspects of the most unimportant authors ! " Like Dean Gaisford of Christ Church, who often recommended his young men to cultivate the art of writing Greek and Latin verses as " an elegant accomplishment which not infrequently leads to posts of considerable emolument in the church," Jowett was a natural pragmatist, who was always trying to bridge the gulf between the scholar and the man of action, and to incite the universities to regard the education of the leaders of the people as one of their essential functions.

But it seems doubtful whether in this case his rebuke to Ellis was appropriate, and whether he understood as well as the latter the world in which both lived. For the academic world loves to segregate itself, and to put itself into opposition to the larger world around it. The qualities which it cherishes and admires, and consequently renders useful in it, are often highly antithetical to those

so regarded elsewhere. It delights to honour attainments which elsewhere are despised, and exalts to the highest posts professors of examinable nonsense and of a useless 'learning' which has as little to do as possible with the serious affairs of life. It was by dint of a lifelong devotion to such learning that Robinson Ellis became a prince of pedants and a member of the British Academy, and died full of years and honours as Corpus Professor of Latin in the University of Oxford.

In view of such careers I shrink from over-hasty judgments, and will leave you to decide whether a common type of academicism represents devotion to pure theory or sharp practice! At any rate respect for scholarship passes easily into subservience to pedantry. So pedantry *pays* superbly in academic life, which finds profitable uses for quite a number of things which are not useful elsewhere. From a national standpoint, therefore, it is socially necessary to evolve checks on pedantry and to institute a certain social control of academic activities, though it is difficult to hit the golden mean in this respect. It may well be that there is a little too much of such control in this country; but there is certainly too little in Europe.

## § 6

However this may be, and whatever estimation we may adopt of pedantry, an important theoretic question is left unsolved by the conventional theory of 'pure' science. How is the 'pure' scientist to determine in what direction he is to push his researches? He finds himself surrounded by an infinity of theoretic problems lying in every conceivable direction. Some of these seem to connect with practical problems and to promise valuable results, others not. Some seem to bear directly on practical problems, others remotely. Being limited both in time and in resources, he cannot pursue all these clues. He has to choose. But how? The pragmatist has his answer ready. Let him choose, not the problem which appeals most seductively to his own foibles, but rather that which seems to him im-

portant, and likely to be most fruitful of results, and take the consequences. But if there is to be *no* subordination whatever of theory to practice, this answer is plainly inadmissible. Believers, therefore, in the self-sufficiency of pure theory are in duty bound to provide another answer. Until it is forthcoming, it will be safe to declare that the antithesis between Theory and Practice is ultimately false, and that Theory neither should, nor can, be entirely divorced from Practice, even in a university!

## § 7

Indeed it is in a university that academic men should be most scrupulous to guard against the bias of their nature. They should endeavour, not to exalt and exaggerate the academic life out of all reason, but to fit it into its appropriate niche in the whole of life, and to correlate it harmoniously with man's other activities.

It is to be hoped that they will not allow themselves to be distracted from this noble endeavour by the stale old plea that our whole procedure has argued fallaciously from origin to validity, and that even though Theory was generated from Practice it has now grown up, and emancipated itself from the parental discipline. For while it is untrue that the way in which a thing originates decides its *value* once for all, and insures it, absolutely and for all time, against the chances and changes of our mortal being, it is fully as untrue that it can emancipate itself from all the conditions that gave rise to it, and can repudiate its past entirely. For everything is what it is in virtue of what it has been through. This does not condemn it to remain what it was; for much can be outgrown, though how much no one can predict; but that some historical condition *has been* outgrown in fact requires always to be shown in detail. Moreover, it has always to be remembered that all the changes and developments that occur take place in accordance with the biological laws that pervade all living nature. It is not possible, therefore, that Theory should revolt against Practice, and declare itself inde-

pendent. If it tries to do so, it will be reduced again to subjection or eliminated, by natural selection.[1]

Least of all can such an unnatural defiance be assumed simply on the strength of the verbal antithesis between Theory and Practice. Ever since Aristotle's attempt to justify the notion of pure theory broke down, its later advocates have made no serious attempt to define its relations to practice, still less to re-define it in the light of the theory of natural selection.[2] They have investigated neither the relations between pure science and applied, nor the relation between the interest in ' pure ' science and other psychological interests. They have merely ignored the problems concerning the social status of pure science and its social utilization, guidance, and regulation.

Above all they have made no attempt to overcome the annoying dualism between Theory and Practice, and to rise to a unitary view of human nature. It is often asserted in words that it is the aim of philosophy to unify: if we are in earnest with this aim, is not the antithesis of Theory and Practice one of the first dualisms we should endeavour to transcend ?

## § 8

As a sort of epilogue to this Lecture, I cannot forbear to quote a delicious illustration of what ' theory ' means in practice, which I owe to my friend Mr. J. W. T. Mason, who obtained it from Professor Hu Shih, of the National University at Peiping, and China's leading philosopher.[3] It would appear that some two thousand years ago a contemplative Chinese sage in the course of editing an ancient Classic interpolated into it a dictum that *knowledge is easy; but action is difficult.* He was taken at his word, and for two thousand years it was *de rigueur* in

[1] Sooner or later, though the process may take an appreciable time in the case of an otherwise strong and viable society which sets itself to defy biological law.

[2] Thus no intellectualist has, to my knowledge, attempted to explore the intricate relations between truth and survival-value. Cp. *Problems of Belief*, chap. xii.

[3] He contributed also an excellent Essay on the Civilization of the East and the West to Dr. C. A. Beard's *Whither Mankind?* (1928).

China (as in Europe) to believe that the 'easier' course was also the nobler and higher.

Then came Sun Yat Sen, who declared, on the contrary, that *knowledge is difficult, but action is easy*, and gaily plunged China into revolution. After a generation or so of chaos, philosophic minds reflected that this maxim also did not seem to work, and that therefore its truth might be questioned. So Hu Shih pragmatically ventured to amend the dictum of Sun Yat Sen, which had become the shibboleth of the Kuo Min Tang party that dominated China. He said *knowledge is difficult; but action also is not easy*. Thereupon he at once became suspect as a counter-revolutionary disloyal to the Founder of the Republic, and very nearly lost his job and had to flee from the wrath of the Nanking government! He is now safe, however, Mr. Mason assures me, largely because the loss of Manchuria has inclined the Kuo Min Tang to rather greater liberality and toleration.

This instructive anecdote reveals how rash it may be to take 'purely theoretic' dicta at their face-value in the abstract, without regard to the human context in which they operate. This indeed is the lesson of history throughout. Theological disputes, notoriously, have not really been about the details of rival formulas, and *There is one God and Mohammed is his Prophet* was never in fact the theoretic proposition it is in form. It behoves us, therefore, to remember that scientific and philosophic propositions are no different. In a proposition about evolution there lurks a reference to an enormous multitude of facts and interpretations, in one about 'atoms' a reference to a vast number of experimental observations and 'pointer-readings,' which even the acutest 'reflecter' cannot observe without leaving his chair. Similarly the differences between rival metaphysics are never *merely* 'theoretic': they are rooted in the diverging temperaments and discrepant idiosyncrasies of their authors and they require different ways of living. Would it not be well, therefore, to convey some inkling of these facts to the student before setting him to 'understand' these theories?

## § 9

For myself I feel justified in concluding that the whole antithesis between Theory and Practice is thoroughly false and misleading. It is false that there is such a thing as 'pure theory' which has no bearing upon practice. Even if theory is made so 'pure' as to become inapplicable altogether and thereby meaningless,[1] it will at least have the practical effect of alienating from reality the mind that entertains itself by playing with it. For even the stupidest and most unteachable theorizer will eliminate himself, if he acts on theories that run counter to experience. It is false, further, that the practical bearing of a theory has no effect upon its claim to 'truth.' In the (extreme) case just mentioned the theory extinguishes itself by eliminating its holders. But few are quite unteachable, and so when a theory works very badly, it tends to be gradually abandoned: if it is signally successful, it finds more believers. Hence it is false also that the 'working' of a theory makes no difference to its truth-claim. Normally practice has great and important effects upon theory. It is true that in the traditional histories of the growth of knowledge the services of practice in testing, confirming, and developing theories, are slurred over or ignored. But then these histories are romances, and not even beautiful romances at that. I sincerely hope that some day they may be superseded by something more authentic, and that some of you may live to see the day when the young are allowed to learn that there is no natural antagonism between knowing and doing, between theory and practice, and that all human activities both can and should co-operate for the continuous improvement and enrichment of human life.

[1] As in the cases of Formal Logic and Kant's categorical imperative in ethics.

# CHAPTER XIV

## THE TRIBULATIONS OF TRUTH[1]

PHILOSOPHY is not a subject a healthy human mind takes any natural interest in. It is too lofty, complicated, difficult, abstruse, dull, and dignified; it has too little reference to human life and action. Regarded as a science, it inspires no confidence, because it exhibits no consensus of authority, no array of undisputed truths: regarded as an intellectual game, it is not an amusing one to watch, because it looks as though all the players were continually making new rules, and no one for any length of time observed any rule whatsoever. So the student of human society and its freaks has accustomed himself to regard the philosopher as a mild kind of crank, who, however, fortunately does very little harm so long as he is kept in proper obscurity, and the world in general is content to pay no attention at all to anything a philosopher may say or think either about it or about the other philosophers.

Nowadays, however, the peace of this indifference has been endangered. The world is dimly beginning to perceive that there is an unusual commotion going on in its philosophic corners, that the Doctors of Philosophy are disagreeing with unprecedented violence, that the sharpest contentions of the irritable race of poets exhibit a profoundly 'philosophic calm' in comparison with those of

[1] From the *Albany Review* for March 1908. A Reply to an article by Mr. (now Earl) Bertrand Russell on James's *Pragmatism*. Lord Russell now takes a much more favourable view of Pragmatism and admits that it gives a correct account of scientific truth. Cp. *Sceptical Essays*, chap v, and his paper in *Whither Mankind?* 1928.

sages—in short, that something has happened. Nay, more; some philosophers are actually coming out of their obscurities and becoming lucid and almost luminous, as if they were trying to appeal to a wider public. The others are frantically trying to explain why these disreputable traitors should on no account be allowed a hearing. In short, a perfect deluge of turbid and chaotic thought threatens to descend upon a puzzled public.

Meanwhile the poor public has hardly yet been given a chance of seeing clearly what is the source of this whole commotion, or of understanding why it should be asked to take an interest therein, and before the plot thickens further it may be well to attempt a little elementary elucidation.

The truth is that the whole hubbub has been caused by the fact that a few philosophers have, quite unexpectedly and to the dismay of their colleagues, discovered that human life and its problems, crude common living and the practical questions it raises, is at bottom the main problem also for the most refined 'philosophy.' In the first enthusiasm of this great (though belated) discovery, they have proceeded to evolve a 'humanist' philosophy which seems to be, in character and aims, the very opposite of all the qualities usually associated with the term 'philosophy.' It is straightforward, simple, easy, entertaining, lucid, undogmatic, and not in the least bit haughty; it is in love with human life, and eager to be practical and useful; so tolerant and democratic that it lets every man have his own truth and be the judge of his own experience, and grants him a vote in the making of that social or 'objective'[1] truth, to agree upon which is so necessary and difficult an achievement of civilized intercourse. The result is, of course, that the old despotic Truth, better and more respectfully called 'sooth,' that claimed a celestial descent from Uranus and Anangke, and always pretended absolutely to control whatever subjects she graced with her august presence, is in desperate trouble, and threatened with supersession and oblivion by the meretricious allurements of a younger double, a new Truth, born of Chaos

[1] A hideously ambiguous word!

and Prometheus, and willing to be the companion and the slave of man, and to share the vicissitudes of his mortal life. Instead of claiming infallibility and dictating sternly and tyrannically to her cowering subjects, the new-comer is anxious only to help and to please : her modest ambition is not to compel and to constrain, but merely to propound a convenient set of rules by the aid of which every one may seek his spiritual salvation and play his intellectual game for all he—and it—is worth, without interfering with the equal liberty of others.

It will readily be understood what a scandal this appearance of Truth *en canaille* was bound to cause among sedate philosophers, how outrageously it seemed to them to run counter to all they held dear and philosophic, how hopelessly it seemed to profane their most cherished mysteries. In their zeal to vindicate their dignity, all other interests were obliterated. No one stopped to consider whether the new view of Truth did not proffer solid compensations for the imaginary loss in rank, and whether it would not redound greatly to the advantage of philosophy and its votaries, as well as of society, if the world could be thoroughly convinced that Truth was valuable and useful, to be loved and not to be feared. After a short interval of stupefied amazement, they threw themselves upon the insolent upstarts who had dared to turn their sacred studies topsy-turvy and refuted them, with much warmth but little light.

Yet, strange to say, the innovators have declined to consider themselves crushed. They continue to talk back gaily and to exhibit other signs of life. They even declare that the whole output of philosophic refutations is so vitiated by failure to apprehend the doctrine attacked as to be almost totally irrelevant. And, stranger still, they find that the root of these misapprehensions lies in the most elementary and simplest aspects of the new ideas. Their very simplicity appears to have proved the greatest stumbling-block, and to have rendered them indigestible as well as unpalatable to stomachs nourished on more complicated viands. Thus the very points which the lay

intelligence assimilated first have found the technical philosophers most difficult of access.

To illustrate this curious situation, I will make some comment on what is certainly up to date the best, the best tempered, and the best written of all these criticisms, the delightful article on William James's *Pragmatism*, of which Mr. Bertrand Russell is the author. Mr. Russell has evidently made a careful study of his text, and abounds in most ingenious objections to what he takes to be the pragmatic conception of Truth. Nevertheless, he has totally missed the essential point of the conception he is contesting, and so completely misapprehends the logical status of the controversy. For he shows an amazing blindness to the grave difficulties in the traditional views which have led to the new ones, or of the manner in which these difficulties can now be removed.

Yet these difficulties are in themselves so plain and simple that it is a puzzle to understand how any one could fail to grasp them. Let us consider a few samples.

(1) Every one who makes an assertion wishes it to be believed; every one who hears it knows that he is expected to believe it. Every one, therefore, knows that assertions in general claim truth; every one also knows that not all of these assertions are true. All too many are false, whether or no their assertors are aware of this. For every one, therefore, there arises an obvious problem as to how, among assertions which all claim truth, he is to discriminate the 'really' true from the false? Or (2), in other words, what is the nature of Error?

(3) The difficulty of answering this suggests that the traditional conception of Truth is by no means as pellucid as it ought to be after so many philosophers have laboured for so many centuries at its elucidation. Truth reveals a very ugly duplicity of aspect. Or else it freely lends its countenance to Error. For errors are everywhere mixed up with truths, in what at first appears to be Truth, and are not to be distinguished from them in appearance. Are we, therefore, to distrust Truth altogether, or to content ourselves with a bogus Truth, which is merely a formal and

logical affair and affords no guarantee against Error? At any rate we are driven to ask seriously what is meant by calling an assertion true, and to demand an account of Truth which shall distinguish it from Error.

Here, surely, are three questions so simple and fundamental that no philosopher ought to be able to respect himself without an answer to them. Any philosophy which is worth its salt and worthy of public attention ought, one would think, to have settled them long ago. Yet though they were raised more than 2000 years ago and have been, languidly, debated ever since, no even apparently tenable answers to them have ever been propounded. What could constitute a worse slur upon philosophy, or be better calculated to confirm the opinion held about it by the man in the street? Until a few years ago the situation seemed quite desperate; the great mass of philosophers were quite content to ignore these questions, which they knew they could not answer. So accustomed were they to this state of things that, when we pointed out the scandal and tried to remove its causes, they actually imagined that we were maliciously trying to destroy an ancient, venerable, and valuable conception of Truth!

In reality there was no conception of Truth to destroy. An intellectualist conception of Truth that was not smitten with manifest incoherence had never existed. Neither has it been produced in the course of the present controversy. No reply to the Humanist criticism of the old futilities has so much as tried to explain what is meant by calling an assertion 'true,' or how a 'truth' is to be distinguished from an 'error.' We were merely told that Truth was Truth and not to be tampered with. 'Truth' was our critics' view; 'error', ours. None of our constant challenges to say what they had to put in the place of our answers to these crucial questions ever elicited the least response.

We are, of course, willing to grant that our answers may turn out to be wrong. We do not claim to be infallible: it would be inconsistent with our theory to contend that any truth remained irremediably true when a better could

be had.[1] But until then we are entitled to hold it true. And we do claim to be constructive, as well as critical, and to be convinced of the necessity for constructive answers. At present our answers are the only ones there are, and no criticism has so much as touched them.

We answer very briefly thus.

(1) The fact that 'errors' and 'truths' both claim and seem to be true, and cannot be told apart in virtue of their outward form, shows, we say, that real truth cannot reside in anything intrinsic to an assertion. It must come from something that lies beyond the two ends of the assertion, something done to it, or with it, *after* it is made. It depends, therefore, somehow on the *consequences* of the assertion. Or, more precisely, *on their value*. When an assertion leads to valuable consequences it is 'good' and *holds good*; it maintains its ground, it is strong, it is 'valid.' Thus it is that the truth it originally claimed is confirmed or 'verified'; this it is that all men mean—and always have meant—when they deliberately declare it 'true.'

(2) When, as often happens, an assertion leads to consequences the reverse of this, it is judged to be bad, worthless, false; and the value claimed for it is now disallowed. The essence of Error, therefore, is getting such a worthless assertion in lieu of the sort we wanted—it is the defeat of a cognitive purpose, of a will to know.

(3) Truth, therefore, is always primarily and in principle a good thing, by the very law of its genesis. It is the satisfaction of a purpose, a valuable means to a precious end. It is always good as such: what is called a 'useless' truth is either no truth at all or one temporarily off duty or out of use, because not relevant to the actual emergency, and so not called out for active service. And an 'unpleasant' truth is one which was made true by satisfying one purpose and now forms an obstacle to the satisfaction of another, which we do not for the time being seem able to remove. No truth, however, could ever have reached its position, have established itself or won recog-

[1] Mr. Russell, therefore, is mistaken when he asserts that we dogmatically rule out the hypothesis that pragmatism is erroneous.

nition, if it had not shown itself good and useful in some such process of confirmation, *i.e.* in some *context*. The question of its usefulness, therefore, is *already settled* when an assertion is judged to be 'really true.' And this, we add, is what all men mean when they believe in truths which have thus been 'verified.'

Now Mr. Russell, in common with our other critics, throughout ignores this very real and pressing need of finding out whether what professes to be true is really true. He seems to concede, however, all we want and far more than he suspects, when he admits (p. 398) that the pragmatic notion of truth is "the notion to be applied to doubtful cases." For all cases for real inquiry are always doubtful: truth must always be prepared to meet the challenge of doubt and to defend its existence with its value. It holds its place by the same tenure as the priest of Nemi: it is 'valid' because, and so long as, it is strong, and able to overcome all rival claimants to its title. Hence *all* cases are doubtful in a sense which renders them explicable by the pragmatic notion of truth.

Elsewhere Mr. Russell always treats truths as given, as absolute certainties about which there can be no doubt. Doubtful and disputed truths (claims), accepted and believed in by some and rejected by others, and stretching in vast numbers and infinite gradations of value from all but universally detected 'error' to 'acknowledged' 'truth,' he does not consider at all. He lavishes his whole ennobling love of truth on the aristocratic few, the first-class truths of uncontested eminence that have won their way to eternal fame, and ignores the insecurity and struggles of the common herd.

But even of the favoured few he misconceives the nature. They are not such as his argument requires. It is even doubtful whether they exist, whether there are extant 'truths' that could not under any circumstances be doubted. If there are no such truths, to ask for them is merely a pretext for scepticism. But even granting that there exist truths raised beyond sane doubt, must they not be taken in their connexion with the rest? Are they not

born of the same parentage and dedicated to the same service? Have they not reached their present certainty and eminence by a long process of verification, which attests and guarantees their value?

The reply to Mr. Russell's contentions about 'facts' is precisely parallel.[1] The old notion of 'fact' crumbles together with the old notion of 'truth.' There are no 'facts' such as his 'truths' require to rest upon and refer to. The 'real fact' has to be made, like the 'real truth,' in a process of inquiry; it is not given to mortal men as a gift of the gods. It needs much critical intelligence to find out whether what claims to be 'real' is 'real,' and to discriminate the various orders of reality and unreality within the widest sense of 'reality.' Still, the process by which we all establish such distinctions would be fairly obvious were it not that philosophers have involved the terms 'fact' and 'reality' in a distressing number of ambiguities. If Mr. Russell did not once more insist on starting from the certified 'real fact,' already sifted out from all doubtful claimants, he could not fail to see this. He would recognize that the 'fact' perceived by the senses is not the ultimate test of truth, that seeing is *not* always believing nor something which demands no further evidence, for the simple reason that the senses do not as such discriminate between 'hallucination' and 'reality.' He would recognize that as soon as we get away from the worthless sense in which the chaos of primary presentations may be called 'fact'—a sense in which the 'real' and the 'unreal' are equally 'fact', and 'fact' is equally hospitable to the true and the false—we have nothing certain given us. If 'fact' be taken in this very wide sense, it is no help towards the discrimination of real fact. For the real fact has to be laboriously discriminated from dangerous imitations just as imperatively as 'real truth' from 'false' claims. 'Truth' and 'fact,' therefore, can never be arrived at, in any scientifically important sense, without a process of critical examination, selection, and rejection, which evolves and authenticates them both together.[2]

[1] Cp. pp. 403-4, 410.

[2] Contrast p. 403

It can never be relevant, therefore, to contest the humanist's right to connect the conceptions of ' true ' and ' good to believe ' by doubting whether every truth can also be shown to be ' good.' For this assumes that its goodness is still in the making, while its truth is made. But its goodness has either been settled already in the process of establishing its truth, or, if a doubt is cast upon this, it unsettles also its truth. It must never be forgotten that it was by showing the ' truth ' to be ' good ' for a purpose that it was shown to be ' true ' ; if its testing had shown inferior goodness for our purposes, it would have detracted also from its truth, and we should have expressed this in a verdict that it was only a methodological truth, or a fiction, or even a downright lie. Here, then, " the *a priori* reason is shown why truth and utility should always go together," —a duty which Mr. Russell strangely charges us with neglecting.

It becomes clear also that, for all its simplicity, the humanist doctrine is profoundly critical. It does not allow philosophers to assume uncritically the notions of ' truth ' and ' fact.' It challenges them to make out their title to every truth and every fact they allege. It points out that they must explain how they were come by, and how they could be known. Such a criticism as that " on the pragmatic definition of the word ' truth,' we find that the belief that A exists may be ' true ' even though A does not exist," it declares to be almost pathetically inapplicable and unmeaning. For (1) no belief that A exists could have become ' true ' except by *verifying* a prior claim that A exists. And (2) this process must have rendered unmeaning and incredible the possibility that A should *not* exist. A's existence, once verified, stands as against everything but fresh evidence. To assert, therefore, the non-existence of A would, under the circumstances, be an unverifiable assertion of an arbitrary dogmatism. For it must always be utterly uncritical and untenable to postulate unknowable realities merely to patch up the gaps in a defective theory of knowledge.

Very much the same reply holds also against Mr.

Russell's amusing comparison of Truth to a library of which usefulness supplies the catalogue, from which he infers that " there are books in the library which have not yet been catalogued, or that there are books catalogued which are no longer in the library," and concludes that usefulness can at most be the criterion, and not the meaning, of truth. But it is clear that with such very lax notions of library administration, no very exact notion of truth can be attained. In any library which is to be worthy of comparison with the humanist conception of truth two regulations must be stringently enforced, which will entirely remove the difficulty. In the first place, no book must enter the library until it has been catalogued ; and, in the second, the inspection must be so thorough that no book which is lost is retained in the catalogue, so that no discrepancy between the contents of the catalogue and of the library is allowed to arise. For only thus will Mr. Russell's illustration approximate to the intimate relation conceived to obtain between use and truth. The alleged criterion and the meaning are in reciprocal relation. For not merely does usefulness never occur without truth,[1] but (except in the sense of ' uncontested claim ') truth cannot arise without antecedent use : each is bound up with the other. It now becomes clear wherein Mr. Russell's simile is misleading. A library and its catalogue always remain physically distinct objects : they cannot be fused together as are truth and use in the humanist conception, once we realise that nothing can attain the rank of truth except through its use and in virtue of its value.

It will hardly be necessary after this to discuss in detail the objections which are consequential upon Mr. Russell's fundamental misconception, not of our doctrine so much as of the problem with which every theory of knowledge has to deal. It is easy, for example, to see that the difficulty as to discerning the goodness of the consequences of a true belief, of which Mr. Russell makes so much, vanishes when the goodness is regarded not as prospective but as

[1] This is not strictly *our* assertion. We make due allowance also for the peculiar cases of the lie and the methodological fiction.

primarily an historical fact embodied in the very assertion of its truth.

I should, however, like to draw attention to one happy inconsequence in Mr. Russell's article, by which he seems to me very nearly to have found the clue that would lead him out of the labyrinth into which he has strayed. On p. 408 he tells us that " obviousness remains always the ultimate source of our beliefs ; for what is called verification or deduction consists always in being brought into relation with one or more obvious propositions." By this ' obviousness ' Mr. Russell does not, apparently, mean the so-called self-evidence, which is an old and discredited test of truth shown to be quite illusory by long experience. He seems to mean rather the immediacy of direct experience, which forms one of the touchstones of all reasonings, and is itself involved in every step thereof. If so, he has advanced a truth with which no humanist will quarrel. Unfortunately, however, this immediacy is exhibited by all the contents of experience alike, 'true' and 'false,' 'real' and ' unreal,' so it cannot be trusted to differentiate them. In his very next sentence Mr. Russell admits this as follows. " This process of verification is necessary even for propositions which are obvious, since it appears on examination that two obvious propositions may be inconsistent, and hence that obviousness is not a sufficient guarantee of truth." He proposes, therefore, to ' select ' the group of propositions which seems ' to contain most evidence,' and presumably, to reject its rivals as false. But if the ' obviousness ' of a ' fact ' is no guarantee of its truth, and may attach itself to systems which are false, surely obviousness is no criterion at all of truth, as opposed to error. Is not Mr. Russell left as helpless as before to discriminate between them ? Do not all his cherished ' facts ' threaten to dissolve into illusions ? Does not his whole case against humanism fall to pieces ? In short, is not his peculiar combination of an ' absolute ' truth tested by a *fallible* criterion a flagrant example of an intellectual misfit ?

But perhaps all this only illustrates how much truth there was in the humorous description, with which Mr.

Russell opened his article, of the fate which befalls the critic when he begins to read a book of James's. " It is," he says, " insinuating, gradual, imperceptible ; it is like a bath with hot water running in so slowly that you don't know when to scream." Mr. Russell should not scream when he is getting a bath. For though he may feel that he also has got into hotter water than he quite likes, the bath is really good for him, and has not been so heated as to scald him, but only to the point at which it enables him to scrape off the last incrustations of intellectualistic prejudice.

# CHAPTER XV

## CASSANDRA'S APOLOGIA[1]

WOE is me, alas, alas! Oh that I had never met you, or had never gained from you the baleful gift of prophecy! Oh that these eyes might once more be blind to the impending doom of sacred Ilium and the fall of Priam's kingly house! Surely it is better for mortals not to get what they most desire nor to have prescience of the future they seek to know so eagerly!

Yes, my dear Cassandra, I thought you would soon begin to regret the way you tricked me. But it is no use your making up to me now. Your repentance comes too late. The gifts of a god are irrevocable, and even if I would I could not change the past. You will continue to foresee the evils you will be powerless to avert.

Woe is me, what shall I do?

You had better betake yourself to a wholly contemplative life, and devote yourself to the prevision of eternal truth which you are privileged to behold. I admit that the life of action is more fun, but I sometimes think it would be better, even for us gods, to become just contemplators of all time and all existence and to cease from interfering with the order of the world, whether to reward or to punish mortals. Anyhow the vision of Truth should be enough for you.

Even though it makes me wretched?

Not all visions are beatific; or rather the vision of a god alone is that. But this you would not see when you

[1] From *Mind*, No. 105 (1918).

beheld me. So it serves you right. You are justly doomed to foresee the hideous truth, but whatever you predict, it will never be believed. Hence your prevision will be vain. If that annoys you, as I see it may, you can become indifferent to what is fated, and take delight merely in your prescience of it. That is how we gods, and Professor Alexander, 'enjoy' whatever happens.

But how can I, being mortal, become indifferent to mortal woes?

That is your look-out. I am merely telling you that you can make your prescience painless and your life endurable by imitating me. After all, as you can now no doubt foresee, I am merely telling you, what Aristotle is going to prove, in another 1000 years or so, that the best life for mortals to lead is that which apes that of the immortals as far as may be, however vainly.

No, I will *not* imitate you. You are horrid. I would rather die a thousand deaths than live like you. I detest you, and I do not believe a word you say! Why should I believe the atrocious vision you have conjured up before my eyes by some unholy magic? How do I know it is true? How do I know that you have not been trying to deceive me in this matter also? How do I know your gift is not an illusion and your promise false?

When a god swears by Styx his promises are kept to the very letter. If you will not now believe me, you will have to later on. See, and wait, until what you have seen has come to pass.

What precisely has been promised me? Do tell me again; for at the time I hardly grasped what you said.

I promised you that whatever you prophesied should come true; but, to rebuke your insolence, I added that, whatever you prophesied, no one should believe you.

I can understand that at first they might not believe me, if I prophesied unpleasant things. Men are always reluctant to believe in the coming of evils, especially if they themselves have brought them about. But if my prophecies came true and they had frequently experienced this, how could they help believing?

They would not, I tell you, however often you succeeded. Experience would make no difference.

How is that possible ?

They would be under a necessity of thought, stronger than any fact, to think that false which you had asserted to be true.

But would not that be belief in necessary error ? How very strange !

No stranger than the belief in necessary truth.

Well, it seems to me very queer. But tell me, Apollo, should *I* be under the same necessity myself ? Should I too think false what I myself had prophesied ?

I had not considered this point—which would you prefer ?

I do not think that you need consider *my* feelings ; the point is that, whatever you say, *you* will get into a difficulty.

Nonsense ! How ?

Well, unless I too did not believe that what I said was true, you would be convicted of having promised falsely, and this you swore by Styx you would not do. For it would not then be true that *no one at all* believed what I prophesied. You will have, therefore, to make an exception in my favour.

I will do no such thing. I had better say that what you prophesy will be true whether you think it so or not, and so even if you think it false. For your thinking it can make no difference to the truth.

That sounds well, but I am not so sure about it. At any rate, I wish you would tell me how I can at the same time both believe that what I prophesy is false and know that it will come true ?

Is not belief different in kind from knowledge ? You *know* the truth, but *believe* the false. Where, then, is the difficulty ?

' Knowledge ' seems to me to be only a confident belief that is not doubted : I wish, therefore, that you would prove to me what is the difference between them and how a belief may be known to be knowledge.

Gods never prove anything ; it would be most un-

dignified. They only speak with divine authority. If you want proofs you will have to foresee those of Plato, the divinest of philosophers, or the most philosophic of divines, and, moreover, (probably) a son of mine !

That does not satisfy me, but before I inquire further, let me thank you for one great privilege your gift bestows. I shall now be able to lie as much as ever I please. It will be great fun.

What do you mean ?

Did you not say that whatever I said should come true ?

I did.

Well, then, whatever I say, *thinking it false*, will come true nevertheless ?

Certainly.

Then I can *lie* with entire impunity.

I do not understand you.

Pardon my lapse into our barbarous Phrygian. But I do not think there is any Greek word to express what I meant, namely, to say what is false willingly and knowing it to be false.[1] Do you not see what an enormous difference this makes ?

I do not see that it makes any. What you say is either true or not, whatever you think about it. There is no third possibility, is there ?

I suppose not.

You seemed to me, therefore, to be speaking nonsense when you said just now that you would be able to prophesy false things as much as you pleased. You could not prophesy falsely. You could only prophesy truly. It would be impossible for you to utter what you call a ' lie.' Nor could you do so with impunity ; you would always be punished for spreading false news—because no one would believe you.

What an intellectualist you are, Apollo ! I am afraid that though you are a god and love some Trojans, you

[1] Greek has no word for ' lie ' as distinguished from falsehood, presumably because the liar's intention and state of mind were regarded as irrelevant to the objective truth or falsity of his assertion.

are very Greek at bottom. Are you not entirely leaving out the speaker in arguing about the spoken word? Do you really think it makes no difference what *he* thinks about the truth or falsehood of what he says?

Most certainly. None at least that it is reasonable to take account of.

Then you think it makes no difference whether I prophesy what I believe to be true or what I believe to be false, if only it comes true? Nor again whether I prophesy what is false voluntarily or involuntarily, so long as it does not come true?

In either case the true is true and the false is false.

Then you do not care whether an error is voluntary or involuntary?

I care only whether it is great or small.

And you do not resent the attempt to deceive you which the liar makes?

Whoever speaks falsely deceives me, if I believe him.

You are at any rate a consistent intellectualist, Apollo.

The reasonable are always consistent.

Ah, but are the consistent always reasonable?

Being a woman, Cassandra, you naturally do not admire the logical virtues.

At any rate I should like to ask your opinion about a further question.

What is it?

Have you not given me the power in certain cases to make what is false true, simply by declaring it true, and in others to make it true, by declaring it false?

Why should I listen to such nonsense, seeing that not even a god has the power of making the false true?

If you will listen nevertheless, you will, I think, understand my difficulty. Is it not possible to tell a sick man he is going to get well, without believing this?

Certainly, even my son Asklepios often says this.

Well then, may not the giving of this assurance sometimes so encourage the patient as to enable him to recover?

Possibly.

Yet he would have died if he had not received this assurance ?

Probably.

Then the assurance being false would have made true what would otherwise have been false, simply by declaring it true ?

My son would say it was not by his assurance, but either by his superhuman skill or by a miracle, that his patient was cured.

Again, may not a wicked physician frighten a patient to death by telling him he is certain to die ?

If he is fool enough to believe a doctor !

Nevertheless, in this case too his belief will make a difference to the truth.

I suppose I can escape from admitting this by telling you that all is fated and no man can escape his fate.

Is that what you are going to tell me ?

No, I had rather let you go on.

Very well, then, do you not think that if you prophesied that the harvest will be bad, or again that it will be good, and if men believed you, the price of food will be raised or lowered in the markets ?

I dare say, but you cannot expect a god to concern himself with market prices.

But you say you are concerned about the truth, and in all these cases the truth does seem to be affected by what men believe about it. The belief that something will happen seems to make it happen, or else to make people take measures to frustrate it.

At any rate, Cassandra, *you* cannot make things happen in this way. For, whatever you say, you will not be believed.

I cannot perhaps make the false true by declaring it true and getting men to believe it true. But does it follow that I cannot make the false true by declaring it false and so getting men to believe it true ?

I should think it did. If you cannot make the false true by declaring it true, how can you by declaring it false ?

Are you not forgetting that you have promised me that I shall always be disbelieved ? Hence by prophesying

one thing I can make men believe the opposite. If I prophesy a scarcity, they will believe in an abundant harvest; so they will sell me their corn, believing that the price will go down. But as the harvest will be bad, I shall be able to re-sell it for much gold when my despised prophecy comes true. Thus I shall be able not only to make that come true which I believe to be false but declare true, but I can also get the others to believe true the opposite of this which I shall seem to them to have declared false.

I did not understand. Only a devil, not a god, could follow all this.

Surely, Apollo, my point is simple enough for a child to follow. If whatever I predict is disbelieved, I can in certain cases foresee that what will be believed will be the opposite of what I predict. I know also that what all believe is false. If, therefore, I act *as if* what is universally believed true is false and *as if* what is believed false is true, I shall be prepared for what will happen, and can guide my life by always behaving as if that were false which all believe to be true.

Such was not the use I intended you to make of my gift.

Perhaps you did not understand what you were doing, and do not understand even yet what I am intending to do.

I understand at least that you intend to set at naught the punishment I inflicted.

Does it come to so much as that?

Yes, for by acting as if what you believe true were false, and what you believe false true, you would be escaping all the evil consequences of your false beliefs.

Well, why shouldn't I?

Because it makes me doubt whether you really believe the false things you say you believe, and disbelieve the truths you predict.

Why should you disbelieve what I say?

Because you *act* so differently. And I suspect that your acts are better witnesses to your beliefs than your words. For it is easier to deceive by words than by deeds.

It seems to me, Apollo, that you are now speaking like a pragmatist.

What is that ?

Oh, something that no one will understand for ever so long, for another 3000 years at least. And when they understand it, men will say that it is nothing new and that they have always been pragmatists.

Then talking pragmatism must be very like talking prose. I remember I once asked Momus to tell me what that meant.

And he replied, I suppose, that it was what you always did, especially in your oracular hexameters ?

Your impertinence equals his. Have you already forgotten the woes that are in store for you ? If so, may I trouble you to turn your prophetic eye upon your latter end, and to foresee by what a death you are fated to perish ? It is better for mortals to meditate upon such things than to bandy words with gods.

It is easier at any rate. But I was not unaware, even before my eyes were opened, how piteous is the lot of mortals. I shall suffer as bravely as Prometheus. And I divined also that you gods were merciless and had no human feelings. That is why I spurned your ' love.'

Like the silly girl you are ! Had you not done so, you might have escaped from the doom of Troy. Had you continued to please me, I might have made you an immortal, or if not, at least have turned you into an evergreen, like poor dear Daphne,[1] which is the next best thing.

I had no thought of escaping my doom. But do not you gods too think of your future ?

No, of course not. We live lightly, in the present, knowing that the future holds no terrors for us.

Then the fate I shall prophesy will be news to you ?

If it is new, it will not be true.

Nevertheless it may be unpleasant.

Nonsense.

Shall I prophesy ?

If it amuses you.

Well, then, I prophesy that you too will be changed,

[1] Laurel.

into a butterfly, Apollo,[1] but will still remain Parnassian, and haunt the mountain-tops.

Do you expect me to believe that ?

Certainly not ; but it will come true. However, it may console you to learn that you will still be beautiful.

Thank you for that ! If I believed you, I should say that so long as I remain beautiful I am still Apollo. And I suppose that even though I became a butterfly on Parnassus I should still remain a god on Olympus.

There will be no gods left on Olympus and the rest will fare worse than you.

I must say, Cassandra, that though of course I know your prophecies are jokes, they are in the worst possible taste. Go home to my temple and devote yourself to your priestly functions. I am sure my sacred image has not been dusted for a week.

[1] *Parnassius Apollo.*

# CHAPTER XVI

## CREATION, EMERGENCE, NOVELTY[1]

SEEING that philosophic discussion turns so largely on the meaning of words, apology for the almost entirely lexicographical character of this paper is hardly needed. Indeed, until philosophers show themselves sufficiently capable of co-operation to get together to appoint a Committee on Nomenclature, like the scientists, which may curb the licence of individuals in misusing old words and coining new ones of repulsive aspect and inferior value, it is something very like a duty to protest from time to time against the proceedings of those who try seriously to live up to the old jest that philosophy is nothing but the systematic misuse of a terminology devised expressly for this purpose.

### § 1

To begin with, let us clear the way for our discussion by disposing of the word 'evolution.' It is, of course, one of the most popular of our catchwords, but has been excluded from my title because of a vagueness, ambiguity, and ineptitude which have become so notorious that no one should have a good word to say for it. True, it has spread itself, like a weed, over the whole intellectual landscape, and is now liable to crop up nearly everywhere. But that is because it is attributed, very much at random, to pretty nearly everything, and is by no means a justification of current usage.

[1] From the Aristotelian Society's *Proceedings*, 1930-31.

'Evolution' is really an outstanding example of a cuckoo word with very disreputable habits. It began its career by usurping the meaning of its original competitor 'epigenesis,' without quite dropping its own, and in consequence is now commonly taken as *affirming* the implication of *novelty*, which it was constructed to *deny*. For 'evolution' was originally a hypothesis about the development (a similarly question-begging word!) of organisms *intended to slur over and conceal the occurrence of novelty*. It insinuated that nothing could be 'evolved' ('unfolded') but what had been involved ('wrapped up') from the beginning. But this hypothesis was used as a theory of descent. It was applied, with some success, to an actual process of nature, to the history of life on earth, because this had, or seemed to have to man's interested eyes, a definite *trend*. This trend our optimism, or conceit, interpreted as an *upward* one, as a progress entailing an *increase in value*, regardless of the vast masses of stagnation and the multitudinous cases of degeneration also exemplified in organic history, and unhindered by the reflection that the history of events on earth, or even in the whole solar system, afforded an absurdly narrow basis for inferences about cosmic evolution as a whole. Thus was the *progressiveness* latent in the notion of 'epigenesis' craftily transferred to 'evolution.'

When it was, tardily, observed that the actual course of biological history, when more closely scrutinized, by no means always supported the belief that the process was a progress, in whatever sense one might be pleased to take 'progress,' the big claims initially made on behalf of 'evolution' had, of course, to be modified. But instead of restricting the term 'evolution' to a fairly definite biological process scientists pursued the reprehensible and improper policy of further extending, and diluting, its meaning. So it was made to include such diverse processes as biological history, the development of a star or a galaxy, and even the 'evolution' of matter itself. These extended uses have, however, reacted upon biological evolution; so it is now becoming clear that such progress

as has occurred in the history of life must be conceived *not* as due to any ' law ' or even ' force ' guaranteeing its continuance and significance, but at most as a complex *resultant* of many historical factors or conditions, which has, in this one case of our earth, ended in a show of progress. Thus we are not, strictly, entitled to regard biological ' evolution ' as more than a *coincidence*, which has quite the air of a lucky accident.

The belief that ' evolution ' in the sense of progress would continue has thereby become an *act of faith*, which the past could engender, but could not prove. Logically it reduces to a *probability*, the strength of which it is hard to estimate, but which will loom large only in the eye of faith. It is plain also that we are *not* entitled to assert the reality of any universal evolution as a ' law ' of Nature. The most we can say is that *if* we are *right* in recognizing a certain trend in history as change for the better, despite the awkward fact that we must needs be strongly biased in favour of a history which has generated *us*, and *if* we are *right* in hoping that this trend will continue, on the whole, to prevail over opposing tendencies leading in other directions, biological history can be viewed as, on the whole, progressive. Even then we shall have to be constantly on our guard against the insidious temptation of conceiving ' progress ' circularly, as whatever ' evolution ' tends to. This seems an easy way of establishing the reality of ' progress,' but it is merely verbal and utterly fallacious.

Furthermore, the implications of the fact that biological history is only an infinitesimal fragment of the total course of events must be fully recognized. A great act of faith was needed to construe biological history as, at heart, progressive ; a second and more stupendous act of faith is needed for the leap from our little earth to an ' evolution ' of solar systems and galaxies, nay, of ' matter ' itself with all its ' laws ' of nature. *A fortiori*, therefore, biological history cannot prove that the notion of progressive process is transferable to the whole becoming of the cosmos. It is a miracle of anthropomorphic audacity that it has so much as suggested it !

The moment, however, we try to effect this transfer we find, to our dismay, that while cosmic history does permit itself to be regarded as a process, it indicates a process of a totally different sort. We at once encounter the Second Law of Thermodynamics, which is much more fundamental and better established than any 'law' of 'evolution,' and has much better claims to be regarded as a law. It implies, apparently, a very definite, and quite inexorable, trend in events, probably a *beginning* (if, that is, the universe is finite, and if it is not no one can say anything definite about it *as a whole*—simply because *it isn't a whole*!), and certainly an *end*, in a state of complete degradation or dissipation of energy which seems as unlike anything we can regard as perfection and life as could well be imagined.[1]

If, therefore, the Second Law of Thermodynamics holds, all the changes in the universe tend towards a maximum of 'entropy'; which, being interpreted, simply means that the universe is running down, and coming to a bad end.

Naturally many of our physicists are human enough not to relish this prospect; they are at present searching (with little success) the most distant regions of stellar space for traces of a process that will mean a possibility of reversing the trend of change and of a regeneration of matter and energy, and so will restore stability (if not progressiveness) to the cosmos.

Curiously enough, however, there is a certain doubt, based on facts much nearer home, whether this law does hold universally. For life (which we know to exist only on our little earth) appears to have a power (very limited at present) of *reversing* the cosmic trend. Living beings, no doubt, spend energy, like everything else; but they do not seem always to *waste* it. This means that although the stream of energy flowing through the physical changes of life tends ever to a lower level, it can yet be used to build up the structures of a *higher* life. Moreover, in virtue of the process we call 'learning,' psychic life seems to be

[1] Cp., however, *Humanism*, chap. xii.

capable of storing up and accumulating the knowledge which is power, to a limited extent. This tendency of life is manifested from the beginning : for some living beings, to wit the plants possessing chlorophyll, are thereby enabled to *synthesize* organic compounds, instead of breaking them up into simpler forms of matter, while others, to wit ' nitrifying bacilli,' are able to draw nitrogen from the air and to render it available as a food. All these processes presuppose a supply of energy obtained from sunlight ; but they constitute curious facts which may indicate that there are really *two* antithetical, or even antagonistic, processes going on together in the universe, and which go to discredit the attempts to interpret it monistically.

We should conclude, therefore, that it is a gross abuse of language and confusion of thought to apply the same word ' evolution ' indiscriminately to *both* processes, those of physical and those of biological history, and that so long as this confusion is current it is better to avoid the word altogether.

§ 2

Let us therefore consider ' creation ' next. This is a word for a notion which the human mind has evidently had great difficulty in evolving. Etymology shows that different languages have proceeded from different starting-points in arriving at it, and that many have never been able to arrive at it at all. Thus the English ' creation ' comes from a Latin root which meant to generate, a sense which ' procreation ' still retains. But in French *créer* has not been similarly specialized. It means to produce or make, and not specifically to ' create,' as is familiar to the women who wear the ' creations ' of Parisian dress-makers. Consequently the French cannot distinguish between making out of already existing material and creating ' out of nothing.' German, on the other hand, *has* a distinct word for creating. It is *schaffen*. But *schaffen* is identical with our word ' shape,' and originally meant no more than ' make.' The Greek word for ' creator,' κτίστης, means properly ' founder.' I suspect that a critical

survey of the words used for creation in other languages would reveal other similar differences and variations.

The history of the theological doctrine of creation points in the same direction. It is quite a late discovery or invention. Primitive thought is not familiar with it; it nowhere seems to trouble itself about the origin of all things. Even when cosmogonies begin they always start with some pre-existent material, which is still a postulate of orthodox science. Hence the 'creator' is only the maker of a cosmic order out of an anterior chaos, which now strikes one as very like the state of maximum 'entropy' predicted by the Second Law of Thermodynamics. In the book of Genesis, which appears to be a monotheistic recension of earlier Babylonian accounts of the struggles of Bel-Marduk with Tiamat the Dragon of the Deep, *alias* the 'waters' of the Abyss, the pre-existence of these chaotic waters is implied: it is concealed only by the mistranslation of a Hebrew tense.[1]

In view of its religious and philosophic importance it is astonishing how very obscure is the origin of the theological doctrine of 'creation out of nothing.' According to my friend, the late F. C. Conybeare, it owed its birth to the exigencies of controversy. Philo the Jew, of Alexandria, found himself committed to proving the superiority of the God of Moses to the Demiurge of Plato's *Timaeus*. So he made much of the fact that the latter made matter out of empty space (*μὴ ὄν*) by imposing on it geometrical forms, whereas the former was potent enough to make the world out of nothing. I have not succeeded in extracting this theory from the text of Philo, and another friend, the late Canon R. H. Charles, has directed my attention to a (probably) earlier allusion to creation out of nothing in the book of the Maccabees (ii. 7, 28), which declares that God made all things out of "things that were not" (*ἐξ οὐκ ὄντων ἐποίησεν αὐτά*). But, as in later Greek the two negatives are frequently confused, it is hardly safe to assume that when a Hellenistic writer uses *οὐκ* he does not mean *μή*, and so is not merely alluding

[1] Cp. C. M. Walsh, *The Doctrine of Creation* (Fisher Unwin), 1910.

to the Platonic carving out of *μὴ ὄντα*. However this may be, it seems pretty clear that the decisive step (attested by my friend, Prof. J. E. Boodin, and Mr. Walsh, *loc. cit.* p. 27) was taken by St. Jerome when he translated the passage from Maccabees in the Vulgate by "*ex nihilo fecit illa Deus*" and adopted the term 'Creator' in place of the earlier 'Conditor' to translate *κτίστης*. For his Vulgate became the authoritative version of the Roman Church, and generated the doctrine of creation out of nothing. After that it was vain for philosophers to quote Lucretius's *ex nihilo nihil* and to decry the doctrine as mere foolishness, incompatible with the 'law' of causation, and they long did so at their peril.

Evidently, then, as so often in the case of great ideas as well of great men, the origin of the doctrine of creation was obscure. Philosophically it was a paradox, and historically it was a mistake, resting on a misapprehension of Plato and a mistranslation of Genesis. Nevertheless, when the Christian Church adopted it a real and genuine novelty entered the world of thought.

## § 3

Now real novelties always have a hard time at first. Among their just grievances, the fact that officially they are always denied existence ranks high. But they might complain nearly as bitterly of the attempt to dismiss their claims by applying to them the word 'emergence.' For 'emergence' is in no wise an *explanation* of the occurrence of novelties: it only records their occurrence, and is hardly even a candid recognition thereof. For it is apt to be rather the vehicle for an ambiguous insinuation that the alleged novelties are not truly new but have long been lurking obscurely in the dark and waiting for an opportunity to break forth into the light of day. Thus, etymologically, 'emergence' has the same sort of dishonesty as 'evolution,' and it is amazing that it should have found such favour even among philosophers.

Logically, it is open to a still more serious objection.

As used, it suggests that the emergence of novelties is a rare and abnormal occurrence which deserves to be dignified with a technical term. This is calculated to conceal from us the fact that it is only a grandiloquent description of a very familiar experience, viz. *the occurrence of novelties*, and so to prevent us from facing this fact, as we ought, in its full generality.

## § 4

The real question which as philosophers we ought to discuss, and if possible to settle, before we allow ourselves (or others) to talk about evolution and emergence, and before we declare true creation inconceivable nonsense, is—What is the place and significance of *novelty* in the world, and what ought to be our logical attitude towards it? I will conclude, therefore, by offering some considerations bearing on this question.

(1) We should agree, I think, that Novelty is the *right* word for what has been variously called 'evolution,' 'emergence,' and 'creation.' It is the right word because it is the simplest and the free-est from pomposity and contamination by irrelevant issues.

(2) It is indubitably a *fact*. For it is being generated to some extent by the course of events at every moment. Every moment arrives with some of the freshness of the unforeseen and unexampled, and passes away into the irrevocable. It is because of the novelty it conveys that the course of events is irreversible.

(3) Novelty is neither unintelligible nor subversive of the cosmic order. For though the new as new is never predictable nor reducible to the old, yet it is, only too easily, absorbed into the old order. For its novelty admits of more and less, and it is never *wholly* new. It always shows itself more or less easily assimilable.

Hence (4) it is always apprehensible as a variation or innovation upon some ancient theme, and capable of explanation by reference to that. But such explanation is never complete. From the nature of the case it is only partial.

It reduces the new to the old, treats it *as if* it were old, and by this soothing fiction beguiles us into accepting it.

We have never, therefore, to face the brutal and disturbing fact that Novelty is a universal, characteristic, and ineradicable feature of the Real; nor do we ever realize that it casts a doubt, or rather a limitation, upon our vaunted 'law' of causal explanation. For if our world is really such that nothing in its history ever quite repeats itself, it is clearly a *fiction* to treat it as if it did. Now this postulate of repetition is one of the major assumptions lurking in causal explanation, towards which neither Hume nor the interminable literature of the subject has ever induced philosophers to show themselves sufficiently critical. The 'cause' of any phenomenon is supposed to be fixed and stable, and in honour bound to reproduce *the same* effect whenever called upon. A 'cause' that was capable of learning from experience, and of modifying its operations accordingly, would be more human, but nothing like so *convenient* methodologically. But there is nothing in this human convenience to prevent an unvarying 'cause' from being only a methodological fiction, and even the stupidest of physical entities may be able to learn a little from experience in the course of aeons. The result would, of course, be that a prediction based on the uniformity of nature might be trusted to come true five years hence, but not 500,000,000 years hereafter.

I concede, however, that, as a matter of course, we shall continue to go upon the assumption that 'causes' do *not* change, simply because there is nothing else to go upon if we desire to foresee the future, just as we assume that causes are determined and will not upset our calculations by freaks of free will: but this concession does *not* oblige us to ignore the reality of novelty. We ought to remain fully aware that we are using a fiction and running a risk, and we ought to be for ever ready to modify and correct the assumptions on which we base our calculations. We should eschew, therefore, the illusory pursuit of safety and realize that life will always contain an element of adventure that will warrant hopes as well as fears.

§ 5

Before, however, our recognition of Novelty can be complete we must settle accounts with Logic. For Logic hitherto has been the greatest obstacle to the perception and discovery of novelty, and the greatest stronghold for the belief that nothing new could be true, and that nothing true could be new.

The old Formal Logic, and until quite recently no logical reformer has ever dared to question its fundamental assumptions, was carefully, though covertly, constructed to do two things. It tried, first, to predict the future entirely *a priori*, by mere reasoning without recourse to experience ; second, to yield complete certainty that could not in any way be shaken or upset by any course of events. The instrument it relied on to accomplish both these ends was the same, namely, the syllogism. Now the syllogistic form lent itself to the purposes of Formal Logic by claiming to be incapable of losing any truth with which it was entrusted on the way from its premisses to its conclusion. Consequently, if only you supplied it with premisses which were absolute, you could rely on it that the conclusion it deduced would be so likewise. The fact, therefore, that the conclusion referred to the future made no difference ; it had become irrelevant, and did not detract from the certainty of a syllogistic prediction. It was in this highly technical way that Logic upheld the existence of ' eternal ' truth.

Unfortunately for Formal Logic the premisses of this reasoning were not themselves true. It had misconstrued the syllogism, and overrated its powers. It turned out that there were insuperable difficulties in starting from true premisses, or, rather, of guaranteeing the absolute truth of any premisses. No premisses could be found that were more than probable truths, and no conclusion that was more than the verification of a hypothesis, and therefore afflicted with the formal defects of all verification.

What was even worse was that it was not true that the syllogism was incapable of losing truth. It was found

to be afflicted with a weakness, inherent in its constitution, which revealed itself so soon as you tried to use it and undermined the whole notion of formal validity. This weakness had escaped notice so long only because formal logicians are not themselves in the habit of using the forms of reasoning they prescribe to others; and the defect in question is not visible so long as you are content to contemplate only the abstract form of reasoning. But when you actually use it you put together two premisses you have taken as true, and may triumphantly 'demonstrate' an absurdity. You may then 'reflect' upon your *débâcle* and discover that your middle term has grown ambiguous, and so your reasoning fallacious. Further reflexion shows that this may *always* happen. For what may validly enough be taken as *M* in relation to *P* does not necessarily stay *M* when brought into relation to *S*. You, moreover, were no prophet: in assenting to the premisses separately and in the abstract, you did not foresee how they would be used. So you may placidly agree that *all men are rational* and that *Smith is a man* and then be surprised to find him a raving lunatic; or, again, that *all men are mortal* and that *Socrates is a man*, and then be puzzled to say when he may be expected to die again, or whether you think that 'mortal' means 'dead.'[1]

In short, modern criticism has shattered the syllogism as an instrument of ineluctable coercion and absolute prediction, and with it our trust in delusive proofs that rest only on the implications of purely verbal meanings. The true moral is that we must steel ourselves to face a future that is really 'contingent,' and really capable of generating novelties. We are armed only with probable anticipations; but it rests with us to cultivate a plasticity of mind that will keep pace with the changes of the real and readily adjust itself to new conditions. And that what is required of us is nothing excessive and impossible, we may learn from the reflexion that philosophic theory is only now commending an attitude which we all have practised all our lives!

[1] Cp *Logic for Use*, p. 256.

# CHAPTER XVII

## NOVELTY[1]

WE have under this heading to consider the most detested of subjects, which runs odiously counter to every instinct and every habit of every being, animate and inanimate. Even a desperado like myself would hardly have dared to intrude it upon a gathering of respectable philosophers, if he could not quote precedents and claim support; if, that is, the greatest of living metaphysicians had not so effectively pleaded for a revision of the old Eleatic verdict, to which nearly all philosophers have assented with such uncritical docility and unthinking enthusiasm, that no place need be made for Novelty in our philosophies, because Novelty is as such ultimately unthinkable and impossible. Perhaps M. Bergson's greatest achievement is to have shaken this prejudice, and to have made Novelty a good philosophic problem. It is no longer mere impertinence to inquire into Novelty, to ask philosophers to recognize its existence, to beg them to analyse why they hate it and won't, and to insist that, whether they hate it or not, they have got to have it. If I do not suffer the fate of Pentheus, Galileo, or Bruno before I have sufficiently elucidated these points, I may perhaps persuade one or two that since Novelty is ineluctable and we are all so constructed as to experience it, and the world is continually generating it, it may be more reasonable, or at least more sensible, to try to understand it than to try to ignore it.

For the benefit of these few, let me outline the scheme of

[1] Presidential Address to the Aristotelian Society, 1921.

this Paper. My aim will be not so much to dazzle you with paradoxes, to ventilate novelties of detail, or to advocate new solutions for secular problems which have proved impervious to philosophic penetration for the past 3000 years, as to examine Novelty in principle, and to determine the conditions under which a place may be found for it in a rational conception of reality. I propose to show: § 1, that Novelty really and naturally exists, or rather occurs; § 2, that hatred of it exists, and is man's normal attitude; § 3, that this hatred is natural, and in a sense reasonable, but that, nevertheless, § 4, it should not goad us into denying Novelty. It is better to make the best of it, and of the consequences of recognizing it, in § 5, Logic, § 6, Metaphysics, and § 7, Religion.

## § 1

The short proof of the existence of Novelty consists of pointing to an obvious, all-pervasive psychical fact which is familiar to every one, and will, I suppose, be equally distasteful to the refined philosophers who feel it an insult to their intelligence to be asked to recognize the reality of a mere fact, and to the sturdy heretics who have found no use for mind in their philosophizing. The former will declare it unintelligible, incredible, and therefore impossible; the latter will decry it as 'subjectivism.' Still it is a simple psychical fact that our experience never quite repeats itself: in what we *call* 'the same,' and are tempted to regard as a recurrence of the same experience, differences may always be detected, if we choose to attend to them. Even if there were no others, the mere fact that an experience has occurred before would make a difference. For the first time it came it was accompanied by a lively feeling of novelty; when it is repeated, this feeling is lost, and its place is taken by a growing sense of familiarity with infinite gradations of intensity. We know in advance what it will feel like and anticipate it with pleasure or repugnance, hope or apprehension, with interest, indifference, or tedium; thus the very fact that an experience is no longer 'new'

introduces a new factor. Even if we have more or less forgotten the first experience, it will ' come back ' to us the second time; and whether or not we remember it, there is reason to believe that the course of events will in all cases proceed differently in consequence of the past, and that hence nothing is ever wholly forgotten and as though it had never been; indeed there would be no conceivable proof of such total oblivion except just this, that the course of events *did* repeat itself completely. And this does not appear to be the case. Instead it appears to be an ultimate fact that every mind which apprehends a fact has had a history, and this history makes a difference and affects its apprehension of the fact.

What is true of the mind holds, moreover, no less, though less manifestly and indisputably, of the rest of reality. Its history too does *not* repeat itself absolutely, but only with a difference. The flow of reality sets in one direction only, and carries with it its whole past: everywhere the very fact that something has occurred before affects the way ' it ' happens the next time. This, ultimately, is the reason why the past is irrevocable and the course, even of physical change, is irreversible. It is the reason also why the future is never quite exactly calculable.

We may say, then, that all things are what they have become, and have become what they are, in virtue of what they have been through. Their history is thus always relevant to their ' essence,' and until we have ascertained it, we must not take too seriously our definitions of the latter, and the inferences drawn from it. Aristotle made a gallant attempt to bring out this relevance of history to definition in his τὸ τί ἦν εἶναι, but his successors have too often failed to see that this clumsy phrase embodied a truth that was lacking to their ' eternal ' essences.

Now practical psychologists have, of course, long been aware of all this. They have known that, to forecast a man's action with any precision, it was vain to appeal to general principles, and necessary to know him, and his past, and if possible that of his ancestors. In these days the other sciences are being forced to similar admissions.

The zoologist could never understand the nature and relations of living beings, until he took to working out their history: now he explains the present by the past, and solemnly tells us that we have five fingers because we have retained the primitive pentadactylism of the vertebrate stock! The astronomer nowadays is not content to speculate about a 'primitive nebula' out of which our solar system was condensed; he extends and confirms his theory by conceiving it as a special (and very rare) case in the processes of 'stellar evolution,' and classifies the stars according to the stage in it which they have reached. The geologist is successfully connecting the character of his minerals with their history, and determining their age (and incidentally providing data for that of the earth) by the varying amounts of their 'radio-activity.' With the discovery of 'isotopes' history has become relevant to chemistry, and chemists are growing chary of predicting how a given sample of a chemical element will behave and of declaring what it 'is,' until they have ascertained its history: for a given piece of 'lead' may be 'thorium-lead' or 'uranium-lead,' or, more probably, a mixture descended from both these 'parents,' and its 'properties' will be affected by its ancestry. Ultimately, it seems likely that all the 'elements' will be found to be mixtures of isotopes.

In short, as we probe deeper, all the objects of scientific interest are turning out to be immensely more complicated, individual, nay, unique, than any one suspected: the simple, sweeping affirmation of universal 'laws,' 'eternally' prescribed to all things, is being more and more plainly revealed as a convenient postulate of method, which the sciences assumed in the hope of controlling their material, and which encourages them to sustain their struggle with the facts. But actually *our* 'laws' are always human inventions and cannot survive without large doses of human fiction. Reality, as we get to know it better, is displaying a character, nay, a will, of its own, and a large measure of recalcitrance to our intellectual demands. Of this recalcitrance Novelty is a conspicuous feature, and one that is intimately bound up with the rest.

§ 2

Here, then, is our first reason for hating Novelty. It is a good scientific reason, and proves that the reasons for our hatred are not all disreputable. But of course we have others, still more potent, in which we cannot take such pride.

In the first place we are all the creatures of Habit. Habit is the greatest force in nature, and the natural enemy of Novelty. All the stability that can be traced in the flux of reality may be ascribed to it. All the Laws of Nature, in so far as we have hit upon formulas that really hold and are not fictions of our own invention and subjective conveniences of calculation, are objectively the *habits* of nature. The stability of these habits is (more or less) an empirical fact, and is the sole basis for our predictions and preparations for the course of events. We naturally, therefore, tend to idealize and exaggerate it, and to resent the intrusions of Novelty.

Furthermore, the rule of Habit extends to ourselves. We too are made up of habits, and ensconce ourselves in them for safety. Those who are conscious of this fact call themselves 'conservatives'; those who are not may imagine themselves 'liberals,' 'radicals,' or even 'revolutionaries.' But they too cannot help being conservative *au fond*, simply because they too have habits.

Fundamentally, then, human nature is conservative—for good and evil. It engenders a conservative bias, which pervades all social structures and all human institutions, and tips the balance against novelties of (almost) every kind.

Novelty is normally painful—psychologically painful—because it demands an infraction of habit, an effort, a readjustment, thought, doubt, experiment, uncertainty, difficulty, strain, and, possibly, failure. Inertia, laziness, custom, timidity, stupidity, the whole brood of Habit and Ignorance, combine their forces to repulse the new. They always succeed at first, and are never routed without a severe struggle.

Of course this is not to assert that all novelties are always detested in every department of life. There are exceptions, or apparent exceptions, notoriously; but they 'prove the rule,' and their analysis is very instructive.

The most striking case, probably, is that of 'fashion.' The realm of fashion is under the spell of the new. The new is habitually valued as better than the old, and imposed on all who would be 'in the fashion.' And who would not? For to be 'old-fashioned' is to expose oneself to ridicule and contempt. To be arrayed in what 'is not worn' is a more heinous solecism than to do what 'is not done.' At bottom, however, both of these social *tabus* have a common root in custom, and custom is merely social habit.

This prerogative position of Novelty in matters of fashion is not, however, a wholly spontaneous growth. The mutability of fashion is provided for by an elaborate organization which is the product of an advanced civilization. In a primitive society the fashions of dressing one's hair and tattooing one's body do not change. They are tribal habits, and it would bring calamity upon oneself and the whole tribe to innovate upon them in the slightest degree. Why? There does not yet exist a class of specialists whose business it is to change the fashions, and who are interested in their continual renovation. *Chez nous* the fashions change annually—because this is good for the trade of milliners and tailors. They plunge us from one extreme into the opposite, in order that any woman may tell at a glance whether her less fortunate rival is still wearing a dress that was fashioned last year! And they know full well that no self-respecting woman can bear to be out of fashion. Hence their power. Hence the 'last cry' of the feminine soul is for the 'last novelties' of Paris. Men's fashions do not change so rapidly, because men are more resistant to the suggestions of the herd instinct, and refuse to follow the behests of their tailors, who therefore wisely do not insist on an annual change.

The human appetite for 'news' seems another objection to the contention that novelty is not beloved. This is

a fairly complex craving, but in the main it may be regarded as an adaptation. We must somehow adapt ourselves to a world that engenders novelties. Also life is actually such that nearly all are always hoping and looking for news of a better. What is surprising, therefore, is that the craving for news is not stronger. Of course, however, these remarks do not exhaust the philosophy of the 'newspaper' and its social functions.

The apparent love of change for its own sake may receive a similar explanation. We try to escape from a reality that is unsatisfactory, and may even be driven to do 'anything for a change,' despite proverbial warnings against leaping from the frying-pan into the fire.

A more serious example of a department of life which seems to look with favour upon novelty is science. In the last century or two quite a number of human societies have developed quite a considerable enthusiasm for new discoveries in science, and are no longer disposed to accept as final the wisdom of their ancestors. But this sentiment is quite explicable. It has grown up since science was enlisted in the service of man, made itself technically useful, and set itself to gratify human desires for material goods. As there are a multitude of things men desire but do not possess, they welcome anything new that holds out a prospect of giving them what they want. But of course it should be noted that novelties do not break through in science without a struggle. There is always a conservative party which will not scrap the old and resists innovation, often to the death, and is vanquished only by the perfecting of the new invention and its manifest working, or, in extreme cases, has to be left to die out.

Philosophy has no such motives to welcome novelty. Accordingly it doesn't. The actual history of philosophy exhibits very little of it, in proportion to its length. Hardly half a dozen really new ideas seem ever to have forced their way into its tradition, to infuse fresh blood or to put a new complexion on the mummy cases of its problems.[1] I cannot stop to enumerate them now, but there is no need

[1] Cp. Chap. VIII.

to wonder at the unprogressiveness of philosophy, which its typical votaries are wont to mistake for an assurance of its eternal truth.

It is clear, then, that the human attitude towards Novelty is not quite uniform. It varies according to the subject. But our fundamental bias is always hostile, and our concessions to novelty are always extorted. Mostly by the force of fact. For Novelty exists and is all-pervasive. We cannot avoid it, try as we may; but we can deceive ourselves about its existence and disguise our acceptance of it. And so we do! We declare that 'there is nothing new under the sun.' And we prove our dictum true, by never accepting a new truth until it is old and has been licked into shape. So a really new and important truth will bear 'discovery' over and over again, for centuries. The first dozen times or so it simply is not comprehended; the next, it is not listened to, because the times are not 'ripe' for it. By the time they are, it can always be shown not to be really shocking because not really new at all; and some one can always earn a living by expounding the ancient sages who discovered it long ago and were forgotten for their pains. Thus the Copernican Revolution was nothing new, because it had been, vainly, urged by Aristarchus of Samos. Darwinism was nothing new, because it was anticipated by Anaximander. Relativity is nothing new, because it is embraced in the great principle of Protagoras, from whom Humanism also may trace its descent. In short, any novelty worth worrying about may be discovered over and over again, like America.

A novelty, therefore, like a *parvenu*, can always be provided with a pedigree, once it has succeeded. This is very comforting; but it is only part of the social *camouflage* which blinds us to the occurrence of the new.

## § 3

To the same system of devices belong at bottom the methodological assumptions by which we render calculable the course of events and construct stable 'objects'

for the sciences to contemplate. It is traditional to erect these into idols for philosophic worship under such names as ' *a priori* necessities of thought,' in order to evade the paradox that the road to scientific truth is paved throughout with postulates and fictions. Scientific novelties also are reached by first pretending that they cannot exist, and then adjusting to the facts the calculations based on this false assumption. Such fictions are everywhere practical necessities, and the philosopher who will not have recourse to them is like a politician who scorns to avail himself of ' propaganda.' On the enormous extension of this procedure, its indispensability and value, I need not, happily, enlarge ; it will suffice to refer to Vaihinger's great study of the *Als Ob*, and to proceed at once to the task of showing how scientific procedure justifies the human hatred of Novelty.

Scientific procedure, as the more progressive logicians are now recognizing it to be, does (*in a sense*) rest on a negation of Novelty. It ' explains ' the new, that is, the object of its inquiry, by taking it as a ' case ' of the old, whether ' law ' or ' object.' It thus refers it to something already known, and assumes that it is ' essentially ' the same, and may be treated accordingly. It is plain, however, that in this proceeding its novelty evaporates. It is taken to be irrelevant to its ' essence,' to be ' immaterial,' if not unreal. In other words, it is abstracted from, even if not denied outright, and it is by this abstraction that the new is triumphantly reduced to the old.

Now what right have we to do this ? Certainly none that flows from the duty of correct or complete description. A vital feature of the actual fact is arbitrarily excised and deliberately ignored. Can we rest our claim, then, on a necessity of thought ? It is an easy and easy-going habit of ours to bolster up our desires by alleging necessities, the tyrant's plea in philosophy as in politics. But here this plea is manifestly false. For we recognize the existence of Novelty even in the act of abstracting from it : our ' case ' is plainly a *new* case of the old. We are intellectually capable, then, of perceiving its actual character ; it is *untrue* that we cannot think novelty.

The real truth is that we do not *want* to recognize it, and boycott it. Why? Because we do not want to take reality as it comes. We want to control it. We want to alter it. We want to adapt it to ourselves. We want to prepare for it. We want to connect it with our desires and aims. Our cognitive processes, in short, are part and parcel of our vital purposes, and are only *intelligible* in this connexion. This is why we treat the actual fact in the high-handed way we do.

Now it is easy to see that to manipulate the new, to bend it, eventually, to our will, we must somehow get a hold on it. If it were wholly new, utterly unprecedented and unlike anything we had ever known, this would be impossible; we could not lay hold of it, we could do nothing with it, we could make nothing out of it. We *must* assume, therefore, that its nature is not thus intractable. We must explore it for points of likeness to something already known. We must test it by applying to it 'laws' (old and approved formulas), and observe whether it will 'obey,' that is conform to, them. Of course we do not know in advance whether it will; but if it does not, we simply try another formula, until we discover one that 'works': the principle that there *must* be some way of coping with the new is methodological, and cannot be renounced. The actual hypothesis we use has always to be confirmed empirically by the event; but the principle that inspires our search for a 'true' hypothesis is not empirical, but volitional, and drives us, when we have failed, to fresh experiments with other laws, other analogies, hypotheses, and similarities. Thus do we grapple with the recalcitrant novelty, until it has been successfully placed in our intellectual cosmos, and we have triumphantly enrolled the intruder in the great army of precedents. Thus is the discrepant novelty tamed and reduced to order and to conformity with the cosmic order, which in its turn stands as a pledge to us (of questionable value) that it will not be intractable.

This, then, is the reason why it is reasonable for scientific method to abstract from Novelty, in order to tame and

humanize it ; it is evident that it affords considerable excuse for human repugnance to the new as a disturber of the cosmic order, though hardly a justification for the insaner excesses of our conservatism.

§ 4

All this, however, is not the whole story, but only the conclusion of the first part. For once the new fact has been broken in and tamed and assimilated to the old order, science can, and indeed does, repent it of the violence done to it. It *undoes*, therefore, its abstraction from the novel features it had ignored, and proceeds to recognize the individuality of the ' case,' its differences from the cases previously on record, its unique significance, and the *additions* it makes to our knowledge. In so doing it revises its statement of the function of ' laws.' It admits that the ' law ' it applied was not a rigid instrument of absolute prediction, but a flexible formula to be adjusted to the facts, fitted with blanks that can be accommodated to the variable circumstances of an infinity of ' cases.' Consequently it never necessitates, or justifies, *absolute* prediction, which would be possible only if the ' variables ' in the new cases were absolutely identical with those of the old : whereas the course of history can go on engendering novelties, without ever repeating itself. *But the novelties have become intelligible.*

Some sciences indeed go further. Biology, for example, under Darwinian inspiration, has actually devised an expedient for systematically apprehending Novelty. It attributes the origination of varieties, the source of supply for the differences to be sifted out for survival by natural selection, to ' accidental variation.' Accidental variation is thus made an essential factor in its scheme of explanation, in fact a ' category,' as good as most. And yet what is it but creative chance ? It is a mere re-statement of the fact of Novelty, and its whole value lies in its recognition of this fact.

It does not follow, therefore, that scientific method

refuses to recognize the new as such, and really reduces it to the old, and makes an end of it. The methodological procedure which seemed to do this was a *fiction*, and only a preliminary to the proper placing of the new, and to an evaluation of its contribution to our growing world, and our growing knowledge. The abstraction from Novelty, then, can, and must, be undone, and does *not* incapacitate our thought from recognizing Novelty. In short, for science, the negation of Novelty is only provisional and methodological: it does *not* justify our human hatred of Novelty and the denials and disguises of Novelty to which this hatred goads us.

§ 5

Our concern so far has been with Novelty *überhaupt*, with its existence as a fact, and its conceivability as such. My endeavour has been to show both that Novelty exists, that it is conceivable, and scientifically manageable, and that our prejudice against it, though natural enough, both can, and should, be overcome. Let me next try to draw out some of the consequences which the recognition of Novelty carries for some of the philosophic sciences.

I will begin with Logic rather than with Metaphysics, because, though metaphysics are just now multiplying far too freely and we have far too many of them, without logic they are like plants without roots, and can at best lead a saprophytic existence.

Logic, however, in spite of its fundamental position, is at present very much of a science in distress. Most philosophers have either despaired of it, or else made it into an impenetrable mystery. I cannot approve of either attitude: both seem to me to be wrong and indeed, for my purpose, practically coincident. Both, moreover, seem to spring from one and the same blunder, an obstinate and inveterate refusal to recognize Novelty, really and fully, in Logic, as elsewhere. Once we consent to do this, there is no reason either for mystery or for despair. Novelty is as vital to Logic as to every science that is concerned with life, occurs in it as plainly and inevitably as anywhere else,

and is explicable in it in a perfectly simple and natural way.

We can easily understand how novelty gets into logic, if we will deign to observe that Logic is a failure if it cannot deal with actual human thought, that every train of thought is purposive, and that logical processes can only occur in trains of thought. Hence they occur only when a thinker believes that by reasoning he can achieve some cognitive aim, and get to something he does not yet possess ; that is, can attain *new* truth (' new,' perhaps to all or ' to science,' but at any rate to *him*) or impart truth familiar to him to others, to whom it will be ' new,' and will convey instruction. Unless one of these conditions is fulfilled, there will not normally be any thinking or reasoning ; consequently there will not be produced any material for logic to evaluate. ' *Novelty or nullity* ' is the first law of Thought, if Thought is not to be divorced from thinking, and Reason from reasoning.

This truth should not be hidden from us by the fact that a good deal of futile and superfluous thinking may go on. An inquirer may laboriously ' discover ' what is not new but old. An instructor may teach what is no news to his hearers. All men make mistakes. But if the result of a thought-process is not new, the process was superfluous ; while a reasoner who habitually tells us nothing we did not know before is merely a bore.

It is plain, therefore, that if logical process is to be in any real sense rational, it must conduce and conduct to novelty, and that a theory of logical proof which leaves no room for novelty cannot be right. It is fatuity, or at best verbal trifling. Yet it is an astonishing fact that 2000 years of logical reflexion have left logic impotent to account for novelty in thought, even though a sort of recognition of it was from the first involved in Aristotle's demand that the conclusion must prove something ' other ' than what was stated in the premisses. This postulate, in Aristotle's eyes, would perhaps have been satisfied by any verbal variant ; still it does not get Logic out of the absurd position of being unable to ' prove ' the truth of anything new,

or to admit the novelty of anything true. This absurdity has now lasted for well over 2000 years, and Logic shows little desire to extricate itself from a muddle that seems to be essential to its claim to ' formal validity.'

The reason for this embarrassment is merely that logicians *have* divorced reason from reasoning. They have chosen to imagine an ' ideal ' of Reason so high and holy that it excludes human reasoning altogether, and renders it unintelligible and impossible. They have become so enamoured of it that not even the discovery that they had inadvertently reduced their own ideal ' forms of proof,' the ' syllogism ' and the ' system,' to unmeaning nonsense has been able to deter them. Yet a child can see that there must be something wrong with a form of reasoning which only ' proves ' what has already been ascertained otherwise, or else assumes the very point it pretends to prove. This flaw in the syllogism has often been ' discovered,' and never been met; yet it remains ' new ' enough to be repeated once more.

(1) If in a syllogism the major premiss is ' taken in extension,' it is manifestly false if, in asserting that *all men are mortal*, no provision has been made for immortals like Tithonus, Elijah, the Struldbrugs, and the Wandering Jew: while if these cases have been proved mythical, what novelty, or point, can there be in reasserting the mortality of *one* of the cases already examined before the major premiss could be formulated ?

(2) If we do not wish either to deny that certain ' men have miraculously evaded death or to sacrifice our major premiss to these exceptions, it is easy to take it as a definition, and so to exclude Elijah, Tithonus and Co. from the class of ' men.' But, if so, has it not become a tautology that *all men are mortal*, and what novelty can the conclusion convey ?

(3) If, lastly, we try to take the major premiss in intension, as a statement of a ' law of nature,' we speedily come upon the same dilemma as before. We have merely to raise the question whether the ' case ' to which we are arguing in the conclusion is really *a case in point*. For it is

by no means certain in advance that the 'law' we are trying to apply is the right one to use upon the 'case,' that the case *is* 'a case in point' and not a deceptive imitation; or that, though a good enough case in a general way, it is therefore a case for the special purpose of our argument. If we assume all this, we shall be *assuming* the very point to be *proved*; while if we *are* in a position to know that ours *is* a case in point, our conclusion will once more have failed to attain to novelty.[1]

And yet if reasoning brings out nothing new, why reason at all? If our premisses are already known to be as true as true can be before we use them, and if our conclusion is implicit in them, the syllogism seems a silly farce. It is a superfluity, unless it gets to something not otherwise accessible. And nothing but an old logical prejudice prevents us from so taking it. It is perfectly possible to conceive this syllogism, *as it occurs in real thought*, and as alone it *can* occur therein, as a thought-experiment with reality which forecasts the course of events we are entitled to *expect* on the strength of past experience. But we do not know beforehand whether our expectation will be fulfilled. The rightness or wrongness of our anticipation is the news we learn from the event. If our conclusion comes true *in actual fact*, the reaction on our syllogism is to confirm our belief in its correctness and in the truth of its premisses; if not, we infer that there is some flaw in the premisses. Clearly on this interpretation the premisses *must* be taken as hypotheses whose truth is *not* assured; similarly the conclusion, though it *ought* to come true, and logically *must* (if the premisses hold), need not happen in fact. When, therefore, it does come about, we learn something new, viz. that our premisses were so far true, and that logical reasoning has availed to predict the actual course of events. Of course this interpretation implies, what non-syllogistic reasoning openly avows, that reasoning does *not* start from certainty but from doubt, and reaches not *absoluteness* but, at best, *adequacy* to the actual problem considered. It means also that the attempt to abstract from the psycho-

[1] Cp. *Formal Logic*, chap. xvi; *Logic for Use*, chap. xiii.

logical side of reasoning is wrong in principle, and must be abandoned. And why resent this? For why should it be denied that every thought requires a thinker, and every thinker needs a motive? The need for Novelty then establishes itself even in the interpretation of the Syllogism.[1]

## § 6

Logic, then, not only pronounces a *nihil obstat* upon the need for Novelty, but in passing it on to Metaphysics associates itself with the demand. Metaphysics, however, has plenty of prejudices of its own. It has long been accustomed to take it for granted that ultimately Being must be a constant quantity, and has relied on the absolute truth and self-evidence of the venerable maxim *Ex nihilo nihil, in nihilum nil posse reverti*. If anything seems to arise or to pass away, this must be an illusion; or else whatever behaves in so inconsiderate and inconceivable a way cannot be truly real. For that which truly *is* cannot grow less or more. Nor can Being really change in any way. For change is Becoming, and Becoming is unthinkable. It is an impossible union of Being and Not-Being, and Being cannot but be, while Not-Being cannot be at all.

Has not all this a familiar sound? Has it not imposed on us all at some time? Yet it is only a string of methodological principles masquerading as absolute necessities of thought. If we were really resolved to consider the matter dispassionately and without prejudice, should we not soon discover that in itself the bare notion of Being assures us of nothing? We do not know that reality conforms to it. It contains no real guarantee of its own eternity; for the mere fact that something now is (or *seems* to be) is no proof that it must also have been, and must endure for ever. The validity of the notion of Being is a hypothesis like any other, and its value has to be determined by its application to experience.

Similarly the quantitative constancy of Being cannot be

[1] The ideal of 'system' must accommodate itself similarly. For if the system is conceived as 'closed' and impervious to novelty, it becomes a fallacious 'argument in a circle.' Cp. *Logic for Use*, chap. xv, §§ 8-16.

assumed *a priori*. Abstractly *three* alternatives would seem to be equally conceivable. Either Being may be constant, or else it may progressively increase, or, again, diminish.[1] The first hypothesis has the methodological advantage of being the simplest and easiest to work with; which is the reason why we always try it first, and cling to it, despite appearances to the contrary. For appearances not infrequently suggest the other alternatives, which intrinsically are quite as plausible, and empirically there is much to be said for them. Thus to all appearance psychic being tends to exemplify a law of increase; it progresses and grows richer, ampler, and intenser as it accumulates experience—until mental decay sets in.

Physical being, on the other hand, tends ever to evaporate. It is subject to a law of decay. The flow of change is ever downwards; mechanical nature seems to be running down like a gigantic clock. This is repugnant to our prejudice, so we insist that the physically real does not really pass away but 'only' passes into an imperceptible form, not into nothingness. But when 'matter' is dissolved into 'energy' and energy is 'dissipated' into 'heat,' they are surely lost *to us*, and disappear as agents in our world. The explanations given by our physicists of this untoward process seem to be merely ways of concealing this loss, and of saving the face of the postulate of the constancy of Being. A similar self-deception has probably exaggerated the value of the empirical support of this dogma; certainly recent discoveries have done much to discredit its validity. We now know that the ordinary chemical experiments to prove the 'indestructibility of matter' were not nearly fine enough. The chemical 'atom' is by no means the ultimate and stable structure it was taken to be; wherever we can get to grips with it, we find that it is dissolving or disrupting, more or less slowly. Hence if we realize that the ordinary propositions of physics are statistical results concerning the behaviour of thousands of millions of the constituents of 'matter,' and are willing to suppose that atoms form an approximately stationary and stable population, there is

[1] Cp. Chap. XVIII.

nothing in the chemical facts to confute the suggestion that atoms, like men, may be generated and destroyed.

The empirical aspect of the world, then, is quite compatible with the falsity of the maxim that nothing arises out of nothing; or rather it seems to hold of some things (or up to a point) and not of others. Of the others some appear to arise out of nothing, and others to pass away into nothingness. These appearances *may* be illusions, but Metaphysics is hardly entitled to assume this, and the presumptions of a cheap monism should not deter us from investigating them.

Metaphysics should rather consider carefully whether it is not bound to declare that in principle Novelty, wherever it occurs, must necessarily be conceived as arising out of nothing; so that if Novelty is real, origination out of nothing, so far from being an impossible paradox, would be about the commonest and most familiar process in nature. The argument for this contention might be worded thus—It is true that nothing ever arises out of absolutely nothing. There is always something out of which it grows. But that does not explain it wholly. It does not account for the *new* in it. It is only in so far as it is still the old, or the old over again, that it is accounted for by what it grew out of. In so far as it is new, it remains unaccountable, unpredictable, uncontrolled, undetermined, free. *That* factor in it, therefore, *has* arisen out of nothing, and Novelty as such *means*, Creation out of nothing!

In view of the length of this Paper I will abstain from criticizing this argument and remark merely that it may be true. After all we do not always succeed in forcing our postulates upon reality: so after all our world may be such a world as it appears to be, a world in which being is *not* constant and stable, and time and change are real, and devour what they have engendered.

## § 7

I come at length to my last theme, viz. the import of Novelty for Religion, a theme on which I can throw out

only a few hints. Religion is perhaps the most paradoxical of human institutions, in which all the contradictions of human nature are embraced and concentrated. For at one and the same time it seems to be morally the embodiment of all man's highest aspirations and the asylum for his maddest and most brutal superstitions, politically the most conservative and most revolutionary of social forces, intellectually the creation of his crudest and his subtlest thought, practically his final effort to transcend the limits of his being and yet the supreme support conditioning his life within them. Its relation to theology is no less paradoxical. At first sight theology seems a mere excrescence on religion, devised to amuse the leisure of idle priests; and yet religions all generate theologies, and theologies not infrequently have lessons for philosophy.

So here. We have slowly forced our way to a point where a theological doctrine has all the appearance of a saving revelation. Originally the doctrine of the world's creation out of nothing was bound to seem mere philosophic foolishness. It was a denial of 'out of nothing nothing.' It had a most discreditable history. It arose out of sectarian zeal, and a blunder of translation. Philo of Alexandria appears to have invented it in order to prove that the God of Genesis was superior to the God of the *Timaeus*. The Platonic 'myth' had pictured the latter as forming the (sensible) world out of empty space, and as having as his models the eternal 'Ideas'; so Philo thought he could go one better by declaring that *his* God created the world out of nothing. He supported his contention by mistranslating the first chapter of Genesis, which was really a Jewish adaptation of Babylonian myths describing how Bel, the Sun-god, slew Tiamat, the Dragon of the Deep, or Ea, the Fish-god, fished the earth out of the waters of the 'Abyss.' A correct translation would have brought out the fact that in the Hebrew version also these 'waters' were a presupposition of 'creation,' and that the God of Moses also made the cosmic order out of chaos, and not out of nothing.[1]

[1] Cp. C. M. Walsh, *The Doctrine of Creation.*

It was a further difficulty about the notion of creation out of nothing that most languages refused to recognize it, and had not evolved the means of expressing it at all.[1] It had not occurred to their makers to distinguish between *making* or *shaping*, out of pre-existent material, and 'creating' *de novo*. In French, for example, *créer* has to do duty for both these ideas. English and German are peculiar in making the distinction, but even they exhibit the difficulty of making it, by specializing different words to express it. The English *create* originally meant to 'generate,' the German *schaffen* is the same word as our 'shape.'

Clearly the doctrine of creation out of nothing was in every respect in a precarious state, and it is a marvel that the Christian Church adopted it. Yet we have found that the Christian Church was right, and philosophy was wrong. A world that generates novelty *is* creating itself out of nothing. It must be pronounced capable of arising out of nothing; only we must add that the creative process is still continuing.

Moreover, it is clear that this process has great religious value. A world of which the being is constant and fixed has one great and irremediable defect. It cannot change for the better, because it cannot really change at all. It is already, and for all time, and despite all appearances to the contrary, as good as it can be. Also as bad. It disappoints no expectations, but leaves no room for hope. *Tout est donné.* All the cards are on the table, and we can judge whether our hand is worth playing. We can therefore decide upon its value here and now, and take it or leave it. Whether we decide for it or against, approve of it or repudiate it, it has no halo of possibilities, of romance. It has no future. It is essentially 'eternal,' fore-doomed to be a 'heaven' or a 'hell' (as may be); and, in either case, a prison and a bore.

On the other hand, a world which is still 'evolving,' creating, and re-creating itself, has room for the realization of all ideals. It can become better, and even, conceivably, completely good. Thus there is no finality about its evils. Nor, of course, about the judgments passed upon it. We

[1] Cp. Chap. XVI, § 1.

need never despair of it, if we do not despair of our good will and intelligence. For that it is becoming what it becomes may in part depend on what we *will* and what we *do* and how we determine its indeterminations. Some of the novelties it generates may be of our own invention!

But of course the choice between these two worlds will not be agreed upon alike by all. Some will prefer the one, others the other. The conservative will opt for the world whose evils are customary, known, and calculable. So will the pessimist, unless he really thinks he is living in the worst world possible. The optimist will prefer a world capable of betterment, because he instinctively hopes for the best and trusts that the sinister possibilities of deterioration will not be realized. The adventurous also will welcome a world that is more fun and promises novelties, and will trust himself to cope with them.

In short, this whole issue as to the ultimate validity of Novelty seems to resolve itself into a question of valuation. Two opposite valuations seem possible, both starting from the equation 'Novelty = Creation.'[1] If we approve of it, we shall value it as 'divine,' and shall say 'Novelty = Creation = God.' If we disapprove of it, and are keenly sensible of its fiendish insecurity, we shall have an equal right to declare that 'Novelty = Creation = the Devil.'

Between these alternative valuations each of us must choose. Each of us will choose the one that appeals more to him, the one more consonant with his nature and tastes, and no one can presume to dictate his choice. For values are not only facts themselves, but the ultimate determinants of all the 'facts' we recognize, and so questions of valuation are the most ultimate of all. Hence differences in valuations are irreducible, and not amenable to coercion by logic or by fact. They attest man's ultimate control over his experience: whatever it may be, *he* has the last word, and even at his last gasp, like Prometheus agonizing on the rocks of Caucasus, he can defy Zeus, and pass his judgment on the world.

[1] Another interesting equation to investigate would be 'Novelty = Miracle,' and the interest of the religions in this is obvious. But I cannot follow out its consequences here.

# CHAPTER XVIII

## *A Philosophic Survey*[1]

### I—THE METAPHYSICS OF CHANGE

IT is not the purpose of these articles to propound anything very recondite and abstruse, to develop, say, a metaphysical theory hitherto unheard of, and to prove it in ways that elude the ordinary understanding. They are intended merely to put forward some reflexions on the present state of our knowledge of the real world and our life in it, which are philosophic in the sense that they are not restricted to the assumptions and conclusions of any one special science, but rest on a general survey of all the relevant and available data. Inasmuch as the sciences are always growing, such a survey will be in order at frequent intervals, and any intelligent philosopher should be able to make it. The only thing in which these articles can claim to be distinctive is that no attempt will be made to exclude human personality and even their author's idiosyncrasy. For perhaps the deepest difference between philosophy and science lies in the fact that philosophy cannot in the end make the abstraction from personality by means of which the sciences so skilfully lay down the common ground on which they operate. The philosopher, on the other hand, is burdened by the double task of weighing the conclusions of all the sciences, and of taking into account, also, the personal data which every science officially omits and every philosophy tacitly builds on. Hence, strictly speaking, there must be as many meta-

[1] These four 'Forum' Lectures appeared in the *Personalist*, 1932-3.

physics as there are philosophers, and none of them can be valid for all types of personality, and conclusive, whether as coercive or as satisfactory, for any but their authors.

In this article, moreover, it will be convenient to start not from the most concrete and familiar facts, but from the most abstract and general. Instead of reasoning from obvious facts to underlying principles, let us first establish principles and then proceed to their application. This is not the easiest procedure to follow, but it has certain advantages. Thus I find I am suspected in some quarters of being incapable of metaphysics, a suspicion which seems to prove at least that I have lived down the indiscretions of my youth and the memory of my early encounter with the *Riddles of the Sphinx*. Nor is this the only reason for administering first what may seem a rather stiff dose of metaphysics, and for daring to discuss the ultimate issues raised by all our attempts to understand the world. It is, after all, the logical order to begin with first principles.

## § 1

This being premised and understood, let us begin our reflexions with the metaphysical import of what we may provisionally call the fact of *Change*. There may be drawn from it certain important implications bearing on the creation of novelty and the value of the historical method of explanation; but to begin with I shall have either to justify my audacity in calling change a fact, or else to apologize for it. I prefer to justify it. Perhaps I shall be allowed to do so by saying that by 'fact' I do not mean ultimate reality, but rather apparent fact; I mean anything which will serve as a starting-point. In this sense change surely is an undeniable fact. Everything that exists, everything that we can start from, including the person who observes the change, appears to change; therefore, is it not possible, natural, and worth inquiring whether this appearance is not a good sound datum for philosophic speculation, and not an illusion to be deprecated, disavowed, and dropped?

Yet there is nothing most philosophers have been more reluctant to admit. They have cudgelled their brains, tortured their thoughts, and strained the resources of language, in order to escape from admitting the reality of change. They have turned it into a problem, a paradox, and a contradiction. Ever since the days of the Eleatics they have professed themselves unable to understand how change was possible. They have proclaimed it a paradox that a thing could change and yet be the same, that it should be able to preserve its identity in change; they have insisted that there must be in it something that did not change.

They sought, therefore, to discover this immutable core of mutability. In the end, driven to desperation, they had to denounce change as a logical contradiction, as a defiance of the primary law of all thought and being. For did not the changing thing impiously contrive both to be what it was, and also not to be it? Was not change 'becoming,' a self-contradictory union of being and not-being? When a chicken hatches or a kettle boils, the egg both is an egg and is ceasing to be one; it is becoming a chicken without as yet being one; while the water, similarly, is passing through what may be conceived as infinite gradations of temperature from cold to hot. Change, therefore, is condemned as a revolt against rationality, which the reason can never grasp nor sanction, although an incurable cheat of the senses seems to attest it; and philosophy can do nothing but ignore it sternly.

Despite these specious arguments, however, let us not surrender the reality of change, nor admit that the objections to it are sound. In the first place, it cannot be admitted that the only way of establishing the reality of change is by a metaphysical deduction *a priori*. It may well be too elementary a fact about reality for any such procedure, and direct personal experience may well be a more adequate way of apprehending it. At any rate, it is a way which appears to be open to us all. We all change continuously throughout our whole life, and we do not

find it at all difficult. In fact, we find it impossible not to change. We all have, therefore, plenty of experience of what it *feels like* to change and yet to remain ourselves : upon that model cannot we construct our theories of what change may be in other things ?

Now, when we thus examine change and identity-in-change in ourselves, we find that many philosophic fancies obtain no support. In the first place, change is not normally catastrophic and incalculable, but gradual, continuous, and orderly. I may now remember nothing of what I did, felt, and thought at the age of five, and I may have already forgotten some items of my experience of five minutes ago ; but there is continuity and memory enough in my life to keep me interested in my past and in my future, and it is this continuity that I express by saying I am the same, though I have changed. True, if by a stunning blow or psychic shock I were to be totally severed from my past, my identity would be destroyed, perhaps for ever : but the recorded cases of such happenings, such as those of Miss Beauchamp and the Reverend Mr. Hanna, suggest not only that identity may be destroyed, but also that it may be recovered.

§ 2

Self-observation shows that in a changing self we cannot discover a part that changes totally and another that is totally unchanged. It is just as well that this is so, for else we should be confronted with the insoluble problem of uniting an ever-changing with an immutable part in the same self, and their encounter might end like that of the irresistible force and the insuperable obstacle. That is, they might refuse to meet, and prefer to cut each other ! Actually, change seems to pervade the whole self, though with various degrees of intensity. The natural way of expressing this is to say that in some respects we change much, in others little. And if this way of changing is permissible and possible for us, why not for other things ? There is no basis in experience, therefore, for

the philosophic fancy of any unchanging substratum of change—and we should rejoice to get rid of it, for we could never hope to understand how a thing made up of two heterogeneous and discrepant parts could have any cohesion or unitary nature.

§ 3

The alleged self-contradiction in the notion of change turns out to be mainly prejudice and misinterpretation. It misconstrues the relations of rest and motion and the verbal fact of predication. It is, of course, a fact that in predicating we say 'is,' and so predicate 'being' of any 'becoming' we may be describing. In the very act of describing a change, we say 'the water is boiling,' 'the egg is hatching.' But when we *say* these things what do we *mean*? Do we mean to say that change is impossible? Do we mean to assert a being absolute, static, and immutable about an ever-changing flux of becoming? Do we mean to commit ourselves to an absolute dualism between being and becoming, rest and motion, reality and appearance, reason and sense? Do we mean to denounce all the most obvious and familiar features of our world as impossible, or, at any rate, incomprehensible? No doubt, ever since Parmenides and Plato, most philosophers have put this strange interpretation on these facts, but is it impossible that they were mistaken? Must the plain intentions of those who use the little word '*is*' yield to its verbal meaning? Cannot another construction be put upon our use of it? May it not be a mistake to smuggle this whole metaphysic into it? Must our recognition of it as the first word of logic commit us also to taking it as the last word of metaphysic? Surely, all these questions answer themselves!

Actually, of course, the common-sense of the human race has never allowed itself to be beguiled by this philosophic nonsense. After listening to Zeno's conclusive proof, by Eleatic dialectics, that motion was impossible, his hearers, nevertheless, got up and walked out; but

even after this humiliating experience Zeno had not the wits to see that he had suffered a practical refutation, and that if he wished really to prove either his own doctrine or his own belief in it, he must stop wagging his tongue!

This *solvitur ambulando* way of confuting philosophic paradoxes has had great vogue ever since, except that the audience no longer walks out. It no longer walks into the lecture rooms in which philosophers are airing their absurdities. Nor can this mode of confutation be invalidated by calling it practical rather than theoretic; it is all the more effective.

§ 4

There is, however, another way of confuting Eleaticism which is more respectful. We can call in question its interpretation both of the logical fact of predication and of the physical facts of motion and rest. It is not, after all, inevitable to take the *is* of predication as asserting immutable being and to declare the terms predicated rigid and unchanging.

It is possible to dip Logic itself into the flux and so to take the starch out of its Formalism. In fact, it has been done. I have for many years challenged Formal logicians to meet the contention that every significant predication inevitably changes the meaning of the terms it uses, and no one has refuted, or even faced, my argument. It runs thus: Whenever the formula *S is P* is used to convey a real judgment—that is, one which really embodies and conveys fresh information—the meaning of its terms thereby undergoes a change. Its subject S *becomes* an S-of-which-P-may-be-predicated (which it was not before), and its predicate P becomes a P-which-may-be-predicated-of-S; thenceforth both these developments, in virtue of the judgment's success, form part of the meaning of S and P. So the assumed immutability of logical meanings or 'concepts' is simply a logical blunder.

A blunder in physics, similarly, seems to underlie the prejudice against the reality of motion. Rest is not a physical fact at all, for none of the bodies said to be at rest

is so really for the physicist. Rest is always relative, and with reference to other bodies which themselves are in motion. Hence rest is really a *psychological* fact, and the prejudice in its favour is nothing but a revelation of human laziness.

Thus the metaphysical case against change breaks down utterly. There is no reason why the real should not really change, as it seems to do, and there is no reason why we should not apprehend change as we seem to do, viz. by directly experiencing it in our own persons. There is not even any reason why we should not proceed to understand the real on the assumption of the reality of change, and succeed better in this way than we have ever done on the assumption of its unreality. Let us therefore try this alternative.

§ 5

Only, of course, we must be willing to make the necessary readjustments, both in our metaphysics and also in our physics. Let me briefly indicate them. (1) We must not continue to believe that what we call the Laws of Nature are necessarily eternal and immutable. Eternal and immutable laws are merely *a priori* deductions, consequential on the old static conception of reality as incapable of change. Instead of this lazy deduction, let us treat our laws as just the habits of nature wherever we think they are objective, and let us observe nature without prejudice. But let us remember also that *subjectively* laws are just devices for predicting the course of happening. We shall, of course, *prefer* to find constancy in nature, and shall therefore look for it; but when we find it, we shall hesitate to declare it absolute on insufficient evidence. We shall naturally construe the constancy we find as due to the stability of *habits*, often of great antiquity and deeply ingrained, but not, on that account, to be regarded as immutable. And we shall have the consolation that this new way of regarding laws of nature is much sounder in logic and more in accord with the actual practice of the sciences. Incidentally, we shall find it much easier than

philosophers now suppose to think of nature as changing her ways and of her laws as evolving. It will also be ever so much more interesting, and even thrilling.

We shall (2) be entitled to scrap such ancient saws of proverbial wisdom as *there is nothing new under the sun*, and with them all the despondent arguments that something delightful and desirable cannot be done, because it never has been done. What has never been possible throughout the aeons may become possible to-morrow ; or again, we may have to wait another million years for it. But there is no point in declaring it impossible *a priori*. That is merely discouraging, and may deter us from rendering it possible. We thus get a good methodological reason for not declaring impossible anything it would be desirable to achieve.

Least of all (3) should we declare the occurrence of real novelties impossible. Rather, we should hold that the world is at least as full of novelties as it seems to be, and that the daily experience of the merest ignoramus is a better proof thereof than all the *a priori* demonstrations of logicians are a disproof.

## § 6

But we should be willing, also, to pay the full price for the recognition of Novelty. (1) Novelties justify the concept of creation ; but they set limits to the confidence of our predictions. And they play havoc with a very widespread notion of causation. For they render unpredictable the new *qua* new, and more or less unpredictable all things into which an appreciable element of novelty enters. If, then, all events have novelty inherent in them to some degree, they all escape to that extent from the control of causal 'law.' They become free, and unpredictable.

But let us not be terrified by this conclusion. Let us not plunge at once into the desperate inference that therefore the cosmos has collapsed and anything may happen. Let us not listen to the alarmists who assure us

that if every tiniest crevice whereby free will may creep into the cosmos is not hermetically sealed, its whole order crumbles and chaos triumphs. Let us remember rather that the same argument which entitled us to recognize the possibility of novelty and indetermination entitles us also to determine their frequency and extent *empirically*; we can then see that neither appears to be a serious obstacle to quite as much calculation as we can achieve, nay, as we really need.

Let us remember, also, that the assumption of causal laws was one of many devices by which man has sought to make predictable the course of events. It was not the first or the most obvious of the devices tried, though it has proved the most successful in the end. Nor was it easy to make it work: it demanded a goodly number of fictions and abstractions. Indeed, it abstracted from so many items in the facts that it never could work exactly. So the admission that it cannot conceivably work exactly, because the real generates novelties and is not determined absolutely, will cost us nothing, practically. Nor yet theoretically, because we can still use determinism as a methodological assumption, without believing it to be metaphysically and absolutely true. We shall continue to use it, for all the uses we can put it to, simply because there is no other way of predicting whenever we desire to calculate. But it should give us much metaphysical relief to reduce determinism from a final truth to a rule of method.

## § 7

The physicist has really, nowadays, much the same problem of readjustment as the metaphysician. He also has had to take over a set of static laws presumed to be eternal and immutable and to make them work upon the ceaseless flux of phenomena. But he lacked the metaphysician's easy resource of loftily declaring the phenomena illusory, when they failed to conform to his preconceptions. He could not rid himself of the phenomena. He could not disavow the duty of predicting what would happen.

He could not flatter himself that when phenomena gave the lie to his predictions, it was merely so much the worse for the phenomena. Their behaviour has had the power to force him to revise his laws; nay, it has power to force him to revise even his conception of law. So, in due course, and after desperate resistance, he has had gradually to face the idea of a changing reality. At first he did his best to struggle against the unwelcome idea. He tried to compromise by formulating a cosmic law of evolution, supposed to be calculable *qua* law, and reducing change to an *unfolding* of what had been eternally involved. But latterly he has been forced to go further. He has partly realized the fictions which are latent in his notion of natural law. He is now willing to admit that his laws are statistical, and exhibit only the constancy of an *average*; they do not prove a real uniformity of individual behaviour.

§ 8

(2) It follows, however, that natural laws do not really prove that individual behaviour is completely determinate. Indeed, in some cases it has to be admitted that certain events are theoretically unpredictable. If anything, the physicist is now inclined to exaggerate his impotence. For, so far as I understand it, Heisenberg's Principle of Indeterminacy involves a greater renunciation of the scientific ideal than the situation actually demands. It is no great marvel that it should be impossible to determine both the place and the velocity of an electron simultaneously, if the only way of observing electrons is to throw light upon them, and if this operation has the effect of sending them scurrying away. Moreover, the underlying presupposition that observation must be presumed to make no difference to the objects observed is grossly blind to the operational character of human knowing, which pragmatism has brought to light. Lastly, there is nothing whatever in Heisenberg's principle to stop us from using determinism as before, wherever we can, *i.e.* as a principle of method.

(3) Thirdly, what is probably more important than either the modifications in the conception of natural law or the limitations in the application of determinism to physical phenomena, is the discovery of what Eddington has picturesquely called Time's Arrow, *alias* the one-way character of cosmic change. This is plainly incongruous, if not incompatible, with the belief in an eternal and immutable cosmos. It means that we pass through reality as through a one-way street. It means that the real always has a history which it behooves us to remember, and that everything is what it is in virtue of what it has been through. It suggests the thought of a world-drama and a cosmic history. It points back to a beginning in creation, and forward to a consummation or a catastrophe. It gives scientific body to the anticipations of the wildest mythologies and to the fancies of the bizarrest philosophies.

## § 9

Let me substantiate this last remark by telling one of these creation-myths and then comparing it with what was said about the evolution of the universe at the Centenary Meeting of the British Association for the Advancement of Science in September 1931. The creation-myth in question is told in a book called *The Philosophy of Salvation* (*Die Philosophie der Erlösung*). Its author, a young German pessimist named Philip Batz, who wrote under the pseudonym of Mainländer, started, quite in the orthodox metaphysical style, with the problem of the One and the Many. After long reflexion he decided that, though both were indispensable, they could not be thought to coexist: for if they were real *together*, the One must inevitably swallow up the Many and annul their reality. So they could only exist successively. But the One could continue to unify the Many, even after ceasing to be, if their unity were construed, like that of the organic world in Darwinism, as a *unity of descent*.

So he constructed his myth. In (or rather before) the beginning there was nothing but the One. The One was

absolute, and was the All; but it was bored. So it recognized that existence was evil, and got out of it. Out of this creative suicide of the One the world was born. Its components are the many fragments of the Absolute, held together by their common descent from the One, and all participating in its ancestral impetus towards extinction. So the whole universe is petering out. Only, as the Absolute was so great and powerful, the extinction of the Many seems to us a slow process, and takes much time. The impetus all things derive from the One is, however, a sure guarantee that in the end complete annihilation will be achieved. For empirical confirmation of this theory Mainländer appealed to the law of the dissipation of energy, as it was then called, which was already known, though the finiteness of the universe and the break-up of the atom had not yet been suspected. Further, he was so pleased with his theory that on receiving an advance copy of his book he sent a bullet through his head, feeling that he had done his bit by pointing out to the suffering Many the pathway of salvation which all were bound to follow.

With this pathetic tale compare the following quotations from the Report in *Nature* for October 24, 1931, of the Discussion on the Evolution of the Universe. I will quote first from the paper of Abbé G. Lemaître of Louvain, one of the authors of the theory of the expanding, or rather exploding, universe. Premising that "a fireworks theory of evolution is needed," he suggests that the highly penetrating cosmic rays which fall upon us from space "were really produced by the process of the formation of the stars," and have been travelling round the universe ever since. For as "the stars are surrounded by an atmosphere, and an atmosphere would altogether prevent any escape of cosmic rays from the inside of a star," it must be supposed that "the cosmic rays went off from the stars at a time when the stars had no atmosphere. The stars are born without atmosphere, the atmosphere evolved after the escape of the cosmic rays . . . some 10,000 million years ago." He then argues that since atoms are known to

disintegrate, and no limit can be set to their size, the cosmic rays may have "escaped from a big-scale super-radio-active disintegration, the disintegration of an atomic star, of weight comparable to the weight of a star."

We need only go two steps further, and assume with Professor F. S. C. Northrop a 'macroscopic' atom dissociating into a universe, and with Sir James Jeans envisage a final state in which (p. 702) "all matter is dissolved into radiation and nothing remains but radiation traversing empty space," to arrive at the essential ideas of Mainländer's metaphysical dream.

## § 10

But whether or not we welcome the notion of an expanding but not unlimited universe, having an origin in the past, a process of evolution and a term of life—and whether we welcome it or not will be largely a matter of taste—it is clear that the axiomatic presuppositions of the old physics have gone by the board. As Jeans says, "there is conservation neither of mass nor of energy" (p. 704), and the philosopher will easily console himself for their loss, if he is allowed to point out that neither was ever proved except by arguments which presupposed it, and that logically both were nothing more than methodological assumptions.

He may then point out that, abstractly and apart from the empirical evidence, there are three or four possibilities, all equally thinkable. The universe is such that the quantity of Being is either (1) constant, and neither increases nor diminishes (this is the assumption of immutability, and has the advantage of being the simplest, and no other); or (2) steadily diminishing, as Mainländer supposed. (This alternative gets strong empirical support from physics and the dissipation of energy, which is a consequence of the second law of thermodynamics. But (3) the quantity of Being may be increasing. This possibility may be suggested by the trend of psychic life. It may also be shown to underlie, dimly apprehended, some

of our dearest prejudices about evolution. (4) It is also possible, of course, that if Being is of different kinds, each of these three processes may be exemplified by some of it, so that the actual course of events may be a diversified resultant of all three.

This raises two big topics, viz. what is the actual course of evolution, and what we should mean by this popular notion. Both must be reserved for the next chapter.

# CHAPTER XIX

## II—THE MEANING OF BIOLOGICAL HISTORY

WE are probably by now sufficiently removed from the bitter controversies which accompanied the rise of Evolutionism to discuss the implications of Evolution in a calm and philosophic spirit. When we do this, we can hardly congratulate any of the parties to these controversies. We cannot say that either the scientists or the theologians or the philosophers behaved creditably, or covered themselves with glory, by their reactions to the new ideas.

The scientists showed themselves very blind to the wider philosophic implications of the idea of cosmic evolution. This might, perhaps, have been expected, since they were not philosophers; but they had little excuse for failing to work out the relations between evolution and progress, and none at all for mixing up evolution and epigenesis, and for saying the former where they ought to have said the latter. Lastly, they were badly deluded about the logical implications of evolution, and greatly overrated them; in particular it was a delusion that they had at length finally confuted teleology.

The theologians, on the other hand, were very stupid to have allowed themselves to be thrown into such a panic by the scientists. For not all of the new ideas were hostile to their thesis. They could have disarmed their foes by blandly accepting all the scientific facts and putting their own interpretation upon them. Thus they could, and should, have said: "Thank you very much. Evolution is very important, and very welcome. It reveals to

us what we have long sought to know, namely, the method of creation. And it finally refutes the profoundly atheistic notion of an immutable, mechanical universe. But we think you are curiously one-sided and unfair in your treatment of biological history. You seem to regard it merely as a way of developing the higher organisms out of the lower, that is, of reducing the higher to the lower. But you should view it also the other way round. The lower organisms have led up to the higher, and you should reconsider them, and your view of the whole process, in the light of what they have been able to achieve. So you should not merely construe biological history as tracing man's descent from an ape, but should also conceive the ape as capable of ascending to manhood. In a history the conclusion is surely at least as significant as the beginnings, and, seeing that the end is not yet in sight, may not the chief value of the study of the past history be to reveal to us the trend and purpose of events, and to point to a future consummation ? Secondly, may we be permitted to point out to you why we think you wrong in imagining that you have rendered superfluous and untenable the whole idea of teleology ? "

Lastly, the philosophers were very slow in appreciating the very novel and important implications the new ideas had for philosophy, not only for metaphysics, but also for ethics and logic. For example, I believe that I was the first to point out, in 1912, that Darwinism entailed a revolution in logic.[1] For Darwinism enabled science to explain the likeness of the individuals of a kind by their common descent, and rendered superfluous the assumption of Platonic universals. It thereby completely vindicated the nominalistic conception of kinds as conveniences of human classification.

Instead of assuming a reasonable attitude to the new ideas and appreciating their value, all three parties lost their heads and their tempers. We need, however, to concern ourselves only with the scientists ; for they, after

[1] This discovery was not noted again till 1931, when Mr. M. B. Foster thought he had made it for the first time. See his article in *Mind* for January, p. 16.

all, were the originators of the whole commotion. Let us begin, therefore, with a logical analysis of Darwinism.

Scientifically speaking, the primary importance of Darwinism consists in the fact that for the first time in history a rational explanation was given by it of the multifarious likenesses that pervade the world of living organisms; it replaced myths by facts. It explained why a dog was so like a wolf, and a cat so like a tiger, while a dog and a cat were far more unlike. Likeness was explained by the principle of community of descent: the greater the likeness between two species the nearer they were to a common ancestry; the more unlike they were the further they had diverged from a common stock.

To explain further how a common ancestry might lead to a differentiation of species, Darwinism relies on three conceptions. They may be called Heredity, Variation, and Natural Selection. The last of these is the elimination of the unfit or less well adapted, which is a necessary consequence of the struggle for existence, resulting from the natural fertility of living organisms. Heredity is the conservative principle, in virtue of which offspring resemble their parents. In beings with sexual reproduction this resemblance is never complete, for the offspring inherit their qualities from both their parents. This produces *part* of the variability which distinguishes living beings. But not, it would seem, the whole; for variation occurs also among organisms which reproduce asexually (like bananas !). Variation, therefore, comprises not only the reshuffling of already existing characteristics, but also the intrusion of definite *novelties*. It is thus the pigeon-hole Darwinism provides for creative novelties of the sort which produce the one-way course of the real. It is the principle and source of innovation. But it seems to belittle creative innovations by calling them " accidental variations." We shall presently see how important it is not to misinterpret this phrase.

The third principle of Darwinism, Natural Selection, would appear to be a piece of purely mechanical sifting. It is *not* creative; it originates nothing, and merely

eliminates. Moreover, it is applicable, not only to living organisms, but to any aggregate that can be sorted. *E.g.* a river current carrying detritus into the sea will drop the heaviest stones first, then the lighter, and will finally deposit the finest mud. Hence it may be said to have *selected* this and eliminated the rest, if mud is what we are interested in. Of course, although the process is mechanical, it may enter into a purposive *technique*, as in the recovery of gold from a gold-bearing gravel. It is, however, on account of this aspect of natural selection that we can speak of the evolution of what we consider inanimate things, such as the chemical elements or the stars.

From the interplay of these three factors Darwinism undertakes to derive all the varieties of organic life. It argues that since every kind of living being can produce far more young than can possibly find subsistence, only a small fraction of those born can survive to reproduce their kind. The rest must be eliminated. But this elimination is not a wholly fortuitous process about which nothing can be predicted. For organisms are not equally equipped for the battles of life. They vary. Some are better able to adjust themselves to the conditions of life than others. Hence they survive better. This is the Survival of the Fittest, or rather, of the fitter. The fitter, therefore, leave more descendants than the unfit, and transmit to them their superior qualities. And as there are many sorts of fitness, and life is supposed to vary indiscriminately in every direction, Natural Selection will constantly be splitting up one species into many, each adapted better to its own way of living. Both biological history and the present nature and distribution of organisms may thus be accounted for.

An important philosophic corollary is further said to follow. The Darwinian theory is said completely to dispose of the Argument from Design, and to account mechanically for the teleological appearance of the organic world, which has always been its chief support. This appearance is declared to be illusion and pseudo-teleology. For the whole development of adaptation in an as yet unadapted organism is really a wholly mechanical process.

The argument runs thus. Let 100 represent the *optimum* value of a quality conducive to survival, say speed, and let an actual organism, say a rabbit, possess it to the extent of, say, 10. Then rabbits will be selected for, and by, their speed. Since organisms vary, if their present speed is, on an average, 10, some rabbits will have a speed of 12 and others only of 8. Now let the struggle for existence be so severe that only the best equipped rabbits can survive to leave offspring. The next generation of rabbits will then be descended wholly from the fastest rabbits, with speed 12. This speed they will transmit to their offspring, as their average. But there will still be variation, let us say between the speeds 10 to 14. Again the devil will take the hindmost: natural selection will eliminate the slow ones, and only those with the speed 14 will survive. Thus in each generation the speed of the rabbit will increase, until the optimum 100 is reached, when the rabbit will appear to be as fast as it need be, and so to be perfectly adapted. Yet the whole process has been purely mechanical. *Ergo* an apparently teleological world can arise by a purely mechanical process. *Q.E.D.* And teleology is needless.

Is this argument conclusive? It is generally taken to be so by scientists, but it contains a number of fatal flaws.

(1) The argument's claim to have superseded teleology is unfounded: it has really presupposed it before beginning to explain it away. It did not generate adaptation out of nothing, but presupposed it to the extent of the rabbit's original speed of 10. Had not rabbits been able to run, however slowly, natural selection could not have speeded up their performances. So with every other valuable quality which is fostered by natural selection. However far back the history of life is traced, a living organism must always be presumed to be endowed with sufficient organs to live, *before* any question of its surviving *better* can arise. *This* degree of adaptation, therefore, cannot be ascribed to natural selection. So it is simply untrue that the teleological appearance of life has been accounted for *completely*.

The argument from an ordered world to an ordering intelligence is *not* disposed of, and still holds.

(2) The growth of adaptation is made much too simple an affair. Only an adaptation to a static and unchanging environment is contemplated. But such is not the usual character of a living creature's environment. A large and important part of it is always composed of *other* living beings that affect it, either as enemies or as food-supply. These, moreover, are equally subject to natural selection, and are improving their adaptations similarly. So the struggle for existence becomes a competition between species that are changing at equal or at similar rates, and it does not follow that either is gaining on the other in the race. We cannot argue from the continuance of *adapting* to a growth of *adaptation*. Hence the survival of one species will depend not only on its own efforts, but also on those of others. To illustrate what really goes on in nature, we should take a more complex case than that of running rabbits: we should consider also *from whom* the rabbits are running away!

Let us take the case of the bird and the worm, and consider the relations of dependence between them. The bird adjusts himself to his conditions of life by catching the worm, the worm by eluding the bird. The result as a whole is a drawn battle. By getting up early the bird catches enough worms to live; by retiring betimes into their burrows, or by emerging only after the last bird has given up the chase in disgust, enough worms escape the birds to keep up the supply of worms. But this is just as well for the birds. For if they grew too expert in catching worms they would devour them all and so could not go on living on worms; they would have to find another food-supply or starve. So each party is in a way adapted to the other. The bird arrests the excessive multiplication of worms, and the supply of worms sets a limit to the number of the birds. How long has this equilibrium of nature existed? In principle it must always have existed. The Miocene thrush must have caught and eaten Miocene worms with the same zest, if not with the same skill, as the

modern thrush eats modern worms. In all probability it made as good a living, and no better. For though since then birds may have become more expert in catching worms, so have worms in eluding birds. On balance, therefore, neither is better adapted than before, although no doubt a Miocene thrush could not have caught a modern worm, nor a Miocene worm have escaped a modern thrush. In other words, there is no growth in the degree of adaptedness. The balance of nature depends on this very fact. There always has been adaptation, and there always is adapting; but it does not follow that adaptation is increasing. Generally speaking, it does not. A stable and apparently static balance of nature is usually presented.

Hence (3) another interpretation suggests itself. Instead of saying natural selection *produces* adaptation, we should say natural selection *preserves it.* It is the *mechanism* whereby an already existing adaptation is automatically adjusted to changing conditions of life, and it is an excellent mechanism, just because it functions automatically; but it neither accounts for the origin of adaptation nor does it guarantee its growth.

It need not be denied, of course, that as a matter of *fact* there seems to have been a real growth in adaptation, in certain respects, and in certain lines of descent. For example in the pedigree of man. Man has really bettered his position in biological history. He has spread all over the earth. He has become more powerful than his ancestors, and now dominates the earth as never before. That is a fact, but it is an exceptional fact and the reason for it remains obscure.

To understand the precise point of the growth of adaptation, of biological *progress*, we shall do well to analyse the meaning of the word 'evolution,' and the confusion of thought which it occasions. The word begins its career in the context of a physiological controversy in the early eighteenth century. The dispute was whether the development of an ovum proceeded by 'evolution' or by 'epigenesis.' According to the evolutionists the limbs

of the adult animal already existed preformed in the egg, and merely had to be unfolded or unwrapped; whereas the believers in epigenesis held that they grew on as novelties. In the end the evolutionists were defeated; but their watchword triumphed when it was taken over as the name for biological history, as it revealed itself to the Darwinians of the nineteenth century. It was not emphasized that the choice of 'evolution' meant a denial of novelty, and should have meant a repudiation of the notion of progress. For it still implied that nothing was unfolded but what had been wrapped up in the beginning.

Soon, however, it appeared that biological history had had a trend which it was hard not to term progressive. It was full of novelties, and seemed to move in an upward direction, which had culminated in man. Human vanity, therefore, as well as an unbiased survey of facts, was soon pledged to conceive it as an upward progress, as a process of betterment. So 'evolution' took on the old meaning of epigenesis: it was dubbed a 'law,' and widely construed as a guarantee of progress.

On closer inspection, however, difficulties arose. The progress actually observed was plainly a *result*, and not a law; nor could a law be found, from which it could be deduced. From none of the three factors in Darwinism could a logical guarantee of progress be derived. Moreover, many cases were soon observed in which biological 'evolution' has led to degeneration. Even man was full of degenerate organs. His fur, his claws, his fangs, his ears, his appendix, were obviously degenerate. It was equally clear that on Darwinian principles if an organ ceased to be vital and to be kept efficient by natural selection, it would degenerate, and that no limit could be assigned to such processes either in theory or in fact.

This left the biological progress, which had occurred, up in the air. It was an empirical fact, but no theoretic explanation was forthcoming for it. It left unknown the cause of progress. It left a *lacuna* in the theory of evolution, and left it open to any one to fill the gap with any suggestion that would impart a progressive trend to bio-

logical history. And was not this once more to fling open the gates whereby teleology might march straight into the citadel of Darwinism?

What could Darwinians do about it? Strict adherence to their principles would have required them to admit the fact, but to deny it all significance. They could, and should, have said: "You are right. There is *nothing* in Darwinism to guarantee progress. Progress, however, may occur as a casual result. It will occur if and when it is conducive to survival: so will degeneration. In so far, therefore, as progress *has* occurred, it has been an accident, a fortunate accident, if you please, but still a piece of luck. There is no reason why it should continue. It may cease any moment. And it *means* nothing. We have no right to smuggle our teleological interpretations into the course of history just because we flatter ourselves that we are the consummation of creation."

But this strictly Darwinian answer would have been extremely unpopular. For we are all, even the biologists, wishful to believe that the process which has ended in us must be something fine and significant and destined to endure. If we wish to justify our natural bias and to escape from this depressing view, we had better pry a little deeper into the Darwinian notion of 'accidental variation.' Let us raise the question whether it should be construed as actual, positive fact or as an assumption of method. Now Darwin himself appears to have meant by it nothing more than a methodological assumption designed to bring out the working of natural selection.[1] *I.e.* he meant that he was *not* going to assume that the variations subjected to natural selection had any definite direction or trend. They were to vary fortuitously in every direction, in order that they might not be able to help or hinder or cloak the processes of natural selection. Now, so taken, the notion of accidental variation was a perfectly good and legitimate postulate of method. It was not, and did not profess to be, a statement of fact about the actual character of the variations called 'accidental.' For this had not then been

[1] Cp. *Humanism*, chap. viii.

examined, nor has it adequately been examined yet, nor can it ever be examined sufficiently to rule out certain alternative interpretations. Suppose we had empirically found a slight preponderance of variations in a certain direction, we could not prove either that it was teleological or that it was not. Scientific method will always permit us to take it as accidental, but in so doing it is arguing in a circle. The data are essentially ambiguous, and compatible with either view.

But there is, of course, another way of construing an 'accidental' variation. It may be taken as a statement about the actual character of the variation. In this case it is a dogmatic statement of fact. As such it is unproved, and perhaps false; but it is undeniably important. For it will then carry the consequence of *excluding* the operation of intelligence from the sphere of biological history; it will rule out the argument from design. It will not, however, be a scientific statement at all, but a metaphysical, and as the scientist should not talk metaphysics, it is reprehensible!

The philosopher, however, may, and should, take cognizance of it. He should view it broadly and discuss it in connexion with the wider question of the comparative merits of causal and teleological explanation. If he is truly broad-minded and critical, he is likely to arrive at conclusions which will displease the extremists in both camps, but will make it clear that the teleological interpretation of history is far from being an exploded superstition, as the dogmatic Darwinist imagines.

The philosopher will begin by scouting the idea that causal explanation is peculiarly scientific and essentially different from teleological. He will point out that both are at bottom human procedures, perhaps all too human. For both arise from the contemplation of the same sequence, *A followed by B*. Now, in the first place this sequence is an artefact, a product of human manipulation of the given fact. It is fixated by human attention, and lifted out of the immense flux of happenings. Have we a right to do this? Only if it proves a success, and can be carried

through to our advantage : otherwise our arbitrary manipulation must be condemned as a falsification of reality. However, let that pass, and permit the procedure.

We can next take our sequence, *A followed by B*, and interpret it in either of two ways. (1) We can say, "*because* of A, B *had* to follow." This interpretation makes the sequence causal. Or (2) we can say, "*for the sake of B*, A had to be." This makes the sequence teleological. In both cases *we* have imported necessity into the sequence—as Hume was the first to observe. In both cases, also, our personal experience prompts, and perhaps warrants, us. For we are familiar alike with the production of ' effects ' by ' causes ' and with the realization of ' ends ' by ' means.'

So far, therefore, both methods of interpretation are logically on a par, and both may properly be used upon the same material. The sequence A followed by B may be viewed, now causally, now teleologically, according to our purpose in dealing with it. But it becomes more intelligible if it *can* be viewed teleologically. For teleological action is, we feel, more characteristic and worthy of us, and if it can be successfully transferred to the contemplation of nature, we should feel more at home in the universe. It is therefore important to show that it is not forbidden by the theory of Evolution.

Summarizing our results so far, what differences shall we say the theory of Evolution makes to our view of the world ?

(1) Our repudiation of the Eleatic metaphysic and our adhesion to the process view of reality are strongly confirmed. We are enabled to use, and to confirm in detail, our belief that everything is what it is in virtue of what it has been through.

(2) The occurrence of novelties is emphasized, and it is to their timely occurrence that the forward trend of Evolution must in the last resort be credited.

(3) This enables us to regard their classification as ' accidental variations,' as only a methodological device of Darwinism, and not as a statement of actual fact.

(4) If so, teleological interpretation will not be excluded.

For what seems ' accidental ' in one context, and from one point of view, may be purposive and highly significant from another.

(5) We may, therefore, legitimately entertain the hypothesis that Evolution is the method of creation, and that the aims of creation may, to some extent, be learnt from its study.

(6) The theory of Evolution yields also a positive enrichment of our logical methods. For it supports and sanctions the use of the Historical Method as a method of explanation, and encourages us to apply it to all things.

Now, about the value of this method there has been a great deal of confusion ; so it may be well to append a short discussion of its character.

At first sight a merely historical explanation does not seem to be an explanation at all. How is it an explanation of our having five fingers on our hands to say that our ancestors had this number, or even to say that pentadactylism was an original endowment of the mammalian stock ? This fact does not inform us why we did not reduce the number of our toes to three or four, like the tapir, to two like the pig, or to one like the ass ; nor, on the other hand, why we did not exploit an occasional anomaly to develop a six-fingered race that would have been superior pianoplayers, and could have devised a better, because duodecimal, arithmetic.

Hence it is commonly asserted that origin does not explain validity. For *validity* we should read *value*, since that is what is really meant.[1] But in a very rough general way the contention may be admitted. Mere knowledge of the history whereby A passes into B does not enable us to understand B any better ; nor A, for the matter of that. For it does not tell us how A contrived to become B. So the mere fact that our ancestors were once indistinguishable from apes, or even worms, is not decisive of our present status. It is certainly no reason for aping apes, or feeling like a worm.

Yet the mere protest against offering a history in lieu

[1] *Validity* is only a technical term of Formal Logic, and a superfluity at that.

of an explanation is not the whole story, either. Mere history is not enough ; but then the Historical Method is never restricted to mere history. The knowledge it appeals to is never ' mere,' nor are its facts ever ' bare.' When it discovers facts it is always in a rich historical setting, and its history is always more than a mere sequence of uncomprehended events. A historical study must be singularly dull and uninspired if it yields no inkling of the causes that were operative in bringing about the historical process, and if it suggests no guidance for the future.

Nor should it be overlooked that the historical standpoint is essentially bilateral. Not only does it admonish us that the present reality is to be understood in the light of its past, but it encourages us also to view the original reality in the light of its developments. If the man is descended from the ape, this does not merely mean that he has had a humble origin ; it means also that he *rose above it.* It means, further, that the ape was more than the humble creature he seemed, seeing that he had it in him to grow into a man.

In short, the Historical Method places at our disposal an enormous mass of relevant data on which to form our judgment, instead of merely confronting us with a cross-section of what may be merely a momentary and ephemeral present state. Should we not all prefer the diagnosis of a physician who has known us from childhood and is familiar with our constitution to that of a stranger who has merely taken the actual temperature from which we are suffering ?

Lastly, it should be borne in mind that if the real is not static but is in continuous process, only prolonged historical observation will do justice to its nature. Only a historical method will enable us to trace out its past, to understand its present, and to forecast its future. So I repeat, the real is what it is, not by the eternal accident of some immutable reality, but in virtue of what it has been through in a time process. And therefore, in reflecting on man's past, it may be wiser not to adopt the merely historical attitude which values history for its own sake, but to try to extract from it some scientific foresight of human prospects.

# CHAPTER XX

## III—THE DEVELOPMENT OF MAN

As was shown in the last chapter, the Historical Method warrants us in construing man's present nature in the light of his past. It is thus unfavourable to the assumption of sudden and catastrophic changes that interrupt the continuity of historical development. But though it naturally tries to trace the present to its roots in the past, it does not dogmatically *compel* us to regard his past history as *completely* continuous, if there is evidence to show that it was otherwise. It permits us to recognize real novelties and real beginnings, if such can be found. We are not bound to explain everything in terms of factors that were visible in it from the outset.

### § 1

No doubt we can also do this latter by the use of the Historical Method, if we like. It is always open to us to allege that the real as it appeared to be *before* the first appearance of any novelty must have '*potentially*' contained that novelty; and this is just the device which has always been used by all who were reluctant to admit the occurrence of real novelty. But, as Aristotle already pointed out, in the last resort the actual is prior to the potential, and it is the actual occurrence of some surprising event that forms the most convincing proof that it was possible. Hence nothing is really gained by appealing to the potential to account for the actual: we merely avoid a

shock to our prejudice. Moreover, once we have steeled ourselves to admit the reality of novelty, we may as well recognize its intrusions into cosmic history, wherever they occur.

It will be more difficult to decide *under what name* it is to be recognized. As we saw in the last chapter, there exists for the reception of the new the Darwinian category or pigeonhole of 'accidental variation'; and this is best regarded as a purely neutral designation, which does not *deny* teleology. But of course it may always be contended also that the accidental variation really *is* fortuitous. There would always be a chance of this, however teleological a result might seem on the surface. One might, *e.g.*, throw a thousand letters into the air and pick up a sonnet, or deal a pack of cards and find that each player had received a complete suit. There is, therefore, no complete and absolute proof that *any* course of events, however antecedently improbable, is not due to chance.

On the other hand, even the slightest deviation from the most probable distribution might be significant and an indication of teleological intervention: moreover, the most probable distribution hardly ever occurs. In tossing a penny the most probable distribution is an equal number of heads and tails; but this number can only occur when the number of tosses is even, and usually the actual result will be a slight excess of heads or of tails which approximates to equality as the tossing proceeds. So it will have to be admitted on *both* sides that the interpretation of accidental variations legitimately remains a matter of dispute: whence it is legitimate to infer that it is best to continue the study of the actual course of events while reserving judgment as to its inner character. Our judgment will always be a value-judgment in either case. To call an event fortuitous is to disparage it, and to deny it significance; to call it teleological is to admire it and to declare it a product of intelligence. But at its first appearance we may not feel ready to judge it in either fashion; we may have to wait and see how it develops. For accidental variations fully participate in the *uniqueness* of all historical events; in addition they stand out as novelties, and start new departures. No wonder

they are puzzling, and we hesitate to make up our minds about them.

Now to all appearance there have occurred in the history of life on earth quite a number of such unforeseeable novelties, which have formed turning-points in the course of events and have determined its subsequent character. To mark their significance, we may vaguely term them 'providential,' but we must remember also, that none the less they may be declared pure accidents, and that the final decision about the course of history is still in suspense. Science, moreover, is not really concerned with this question; for the purpose of scientific treatment it is enough that these incidents, whatever their source, should fit into the scheme of nature and exhibit a natural development, so that their *consequences* can be calculated, even though their *arrival* could not have been predicted.

§ 2

Let us consider, then, the first appearance of life on earth. This may, of course, be conceived as arising from the propulsion through the wastes of space, by light pressure, of minute germs that preserved their latent animation till they landed fortuitously on a celestial body where they could develop. This theory, though it seems highly improbable, is not impossible. The alternative to it is some form of abiogenesis, some generation of the living from the inanimate. In its favour it may be urged that no disproof of abiogenesis has ever been logically complete. Nothing more was ever proved against it but that life does not appear in liquids suited to its maintenance, if these have been properly sterilized. But what did 'properly sterilized' mean? It meant boiled hard and long enough to kill every living germ. But is it not quite likely that every incipient tendency in any inanimate substance to become alive will likewise have been destroyed by this same drastic treatment? So the experiment was not conclusive.

Admitting abiogenesis, however, it does not follow that

it must still be going on. The requisite conditions for it need never have recurred. The historical event as such does not recur; and in a real history, if that is what the cosmos has, the significant events need not recur. We may illustrate this by the theory that the sun acquired its planetary system by nearly colliding with another star. That event has never recurred, and we may hope it never will. The origin of life, then, may have been a unique event. What difference did it make? It generated on the earth bodies that possessed a potentiality of indefinite increase; and this we can see to be a very remarkable quality, even without indulging in calculations that, if provided with sufficient food, the descendants of a single green fly might, in a week, grow into a body equal to the earth in bulk; or that a single pair of elephants, the slowest breeding animal on earth, could cover its whole surface with elephants in 1800 years.

§ 3

After the origin of life came the origin of consciousness We cannot even form a guess as to when and how it came about; but we can once more argue that it must always have existed, and we can see that, if it originated, it meant a potentiality of plastic readjustment and a possibility of breaking through the tyranny of rigid habits, which underlies the 'laws' of inorganic nature. Consciousness is not only a variation itself but is the basic principle of all variations in response: that is, a conscious being cannot be trusted to exhibit completely uniform reactions. Now this is an impediment and a nuisance to the scientific calculator, who may feel so bitterly about it that, as behaviourism shows, he may even try frantically to deny the existence of consciousness altogether.

But for all that, it is an advantage to the living being to grow conscious. For it enables him to adjust his actions much more exactly and more variously to the individual situation in which he finds himself than he could do if he relied entirely on the mechanism of established habits. So

consciousness has proved itself a successful variation in the history of life, and has grown and spread. In man it has been exalted into *reason*, which is not, as obsolete philosophers still repeat, a faculty of universals, but a power of adjusting action to the particular and peculiar circumstances of each vital situation, by means of reflective estimation of the likenesses and differences it exhibits when compared with former situations.

But the growth of consciousness has not occurred in man alone. It is found in the whole line of terrestrial life. The mammalia appear to have owed their triumph over the reptiles more to their bigger and better brains than to their success in maintaining their bodies at a constant temperature in all climates. True, this argument depends on an inference; an inference from brain, or rather brain-case, to mind; but the phenomenon is general. The brain was originally a special organ for co-ordinating the motions of the limbs; but for a life of reflex actions, fixed habits, and automatic responses, very little brain was needed. Hence the brains of the giant reptiles, dinosaurs, etc., were ludicrously small; and even those of the early mammals were much smaller than those of their modern descendants. But when success in life came to depend on variable responses and plastic habits, much bigger brains were needed, and were grown throughout the mammalian order. Man forms the culmination of this development. We may adduce this relation between brain and mind without risk of materialism, if we regard brain as the *instrument* of mind rather than its *source*; and there are enough irregularities in the correlation between big brains and intelligence to support, empirically also, a suggestion which no empirical evidence can confute.

## § 4

Perhaps the origin of a backbone should have been given historical precedence over that of consciousness; but its physical significance is plain. It is a guarantee of an adequate *size*, and explains why vertebrates can grow

larger than animals constructed like molluscs, crustacea, and insects, on the principle of having their hard parts outside and packing their soft parts inside. The force of terrestrial gravity would pull them in pieces, if they tried to be both large and agile. That is why the elephant cannot jump like the flea!

Another epoch-making innovation in his mode of life which has contributed greatly to man's success is his adoption of the upright posture and bipedal mode of locomotion. This change was no doubt mediated by a period of arboreal life, which trained the human eye to become an excellent judge of moderate distances and to focus upon the rather minute objects which then formed an important source of food-supply. It also subsequently fitted the human eye for a literary life. Still more important, however, was the consequence that the hand was liberated by the arboreal habit from the service of locomotion; it became first an organ of prehension, and then developed general handiness for any vital purpose. As Dewey has well pointed out, it is now the tool of tools, the instrument that fashions, and also uses, them. So the human retention of primitive pentadactylism, to which allusion has been made, *paid* abundantly.

## § 5

A great deal of human progress appears to be bound up with the revolutions in food-supply which we may next consider. The structure of our teeth is generally held to show that they were evolved for a vegetarian diet of fruits, roots, and leaves, which did not, of course, preclude the occasional consumption (as by the modern chimpanzee) of such animal products as eggs, spiders, caterpillars, and such other small fry as might be caught in the trees or in the fur of a friend. Nevertheless, the earliest men of whom we have discovered traces were not vegetarians, but carnivorous hunters. Hence there must have been a great revolution in their habits of feeding at a very early date. How did it come about? This was a problem

Carveth Read set himself to solve.[1] He supposed that at some time in the remote past, when our ancestors had grown fairly large and powerful, though not as powerful as the modern gorilla, but still lived largely in tropical forests in family bands, they found themselves cut off in a region in which the climate was deteriorating and winters were growing up. The consequence would be, of course, that there would no longer be vegetable food all the year round. Retreat to more genial climes in winter being cut off by deserts or seas, our semi-human ancestors were faced with starvation unless they could discover fresh sources of food supply. If they were willing to become carnivorous, there was plenty of meat to be had. Moreover, they had a choice: either they could prey on the small deer, rabbits, mice, hares, hedgehogs, rats, etc., or they could attack the big beasts, elephants, oxen, giraffes, horses, and deer, and develop methods of attack that would lay them low.

The choice was a momentous one, for it decided once for all the whole subsequent development of human society. The bolder policy prevailed, and entailed social co-operation. For while the individual man would have no chance, of course, of mastering a mammoth single-handed, a tribe of hungry savages might capture the monster by digging a pit in his path, or even by direct attack. So eolithic man organized himself in hunting packs. From having been a placidly arboreal ape he became one of a ferocious pack of hunters that scoured the forest glades and open prairies for his meat, and rapidly grew more cunning and fleet of foot. In Carveth Read's picturesque phrase, he became a *wolf-ape*, that is, an ape who had adopted the habits of a wolf. For this phase of human prehistory he suggested the Latin name *Lycopithecus venaticus*, the Hunting Wolf-Ape.

Furthermore, Carveth Read held that to this change of food supply other salient features in human nature could be traced. Man not only became a carnivorous animal in consequence, but also a social one. Moreover, his social

[1] In his *Origin of Man* (1925).

nature still has stamped indelibly upon it the mark of the beast that was the wolf-ape. He is social in a way that harks back, not, as Aristotle thought, to the city-state, but much further, to the hunting-pack. He can co-operate for the purpose of the chase, and will combine to attack his quarry; but after victory his greed and selfishness revive, and he is apt to quarrel over the spoils. He gets on so well with the dog, his earliest friend, because the dog, too, has developed his nature in a hunting-pack. In short, the Wolf-ape, who, as the widespread passion for the chase shows, is still lurking in the human soul, throws a strong, but rather lurid, light upon the character of man.

The adoption of hunting as a livelihood was not, however, the only revolution that occurred in man's dietetic methods. After a time, which was probably long compared with that which has elapsed since, some genius conceived the idea of *taming* the animals that were eaten, instead of hunting them. This discovery rendered possible a new mode of life, that of the nomad herdsman, who roamed about the country, not *after* his food supply, but *with* it. It had important advantages. It was an *easier* and more assured mode of life, because you could always lay your hands on your dinner, instead of chasing it, and it admitted of the first accumulation of wealth. It was a more *leisurely* mode of life, which admitted of the first beginnings of knowledge of the world, though *stalking* must already have trained the hunter's powers of exact observation of the habits of his game and the beginnings of reflexion and self-control. Lastly, it was a more *potent* mode of life, which admitted of the development of political power. For the early nomad tribes were able to congregate in much larger bodies than the hunters, and were much more mobile than the agriculturists: they could, therefore, combine for raids upon the settled agriculturists, because they could carry their food-supplies with them. They could thus become a conquering class of rulers. Agriculture, on the other hand, which was based on the domestication of plants instead of animals, produced a further revolution in food supply which has reinstated

man's original vegetarianism to a large extent in many parts of the earth. It has so greatly increased both the abundance of food and the ease of life that the agriculturists have in the end prevailed completely, both over the hunters and the herdsmen. The settlement of the North American continent is the great object-lesson in this process.

Agriculture, moreover, led to other developments also, notably in the sciences. To carry it on successfully, it became necessary to determine the length of the year with considerable accuracy. Now this is by no means easy, and at that time it could be done only by long-continued observation of the heavenly bodies, especially the sun and the moon. A problem therefore arose of recording observations over long periods, and preserving the records. It was solved by making religion astronomical, and by handing down the records by word of mouth in the families of hereditary priests. The stars were regarded with religious veneration long after they had served their utilitarian purpose, and even Aristotle could still maintain that they were formed of a superior sort of matter and exempt from all the frailty, the generation and corruption, of the sublunary world. Similarly, the men who practised agriculture in the fertile river valleys of the Euphrates and the Nile, and were inundated every year, simply had to concern themselves with the measurement of land, and to devise the science still called geometry. Thus astronomy and geometry were the earliest sciences, because they were the most urgent; and from their history philosophers might long ago have learnt the plain psychological truth that no science will be studied till there is a social demand for it and a personal interest created in it.

## § 6

Immediately after the problem of securing food naturally comes that of utilizing, that is, of cooking, it. Hence the art of cooking is among the earliest and most urgent of all. Yet there are not many myths that commemorate it, and, with the exception of the Chinese

discovery of roasting pigs, none has become famous. The reason probably is that early literature is masculine in authorship, and that the art of cooking was almost certainly a feminine invention, the first step in woman's arduous ascent to sex-equality.

Cooking, however, presupposes fire, and the control of fire is recognized by all the mythologies as a great and vital step in the ascent of man. The Fire-bringer is the standard culture-hero everywhere. Generally he steals it from the jealous gods, and suffers for it, like Prometheus. Justly, for there was no more impious and essential step than the harnessing of Vulcan in achieving the domination of the earth by man. It is the material presupposition of the knowledge which is power.

But the spiritual world, also, and its forces, must be controlled if human societies are to prosper, and not to wreck themselves by the persistence of their animal and savage instincts. Hence it was of vast importance to devise some means of accumulating a stock of knowledge, some system whereby the achievements of one age might automatically be recorded and passed on to the next. This is the significance of the invention of *writing*, which seems to have been evolved out of pictographic symbols, and to have been invented often and in many parts of the world. It yields the possibility of stabilizing tradition and transmitting experience, by means of writing, from one generation to another, and thus constitutes the great superiority of human over animal societies. It enables them to preserve for social use the memory and inspiration of heroism and genius, and to make good the losses which mortality would otherwise inflict. It contains a promise and potency, therefore, of indefinite progress, and has probably done more than anything else to bring about the progress actually achieved.

Not that it renders progress mechanically inevitable and absolutely certain. No agency capable of that is known, either to science or to history. There is no *law* of progress, although progress occurs in accordance with natural law.

§ 7

So writing also and literary tradition may be misused, like every gift and power. An over-powerful tradition may not only stabilize society but fossilize it, and a system of fixed ideograms, like the Chinese, may render it almost impossible to think any new thought, because there exists no symbol to convey it. And there is, of course, the possibility that society may grow *too* learned, and become unable to assimilate the store of knowledge it inherits, finding the effort of assimilating the treasures of the past so exhausting that it has no energy left for any advance beyond it. That would appear to be part of the explanation of the intellectual sterility of the later ages of Greco-Roman civilization. But perhaps the badness of the paper on which we print our books may protect us against this fate!

It remains to mention one great adjustment which has to be preserved, and, if possible, perfected in any enduring social structure. The life of a society depends on the mutual adjustment of the behaviour of its individual members. They must so conduct themselves that friction is minimized and co-operation maximized, and must acquire habits whereby such conduct is facilitated and secured. This process will be particularly difficult in a species which has altered its mode of life radically and repeatedly. It is then to be expected that there will be discernible a regular *stratification* of social habits going back to the different epochs in human history. For though man has always lived more or less socially, the societies to which the individual has to adapt his action have differed widely.

The earliest aggregation which regulated individual conduct was, we have reason to believe, what may be called, politely, the patriarchal family, as it is understood among the higher apes. There followed the hunting-pack, with its peculiar ethics, which Rudyard Kipling has called the Law of the Jungle. The development of nomadic life reinstates the patriarchal family, with differences, and on a higher moral level. The adoption of agriculture puts a

high premium upon steady, unremitting toil, felt to be deadly dull as compared with the intenser but more spasmodic exertions demanded from the hunter and the herdsman. The city-state, with which the Greek analysis of society began, is a much later development: it calls for adroitness, urbanity, diplomacy, and skill in persuasion and deception, rather than for violence and strength. It develops manners rather than morals, and accordingly we find that in Greek ethics morals have been pretty well swallowed up by manners.

In modern societies the typical and most vitally important relations are becoming more and more the economic, and, moreover, these relations are becoming more and more international and world-wide. But human habits and human feelings are still far from recognizing the present facts, and therefore constant outbreaks of atavism, erupting often from the lowest strata of our nature, continue to disturb the social order.

Moreover, it has never been easy for any society to control the individual and to train its members to develop the feelings and habits which are socially salutary, and to refrain from anti-social conduct. Man has never achieved the instinctive, almost automatic, perfection of conduct which distinguishes the social insects. In bee-states and ant-states human observation has not yet disclosed the existence of individual criminals, though the collective wisdom of the community appears to be capable of most of the follies to which human societies are addicted. They are apt, for example, to nourish and cherish social parasites that are destructive of the community.

Under these circumstances, it may be suggested that there was room for a new appearance upon the social scene, and there would be a great survival-value in any psychological variation that would tend to bring about greater conformity between the promptings of the individual nature and the best interests of the community. Moreover, it would seem that such a variation has occurred. It is usually called the moral sense, conscience, or sense of duty, and passes value-judgments in terms of 'right' and

'wrong' and 'oughtness.' It is not much liked by the psychologists, because it refuses to fit into their cherished categories. On the other hand, some moralists esteem it highly, and tend to gush about it; others ignore it. Many men seem to be devoid of it, more or less, while many well-trained dogs appear to have it. By some it is lauded as divine and indispensable; by others it is denounced as an obstacle to the free expansion of life.

When and where it first appeared upon the earth we cannot say. It would seem to be a relatively recent acquisition, for it is still spreading. Yet some highly developed languages have no words to express its typical distinctions. Thus, French has no words for *right* and *wrong*, while classical Greek not only lacked these, but the whole vocabulary of duty. Although its deliverances share in the formal absoluteness of the intellectual judgment of truth or falsity when it is expressive of heart-felt conviction, it is not infallible nor unteachable: for it is capable of training and enlightenment.

What, then, are we to make of it? Let us refrain from dogmatizing in answering this question. For, as we have seen, the placing of novelties is always uncertain, and our judgments upon them are *ex post facto*. But it rather looks as though the growth of conscience, of the moral judgment, was not an unmeaning accident, but worthy to be classed with that 'providential' aspect which we found pervading the history of the world at various points. The meaning of this answer may become clearer in our final chapter, when we shall have to consider the bearing of the cosmic history upon man's destiny and destination.

# CHAPTER XXI

## IV—MAN'S FUTURE ON THE EARTH

WHAT light has our survey of biological history thrown on the mystery of progress? Not very much, it would seem, at first sight. We have been able to associate progress with the occurrence of certain intrusive novelties, which have lifted life on to a higher plane, at intervals. But from the nature of the case this mode of genesis cannot yield any *guarantee* of progress. For novelty being unpredictable in essence, we cannot assume that the variation it entails will lead to progress rather than deterioration. And we have not dared to postulate a teleological agency directing the flow of variations. So we are apparently as far as ever from the discovery of any law of progress.

### § 1

We may, however, detect a *law of acceleration* pervading history. Evolution is somehow speeding up. The rate of change is clearly increasing, and changes come at shorter intervals. Also, novelties now spread over the surface of the earth with greater rapidity—for good and for evil. But this acceleration also is not the clue we seek; it redounds to the benefit of deterioration as easily as of betterment.

Though thus baffled, we may, however, continue to cherish the suspicion that the variations which have mediated progress were not really accidental. They have been too valuable, and have come too often and too

appositely in the nick of time, to have been fortuitous. They may really have been as ' providential ' as they look to us. This is a suggestion not to be brusquely put aside. If more weight is not put upon it than it can bear, it will be right and well to keep it in mind : but we must not deceive ourselves as to how much it can prove. It cannot amount to demonstrative proof; at best it can yield growing probability. This, however, should not dismay us ; for ultimately *all* scientific truth is concerned only with degrees of probability. It must, however, continue to suffer from the drawback that it is rooted rather in the exceptions than in the routine of nature. It appeals essentially to a series of exceptional facts ; and such a series, however prolonged, cannot form a firm basis for a general judgment about the world.

§ 2

Some more general feature of the real, therefore, would seem to be needed, upon which to base our faith ; and something of the sort may, perhaps, be found. At any rate, the implications of one general feature of human history which is often overlooked seem worth considering : we may call it *the precariousness of progress*. The more keenly we analyse the present posture of affairs, the more closely we scrutinize the course of history, the more we are impressed with the amazing ambiguity of the facts on which we base our guesses at the meaning of the real. The factors making for degeneration are always found to co-exist with those making for progress, and the facts nearly always permit themselves to be interpreted as incidents in either process. It is true at present, and seems to have been equally true at every other period of the world's history, that either of two diametrically opposite views may be taken of its prospects : it may be taken to be degenerating as easily as to be progressing. In fact, both views usually are taken, though not by the same persons. The young and hopeful believe in progress, the old and disenchanted look back upon the golden age, and complain

that the country is going to the dogs. Moreover, logically there always *is* a case for the pessimist's as well as for the optimist's verdict on the value of existence and the trend of events, and the verdict of history is never an agreed one. Allowing for the psychological reinforcement which optimism gains from its superior survival-value, it will probably be fair to conclude that in logical strength the pessimist case and the optimist are fairly well matched.

It should be added, however, that these two alternatives require to be viewed in the light of the fact that hitherto the complete disaster, which has so often seemed imminent, and which the pessimists anticipate, has always been averted: history has never crushed the faith of the optimist, even though it has never realized his dreams. Even though the human mode of progression has always resembled that of a blind man staggering along beside the brink of a precipice, progress has *usually* continued. This fact again looks curious; it has the providential aspect which we have repeatedly had occasion to notice, though we could not assign to it any definite value as a proof.

Secondly, the fact that progress always remains precarious and 'contingent' and cannot be formulated as a law, may be found to have some interesting implications. It may mean that we are not *forced* into progress against our will, though we *can* progress *if we will.* In other words, to effect progress our assent is really needed. So, then, we are not the helpless victims of a destiny that drags us to a predestined end; we can actually, to some extent, steer our course and that of history. This is a possibility which should not only enhance our responsibilities, but also encourage us to play a part that seems no longer negligible. Once we realize that our own action is an essential factor in our future, we can proceed to devise means for grappling with the evils which beset human life. They are many and serious enough, and largely inherent in our own nature. But our faith in evolution, meaning thereby the possibility of change, justifies the hope that neither our nature nor that of the universe is irrevocably fixed, and if it is possible to change it at all, it can be

changed for the better. It is with this hope in our hearts that we should face the future and survey our present anxieties.

§ 3

Let us start with the most obvious. It is pretty clear that if we allow our fighting instincts to get the better of our reason and to beguile us into more world-wars, it would not require more than two or three, or perhaps only one more, to see the end of civilization. It is also clear that the obstacles which bar the way to a policy of international appeasement are terribly strong in every country. Nationalistic sensitiveness is stronger, touchier, and more widespread than ever before. The spirit of mutual toleration of differences, the respect for the self-determination of others, whether individuals or societies, the love of liberty, the faith in justice, and even in many countries its administration, have not often been so weak.

Moreover, the very foundations of our social order are to-day called in question and attacked more resolutely and fiercely than ever before. There is widespread dissatisfaction both with capitalism, the economic basis of society, and with the family, its moral basis.

In the whole of Europe there seems to be only one sensible people, the Swiss; for among them alone is it not the delight of the majority to oppress their minorities: in the rest of Europe the ruling majorities all commit the atrocious absurdity of being at one and the same time imperialistic and nationalistic. That is, they are stupid enough not to see that these two ends are incompatible and incapable of realization in such a hodge-podge of nationalities and babel of languages as exist in that quarter of the globe. In consequence, the internal condition of most European countries is one of constant strain and latent civil war; moreover, with very little provocation class-wars might, it seems, break out as well. Yet these facts do not apparently avail to soften international animosities, but threaten rather to exacerbate them; while even if the habit of national wars could be dropped

and class-wars avoided, their successors are already visible. Race-wars have not yet begun; but they are already looming on the horizon. So in spite of Leagues of Nations and Kellogg Pacts and treaties of non-aggression, the future of peace by no means looks assured.

Politically, it would seem that the era of Democracy is ending. Despite the triumph of democratic politicians over the bureaucrats in the late war, democracies have shown themselves to be factious, prodigal, corrupt, easily deceived, and sadly inefficient; no wonder that they are being superseded somewhat rapidly by various forms of dictatorship. It would be hard, however, to interpret this as a symptom of progress.

Moreover, the material basis for the supremacy of democracy, the military superiority of musket-bearing infantry over armoured cavalry, which was established by the introduction of fire-arms, has disappeared with the advent of the aeroplane. With its help, a small body of dare-devil airmen, starting from a secure base and supported by well-paid mechanics, can terrorize a whole country and render irresistible any rulers they choose to uphold. Thus from the merely military point of view the masses count no longer; gang-rule, and even tyranny, once more becomes a practical proposition.

If democracy goes, what will succeed it? It is fashionable and easy to answer: some form of government that will practise social planning instead of leaving men to find the ways to their ends by cut-throat competition. But it remains to be seen whether such gigantic plans as are needed are within the compass of any human mind; and if a planned economy collapses, what means of recovery from chaos will remain? Meanwhile, the attempts at planning already made suffice to show that *two* sorts of planning may be tried.

## § 4

The first is exemplified by the Communist experiment now being enacted in Russia before the eyes of a puzzled

world. It is hard to believe that it can succeed, even with a people so slavish and so credulous as the Russian. But supposing that it did succeed, it would entail two consequences. First, it would be fought with its own weapons. There would be counter-planning everywhere, aiming at different ends ; and victory would attend the bigger brains. Secondly, if communism succeeded in Russia, there would be bred a type of man comparable with the social insects, with the ant-worker and the working bee, or at most, with the various castes of termites.

Now, this development must be pronounced not only conceivable, but possible ; it would, however, put an end to any significant history of man. For, like the insect-states, human society would grow incapable of progress. This is the great defect which insect communisms suffer from : they have so suppressed the individual, and so subjected him to the purposes of the community, that he can no longer vary in any significant way. Now this is not only dull but destructive of the germs of progress ; for the variations which initiate progress begin with individuals, and by suppressing individuality these germs are killed.

## § 5

There is, however, conceivable a second and more intelligent mode of planning, of which Italian Fascism may be the harbinger. It does not fly in the face of natural selection, and try to reduce all to the same lowly level : it is selective, that is aristocratic, in method, and aims at raising man *above* his present level. Thus it is essentially an attempt by human society to direct its own development, to supersede mere survival-values by ethical values of equal or greater survival-value and to substitute for natural selection a selection of what is judged to be the *best* in order to grow a *super-man*.

In the execution of this programme it would first of all be necessary to arrest the contra-selection at present going on in the whole civilized world, in consequence of which all societies recruit themselves, by an undesigned preference,

from those whom they (and every one else) would judge to be the unfit, because under social conditions weaklings and undesirables are actually enabled, not only to survive, but also to survive more copiously than the more valuable elements in the population.

This comes about by a stupid social oversight. As the undesirables have a higher birth-rate and their children are cared for by others more competent than their incompetent parents, there is produced a selection of the worst, and an alarming proliferation of the insane and feeble-minded. The costs of this suicidal policy are borne by the competent and intelligent, and prompt them to limit further their output of valuable citizens. The deterioration of the race produced by this insane ordering of society pronounces the doom of civilization in no very distant future. For pretty soon its morons and lunatics will not be able to assimilate its intellectual, nor to operate its technical, achievements any longer. The apparatus on which our progress should rest will be perverted into an engine of destruction. In short, one of the most urgent social needs at present is a study of the science of eugenics, and the application of its findings to human life, in order to put an end to the survival of the unfit we are now fostering. Nor should we be satisfied with the *negative* eugenics that will arrest man's deterioration ; we should endeavour to devise also a workable scheme of *positive* eugenics that will *improve* the race.

If this can be done, the biological ascent of man, which has come to an end under present conditions, may be resumed. At present, biological progress has long been arrested, and the outlook is most menacing. Man has become a stationary or even a degenerating species, ever since civilization was invented. Until then, in savagery and barbarism, the conditions of life were sufficiently severe to produce an effective elimination of the unfit ; after that, life was rendered easier, but no more intelligent method of selection was introduced to keep the race progressive. There is nothing in the known facts to support the belief that since the rise of civilization, say

6000 years ago, there has been any improvement in the *intrinsic* qualities of the human race, and so in the *biological* basis of progress. What progress has been made has been due to tradition, to better methods of transmitting the accumulated knowledge from generation to generation. But these methods cannot be relied on indefinitely, if the intelligence to work them goes on declining.

Hence the future of the human race is by no means assured. Man is not bound either to progress or even to survive, and what will happen to him depends largely on his own behaviour. On the other hand, he *can* continue to progress, and that at a greatly accelerated pace and in directions in which he is not progressing at present, if he will. If the human race is willing to adopt a rational scheme of eugenical self-training and self-selection, it is hard to set any limits to the possibilities of its progress. It might become indefinitely more powerful, richer, healthier, stronger, more intelligent, and more beautiful; it might aspire to a life raised as far above that of the present day as the latter is superior to that of the lowest savage.

## § 6

As improvements that may reasonably be anticipated, if man is willing to aim at them, we may enumerate: the extirpation of all noxious animals, of vermin like the rat and the mouse, and especially of the little demons of Ahriman's creation, the noxious insects, the practical conquest of all diseases, and, in consequence, a great extension of human life. A conquest of death it might be rash to promise, although it has already come to seem a mystery why any one should die. Why should the individual die, when the race is deathless? Is not he also a self-repairing machine—and once he has learnt *that* magic art, of which *our* machines remain incapable, why should not his body continue to repair itself for ever, and even grow more and more expert in so doing? Why should it relax its efforts to keep alive after a while, and

allow itself to get clogged up more and more with the waste products of its own working until it ceases to function altogether, and dies a 'natural' death? The whole process is quite contrary to the analogy of the learning process elsewhere; for what we have learnt we can do better and better with practice, not worse and worse. Or can senescence be paralleled by the growth of bad habits and of sloth, which shows itself in a decline from a skill formerly possessed? Certainly it is odd that the capacity for self-repair diminishes with age not only in the individual life but also in the ascent of life to 'higher' forms; until this tendency can be reversed, it will frustrate the desire to go on living, and it seems vain to hope that natural death can be averted.

§ 7

On the other hand, as knowledge grows and it is more widely recognized that the true knowledge is the knowledge which is power, man's conquest of material nature should continue, and become more complete. This should engender works of engineering far more stupendous than anything achieved as yet. It is not fantastic to suppose that the artificial control of temperature will become so perfect that it will render the whole earth habitable from the deserts to the poles. And the next hundred years may see the Mississippi tamed by the transmission of its devastating floods to California to turn her remaining deserts into fertile fields.

The curse of Adam, toil, may be lifted from the back of man by the development of the machine. We may look forward to such a multiplication of machinery that a few hours a day of machine-tending will suffice to assure to every one an ample living. For the tediousness and strain of our present work are largely due to the mere length of our working day, and most of our economic difficulties are due to the maldistribution of the leisure which results from the use of the machine. Both the idle rich and the idle poor are essentially social problems due to this maldistribution. But if by some stroke of social reorganization

every one could be induced to shoulder some portion of the burden and to do a little work, a great deal of our 'work' would turn into 'play' and would cease to be irksome. For example, rat-hunting and fishing would be 'sport,' and gardening a 'hobby,' if they were not all-day occupations; while, conversely, it is already recognized that any game or sport, when pursued by whole-time professionals, becomes their 'work.'

The abolition of 'work,' however, would be a blessing only on condition that our present maldistribution of employment and leisure were remedied, so that all would have enough of them, and none too much. At present our population is divisible into the idle rich, the idle poor, and the workers. Of these the workers suffer from excess of work; the others, from defect. Yet a better distribution of the same amount of work might increase alike the worth and the happiness of all classes.

Only, however, if all had learnt what at present they are hardly taught, namely, the proper use of leisure.[1] Instruction in this subtle art should be regarded as an essential branch in a proper system of social education. In particular, it should be regarded as the real aim of a liberal education. Educationists would thereby be enabled to draw a clear and unmistakable line between vocational training or education for work, and liberal education or education for leisure. And as the world grew richer and the total amount of leisure to be distributed ampler, the importance of liberal education would steadily increase. We should not, therefore, despair of our universities!

## § 8

But when all has been said that the most sanguine foresight can conceive, when all has been done that our utmost efforts can achieve, a feeling of doubt remains. Shall we ever be able to accept our present world as containing the capacity for the full satisfaction of our demands upon existence, for the full realization of the

[1] Cp. *Social Decay and Eugenical Reform*, chap. vii.

aspirations of the human soul? Shall we ever be able to fashion a heaven upon earth? It seems very dubious whether we shall ever be able to do this, whether we ought to do this, and whether we are *intended* to do this. In the first place, terrestrial existence on a tiny planet of a star, long past its prime and lost in the immensities of space, can never be made to seem sufficiently significant and satisfactory to be acceptable as the whole meaning of life. So why should we resent it that the signs are multiplying that our physical life and indeed our whole physical universe, may be but a temporary, transient episode in the scheme of being? We have no abiding habitation on the earth, nor has the earth an assured position in the stellar universe, nor is the physical universe itself eternal and constructed to endure. It seems to have had an origin in a not incalculably distant past; it seems doomed to fade and pass away in a not incalculably distant future; it is stamped throughout with the marks and signs of impermanence. So I am not disposed to withdraw the judgment I pronounced more than forty years ago when I declared Time to be the measure of the impermanence of the imperfect.[1] The physical universe is, and seems destined to remain, a disappointment.

Can we escape from it? Can we emancipate ourselves from the oppressive spell it casts even upon our thought? Can we raise the Veil of Maya? With the aid of Philosophy, perhaps. For to philosophy the point of view of science is not final, and it has the right to insist that all known data have to be included in the final synthesis.

We should do well, therefore, to remind ourselves how very artificial and selective a creation of our science the physical universe really is. It by no means satisfies the demands of a philosophic synthesis. It by no means uses up all the material provided by our immediate experience. For do we not all live in worlds upon worlds of dream, imagination, and aspiration, which supplement, transmute, and transcend the physical universe? True, we mostly look upon, and down upon, these worlds as 'subjective';

[1] *Riddles of the Sphinx*, p. 257.

but this should not be taken as denying that they are real. It means merely that they are not at present of great pragmatic value, that they do not enter into the great practical synthesis called common-sense reality, that they do not serve as a basis for intersubjective intercourse and common action. But this does not entitle us to deny them psychical reality, any more than a dogmatic monism has a right to deny them metaphysical reality. Hence a philosophy which reckons seriously with the metaphysical possibility of pluralism and with the psychological ultimacy of personal experience, will think twice before it assumes without further ado that the present universe of physics is all the being there is, and that the human soul is inextricably entangled in it and cannot conceivably rise above it. But at this point may we not fitly remind ourselves that all the major religions have always offered us the assurance that our present world of shows and shadows is not the only nor the true reality, and hinted to us the transcendent glories of their heavens and the terrors of their hells ?

The argument has led us to the threshold of religion, where we must arrest it ; but philosophically there is nothing to hinder us from recognizing an indefinite plurality of worlds, with a series of transitions into worlds of higher reality and greater value, which would be heavens, or of nightmare lapses into illusion and unreality, which would be hells. And of both heavens and hells would hold the law, which was enunciated at the outset, and constantly repeated, namely, that everything will be what it turns out to be in virtue of what it has been through !

# CHAPTER XXII

## MAN'S LIMITATIONS OR GOD'S?[1]

### § 1

THAT man is the measure of all things that can be known by him is hardly open to dispute. But man has usually resented rather than welcomed this. He has taken it, not as a precious assurance that he is an integral party to the real world he lives in and that he can know about it all that concerns him, but as an invitation to scepticism, nay, to despair, of knowing reality 'as it truly is in itself.'

But he has usually abstained from inquiring why it should be thought desirable to know reality as it is in itself. Why should the denizen of a world crave to know it, not as it is for him, but as it would be if he were subtracted from it, and it were consequently *changed* by the loss of all his contributions to it? Why should he imagine that reality would then appear more truly and be known more adequately?

But surely the assumption that the elimination of man and of human knowing would be an improvement in the real, is quite unwarranted. It is at any rate the last assumption man should make. For it assumes, wantonly and without need or provocation, that man is nothing but a source of falsification and error about reality, or at best a negligible factor. If man conceives himself as a vitiating medium, as standing in his own light when he strives to

[1] From the *Hibbert Journal* for October 1933.

know and as frustrating his own efforts, he condemns himself and all his sciences to futility and failure. But even if he merely adopts the assumption that his knowing can make no difference to the objects known, and therefore seeks to know them as they are in themselves and apart from his knowing, he conceives himself (quite falsely and gratuitously) as an impotent and negligible factor in the world he knows, and makes an impossible abstraction. For what is given him in knowing is reality-in-relation-to-him, and ' reality-*per-se* ' is an inference and a construction in which the nature and the activity of the human mind are plainly implicated. The need for this abstraction, therefore, has always to be shown, and needs cogent argument to establish it.

Moreover, it is quite untrue that human knowing is impotent and that therefore man is negligible. Our knowing is always *operational.* It is never merely passive and random ' observation.' It selects and arranges its material, and lays down the conditions for its observation. It always operates on its chosen data. It is always more or less *experimental.* It is false, therefore, that our knowing makes no difference to the objects it knows. On the contrary, it always, more or less, *makes* them ' the-objects-it-knows.' The idea that in knowing, the inquirer must wholly eliminate himself is a delusion and a survival from a pre-scientific age in which man had not yet grown conscious of scientific method. What scientific method really requires is, not that man should eviscerate and annul himself, but that he should be willing to *experiment* with himself, his passions and his prejudices, and should so discover which of them are noxious, dangerous, or to be used with caution, and which are capable of becoming scientific postulates and of guiding observation. In this procedure human personality is not negatived, or abstracted from, but furnishes the clues which are utilized to know our world; and science continually becomes a more adequate approach to an interpretation of reality which improves and harmonizes our experience.

§ 2

Having renounced in principle the suicidal attempt to eliminate man from human knowledge, we must next explore the influence of the human element on the problems of our sciences, philosophies, and theologies. We shall find that every question, and every answer, is conditioned in every detail by the nature of human faculties, and we should not be at all surprised that such human limitations extend much further than is commonly realized, and indeed are all-pervasive. This comes out best in the notions of (1) Causation, (2) Teleology, (3) Infinity, and (4) God.

§ 3

(1) The question—*What is the cause of . . . ?* always serves the human purpose of formulating a subject of inquiry, and whatever satisfies this purpose in the particular context of the question raised is accepted as an answer to the question. This explains why the ' causes ' recognized in the different sciences are so different and why what is accepted as ' the cause ' varies with the purposes and interests of different inquirers. Closer inspection of cases of causal explanation will, however, always reveal common features.

(*a*) In every scientific inquiry the subject-matter is always a *selection*; a selection, moreover, which determines the meaning ' cause ' shall have in this context. This is true even where, ostensibly, ' the totality of phenomena ' or ' the whole of reality ' is the professed subject of inquiry. For such inquiry never concerns itself with all the details of the subject, but regards them as trivial and irrelevant: hence any *general* treatment is necessarily *partial*. And normally we take some chosen ' event,' quite openly, as an ' effect,' and inquire into its ' cause.'

(*b*) This ' cause ' also is a *selection* from the totality of phenomena present to the mind of the inquirer. It too is never the totality of such phenomena, and always rests on

an exclusion of the irrelevant, where what is judged irrelevant of course depends on the inquirer's purpose. This selectiveness of scientific procedure has important consequences. It threatens, from the outset, to prove an insuperable obstacle in the way of all philosophic attempts to conceive the totality of reality as the ultimate 'cause.' For it is vain for the philosopher to allege that for *his* purpose *nothing* shall be irrelevant, and that he seeks 'the cause' of everything. The first effect of this demand is to yield the doctrine that the whole of reality is the cause of the whole of phenomena, and so the barren tautologies that the All is the cause, and the All is the effect, and so that the 'cause' = the 'effect.' But this interpretation fails to justify the practice of causal analysis. So the next result is to condemn causal analysis, as used in the sciences, altogether. The practice of selecting 'causes' and 'effects,' and of tracing distinct and separable chains of causal connexion among phenomena, becomes philosophically indefensible. Alternatively, if we prefer to be guided by the practice of the sciences rather than by the speculations of philosophers, we shall have to declare unmeaning the question about 'the cause' of all reality.

(*c*) This dilemma may, and indeed should, incite us to inquire what we are to mean by a 'cause.' This is a subject about which philosophers have debated endlessly. The dispute has raged chiefly between the metaphysical conception of causation as necessary connexion and the naturalist conception of it as observable regularity of sequences. But neither party would seem to have analysed out completely the implications of its own theory. The Humians have failed to take into account the selectiveness of human observations, and the believers in 'necessary connexion' have never properly explored the many and tantalizing ambiguities of this phrase. Even when, like Kant, they agreed with Hume up to a point and admitted a certain 'subjective' (*i.e.* human) element into causality, they tried to re-convert it into an 'objective necessity of thought' in various obscure and unconvincing ways, and they never clearly distinguished the various senses of

'necessity.' So it escaped their notice that psychologically 'must' and 'can' belong together, and are as fundamentally human additions and interpretations, when ascribed to the observed course of events, as 'if' and 'either—or.' If the mind is restricted to passive observation, it does not observe *any* of these. In so far as it succeeds in just observing, it finds no 'facts' that are either necessary, or contingent, or hypothetical, or disjunctive. But it would do well to remember that even so observation of pure (or mere) 'fact' is one of its own ideals, and one, moreover, which seems both unrealizable and sterile. It might be wiser, therefore, to start from the human end, and to examine how the feelings of 'can' and 'must' generate the sense of 'power' and the belief in 'efficient causation,' and how experience justifies the application of these feelings to the interpretation of events.

Hume, after disposing of the metaphysical belief in necessary connexion, somewhat tardily discovered its real roots in the common-sense belief in the efficacy of volition, and in his *Inquiry* set himself to represent it as an illusion. His explanation was subtle and consistent with his principles, but to a believer in the volitional origin of causation begged the question.[1] And it was only a lapse in logic that enabled Hume to imagine that he had refuted it by arguing that because the volitional theory of causation was (in his opinion) wrong, the conception of 'cause' could not have been derived from the immediate experience of 'power.'

§ 4

(2) Attempts are often made both by scientists and by philosophers to draw a radical distinction between causation and teleology, and to represent the former as objective and mechanical and the latter as subjective and unscientific. But it is difficult to see how these contentions can be upheld. For if it is agreed that what we are always dealing with is the course of events, it is clear that any sequence A—B may

[1] I have discussed this fully in *Humanism*, chap xvi.

be viewed in two ways. We can either say 'because of A, B must follow,' or 'A for the sake of B, and in order to reach B.' In the first case 'A' will be the 'cause' and 'B' the 'effect,' and our sequence will be *causal*; in the second 'A' will be the 'means' and 'B' the 'end,' and the sequence will be considered 'teleological.' The sequence A—B in itself evidently admits of either view. Moreover, the two views are not incompatible. Human action, for example, lends itself to both, and is habitually viewed in both ways. So it is quite legitimate to transfer both, experimentally, to the course of nature. There is no reason so far to regard one as intrinsically better or more objective and scientific than the other. Both should be regarded alike as human experiments in interpreting the course of nature.

It is only when we consider their actual success in manipulating experience that differences appear. 'Causal explanation' has been widely used and has shown itself so useful that it alone is often supposed to be 'scientific'; and that, in spite of the difficulties involved in its conception. Indeed, it may be argued that its success rested largely on the convenient ambiguities of 'cause.' But whenever teleological explanation has been attempted, beyond a very narrow range of human and animal action, the result has been phantasy and failure. No doubt it has often been used rashly and dishonestly. For its successful use presupposes not only the presence of minds akin to our own, but also a certain knowledge of their purposes, and this knowledge has often been lacking. But instead of frankly acknowledging this and comporting themselves accordingly, teleologists have not refrained from alleging purposes in nature crudely analogous with human purposes, and then, when experience did not seem to bear them out, have proceeded at once to declare them 'inscrutable,' rather than confess that they had misused their method. Moreover, to assert that the processes of nature were teleological but inscrutable was really to stultify the method of teleological explanation. If what claims to be a method of scientific explanation cannot be *used*, it is not a scientific

method at all. Hence science declared war upon teleology, and vanquished it; it had been betrayed in advance by its professed champions.

Yet teleological explanation retains certain inalienable advantages. If it can be carried through, the processes of nature are brought into closer kinship with the operations of our minds and are rendered *pro tanto* more intelligible. So that, regarded merely as a hypothesis, teleological explanation seems preferable to causal, which leaves the succession of events a mere brute fact. Of course, however, a working hypothesis must be made to work, and must succeed in explaining the facts to which it is applied. We must not set out with preconceived notions of the purposes to be realized in nature, and uphold them in defiance of the facts. What the purposes are that animate the course of nature must be discovered, *and verified*, empirically. The failure of teleology would appear to have been due largely to the neglect of this simple rule of method. It was therefore thoroughly bad in scientific method, as well as a fraud upon the religious instincts, to declare that every event was the realization of a Divine Purpose, but that this purpose was inscrutable and that it was impiety to pry into it.

Another charge on which teleologists may be convicted is that they failed to analyse out the full implications of their principle. They did not see that it was not enough merely to assume that nature was teleological and pervaded by mind, without attempting to determine the nature of this mind and to trace its functioning in detail.

In particular, it should have been recognized that teleological functioning, as we observe it in ourselves, moves within the category of means and ends, and shares in its limitations. Actually we adopt an end, and seek for the means to realize it. If adequate means are found, they assure us of our end, and become 'necessary' (*i.e. needed*) for our purpose. But we sometimes have a *choice* of means, which then become alternatives, and a question arises which is the *best*, and should be chosen. It is only when the best means has been found that the

relation of the means to the end becomes 'necessary' (*i.e. obligatory*). Before that we encounter a plurality of alternative means. Usually, however, this plurality is strictly limited, and we have not many alternatives to choose from. If we have, they render choice difficult, and delay decision. But if we had an infinity of means to examine, we could never arrive at a choice at all; and if we could use anything at all as a means to any end, the category of means and end would break down altogether. For no end would any longer call for any particular means, and no means would be means to one end rather than to another. If water could be used to light a fire as easily as to quench it, nothing like a stable order of nature could survive. It is, therefore, only because we have *not* such powers of making all things means to our purposes, and have to choose our means intelligently, that we can recognize an order of nature and use teleology to explain it. The possibility of teleology is thus based on the limitations of our power.

It would plainly seem to follow from this that the notion of omnipotence (as usually interpreted) is invalid and unmeaning. If 'omnipotence' means ability (or liability) to do anything and everything, it is incompatible alike with any order in nature and with the detection within it by us of any end or purpose or regularity or rationality. An 'omnipotent' mind, therefore, not being tied down to the use of any means to any end, and accomplishing all things by a mere fiat, could not be recognized by us as a mind at all. The course of nature in which such a mind disported itself, would appear to us an unintelligible sequence of freakish miracles. And whether we welcomed or dreaded them, and accordingly deemed it divine or diabolical, we could do nothing either to control the course of affairs or even to adjust ourselves to it. This hypothesis of an 'omnipotent' mind, therefore, not only lacks the advantages of assuming a mind akin to our own, operating teleologically and adapting means to ends, but renders reality fundamentally unintelligible. That omnipotence is a vague and undefined notion, and that

'omnipotent' and 'mind' are implicitly contradictory, are but secondary objections to a suicidal hypothesis.

## § 5

(3) Infinity is a notion which arises, legitimately enough, in certain contexts. That number is infinite, in the sense that there is no end to counting, is plain. Space also, and time, would seem to possess an inherent infinity, at least in conception. Mathematicians also make much play with the conception, and juggle with it, with astonishing effects. But mathematicians can always obtain strange results by pressing analogies beyond the points at which, to ordinary minds, they break down; and of late they have become willing to admit that the *conceptual* infinity of space and time has little or no bearing on the question whether the *physical* universe should be conceived as having limits and a beginning and end to its career.

Moreover, the infinity of number clearly has a different origin from that of space and time. In the former case the infinity arises out of the fact that when we have once learnt how to perform an operation (in this case counting) we can repeat it as often as we please. Once the law or rule for the formation of numbers is laid down, number becomes infinite, potentially: that is, it becomes possible to form numbers large enough for any need. The infinity of space and time differs from that of number in that it seems to be an infinity, not of power, but of impotence. We *cannot* think limits to space and time. But our inability arises from the fact that in forming the abstractions space and time we have removed, in thought, the *actual* limits of the spaces we observe and the time-sequences which we experience. Hence conceptual space and time are rendered infinite by abstraction from perceptual spaces and times, and how the latter comport themselves remains a subject for empirical inquiry.

It is, however, fairly clear that none of these cases will warrant the application of the notion of infinity to that of

'power.' 'Infinity' of power can be assimilated neither to infinity of number nor to that of space and of time, nor to the technical uses of infinity in mathematics. Its genesis appears to be quite different. It arises from raising the psychological question—*what can you do?* and then finding that sooner or later all known powers give out and confess that there is something which they cannot do. But as thought thinks that it can transcend the limits of the actual, and not infrequently desires the impossible, it proceeds to postulate a power that is 'infinite.'

Unfortunately, after that, the notion is not further analysed, and many of its relations are left obscure. Is infinite power, for example, to be identified with 'omnipotence'? 'Omnipotence' should mean 'all power,' and 'all' means totality or wholeness. But can a totality or whole be conceived as infinite? Number, space, and time are certainly infinite; but is it not equally clear that they *cannot* be wholes? Can power be a whole? If so, does it mean the sum of all the powers that are? Or does it mean ability to do anything and everything, however monstrous and absurd? In the former case it cannot be conceived as infinite, in the latter it cannot yield the basis for a rational and intelligible universe.

The latent incompatibility between the notions of infinity and wholeness was apparent already to Aristotle; but the modern champions of infinity are singularly reluctant to face it. They prefer to assume, without argument and on purely verbal grounds, that the universe is one; yet there exists considerable evidence that it is infinite in several ways, and that the human conception of wholeness fails signally to apply to the reality we encounter. Thus it clearly does not apply to number, space, and time. And it takes a great deal of unsupported faith to believe that the crude experiences of countless minds, together with the subjective worlds they fancy they experience, can all be fused together into one harmonious whole in which nothing is lost or suppressed and all claims to reality are satisfied. The notions of infinity and of power had much better be kept apart.

§ 6

(4) We are now in a position to approach the conception of 'God' with some hope of disentangling the many threads which run together in it and of distinguishing its various constituents, in order that we may estimate whether 'infinity' or 'omnipotence' is really essential to it.

We may premise that, socially speaking, every difference in the conception of God entertained by different persons, or by the same person at different times, functions as a different 'God': for this reason the normal condition of every society that is not completely atheistic—and probably no such society has ever existed—is necessarily polytheistic. That is, many 'Gods' are actually recognized, and divergent beliefs are actually operative in it. This sort of polytheism is plainly different from one which recognizes a plurality of divine powers; but its social effects are much the same. If devotion to Our Lady of Lourdes competes with that to Our Lady of Loretto, they are in effect different deities.

Further complications are introduced into the situation by the fact that the conception of God is not the outcome of a single line of thought, but of several. There are a number of gods, reached by different routes, which cannot be taken as equivalent without more ado, and may often prove incompatible. There is, for example, the 'god' of the ontological argument, the 'god' of the cosmological argument, and the 'god' of the physico-theological argument, the interrelations of which Kant laboured to explain. All of these claimed to be theoretically cogent, but none of them was popular; there were practical, moral, and traditional arguments which were much more obvious and effective.

Lastly, it would seem that, epistemologically speaking, 'God' is a *postulate*, or rather a number of postulates, to be tested, like all postulates, by its working. It should also be borne in mind that a series of postulates which seem quite possible and natural psychologically may not on reflexion seem logically coherent and consistent at all.

Altogether the analysis of what figures as ' God ' in philosophy and religion is by no means likely to prove easy.

## § 7

Perhaps we should begin by considering the traditional theoretic ' arguments for the existence of God. The first of these, the so-called ' ontological ' proof, occurs in two forms. It either conceives God as the totality of reality, or as the *ens realissimum*, the most real being, possessing all perfections. In both cases it concludes that such a being must exist, because its very conception entails its existence.

But a cloud has rested on this ' proof ' ever since Kant assailed it in his *Critique of Pure Reason*, and denied (after Aristotle) that existence was a conceptual predicate, and so a ' perfection ' of the most real being. The proof was too easy and too attractive to *a priori* metaphysicians to be dropped ; but the truth is that in both its forms it is suspect, and to cautious common-sense it will never be plausible that the existence of God can be proved by mere manipulation of concepts.

In its first form its tendency is plainly pantheistic, and does not yield a ' God ' who is a purposive moral being capable of distinguishing between good and evil and of siding with the former. It thus proves incompatible with the gods of most of the other arguments, though this is not to say that its ' God ' is not adequate for the religious instincts of those who desire nothing more than a proof that they are included in the unity of the universe. Only they should not assume that what satisfies them should satisfy all others.

Regarded as a proof, moreover, it is open to other objections, besides Kant's. It claims real existence, no doubt, for what is initially a human conception. But this is not in itself fatal ; for so does *any* conception which we use to describe reality. Its unwarranted assumption lies, not in *claiming* reality for a conception, but in declaring this claim to be an *a priori* proof. Its logical status is merely that of a hypothesis in need of verification. And

that this was the real flaw in its pretensions, Kant's prejudice against empirical proofs prevented him from making clear. A second, and no less serious, flaw is indicated by the difficulty, discussed above, of applying the conception of a whole to our reality.

The second, and historically more ancient, form of the ontological proof is more theistic. It shares with the first the difficulty of verifying a human conception. It has to show that reality is really such that it points to the existence of an all-perfect being. On the other hand, it does not expose itself to the objections raised against a totality of reality. A sum of perfections can be identified with the totality of reality only if all things are regarded as perfect; but this *we* cannot do. Even if we are wrong and the universe really is perfect, our inability to see this will be a blot and an imperfection in the whole. So we can conclude that the universe cannot be a *perfect* whole, so long as we (or the likes of us) figure in it.

As regards God, this difficulty produces the problem of evil. How can perfection and imperfection co-exist in the same universe? This question has proved insoluble along the ordinary lines. If, on the other hand, God is distinguished from the totality of reality, what is the rest of reality, and what are its relations to God? These questions are not, perhaps, insoluble, but they can hardly be answered *a priori*, *i.e.* by merely analysing human conceptions.

§ 8

The cosmological and physico-theological proofs give much less trouble. The former argued from the nature of 'contingent' existence that there must be an 'absolutely necessary' being, and that this could be none other than the all-perfect being of the ontological proof. Kant rightly objected to it that the totality of reality would also satisfy the conditions of the cosmological proof, and exception may also be taken to the notion of absolutely necessary being. It seems an illegitimate extension of the idea of conditional necessity.

When stripped of its Scholastic trappings, the cosmological proof is reducible to the argument for a First Cause. But our discussion of the practice of causal analysis in § 3 should have rendered us wary of extending it to so big a question as that of the whole of reality. If in their actual use 'causes' are always partial, inquiry into 'the cause' of the whole of reality cannot be valid or fruitful. We cannot assume that because parts of the whole are 'caused' the whole must be. Causal inquiry, therefore, provides no way to a serviceable 'God.'

The physico-theological proof stands on an altogether different footing. It is the familiar 'argument from design,' which, concretely and empirically, appeals to the wonderful adaptations and harmonious workings of the cosmic scheme, to ascribe its construction to an intelligence akin to our own, but vastly transcending it. Kant also perceived the difference between this and the former proofs. Indeed, he made it his chief ground of objection. The argument from design would not lead to the God of the ontological proof, as had been supposed. It led only to a limited God, who adapted means to ends and operated teleologically. This hypothesis Kant was unwilling to explore; so he discarded the 'physico-theological' proof.

But, curiously enough, he never considered whether its very limitations did not bring it into line with the one argument for God's existence which he himself approved and adopted, the *moral* argument. True, as he said, the adaptations in the world can never prove the operation of an *infinite* God: they can prove only the power and wisdom of a being *adequate* to bring them about. But is not the same limitation implied in Kant's moral argument for a God? In its actual Kantian form this argument seems unattractive, not to say grotesque; but in substance it is sound, and socially and psychologically it is the strongest of all. Kant had argued that the (empirical) fact of a sense of duty (in many men) was to be construed as a 'categorical imperative,' and meant an intrusion into phenomenal existence of a higher order of being from which moral postulates could be derived. 'God' was one of

these, not a theoretic certainty, but an object of faith, in whom it was man's duty to believe. This duty Kant derives as follows: The categorical imperative postulates the performance of a perfectly moral act, done from a sense of duty alone, to the exclusion of all baser motives. But on earth no such act is possible, nor is happiness the reward of virtue. So Kant postulates a future life, in order that the approach to a perfect moral act may be continued. Hence the postulate of immortality. God is derived from the Moral Law in a still more curious manner. Kant assumes that (by definition) the Highest Good is a union of virtue with happiness. But, being a good deal of a pessimist about the actual world, he did not hold that virtue was conducive to happiness on earth, and in his ethics tried hard to exclude all reference to happiness from moral action. Consequently, virtue and happiness could be united only by a miracle, and it was to perform this miracle that Kant required a God.

But what sort of a God was thus demanded? Why did not Kant observe that he was postulating not a God able to do anything and everything, but merely one who should be able to reward virtue with happiness, and limited to and by that function? If the God of the physico-theological proof was to be deemed limited because he merely had to be able to produce the actual goodness and wisdom in the world, had not the God also of the moral postulate merely to be adequate to rewarding human virtue with human happiness? Moreover, Kant should have noticed that *the same* God could satisfy *both* these demands and that these two limitations were substantially the same. Also that there was no reason for labelling the physico-theological argument 'theoretic' and the moral argument 'practical.'

## § 9

The fusion of these two 'Gods,' which we have shown to be easy on Kant's own principles, means, of course, a 'limited' God. But we shall no longer be troubled by a 'God' whose ways are 'inscrutable,' and who is therefore

unknowable. The divine intelligence will be, in principle, such that we can apprehend it—the divine purpose such that we can discover it. In both cases we shall have to inquire into it empirically, by a study of the world in which the divine forces operate, the divine order is established, and the divine purposes are achieved. Hence such a God will become a *scientific* principle, and theology an empirical science.

Moreover, if we are sincerely willing to use such a teleological God to explain the order of nature, we can even press into our service the facts which have always been felt to be the most serious, and even fatal, objection to teleology. The world, as we know it, is full not only of wonderful adaptations suggestive of teleological interpretation, but also of heart-rending failures, deep-seated evils, and stubborn frustrations. This widespread *dysteleology* is usually ignored by those who cling to a teleological view of the cosmos. But it would be better to *study* these obstructions to what we take to be the good; we may be able to deduce from them what is the nature of the limitations under which the Deity is working, the difficulties to be overcome, and the means whereby this is gradually accomplished. The world-process, which we call 'evolution' and which is so inexplicable on the assumption of a finished world with either a perfect 'God' or a static 'Absolute,' may thus grow intelligible. Teleologists should have the courage of their convictions. Hitherto they have allowed themselves to be so much hampered by theological dogmas that the divine power was unlimited and the divine purpose *known* (and yet also unknowable!), that they have never dared to use their method. They have even acquiesced in the current assumption that Darwinism has completely disposed of teleology, although it plainly *presupposed* adaptation enough for the organisms selected to live, and though Natural Selection may quite plausibly be represented as merely the mechanism by which an already existing adaptation is adjusted to the changes of an evolving world.[1]

[1] Cp. Chap. XIX, and *Humanism*, chap. viii.

§ 10

The more popular motives for belief in God nearly all array themselves on the side of the teleological God whose aims are good and whose guidance is wise. The postulates in which belief in God originates, spring from the manifold evils of earthly life, the craving for help when human power fails, the demands for justice tempered with mercy, for salvation and (in a minority of cases) for communion with a greater and better who will pardon, help, and sympathize with human frailty. But none of these postulates requires the divine power to be unlimited. We do not even *ask* so much. Even the most devoted do not expect or desire all their burdens to be cast off miraculously and cured without the co-operation of their 'free will.' The postulate of 'omnipotence' seems to arise rather from a growing realization of the difficulties to be overcome, accompanied by impatience of a gradual process. It is seen that more and more power is required, and then, by a logical leap from 'enough power' to 'all power,' omnipotence is postulated. But after that little or no inquiry is made into what 'omnipotence' may mean, how 'all' differs from 'unlimited,' and what powers can be combined into a whole. Thus an unlimited deity would seem to be a hyperbole approached by an incoherent line of thought.[1]

§ 11

In point of fact, the gods actually worshipped are never unlimited. Where they are not limited by other powers, divine or demonic, they are limited by the stubborn nature of things, by their own nature, or by their own acts. Thus the Creator is often supposed to have endowed his creatures with 'free will,' and so with the power to go wrong, of which they naturally availed themselves. Usually the limitation of the Deity is more or less camouflaged. Thus when Leibniz argued that ours was the best of all possible

[1] See, further, *Riddles of the Sphinx*, chap. x.

worlds, because not all perfections were 'compossible,' he was covertly asserting a limitation either of God's power or of God's intelligence. Either God could not think of a perfectly good world, or he could not realize it. And, of course, the thought that there is presupposed in creation some material which resists and thwarts the divine creativity, constantly recurs. It is (at least) as old as Plato, who tried vainly to minimize it by calling it 'Not-being' and equating it with empty space. However, this idea obtains strong scientific support from the fact that no natural process can be explained monistically. It always implies an interaction between at least two factors, 'form' and 'matter,' 'spirit' and 'matter,' 'force' and 'mass,' 'space' and 'time,' 'electron' and 'proton,' or whatever it may be fashionable to call them at the various stages in the development of science. The monistic ideal of explanation seems to be scientifically unworkable.

Nor does its history restore its credit. In so far as it is not pure mythology, as in the Indian stories of Brahma laying the World-Egg and then hatching himself out of it, it seems to have sprung from an unguarded remark of Plato's, in the *Republic*, Book VI, about deducing the whole rational ('Ideal') order of the universe from the Idea of the Good. This meant no more than that Plato had adopted the ideal of a complete teleological explanation, together with ignorance of Aristotle's subsequent discovery that deductive demonstration requires *two* premisses. It in no wise detracts from the Platonic dualism of matter and form, and we have seen (§ 4) that teleology always implies an adjustment of means to ends and a certain limitation in the choice of means. Thus the notion of a single infinite being, that is literally 'all in all' the complexity and variety of existence, eludes the grasp of the human reason.

## § 12

Must we conclude that belief in an 'omnipotent' God and an 'infinite' divinity is a groundless superstition? It would be rash to draw so big an inference from the con-

siderations we have adduced. For, after all, these only went to show that *we* could not support such a deity by rational arguments. And this too only proves, perhaps, *our* limitations, and not God's. Absurd and self-contradictory as the idea appears to our intelligence, there may yet be an Infinite Being, whose nature is inscrutable, whose ways are unlike ours and past our finding out, and whose sole attestation lies in the longing for the infinite which (apparently) possesses the minds of certain theologians and philosophers. We should beware of too confidently making the human *reason* the measure of all things and of utterly denying all cognitive significance to longings and cravings, however irrational they may seem.

Only may we not justly demand some return for these concessions? If the sole basis for an infinite being is the emotional longing for it felt by certain philosophers and theologians, should they not admit that there is a logical alternative which may be preferred (quite as legitimately) by those who do not share their longing? Their critics are entitled to a total disbelief in such an unknowable 'God.' Secondly, if they will not admit that their infinite 'God' is just an emotional idiosyncrasy of their own, are they not in duty bound to produce real arguments for their case, and should they rely merely on traditional phrases honeycombed with ambiguity? Thirdly, the hypothesis of a teleological and humanly apprehensible God should be acknowledged to be a legitimate one, and should no longer be condemned out of hand as an inexpiable heresy. Which of these alternatives is the most satisfactory and verifiable may then safely be left to experience to decide.

# CHAPTER XXIII

## PRAGMATISM, HUMANISM, AND RELIGION[1]

OF the three very big subjects of my title I feel competent to deal only with two. I can deal with Pragmatism and Humanism, because I made one of them myself, and had a hand and a sword in fashioning the other. On Religion I can pretend to speak with no authority whatever; but it is a subject on which even bores can contrive to be interesting, if they are sincere.

### § 1

Nothing is easier to define than Pragmatism; few things also are more futile. Because experience shows that its critics are so chock-full of their own prejudices, and the mere suspicion of pragmatism so violently stirs their emotions that they never listen to what one has to say. The Archangel of Lucidity himself, whose name I have forgotten, could not make them understand. You, however, are not prejudiced, I will assume, but if you have not studied the subject the danger is that you will not appreciate the enormous scope of what looks like a very simple definition. The official definition of Pragmatism, that the truth of any assertion depends on its consequences, looks innocent enough. It seems a bit vague, and one wants to know what consequences are meant, and that is all. But you would hardly suspect that its real meaning is that all knowledge is empirical, and that no sort of Formal

[1] Reprinted from the Scripps College Papers, 1929.

Logic is desirous or capable of dealing with real truth at all.[1] To bring out this meaning I should have to dive deeper into technicalities and to show you how Formal Logic everywhere disintegrates into nonsense, because it has uncritically taken ' truth ' in a sense in which it does *not* exclude falsity. And the reason for this mistake, again, is simply this : that as a matter of course and of form, every assertion verbally claims to be true, whether it is really true or really false. If, therefore, you restrict your truth-seeking to this formal claim, and do not inquire what makes assertions really true, you get a formal sense of truth, in which ' true ' includes ' false.' It is as a protest against this self-frustrating procedure that Pragmatism insists that the consequences of an assertion, and not its mere form, decide whether it is really true. All this of course needs a little reflexion, and you may not see it at first. Hardly any philosophers above twenty-five saw it at first, and most of the old authorities in philosophy have died without seeing it, just as most of the great authorities in biology died protesting against Darwinism, without ever seeing its point.

*You*, however, can probably understand that this rejection of Formal Logic, root and branch, is a revolutionary achievement of human thought. It means the dissipation of an enormous cloud of illusion, which has befogged the human reason for thousands of years, blocked the advance of knowledge, and inflicted untold miseries upon its victims. During the whole of its reign Formal Logic has shown itself incapable, not only of improving the processes of human thinking, but even of understanding how men reasoned in ordinary life and in science. No wonder that logicians do not, as a class, reason any better than other people, and that the study of Logic has been quite impotent to diminish the amount of bad reasoning in the world. Logic has been merely a source of pride in pedants and an instrument of educational torture. I attribute the insensibility of philosophers to scientific reasoning largely to the fact that they have never

[1] As has been fully shown in my *Formal Logic*.

dared to shake off this incubus. In short, I know of only one thing which has made more mischief than the usurpation by Formal Logic of the study of concrete thinking, and that is the false theory of truth which makes intolerance a duty and toleration a despicable act of cowardice.

## § 2

It is this second bogy which Humanism sets itself to exorcize.[1] We may define Humanism as the systematic and methodical working out of the perception that every thought is a personal act of which some thinker is the author and for which he may be held responsible. This perception rests on the undeniable fact that it is a psychological impossibility for any thought to be born into the world except through the ministration of some human mind, by commending itself to the total personality of some thinker, and by at least seeming to satisfy some purpose. Why do you suppose that any one ever says anything? Because, at the time, he judges it *good*: because it seems to him *better* than anything else he could say. But for him, therefore, that truth would remain unconceived and unuttered. It is a personal response to the situation in which he finds himself. Thus it follows that all truth-seeking is personal. And must not truth-finding be so likewise, if so be that we find it?

Now if truth is necessarily personal, it cannot really be dehumanized, and if a philosophy or a science professes to dehumanize it, it must either be expressing abstractly some other truth which really has a human side, or else be

[1] The term is here used in a purely epistemological sense. It was adopted by me, with very little philosophic precedent, in the year 1902, to designate a point of view which emphasized the central position of man and of human enterprise in the theory of knowledge, and was opposed alike to the Naturalism which would not recognize human activity at all, and to the Absolutism which merged (and lost) it in the whole. It was thus descriptive of the great principle of Protagoras that 'Man is the Measure of all things,' that is, of all that concerns him and comes within his ken. Since then, however, a *religious* reference has often been given to this term in America. It is used to describe a trend of opinion within the Unitarian Church, which emphasizes the concern of religion with man, and says little or nothing about God. So Humanism is made antithetical to Theism as well as to Absolutism. It will be seen that this development is quite foreign to my thought.

meaningless. In all real knowing the personal equation always plays a part. You may dislike this fact, or welcome it; but you cannot deny it, unless you are bent on giving a stupendous example of personal prejudice yourself. And then you signally prove the very point you were trying to contest.

This discovery of the personal background to all assertion as such, means more than a radical reform of Logic. It means an end to every form of logical bullying and intolerance. The phantom of absolute truth, which every bigot of every kind, on every side of every question, always claimed to possess, and never could substantiate, is dissipated in the brilliance of a new day. And with it the atrocities, for which it supplied the theoretic justification, are bound gradually to pass away. In its stead we must learn to respect the human truths which respond to the personalities of human thinkers. The claim to absoluteness being gone, we need no longer hesitate to admit that, relatively to different situations, different beliefs may have value and be judged true. For men are different: they are differently situated and differently trained; they have had and have different experiences. Hence they naturally take different views, and it is no use expecting them to agree—at first. Nor is it a bad thing that they don't, because *so* the chances are increased that everything that is of value will be judged true and advocated by some one. Our best policy, therefore, is to recognize and welcome a situation which has always existed, without bitterness and without quarrelling. Thus man is liberated from the burdensome claim to infallibility, and the demon of intolerance dies with the delusion which nourished him.

## § 3

We now approach Religion, with mitigated hopes and fears. If we have sincerely renounced the hope of enclosing the infinite fulgurations of spiritual activity within the narrow limits of a rigid formula, which some scientist's, philosopher's, or theologian's little mind has laboriously

compiled, we are freed also from the paralysing fear that religious truth may fail to respond to the needs of any human soul. Religious truths are *strengthened* by being found to conform to the type of all truth. Like all other truths they must fulfil a purpose, satisfy a need, and be verified experimentally. The religious question for each of us becomes—" In what belief shall I find the overbelief, the supplementation and transfiguration of my workaday beliefs, which will interpret my experience for me and set at rest my soul ? " Of course, this is a question every one must answer for himself. But it has become a question every one has a right to ask and a right to answer, and has ceased to be a question which is unanswerable in itself.

All that a spiritual adviser, therefore, can or need do for us is to draw our attention to a number of points which may help toward working out our own salvation.

## § 4

For my own part I should like to raise a few relevant questions. (1) How should we conceive Religion ? (2) How should we try to find a satisfactory basis for Religion ? (3) What bearing should Humanism have on the Religious Problem ?

(1) Religion is clearly an extremely difficult thing to define, or even to describe. For it is so evidently a much bigger and deeper thing than any creed and any theology whatsoever. It is rooted in the human heart, and forms one of the most important of our psychological instincts. It must therefore be conceived very broadly, as essentially a demand for something that will respond to our spiritual needs and cravings. This demand in its turn, though as such subjective, has an objective source : it is evoked by the nature of experience. Our experience is such that religious cravings are widespread and vital, and probably will always continue to be almost universal. So far as I can make out indeed only three classes of persons can be said to be devoid of them, and therefore to be inherently

irreligious by nature, whatever they may seem to be by convention, to wit: (1) extreme pessimists, (2) extreme optimists, because neither doctrine leaves one with anything to hope for, and (3) the utterly unimaginative, because they can imagine nothing beyond that which actually occurs in their experience. Whoever, on the other hand, has an ideal, and can conceive a better than his actual experience, is fundamentally religious. Fundamental religion, therefore, is primarily a systematic refusal to accept our inherited world, such as our brute and savage ancestors have actually made it for us, as an adequate sample and measure of true reality. This refusal drives us on secondarily to a belief in the possibility of a higher and better order of things to which we may attain.

Most of us, then, have religious cravings and are potentially religious animals, seeking for congenial provender, wherewith to feed our souls. But our cravings are somewhat various, and it is not easy for one and the same religion to satisfy them all. Most men, therefore, in their practice acknowledge a plurality of religions, and aim at a plurality of ideals. Even construing religion more narrowly, some of us have many more religious demands to make upon the universe than others. If we want Help, Justice, and most of all, Mercy, we shall demand a Personal God who cares for his creatures, a personal Saviour to sympathize and commune with us, a future life, and perhaps ultimately a heaven, though tastes in heavens seem to be very various, and some have no taste for them at all. Others demand in addition a definite organization of spiritual interests or 'church,' with an impressive ritual and a romantic past, and even a beautiful variety of vestments.

Others again are much less exacting. The only thing their spirits crave is an assurance of unity. If you assure them that the universe is one, and that they are part of it, they can dispense with all the rest. The absolutist philosophy which so easily satisfies this demand, *and so far as I can see no other*, may perhaps strike you as making a very tenuous and innutritious sort of religion. But we

must not be intolerant, and so far as it goes it is a genuine religion, because, and in so far as, it satisfies a genuine demand. It lays itself open to criticism only when it makes a preposterous attempt to narrow down religion to this single form. If this pretension is advanced in the name of philosophy, we should send this so-called philosophy away to study a little elementary psychology and a few of the elementary facts of human life, in order that it may appreciate the richness and variety of human nature. Let us conceive religion, then, as the soul's aspiration towards an ideal wherewith to rectify and transfigure the actual.

§ 5

(2) You may have gathered from what I have said how I think a satisfactory basis for religion should be conceived. The fountain-head of religion is situated in the human soul, and helps to float the frail vessels that hurry us down the stream of time, until we pass beyond the narrow range of human vision. No other, no further, basis is required at first; indeed we do not strictly need a *basis* at all. The metaphor of a basis is thoroughly objectionable. It is only a *stationary* religion that needs a basis, *i.e.* something to rest on. And a stationary religion is one that has ceased to move with the times, to show a capacity for spiritual growth. It is a dead religion, or at least a dying one, and no emotional 'revival' will revive it.

Let us conceive *theology*, therefore, by all means as possessed of a basis, as resting immutably on fixed foundations, as safely bestowed in the glass cases of museums of antiquities, as from time to time reverently taken out and exhibited by their curators to the curiosity of their pupils.

But let us not confound *religion* with *theology*. Theology has mostly been a fruit of priestly leisure rather than of spiritual experience. At its best, it only codifies the beliefs which spiritual experience has spontaneously evolved; at its worst, it swells into a parasitic vampire which sucks the life-blood from Religion. Genuine

Religion cannot be stereotyped or fossilized, as theology always tends to be. It lives in the hearts of men ; and if it lives at all, it moves, and its progress cannot be stopped. It must keep in touch with life, and enter into it. And so it must grow and develop, and be transformed by the experience of life, and in its turn transform it.

§ 6

(3) But how does all this bear on Humanism ? Why, not at all, directly. Strictly and properly conceived, Humanism is not a religion, nor even a philosophy of religion, though it has a human interest in religion as a big fact of human nature. Nor is Humanism a metaphysic. It is something very much humbler and simpler. It is merely a tardy recognition on the part of a few philosophers, who have given up gazing at the clouds and divining the future thereby *a priori*, and turned their attention to the humdrum facts of life on earth, of the way in which men have at all times acquired knowledge. In itself it is merely a reform of logic or theory of knowledge. It applies to all knowledge, and therefore if there is such a thing as religious experience and a knowledge derived from it, we can confidently predict that it too will conform to the humanist analysis of knowledge.

This is to say that religious phenomena also will nowhere exhibit the operation of purely rational principles : they will everywhere be inspired and excited by desires, cravings, interests, emotions, purposes. Religious truths also will begin their careers as postulates, and will need, and receive, verification by experience. And they will attest their truth by the manner of their working, by the control they exercise over the actions and passions of men, rather than by their success in evolving verbally invulnerable formulas to repel the assaults of armchair dialecticians. In short, Humanism is so far from founding a religion that it will rather be true that religious phenomena will supply no small part of the evidence to which the humanist theory makes appeal.

Shall we conclude, then, that Humanism will make no difference to religion? No; it will make differences which in some points may be very important. I will mention three of these.

§ 7

(1) Humanism will make a difference in the logical status of the religious attitude towards life. It will make men more conscious, and *therefore critical*, of their Will to Believe. The natural man everywhere begins by believing and disbelieving what he likes. Whatever strikes him as impressive and insistent, as aesthetically pleasing, as convenient, he accepts as self-evidently true, forthwith. He is the victim of first impressions. Whatever he dislikes he closes his eyes to, ignores, forgets, and disbelieves. So smooth and unobstructed is the passage, in most minds, from the dim consciousness of a desire to a confident affirmation that its aim has been attained, that they are quite unaware of the existence of prejudices that determine their views on any question that interests them. But whenever the psychologist studies the actual reasonings of men he has always the same report to make. In politics, in religion, in science alike, men observe what they come prepared to see, confirm what they already believed, and overlook what does not fit in with their preconceptions. But the worst sins have probably been committed in philosophy, until recently the least self-critical of the sciences. Metaphysics are simply concretions of an individual's will to believe; in every case the conclusions are reached first, and the reasons invented afterwards. Every metaphysician believes in whatever he wishes to believe, and naïvely wishes every one else to believe with him. Why? Because his truth is self-evident to him, and he admits its claim to be self-proving. Now the 'self-evident' is that for which there is no *other* evidence. To believe in it is to be willing to dispense with extraneous tests of truth, and to hanker after *a priori* truths. *A priori* truths are truths conceived to prove themselves simply by the statement of their claim.

Now the whole of this mass of habit the Pragmatic Method challenges and puts on its trial. It insists that every truth, whatever its origin and whatever its claim, shall be *tested* by the value of its consequences. It will not accept a mere will to believe as a sufficient authentication of any dogma, philosophic or religious. If a religious doctrine has bad consequences, it will suggest that it may be inspired by the devil rather than the deity; if a philosophic doctrine has bad consequences, it will remark that psychological apriority is quite compatible with an origin in insane delusion. For the first time in its history philosophy is summoned to have an audit of its accounts; for the first time in its long career the Will to Believe has been found out.

But there is granted to us scientific compensation in the Right to Believe, which is the correlative of the duty to test beliefs. "The Right to Believe at our own risk any hypothesis that is live," as James calls it,[1] gives to the religious man the right to explore his subject by suitable hypotheses which are adopted and acted on before they are proved, and proved by being acted on. This is the right which has long been exercised by science, and has ministered so greatly to its progress.

The effect of this is to put the religious attitude toward the world logically on a par with the scientific, by proving the essential identity of their methods. What could be better calculated to restore its self-respect to Religion?

## § 8

(2) Humanism cannot but involve a revolution in apologetic. It finds a great common measure for scientific and religious fact in psychology. It finds in the relativity of all truth to the purpose of the inquiry a great solvent of antagonisms, whereby it dissolves the stolid solidity of the old conception of scientific fact which was slowly sapping the loftiest citadels of faith. It dissolves also the solidarity of the conceptions of fact in the different sciences, and so

[1] *Will to Believe*, p. 29.

makes room for the recognition of the religious experiences as scientific facts. For in ultimate analysis it appears that each science adopts whatever notion of fact is consonant with its purpose, and ignores the rest. The facts of one science are not facts for another; the facts of ordinary life are not facts at all for any science—but only raw material worked up differently for their different purposes. Take, *e.g.*, a common experience, say of red. For the science of physics the real 'fact' is not red: it is an ether vibration of a certain 'wave-length' or 'frequency.' For physiology it is a chemical decomposition in the retina. For psychology it is a 'simple sensation.' But what have these formulas in common, either with each other or with the crude experience which takes an object as inherently red?

The only common ground which all these divergent conceptions have is their relation to human purposes and their relativity to human experience. But on this ground they can meet not only each other's elaborations of crude fact but also those effected by the religious consciousness. Different as are the purposes, postulates, and verifications of the religious interpretation of experience, they do not differ in this fundamental respect from the interpretations of the sciences. All ultimately aim at alleviating the crushing burden of this unintelligible world. All strive to make it intelligible by making it inhabitable. All are justified in what they do by their success, and would eliminate themselves by failing in their aim. Science, therefore, to be humanly possible, must take account not only of the motions of bodies, but also of the emotions of souls. If its last word were pessimism, and of Religion optimism, it could safely be predicted that scientific 'truth' must succumb to religious. For it would eliminate its votaries, and its suicidal 'truths' would perish with them. The 'truth' that kills you, if you believe it, kills itself. Conversely, complete other-worldliness would be fatal to religions. They must be some earthly good; they must condescend to save bodies as well as souls.

§ 9

(3) It always makes a difference if we do consciously and with insight into its meaning what before we had done blindly and instinctively.

And so I do not doubt that a far-reaching change will come over the spirit of our religious dreams, when they are regarded in the kindly light of Humanism. This change will affect religion as such, *i.e.* all forms of religion. For to the humanist eye the really functional parts of all religions are so similar as to be practically identifiable, while the differences between them arise chiefly from the enervating excrescences of an intellectualistic theology, almost wholly derived from Greek philosophy and devoid of reference to religious experience. Humanism then will encourage us to trust our religious instincts, embolden us to try, more freely, spiritual experiments. It will disparage mere ritual, and dogma and formalism, mere theological dialectics, if they lead to no practical consequences and have little or no value for life. It will shift the centre of religious gravity from theory to practice. It will strengthen the religions in proportion as they are functionally efficient, and enable all of them to slough off their non-functional obstructions, and the obsolescent appendages with which dead superstition and undying pedantry have encumbered, and almost stifled, them. And it will subscribe with all its heart to the admonition, " By their fruits ye shall know them, whether they be of God."

And so instead of vying with each other in constructing subtle traps for the ignorant and unwary and calling them creeds, or in hunting and splitting dialectical hairs, theologians will learn to contend not with vituperative words but with good works, and to recommend their various answers to the religious question by showing that they really meant, and still mean, something in terms of spiritual experience, and can practically sustain our spiritual activities. Religions will set themselves to establish their truth, not by doctrines and dogmas, but by confirming and ministering to the good life.

And, to me at least, this way would seem much better and more salutary both for the theologians and for the rest of the world.

§ 10

But I do not flatter myself that Humanism will prevail in Religion, any more than in philosophy, without a long and bitter struggle. That right thinking depends on right doing, and not *vice versa*—because we find ourselves committed to life from the day of our birth and long before we can think about it—is a hard saying in itself, and it is not rendered easier for the denizens of a university by the nature of an academic atmosphere. For academic life breeds and selects intellectualists, and these, like most men everywhere, naturally prefer to believe that they and their life are just about as right as possible. It is a popular misconception of pragmatic theories that they relax the rules of truth-seeking in favour of our credulous instincts. But nothing could be more mistaken. That truths must authenticate themselves by their working, *i.e.* by their actual value, is the severest of all tests, and to it the little faiths of the men of little faith will ever be reluctant to submit.

I venture, however, to hope that by taking our religion practically we shall in the end find ourselves impelled in the direction of substantial agreement far more rapidly than by attaching an altogether excessive importance to the vagaries of the individual intellect.

For it should be remembered that the intellect is not the only, nor even the chief, source of social agreement. Biologically speaking, its essential function is to be an instrument of variation producing salutary divergences from habitual modes of behaviour. It is therefore individualistic from the first, and in its higher reaches gets unduly so. When two philosophers meet they never quite agree, unless they are trying to be polite, and generally they quarrel violently. Every man's reason is always up in arms against every other man's, and destroys his reasons. The reason is that each thinker in these higher regions

grows into a lonely specialist, who goes on his own way and grows less and less humanly intelligible to his fellows. As William James says in one of his letters, "the philosopher is a lone beast, dwelling in his individual burrow."[1] Intellect, therefore, isolates and estranges; it does not promote agreement. It has utterly failed to produce agreement in religious matters, more utterly even than force. I speak in sorrow not in anger, and in view of the facts of history. No wonder religions have never relied on reasoning alone; the merely intellectual view of religion has always bred an intractable Rationalism, and rationalism is an exaggeration and caricature of the deeper reason which adjusts our acts to the particulars of life, and so helps to keep us alive.

On the other hand it is on the plane of action and of the feelings and perceptions that subserve the needs of action, that we lead a common life, and can co-operate for all essential purposes. Hence, though we may be as slow to agree theoretically about religion as about the other values of life, we may learn to regard our differences as unessential, as the bad reasons which those who differ from us give for doing the right thing; and practically this suffices.

In conclusion, let me express a hope that even though, being myself a philosopher and full of philosophic perverseness, I have probably not said what I was wanted or expected to say, I may have said enough that is debatable to set the ball of discussion rolling towards the abysses of truth!

[1] *Letters*, vol. ii, p. 16.

# CHAPTER XXIV

## PHILOSOPHY, SCIENCE, AND PSYCHICAL RESEARCH[1]

I AM not at all sure that a philosopher ought to be called upon to preside over a Society which has scientific exploration for its aim, the more so when its researches are as arduous and prolonged as ours. For the philosophic temper seems to be contemptuous of the minute details which count for so much in science, and impatient of the slow but unceasing advances which constitute the normal progression of a science. They contrast too much with the procedure of the speculative method, with its spectacular flights, gorgeous guesses, and hazardous predictions, which it flatters itself can be guaranteed by reasoning *a priori*. But the more I see of philosophic interventions in scientific questions, the more sceptical I become about their value, and the more doubtful whether irrefragable proofs that a thing must be so, render it in the least more likely that it is so in fact. The deductive arguments from general principles, to which philosophers are addicted, therefore, seem to be, not only useless, but positively mischievous. They always assume what we none of us know, to wit, where the limits of the possible are laid down.

But amid such doubts I take heart again when I think of the grand succession of philosophers who have presided over the destinies of our Society before me. Henry Sidgwick, William James, and Henri Bergson rank with

[1] A Presidential Address delivered to the Society for Psychical Research on June 29, 1914, the day the Archduke Francis Ferdinand was murdered.

the greatest names in the philosophy, not only of our day, but of all time.

And they have all served us nobly. Henry Sidgwick was a chief among our founders, our first and most essential President, who nursed the Society through the perils of infancy. Well do I remember those days, though it is now over thirty years ago, when to profess an interest in Psychical Research meant to incur an imputation of insanity. We should hardly have lived down the unreasoning prejudices that poisoned the social atmosphere, had we not been guided so long by the counsels of a man whose genius for common-sense stood between us and almost inevitable condemnation for crankiness, and whose stainless candour shielded us against attacks both from within and from without in the pursuit of an enterprise in which fraud and self-deception are a perpetual danger.

To William James we owe, not only the claim which the support of the greatest psychologist of all time has given us upon all succeeding investigators of his science, but also the discovery of Mrs. Piper and a number of most brilliant and inspiring papers.

About Henri Bergson, the first metaphysician who has radically challenged the stupid old tradition, which has come down from the Eleatics, that time is unreal and change impossible, I will say nothing for the moment. You must all have read the charming Address which delighted and instructed us so much last year, and I mean to take up one or two of his points later.

It is clear, therefore, that our Society has been most fortunate in its philosophers. And this is the more surprising because one does not usually associate the patronage of scientific adventures with philosophers. When they are not 'speculating' on their own account, they seem as a rule to play for safety, and to content themselves with *ex post facto* 'reflexion' on the work of others. This conception has been classically formulated in Hegel's famous comparison of philosophy with the owl of Minerva, which takes flight only at nightfall.[1] He meant, pre-

[1] Preface to the *Philosophy of Right*, *s.f.*

sumably, that it loves obscurity, gets on the wing when the day's work is done, and pursues its prey in the dark. I am afraid this is only too true of much philosophy, and it explains why men of affairs and men of science as heartily despise the *ex post facto* explanations of philosophers after the event as they suspect their *a priori* dogmatism before.

But it is not true of *all* philosophy, and was not true of the great philosophers who have supported us, and of whom I may claim to be not only a successor, but also in some measure a follower. There is another and a truer philosophy, which by way of contrast with the philosophy of the Owl we may call that of the Lark. It conceives the duty of philosophy to be, not *a priori* speculation and *ex post facto reflexion* merely, but the preliminary *exploration*, which heralds man's conquest of new realms of knowledge. So it rises above the common clods of earth and soars carolling to the sky, pointing out to men the upward and onward way. Or, in less poetical language, it is possible, and at times even essential, to prepare the way for science by ingenious guessing, and this is why so many of the successful scientific conceptions have originated with philosophers. I will remind you only of Anaximander's anticipations of Darwin, of the Atomism of Democritus, of Heraclitus's discovery of the Universal Flux, of the Stoic doctrine of the periodical conflagrations of stellar systems, of Descartes's adoption of the Mechanical Theory, of Berkeley's Immaterialism, of Kant's Nebular Hypothesis. There was nothing owlish about these guesses; if they erred, it was from excess of daring.

There is lastly the philosophy of that self-sacrificing bird the Pelican, which does not selfishly seclude itself in the contemplation of the eternal and immutable and indifferent, but tries to be useful and beneficial to men. And the Pelican is, I am proud to remember, the totem of my own College.[1] But the Pelican must follow in the wake of the Lark. For there is need of Daring in intellectual, as in warlike, adventures, and we particularly

[1] Corpus Christi—though we also own to the owl.

need the spirit of the lark, if we would rise above our actual horizon and explore the undiscovered country.

But in what direction is it best worth exploring at present, and to what points can your attention be most usefully directed? These were, of course, questions I had to consider. It seemed to me that in our present era of incipient exploration of the psychic *terra incognita* I could best serve the cause by discussing some problems of our proper logical equipment, and by clearing away certain metaphysical obstructions which beset the minds of many. I hope, however, you will not be terrified by hearing that I am going to talk both logic and metaphysics, and will not make up your minds in advance that I am going to be unintelligible. Logic is, I know, universally respected, though no one reads it; while those who read metaphysics mostly do so, one feels, not to be enlightened so much as to have their sense of the inscrutable mystery of everything stimulated and augmented. We, however, as scientific pioneers, must go armed with a logic that we can use as an instrument to cut a clear path through the wilderness, and must not be afraid of bogies, metaphysical or otherwise. Indeed it may be that by going ahead boldly we shall not only advance our own subject but perform a notable service both to metaphysics and to logic.

Let me start, therefore, from an important and interesting fact to which Prof. Bergson has directed our attention.[1] The evidence of psychic phenomena, which we collect, is primarily *historical*, and has to be ascertained according to the canons used by the historian and the lawyer, rather than by the methods of the laboratory experimenter. Now this profoundly true remark indicates the great gulf which exists between our procedure and that, not only of the exact, but also of the experimental, sciences. For a historical event occurs once, and is not to be repeated. History *never* repeats itself. Julius Caesar was assassinated only once, and if we wish to know how, and how large precisely was the rent the envious Casca made, we must get the historical eye-witnesses to

[1] *Proceedings*, vol. xxvi, p. 464 f.

record their evidence accurately and at once, and compare and criticize their several accounts. That too is essentially what we have to do with our ghost stories, etc. If we are lucky, and get hold of the story while it is still fresh and the witnesses are still alive—and this we are being allowed to do much oftener than formerly—we can proceed to strengthen our historical evidence by applying the methods of the law-courts. We can question our witnesses and cross-examine them to a certain extent. But we cannot, as a rule, *repeat the experience*. We cannot summon spirits from the vasty deep at will, and cinematograph their performances, in order that if they do anything we did not observe closely enough, we can make them do it over again slowly. In short, we can *experiment* not at all, or hardly at all. Consequently we cannot multiply our evidence at will, nor crush our critics by its accumulating weight.

But worse remains to be confessed. Our evidence does not really accumulate at all. The longer we keep it, the worse it gets, and that through no fault of its own. It wastes insensibly away through the mere efflux of time, and, so far from growing greater with the growth of interest, our scientific capital is composed of wasting assets.

The reason is quite simple. The strength of our evidence depended on our securing first-hand records from trustworthy witnesses and getting them competently examined and criticized by honourable investigators. So long as our witnesses and our investigators are *alive*, therefore, they can confront the hostile sceptic in person, and will have the support of those who know them and believe in them. But as the original witnesses and investigators pass away, their evidence inevitably undergoes a serious and progressive loss in value. Coming generations have nothing to go by but a paper record, and a record of its recorders. They can know neither the witnesses nor the investigators personally, and hence the value of the evidence may shrink incalculably. Whoever wants to disbelieve it has merely to get up and say the witnesses were liars or lunatics. "Why don't these marvels happen

now? Certainly they seem well attested; but what if the records were biased or fraudulent? Anyhow they are not up to modern scientific standards." Nor can any one refute him. At present even those of us who have discovered nothing at first hand (and their numbers are regrettably large) can yet reply: "Such insinuations are absurd; we have known Edmund Gurney and Henry Sidgwick and Frederic Myers and Richard Hodgson and William James, and they were all honourable men, in whose integrity and intelligence we could safely put our trust." But will any one be able to feel this as strongly 100 or 1000 years hence? Surely we must recognize that however fully and carefully we record our cases now, it is simply a question of time for them to become as inadequate for scientific purposes and as unconvincing to our successors as the records of similar events in the past had become to us. In other words, we must recognize it as an intrinsic limitation of historical evidence that it can hardly ever be, and can never remain, scientifically adequate, and that therefore our evidence also can never be made scientifically cogent, so long as it remains historical.

We labour, then, under a serious disability. But is it incurable? The answer must be, *yes* and *no*. Yes, in so far as we continue to depend on crude evidence: for the crude evidence is always historical, even in the sciences. All scientific discoveries are in the first place historical events. That Newton had the law of gravitation suggested to him by the fall of the apple, that he made certain calculations and predicted the orbit of the moon, that his predictions failed at first because his data were wrong, and afterwards, when he had got hold of better ones, succeeded (approximately), are, or are believed to be, historical facts, without which our law of gravitation would not have come into being.[1] Nor does our recognition of it as an 'eternal' truth exempt it from dependence on such facts. If it is to remain 'true,' it needs a continuous supply of historical

[1] Of course if some one else than Newton had subsequently propounded the same formula, there would still have been a similar set of historical circumstances conditioning the discovery.

verifications; its predictions must continue to come true and never fail. If at any time a gravitating body should be observed to move unpredictably, a question would arise about the truth of Newton's law, and it might have to be amended.[1] Even the best established laws of nature, therefore, rest in fact on a *finite* number of historical observations, and in the case of laws which can be verified only with difficulty, or at long intervals, that number is by no means large. It takes seventy-eight years (more or less) to verify the orbit of Halley's comet, and it would seem that at most about forty reappearances of this luminary are on record. The atomic weight of some of the rarer metals has probably not been calculated more than three or four times, and finally there are whole sciences (like palaeontology) in which important conclusions repose upon single historical observations as to where a bone was found in a bed. Thus the name and fame, nay, the very existence, of *Pithecanthropus erectus*, the 'Missing Link,' depend on the truthfulness and competence of Dr. Eugene Dubois's assurance that he had found a cranium sufficiently near a thigh bone for both to be attributed to the same creature. In all these cases any source of error in the historical data may radically vitiate all the beliefs that are built upon them.

So far, then, our evidence does not differ from that on which all science ultimately rests, and it is a mistake to imagine that crude historical evidence can be dispensed with. Even the sciences that predict most boldly and successfully rest on historical evidence and individual witnesses, and depend on confirmation by experience. Nor do the mathematical sciences form a real exception. For though in their case we seem to be free to make what assumptions we please, and to work them out as consistently as we please, the only thing that guarantees to our procedures any relevance or applicability to the course of real events is that we should have happened to hit upon assumptions which turn out to be serviceable idealizations of reality. However enthusiastic, therefore, we may be about

[1] It now has been, by Einstein.

the exactness and apriority of *pure* mathematics, we must leave the truth of *applied* mathematics essentially empirical. There is nothing in the number-system to secure that it shall always be supplied with things that can be numbered, nothing in any geometry to guarantee a supply of shapes that can be treated *as if* they were geometrical. Thus it is their actual application to reality which raises the value of mathematics above that of difficult games with imaginary counters.

Nevertheless it is *not* true that the sciences are wholly dependent on truthful records of events. Their truths are historical, but not merely historical, and herein lies the real difference between their materials and ours. This difference consists essentially in the extent to which the data can be controlled. Where there is control enough to experiment, there is always a possibility in theory, and usually in fact, of indefinitely repeating and multiplying the evidence, on which the truths of the sciences rest. If, therefore, there is any dispute about the evidence, it is possible to *repeat* the experiments questioned, with special attention to the doubtful points, or, better still, to devise such new and improved forms of them as will meet the objections urged. Thus, though the evidence is historical and its amount may actually be small, more can be manufactured on demand, and it is therefore scientifically adequate.

The existence, therefore, of such experimental control revolutionizes the logical situation. It justifies an entirely different method of discussion and an entirely different notion of proof. It puts 'dialectical' disputation and logic-chopping out of court altogether. When a doubt arises whether a phenomenon has been correctly observed, it is no longer necessary to go into the *pros* and *cons* of a historical record, and to dispute about the honesty and competence of the observers with critics who may be bitterly prejudiced for all sorts of reasons that are not revealed—not because a good case cannot often be made out in their favour, but because it is no longer worth while. It is much simpler and more satisfactory to repeat the

experiments, and so to make fresh evidence. Thus when in the early days of wireless telegraphy the Marconi Company first claimed to have transmitted a signal across the Atlantic, and this claim was disputed, there did not arise a literary controversy as to what exactly happened on this particular occasion. The company simply went on perfecting its apparatus until it got through so many messages of such importance that it was no longer worth the captious critic's while to dispute its achievement. In short, where there is experimental control the decisive appeal is to facts, and not to dialectical reasoning and argument, though it has taken mankind a long time to learn this, and some philosophers may still behave like the Aristotelians who refused to look through telescopes, lest they should see the satellites of Jupiter revolving round their primary and behold a visible refutation of their master's astronomy.

It follows that in Psychical Research also we should aim, not so much at establishing that any particular 'supernormal' event, say a message from the departed, did veritably happen at a particular time, but at getting such a grasp of the conditions of such events that they can become predictable and 'normal.' We live in a beleaguered city that is hedged round and beset by death: it is no great relief, even if we can believe it, that from time to time a sporadic message should get through the blockading lines; what we need is to be assured of a free line of communication with our friends without, that will render our life the outpost of a larger scheme. That the real 'G.P.' or Frederic Myers communicated through Mrs. Piper on this occasion or that, we shall never be able to establish to every one's satisfaction; but we may perhaps learn so to regulate the conditions of trance, automatism, and other forms of so-called 'mediumship,' that they will yield results, as in the natural sciences, which progressively increase in value and trustworthiness, until they cease to be laboratory experiments, and enter into our ordinary practice and outlook upon life. How *in fact* that is to be achieved I cannot, unfortunately, tell you; for that would

be the *real* discovery, and one of the most momentous men could make. But we are far more likely to make it, if we make it clear to ourselves that it is the discovery at which to aim.

Experimental control similarly changes the notion of 'proof.' It liberates us from the illusion, which still vitiates so much of the argument on both sides in Psychical Research, that it is in our power or duty to contrive a single unexceptionable and final experiment or observation which will constitute an absolute and coercive proof of a disputed belief once and for all, and silence sceptics for ever after. Once we capitulate to this logical superstition, we are not only bound to reject much valuable and scientifically suggestive evidence that for one reason or another does not come up to this standard of 'proof,' and to engage upon a wildgoose chase of an impossibly perfect case, but we are also committed to endless arguments as to whether a particular observation does or does not reach the standard. But a really experimental science does not allow its progress to be impeded in this way. It says to the objector: "You don't think our evidence good enough. Well, I will not dispute with you about case A, which you reject; but here are also cases B and C, and D, and so forth to any extent, which, though not one of them is ideally perfect, are not subject to the same objections as A." Thus, by the indefinite accumulation of evidence, even the strongest prejudices are slowly overpowered.

It is possible, therefore, for a science, *i.e.* a systematic interpretation of a number of facts, to become certain and indisputable, even though none of its constituent facts is *per se* beyond cavil. And conversely, if a scientific investigation is put into a position in which its evidence is *not* allowed to accumulate, it can never be secured against cavils, and remains exposed for ever to attacks which experimental control would justify it in ignoring.

It follows, moreover, that much of the criticism to which our evidence is subjected, is mistaken and rests upon bad logic. It is assumed that proof must rest upon absolute certainties, and cannot accrue from a confluence of

probabilities. It is then shown that no part of the evidence *taken piecemeal* is absolutely unexceptionable. It is, thereupon, rejected as inconclusive, and it is inferred that nothing has been proved. But this is really to imply that evidence must never be allowed to accumulate, that probabilities have no logical value, and that the sort of evidence on which most of the sciences rely is worthless. It would clearly be inept on our part to acquiesce in a procedure which first requires us to prove scientific novelties by one single historical case, and then condemns us for failing in this impossible attempt.

It is evident, then, that experimental control would not only give us power to amass evidence to our hearts' content, but would enormously improve our logical position. If we had such control, even to a slight extent, we should no longer need to waste time and ingenuity in arguing with sceptics about the precise weight of particular pieces of evidence or to strain after one single invulnerable *pièce de conviction*. We could calmly let the evidence accumulate for what it was worth, and devote our energies to the extension and improvement of that control, convinced that in the long run it is not possible to deny the status of truth to a progressive knowledge which has shown itself to be real, by proving itself useful and by becoming a power in the world.

It seems, then, that in Psychical Research also we cannot convince others, nor in the end perhaps ourselves, that our discoveries are real, unless they conform to the type which the pragmatic philosophy assigns to all genuine knowledge, *i.e.* unless they increase our power over the course of events. Indeed I do not know of any case which bears out more strikingly the correctness of the pragmatic analysis of knowledge. What other case is there of alleged knowledge which is as ancient, as important, as passionately defended and attacked, as the occult and mysterious occurrences which our Society has for the first time in human history essayed to subject to systematic investigation? And about what alleged knowledge also have disputes raged so interminably? Why? The testimony to the

genuineness of this whole realm of knowledge is doubted and repudiated, because those who claimed to possess such knowledge have never been able to show that it could stand the pragmatic test, that they had the phenomena under control, and that it yielded them real power. Hence the world has never been willing to acknowledge that they possessed real knowledge.

Let me illustrate this point from a delightful book which exhibits a rare combination of philosophic and spiritual insight, Dr. L. P. Jacks's *All Men are Ghosts* (pp. 4-7).

Turning the tables upon us, one of his characters declares that "Ghosts who believe in the existence of human beings often regard them as idiots. To communicate with such imbeciles is to court an insult, or at least to expose the communicating spirit to an exhibition of revolting antics and limited intelligence. From their point of view, men are a race of beings whose acquaintance is not worth cultivating." By the majority of ghosts "belief in the existence of beings like yourself is regarded as betokening a want of mental balance. A ghost who should venture to assert that you, for example, were real would certainly risk his reputation, and if he held a scientific professorship or an ecclesiastical appointment he would be . . . made the victim of some persecution. . . . The ghosts have among them a Psychical Research Society which has been occupied for many years in investigating the reality of the inhabitants of this planet.

"A friend of mine, who is a Doctor of Science, and extremely scornful as to the existence of spirits, is actually undergoing examination by the ghosts. . . . Some assert that he is a low form of mental energy which has managed to get astray in the universe. Others declare that he is a putrid emanation from some kind of matter which science has not yet identified, without consciousness, but by no means without odour. They allege that they have walked through him. . . ."

"By the vast majority of ghosts the proceedings of the Society are viewed with indifference and the claim, which

is occasionally made, that communication has been established with the beings whom we know as men is treated with contempt. The critics point to the extreme triviality of the alleged communications from this world. They say nothing of the least importance has ever come through from the human side, and are wont to make merry over the imbecility and disjointed nonsense of the messages reported by the mediums, for you must understand that there are mediums on that side as well as on this. Some time ago, two questions, purporting to come from this world, reached the ghosts. One was 'What will be the price of Midland Preferred on Jan. 1, 1915?' The other, 'Will it be a boy or a girl?'"

Why do you laugh at these questions? Are they not psychologically natural questions for us to ask, and questions about what it concerns men greatly to know? Nay, are they not logically good test questions, and would not correct answers to them unquestionably be convincing? Could any one persist in disbelieving the genuineness of supernormal communications if they conveyed information bearing so directly on his vital interests? And if he did, should we not confidently expect one who was blind to the advantages of such valuable information to be speedily eliminated by natural selection? Whatever, therefore, may be the idiosyncrasies of individuals, the race has to be empirically-minded enough to believe whatever is enforced by a long course of successful and valuable prediction. You may convince yourselves of this by an illustration taken from an ingenious tale, by Mr. H. G. Wells, if I remember rightly, of a race of men congenitally blind, in whose midst by some freak of atavism a child was born gifted with sight. Being a seer, he became of course a prophet; *i.e.* he was able to predict, *supernormally*, a vast number of events which duly came to pass. He could foretell to his blind fellows that if they walked on so many yards in a certain direction they would run into a rock or encounter a bull, and would of course himself avoid many dangers he could see approaching. At first, of course, his claim to be possessed of an additional sense and a conse-

quential extension of his means of knowing would be scouted, and fraud, coincidence, or lying be alleged in explanation of his feats ; but in the end the regular success of the seer's predictions and the superior adaptations which they rendered possible, *i.e.* the *practical value* of his endowment, would force the reluctant blind to admit the existence of a sense they did not possess. And if they reflected intelligently on this result, they would perceive also that here was one way in which practical value could establish ' theoretic ' truth.

Why, then, are questions of the sort that Professor Jacks satirizes felt to be absurd ? Their absurdity lies in their naïve assumption that they are *equally interesting* to the denizens of another world, to whom they are supposed to be addressed, and are natural questions not merely for us to ask, but also for them to answer. They presuppose a community of interests between the two worlds, which seems to us presumptuous and absurdly unlikely.

Yet there is nothing in itself absurd in presuming a community of interests. Unless we can find or make such a thing, we can hardly hope to establish any effective communication. It is no use trying to ring up any one on the telephone who does not want to converse with you, because he knows you will bore him with your personal affairs in which he takes no interest.

The flaw in these questions lies in the one-sidedness, blindness, and egotism of the standpoint from which they are asked. If we want to enter into communication with other worlds, we must endeavour to ask, not only questions to which the answers would be of value to us, but also questions which will seem worth answering to those we address. And this I think we have so far failed to do. Whether we conceive them to have been addressed to angels, devils, spirits of the departed or ' elementals,' our questions must have seemed intolerably silly, and (as a rule) the answers have paid us out in kind. It may well be, therefore, that the value of the responses we have elicited has been so small because we have been so stupid; it would be unscientific to infer from our failures either that no

communication is possible or even that it has not occasionally in some measure been achieved. But, as a rule, the few who have not been too engrossed in mundane affairs to interest themselves in such attempts have asked for information either about spiritual spheres, and got descriptions that were humanly quite unverifiable, or about such of their earthly affairs as could hardly be subjects of interest and competence to the denizens of other worlds. They have not contrived questions of interest to *both* sides, which would yield evidential answers.

I do not, however, wish to imply that the fault is wholly on our side. It may well have been that the only common interest to which we could hitherto appeal was precisely the personal one, viz. the desire to get through a message of greeting and consolation to those whom death had left bereaved. That certainly, rather than the purely scientific desire to extend our knowledge, has been the driving force in such researches as there have been on our side. And why not also on the other? Such personal messages have not infrequently convinced those for whom they were intended. But, unfortunately, they can rarely be made to appear evidential to the world at large, which cannot judge the facts, and naturally suspects the bias of those who can.

Success in Psychical Research, therefore, seems to need not merely systematic and continuous effort on our part, organized with much larger resources both in men and money than the world has yet placed at our disposal, but also intelligent *co-operation* in what, for purposes of reference alone, I may call the 'spirit' world. And on both sides the efforts made will have to be prompted largely by a scientific desire to break down the barriers that evidently exist between the different phases of being. These barriers, if a 'spirit' world exists at all—and I have elsewhere shown that there are no reasons, scientific, philosophical, or theological, why there should not be one[1]—are probably mainly *psychological* in character, and

[1] Cp. *Riddles of the Sphinx*, chap. xi; *Humanism*, chaps. xvii-xix; *Studies in Humanism*, chap. xx.

no more substantial than the flimsy fences that restrict the grazing of the Alpine cow.

In other words, we need a S.P.R. on the other side as well as on this. And if we may trust the gradually hardening convictions of those who have most intimately and laboriously studied at first hand the complicated evidence, we seem to be getting something of the sort, as more and more of those who were devoted to Psychical Research in a lofty scientific spirit join the majority. But I fear that the obstacles in the way of Psychical Research must be even greater on the other side than on this. For a variety of reasons, largely discreditable and therefore unavowed, Psychical Research is far from popular on earth. There are pretty good reasons why it should be even more unpopular in the beyond. For the conditions are much less favourable. No one can seriously and honestly contend that it is a good thing that *we* should know nothing about what death means to what, again for the purpose of provisional reference, I must call the individual soul, and about what may befall it after that—for I greatly doubt whether the sentiments of those who say that knowledge would destroy the merit of faith have been interpreted aright. But it is easy to conceive that, once the ordeal of death is passed, it may seem in a high degree repugnant, unnecessary, and degrading to allow one's thoughts to dwell on the dreadful past and to attempt to resume relations with a world like ours. It would at any rate demand some leisure and a high degree of unselfishness and independence of a social sentiment which would doubtless denounce communication with our earthly sphere as disgustingly ' bad form,' and make its reprobation felt in appropriate ways. So it would accord with what we know of human nature that, if we survive death, we shall continue to live for the future rather than in the past, and to be sensitive and submissive to social sentiment.

We have come, then, upon a number of grave intrinsic obstacles of Psychical Research : (1) In trying to establish communications with other worlds we are probably dealing with forces which are not seriously interested in us, or

nothing like as much as we are in them; (2) At present these forces are beyond our control.

(3) We have scarcely any more control over the forces at our end of the line, which we could use as instruments of exploration. For the 'physical' forces, which we have learnt to some extent to control and use, seem to fail us here. There seems to be very little analogy, and an almost complete difference of kind, between the 'physical' and the 'psychical.' And though I quite believe that in the end, when we have made as serious and sustained efforts to understand the psychical as we have the physical, and considered the whole antithesis in a philosophic manner, this difference will turn out to be as arbitrary and fictitious in fact as it historically was in origin—it is at present unfortunately true that psychologists have not yet succeeded in making the methods which are effective in the physical sciences work in the psychical.

Nor have they succeeded as yet to any important extent in devising any methods which are *distinctively* psychical. Hence psychology at present seems to concern itself chiefly with the multitudinous rivalries of alternative descriptions of the psychic processes or data, all of which rest on arbitrary abstractions and fictions, and none of which exhibits any decisive superiority by working better than its competitors and showing itself more extensively applicable to the life of psychic beings.[1] In other words, psychology at present stands the pragmatic test hardly any better than Psychical Research. Some day it may supply us with real knowledge about the 'soul,' which we can apply and act on; but that day is not yet.[2]

(4) This inadequacy of psychology and of its knowledge of the 'soul' brings me to the last point to which I can

[1] Perhaps these remarks do not apply quite so definitely to the descriptions of 'functional' psychologies as to 'structural,' nor to the hypnotic and 'psycho-analytic' methods of practical psychologists like Morton Prince, Boris Sidis, and Freud, which have to some extent verified themselves by yielding actual cures.

[2] Teachers are often found to make similar complaints of existing psychology. For they too desire to use it, and find that psychological speculations have not yet come down to the concrete mental life, while psychological experiments presuppose conditions that are too remote from those of teaching.

draw your attention to-day, viz. the general inadequacy of the conceptions with which we have to operate in analysing the phenomena that are offered us.

That our notions should be inadequate is not of course astonishing in itself. For the conceptions in use everywhere embody merely the knowledge on record, and nothing more can be extracted from them than was put into them by the researches which consolidated their 'meaning.' Consequently it is the regular and normal experience of every progressive science to find that its initial conceptions were inadequate and have to be extensively modified as its knowledge increases. History also attests that many centuries of groping often precede the discovery of suitable conceptions that will effectively analyse and handle the phenomena a science studies. The palmary example occurs in the history of physics. From the beginnings of Greek science the human intelligence strove for over 2000 years to hit upon conceptions that would lead to a fruitful treatment of physical phenomena. Men naturally took their first cues from the apparent sensible qualities of bodies, and laboured perseveringly to explain their behaviour by assuming the antitheses 'hot' and 'cold,' 'heavy' and 'light,' 'thick' and 'thin,' 'rest' and 'motion,' etc., and the elemental character of 'earth,' 'water,' 'air,' 'fire,' and sometimes 'ether.' But all these efforts proved vain, and it was not until Galileo and Descartes in the seventeenth century that physics arrived at mechanical conceptions that would really work. After that progress was assured, not because 'absolute' truth had been attained and nature was wholly (or even in part) 'mechanical,' but because the mechanical conceptions gave the physicist the experimental control which enabled him progressively to improve his weapons. The physical conceptions now in use—'atoms,' 'ether,' 'electrons,' 'quanta,' etc.—are not such as would impress themselves on an *a priori* philosopher as self-evidently true, or even reasonable, and they would have appeared incredible and absurd to primitive man; but they work so well that they silence our prejudices.

In Psychical Research, I venture to think, we are still in the groping stage. As Prof. Bergson has pointed out so lucidly, the Psychical is only just becoming a subject of scientific interest. Man's first preoccupation (of natural necessity) was with the outside world; what study of the psychical there was devolved upon magicians and priests. But the magicians, not being endowed, pursued it in a narrowly commercial spirit with an eye only to their personal power and profit; the priests, though endowed, were so on the wrong lines, and evolved an intolerance and conservatism that was even more deleterious scientifically than the impostures of the magicians; neither, moreover, had any conception of the need for scientific progress.

The net result is that we not only have no suitable conceptions even for preliminary use in psychical researches, but have had our minds thoroughly confused by the vagueness and ambiguity of the current terms, and obstructed by various inappropriate notions that spring from applying to the psychical false analogies from the physical world.

The peculiar badness of our initial notions here seems to be largely due to the fact that they are forced upon us by an unnatural conspiracy of common-sense and metaphysics. Common-sense normally looks only to the immediate need, and devises notions adequate to the practical purposes of ordinary life, and in this it usually succeeds. Metaphysics, ideally, should, however, criticize the limitations of these notions, and open our eyes to wider possibilities. But in this case it has not fulfilled its proper function, but merely reduced the common-sense notions of uselessness and absurdity, while so infecting common-sense with its paradoxes that it is hard to disentangle its original meaning.

From lack of time I will exemplify these strictures from two only of the notions we have to use, those of 'soul' and of 'reality.'

(I) The conception of 'soul' is one of immemorial antiquity, and enormous elasticity. It embraces and

expresses, in varying proportions, the notions of a principle to explain life, consciousness, spontaneous mobility, breathing, sleeping, dreaming, and possibly others. It is conceived as material or immaterial, as simple, multiple, or both at once, as the real man, or as a shadowy reflex, as separable from its body and capable of inhabiting others, usually as surviving death and often as pre-existing birth. Needless to say, it is a pretty slippery conception to handle, and hard to pin down to any definite formula. But on closer examination it will be found that every one of this bewildering variety of functions assigned to the 'soul' by primitive thought, is intended to solve a real problem; and that the conception of soul is never otiose. Primitive man is not *learned* enough to construct purely verbal problems and to pay himself in words; common-sense, therefore, always conceives the 'soul' as a principle of real explanation.

But when we turn to metaphysics the situation is greatly altered for the worse. The great philosopher of the soul is Plato, and in him most of the primitive notions about the soul jostle each other with little or no attempt to unify them. But, animated by an ascetic dread of the sensible world, Plato proceeded to invent also the attribute of immateriality and the notion of pure spirit, which have ever since had a *succès fou* in philosophic circles. He thus paved the way for the philosophic elaboration of the soul into a 'spiritual substance,' absolutely different in kind from the body, which could be proved to be *immortal a priori*, because it was *simple* and therefore *indissoluble*, and could support all its changing 'accidents' as an *immutable substratum*. The intention of all this metaphysical defining was of course to demonstrate the soul's immortality without recourse to any laborious interrogation of experience. But the actual effect was not only to fail to do this, but to render the notion of soul scientifically useless, and unintelligible, even as metaphysics, because incapable of performing the function assigned to it by definition. As conceived by philosophy, therefore, the soul became a meaningless principle.

To justify this briefly, I may point out—(1) that the 'immateriality' ascribed to the soul, so far from facilitating a genuinely idealistic interpretation of the world, really contravened it. A genuine idealism has to try to conceive all reality as existing for spirit, and as in some sense ultimately spiritual. It must hold, therefore, that the external world also is spiritual in its nature, and it cannot admit that there is any real incompatibility between apparent materiality and real spirituality. This, however, leaves the 'immaterial' functionless. Idealism has no need to postulate with Plato an immaterial world to be the true home of an immaterial soul which has inexplicably fallen from its high estate and is yearning to return to it: nor need it chill the aspirations of the natural man with the uncomfortable and unimaginable institutions of 'heavens' compounded according to the Platonic *recipe*. It can argue rather that if it is not inconsistent with the spirituality of reality to reveal itself as a sensible and material world now, it need not ever be so, and can infer that the heavenly Jerusalem is a forecast of perfection logically sounder, as well as more agreeable, than the thinly-veiled negations of non-sensible being out of space and time.

(2) However verbally invulnerable *a priori* proofs of the soul's immortality might be, they could never demonstrate that the metaphysical definitions of the notion were *empirically applicable to reality*, and that 'souls' coming up to their specifications were in fact possessed by anybody. This unavoidable defect, which clings to the method of *a priori* reasoning everywhere, renders real proof of matters of fact essentially empirical and takes all the effectiveness out of the philosophic arguments about immortality.

(3) As a matter of fact these verbal 'proofs' of the soul's immortality were far from invulnerable, and Kant had no difficulty in pointing out their obvious gaps and flaws. A 'simple substance' cannot indeed perish by dissolution into 'parts,' which it has not got; but that need not save it from fading out completely. Nor is the soul properly called 'simple.' Rather it is 'one' for

some purposes and 'many' for others,[1] and its unity embraces an infinite complexity. A really simple soul-atom would be perfectly useless theoretically, and perfectly intolerable practically. It is, moreover, undiscoverable in psychic life, as Hume proclaimed, and if it could be found, could certainly *not* be identified with our true self.

(4) But the most maladroit blunder of all was to conceive the soul as 'a substance,' taken in the sense of an immutable substratum. For in the first place this notion of substance was inappropriately modelled upon the common-sense notion of 'things,' which serves us so effectively to group together the changing appearances of the external world. But the course of inner experience flows very differently. Nothing even remotely thing-like appears in it, nothing requiring to be hung upon the peg of 'substance.' A 'soul' is composed of 'processes,' not of 'things,' and even its 'permanence' is that of a stream and not that of the rock it carves into. It is in unceasing change, and neither immutable, nor required to be so. For an immutable soul would be incapable of learning by experience, and no one wishes to have such a stupidly ineducable soul.[2] What we want is to change and yet to be 'the same,' to preserve our 'identity' in changes (preferably for the better), and the only spot in the universe where the possibility of this feat seems to be revealed to us is in our personal experience. And even if we overlooked these differences, the notion of substance does *not* explain even the nature of 'things.' No one has ever been able to conceive how a 'substance' functioned, how its 'attributes' 'inhered' in it, or how an immutable substratum could guarantee to 'things' their identity and permanence. For the changes which pass over the 'thing' do not touch its 'substance,' nor can the 'substance' exercise any influence on the course of the changes. There is not even an imaginable connexion between the 'substance' and its

[1] Even the philosophers who most strenuously insist on its 'unity' cannot manage without ascribing to it 'parts' and 'faculties.'

[2] Except, apparently, some philosophers (as Schopenhauer), for whom time is 'unreal,' and therefore learning illusory.

'accidents'; and there are no means of knowing what is happening to the former, because *ex hypothesi* all we ever know is the behaviour of the latter. The truth is that this notion of 'substance' is not functional at all, and explains nothing either about 'things' or about 'souls.' It is no wonder, therefore, that modern psychology has no use for a metaphysical soul of this sort.

It should be clear by now that we must get a better notion of substance, before we can get a helpful notion of soul, that will enable us to attack the complexities of our psychic nature as they are beginning to reveal themselves in the phenomena of multiple personality, trance, automatism, and what we have ventured to label 'telepathy.' Unfortunately I have no time on this occasion to suggest the positive developments of the notion of soul that might advantageously be tried.[1]

(II) The defects and ambiguities of the term 'reality' are still more mischievous. For they enter into and vitiate all inquiries into the reality of anything; so that, even if we had succeeded in meaning something definite by 'soul,' we could hardly discuss whether 'souls' were 'real' until we had settled what we meant by 'reality.'

The particular point, however, I want to make to-day is that in Psychical Research we are specially concerned with the ambiguities of 'reality.' We are continually endeavouring to test 'facts' of sorts, which lay claim to 'reality' in some sense, and to assign their proper sense to each, and in this process we may often have to revise or modify the classifications of realities which are good enough for the purposes of ordinary life and even of the sciences, and in the end may even have to declare thoroughly shallow and inadequate, beliefs which are almost universally accepted. For example, if there is anything about which ordinary persons, philosophers, and scientists may be said to agree it is that the simple and proper answer to the question 'How many real worlds are there?' is 'One!'; and yet it is impossible to concern oneself at all seriously with

[1] Some hints, however, together with a reconstruction of the conception of substance, will be found in *Humanism*, chap. xii.

psychical phenomena without feeling that this answer is, so far, quite an unwarranted piece of simplification.

The first sense of ' reality ' is the *merely formal* sense to which formal logic restricts itself. It constitutes anything an object of discourse, and must be possessed by anything talked about, however nonsensical and absurd it may be. But as this sort of reality is presupposed in every real inquiry, it may be dismissed as unimportant.

We next find that the other senses of ' reality ' are derivative from two main sources. To the first, which we may call the *psychological*, anything is ' real ' that is experienced, and, moreover, *as it is experienced*, and nothing is unreal that any one can be got to experience. It follows that errors, illusions, hallucinations, dreams, etc., are all possessed of this sort of reality. The ' imaginary ' pains of hysterical patients also are real in this sense.

The second main sense we may call the *pragmatic* and explain by saying that for it *the ' real ' is the important.* Its classical description by James declares that " whatever things have intimate and continuous connexion with my life are things of whose reality I cannot doubt." [1] In this sense ' reality ' is clearly a value, and admits of gradations, and is essentially relative to purposes and their order of importance. It is this sense which dominates our sciences and our ordinary life. The common-sense beliefs of ordinary life have an indefeasible reality, because they are undeniably important. So are the realities of ethics and politics, and the other opinions which have social currency.

The realities of the sciences are less universally impressive : for though the objects of every science are of course real *for it*, however fictitious and abstract they may seem to common-sense, like *e.g.* the realities of mathematics, and however little interest we may take in them, many of us manage to avoid any very intimate contact with the realities of many sciences. Yet even in such cases we have to concede that, in so far as the sciences are important for life, the reality of the ' realities ' they posit must be admitted.

[1] *Principles of Psychology*, vol. ii, p. 298.

It is, however, to be noted (1) that all the realities mentioned are (or are supposed to be) *common*, *i.e.* to be shared by many, and not to be in their nature objects only for a single percipient. The one exception to this which common-sense allows is the reality of pleasures and pains. We are willing to admit that our fellow-creatures have feelings, although we can never apparently feel them. But the pragmatic reasons which compel us to make this exception are so obvious that it only confirms our contention that the 'real' is the important.

(2) All these positive values which we call realities are haunted by negative counterparts, variously named 'errors,' 'failures,' 'unrealities,' etc. Neither our science nor our public opinion is actually infallible, though it is often contended that ideally both should be. We try to put the blame for such failures on the fallibility of individuals, and label them 'subjective,' although most errors are collective and popular, and every truth starts its mundane career as the discovery of some unhappy wight who is sure to be persecuted by all the authorities for making it.

Nevertheless, we cannot, by attaching a stigma to these 'unrealities,' deprive them of *psychological* reality (in the first sense); we only lump them together with such 'subjective' realities as 'dreams' and 'hallucinations.' By coalescing with these they form a formidable host, capable of very seriously upsetting the conventional beliefs both of ordinary life and of the sciences. Ordinarily, however, little attention is paid them; they are flung out on the rubbish heaps, and officially their existence is denied.

Now this is where *we* come in, and come across them. Both for the reason that they are 'subjective' and because they are suspected of error and illusion, they concern us nearly. For all the subjects we investigate seem to have a reality which is largely of the sort called 'subjective'; indeed there is usually a question whether they have any other. They are also peculiarly subject to error and illusion. We are bound, therefore, to become expert in

dealing with perplexing material of this sort, and to fit ourselves to work over the rubbish heaps of all the sciences for residual products of value.

Now when we do this we cannot but note two facts. (1) Though in a general way the sort of reality which the various objects of our interest have has become pretty plain, yet there is always a fringe of disputed cases. No sphere of interest is sharply defined, and each gets shadowy at the edges. *E.g.* we feel quite confident that in general the science of astronomy does not deal in illusions, and yet at the present moment we must say that the 'canals' of Mars may be only 'optical' phenomena. Again, while the N-rays have been relegated to the realm of illusion, the synthesis of elements is *either* a great physical discovery *or* an error of experimentation. The subjects whose scientific place in reality is thus ambiguous vary, of course, from time to time, but there always are such puzzles, and in any decision of them psychology must always have a large part; the case therefore runs closely parallel to our own problem in dealing with the supernormal: in both cases the alternative explanation is illusion, and psychology is relevant, if it is understood as the psychology of actual minds, and not as a mere juggle with abstractions.

(2) We note that though our ordinary classification of realities usually stands, yet realities which do not normally rank high in the scale do become valuable upon occasion, and force us to take them seriously by the importance they acquire. This is particularly true of such things as dreams, trances, and visions, which have not infrequently turned the course of history. The visions of Jeanne d'Arc, for example, decisively checked the English conquest of France, and force us to choose between a recognition of their supernormality and the alternative that 'delusions' may be the really important and dynamic forces in human life—a view ill calculated to enhance the rationality of human history.

But does not this occurrence of valuable realities in unlikely quarters cast an extensive doubt on the correctness of the classifications which common-sense accepts as final

because they usually suffice? When we combine these anomalies with the general presumption of the fallibility of all our knowledge, are we not driven to inquire whether the distinction between the 'real' and the 'unreal' is as rigid and absolute as we commonly assume? As a matter of fact the real and the unreal seem to interpenetrate in the subtlest fashion, and to be separable only in the roughest way for the most coarsely practical purposes. So may there not lurk in 'dreams' and their kin far more valuable revelations than we have yet extracted from them; while, on the other hand, the multitudinous abstractions, theories, and fictions, of which the sciences proclaim the 'reality' so loudly, and even those common-sense realities which so irresistibly obtrude themselves in practice, may in very sooth turn out to be but fashionable modes of 'dreaming'?

These suggestions seem to me worth dwelling on, both directly and for their own sakes, as opening out what may prove profitable lines of investigation, and indirectly, as abating our excessive trust in the reigning 'truths,' and compelling both the man of science and the man in the street to face the fact that the foundations of their ordinary interpretation of experience are by no means as assured and stable as they find it convenient to believe. Let us marshal, therefore, in a progressive series the doubts that should save us from premature dogmatizing about the 'real' and the 'unreal.'

(1) So long as we restrict our regards to the ordinary routine of everyday life, the realities we encounter seem solid and assured enough. On the level of common-sense, on which we spend our days (if not our nights), we live as animate bodies amid other bodies which we distinguish as animate and inanimate, feeling, moving, changing, acting upon them, and interacting with them, finding them hard, rough, cold, noisy, malodorous, unpalatable, or their opposites, in various ways and degrees. This common-sense view of reality imposes itself upon all in their actions, whatever the over-beliefs they may privately add to it in their philosophic or religious cogitations.

(2) But even the ordinary man does not live wholly by

routine, and most men are extraordinary when you can really probe into their souls. So the ' realities ' of common-sense do not satisfy them. Indeed they are not entirely satisfactory objectively, as men discover after a time. In order really to understand this world of sense and common-sense we have to devise a multitude of sciences, which enormously enhance our power over the real. But in so doing they abrogate the realities of common-sense and substitute constructions of their own which are very different. For none of the sciences is the sensible world really ' real,' and more than a starting-point for conceptual experiments. It is as vain to appeal to physics as to geometry to substantiate the visible, audible, tangible ' thing ' our matter-of-factness loves to embrace as a solid fact. Geometry deals only in immutable, immaterial shapes in an ideal space in which no thing could possibly move or live. Physics deal only in creatures like ' molecules,' ' atoms,' and ' electrons,' that possess neither temperature, colour, nor solidity, but move with incredible velocities in a space and a time that are wholly relative through a mysterious ' ether ' which has been expressly invented as a vehicle for the paradoxical qualities which the science of the time finds it convenient to attribute to the *physically* ' real.'

(3) Not only do our sciences thus disavow our senses, but they are mostly not on speaking terms with each other. In the name of scientific specialization they claim the right to make incompatible assumptions, which, when they meet (as officially they never need do), simply cut each other. But what is a concrete human being to think when, *e.g.*, he learns, in physics, that a colour is a definite rate of vibration in the ether, and, in psychology, that it is a ' simple sensation ' ? Must he not infer from the difficulty of finding anything to mediate the transition from the one to the other of these modes of regarding his ' sensible quality,' that both are pragmatic conveniences for scientific purposes, and that in the end it is *his* experience and *his* needs that both are catering for ?

(4) The ' realities ' the various sciences assume do not

merely conflict with each other: they also administer a severe shock to what might otherwise be dangerously plausible pretenders to reality. I mean the accounts of ultimate reality given by the various philosophies and religions. For, in the name of scientific method, they insist that these accounts shall be susceptible of verification, and to this pragmatic test neither the metaphysics nor the theologies seem willing to submit. Hence the modern mind seems to be inclining more and more to the conclusion that the philosophies express little beyond the idiosyncrasies of their authors, while the religions all suffer not only from the badness of the historical evidence to which they appeal, but also from incapacity to see that historical evidence never suffices to establish scientific truth.[1] When in addition the irreconcilable varieties and incompatibilities of these masses of speculation are noted, it is no wonder that they are growing more and more 'unreal' and tending to be classed with 'dreams.'

(5) Variability, however, is no reproach to address to the results of uncritical speculation alone. It occurs also in the finest products of science. Indeed it occurs more constantly. For while in the former case it is more or less accidental and restricted by the influence of conventions and traditions, in the latter it is a matter of principle, inherent in scientific method. For the sciences must all conceive themselves as *progressive*. Hence they cannot regard their 'truths' as final, but must continually labour to improve their statement and to extend their sway. In this process the 'realities' the 'truths' reveal may undergo the weirdest transformations. When, therefore, we have sufficiently recovered from the shock of its novelty, we shall realize that revolutions like that which the electric theory of matter has recently occasioned in our view of physical 'reality,' are normal incidents in scientific progress, even though their occurrence can never be predicted. It

[1] I do not myself hold that this condemnation is altogether just in either case. But I cannot help noting the trend of thought, and the responsibility for it of the expounders both of the religions and of the philosophies. Both mostly labour to estrange their beliefs from life, and the living retaliate by letting them alone to fossilize to their heart's content.

should be noted, however, that there is no necessary correlation between the improvement in scientific value which a new theory effects, and the change in our beliefs about ' reality ' which it demands. Quite a slight improvement in the interpretation of scientific facts may entail a complete revolution in our conception of reality, as was exemplified by the substitution of the Copernican for the Ptolemaic explanation of the succession of day and night.[1]

(6) Similarly what are theoretically quite easy emendations may enormously alter the bearing of scientific truths upon our life. Quite a small improvement in petrol engines removed flying from its proud position of proverbial impossibility. The perception by Darwin of biological facts, as easy as the egg of Columbus, has profoundly modified our conception of our place in nature. And whereas but a few years ago we were taught to look forward to a gradual chilling of the earth as the sun's furnaces burnt out, we have now a choice of sudden deaths, according as we prefer to believe that radio-activity, heating up the earth's interior to the explosion point, or a collision of the solar system with a dark nebula, is destined to terminate our earth's career.

(7) In no way, then, and for no purpose is there an escape from the uncomfortable uncertainties of science. Nowhere can even stable illusions be found to lull our doubts to rest. And seeing that we cannot in any proper sense be said to live only in *one* ' real ' world, what attitude is it reasonable to take up towards the chaos of ' realities ' that surround us ? It is clear that we cannot admit the claims of all alike ; we must *select*, to get anything like order into them. But does not this mean that the source of unity and order in our scheme of realities will be ' subjective,' will be precisely that very personal subjectivity which at first we strove to represent merely as a principle of insecurity and error ? The individual soul, which science seemed to abstract from and philosophy despised, is after all the ultimate principle of unity and order, because it is the only available agency of selection. It

[1] Or of the Einsteinian for the Newtonian ' law ' of gravitation.

stands at the core and centre of the cosmos and occupies the sole point at which all the various sorts of reality intersect, the sole position from which they can be controlled and unified. How that may be it is still premature to guess; but the indications do not at present favour any more 'objective' unification of all that claims 'reality.' It does not, for example, seem at all likely that all the 'dreams,' errors, and delusions of every one can be made to fit together into a real cosmos; but how many worlds we may thus, actually or potentially, inhabit remains to be explored.

The central position of the individual soul does, however, fully warrant, I think, a resolute refusal on our part to neglect the significance of the 'realities' we have called 'subjective.' They certainly lie very near the centre of affairs, and no limit can be set to their influence: they pervade, and, if you will have it so, taint, all our 'truths.' Indeed, no truly comprehensive view of reality can ever allow us to grow oblivious of the most extensive of our doubts, which I have saved up for the last, because in the end it may prove the most consoling. We have no means of proving that our whole life, with all the 'truths' it supports and all the 'realities' it attests, is not itself a 'dream': consequently death itself, when we come to it, may appear like awakening from a nightmare. This suggestion is an old one and there is much to be said in its favour, while no serious reply to it has ever been forthcoming. But as the representatives of established 'orthodoxies,' scientific, religious, and philosophic, will not face so big a thought, it is all the more incumbent on adventurers and explorers like ourselves to bear it conscientiously in mind. For, even practically, it may be that the difficulty of communicating with other planes of being is essentially that of transmitting a message to (or from) a man asleep.

To conclude, then, let me say that we cannot in Psychical Research complain that we have a subject which is trivial, hackneyed, or devoid of the most varied connexions with life, science, and philosophy. On the contrary, we have a

task of such magnitude and complexity that only an age which has had such abundant experience as ours of the triumphs of science, and of the progress of knowledge, could have been emboldened to attempt it and to discredit the old prejudice that knowledge is evil and that the particular sort we seek is forbidden to man and is the devil's own preserve. Success in our enterprise is not of course assured: but if we are vigilant and worthy of our opportunities, and can obtain social support at all commensurate with the importance of our quest, I can see no reason why the methods of science should not vanquish difficulties which do not differ in kind from those of all knowing, and so should not illumine the darkness that broods over the destiny of man

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*Printed in Great Britain by* R. & R. CLARK, LIMITED, *Edinburgh.*

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